To: DRECP planning team
From: Susan Antenen, Conservation Biology Institute (CBI), 415-652-6903, santenen@consbio.org
Date: May 23, 2012
Re: Preliminary analyses of the DFAs in the western DRECP

Conservation Biology Institute (CBI) has examined the westernmost Development Focus Areas (DFA) (April 25, 2012) which lie within the Wind, Wing, and Wilderness (WWW) study area. To provide preliminary feedback on the DFAs, we used outputs from our draft WWW decision-support model. We would like to provide more detailed analyses and comments on individual DFAs and/or scenarios in the near future as we refine our model. To do this, we need shape files with discrete polygons for each DFA.

This draft model does not explicitly consider use areas of eagles, condors, migratory birds, or bats, although the model does incorporate surrogate metrics for these species (e.g., wetlands, grasslands, large areas of undisturbed habitat). It does include draft species distribution models for selected desert species from the SCWildlands Desert Linkage study. However, we intend to replace these after the Independent Science Advisors review the consultants' species models for the DRECP, which we believe will represent a finer resolution than the models we currently have as "placeholders."

For these comments, we looked at the DFAs as a group, using Scenario 6. We did not limit the comparison to only the wind DFAs, as our spatial data and decision-support model have application to any form of development which might fragment or degrade the landscape. We used biological potential and levels of disturbance as our metrics. The unit of evaluation is 1 section of land (640 ac or 1 sq. mile). These results will be refined with further review by agency and industry staff.

Biological potential is based on:

- habitat values (linkages and intactness, effective roadlessness)
- species values (supporting habitat, designated species habitat)
- mapped species habitat for burrowing owl, desert tortoise, Mojave ground squirrel, pallid bat, and shrike, badger and bighorn sheep (from SCWildlands Desert Linkage study)

Level of disturbance is based on:

- land use (energy, urban, agriculture)
- road density
- transmission line density

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Findings:

- Two-thirds of the DFAs (68%) are sited on areas with Very High and High biological potential.
- Less than 10% (7.5%) of the total DFAs comprise disturbed lands with Low and Very Low biological potential.
- Almost one-quarter (23.7%) of the land within the DFAs comprises areas of Very High and High biological potential and Very Low and Low levels of disturbance.

Please see the following analyses and map for more details. Also attached are 3 sub-regional maps of our study area (north, central, and south), showing the DFAs overlaid on the WWW model output for biological potential and disturbance levels and 3 maps showing only biological potential (i.e., without the disturbance metric).

	Level of Disturbance				
Biological Potential	Very Low	Low	Moderate	High	Very High
Very Low	2,175	886	2,249	80	1,423
Low	8,499	3,318	13,916	10,556	15,109
Moderate	2,5887	10,413	73,319	27,810	53,898
High	51,803	23,711	118,125	35,599	51,274
Very High	77,956	31,429	87,645	29,765	22,554
Total Acreage of DFAs within study area:					779,396

Table 1: Acreage of scenario 6 DFAs separated by level of disturbance and biological potential. The nine different colors in the table represent the breakouts of category combinations used in map-based analysis.

	Level of Disturbance			
Biological Potential	Very Low and Low	Moderate	Very High and High	Totals
Very Low and Low	1.9	2.1	3.5	7.5
Moderate	4.7	9.4	10.5	24.5
Very High and High	23.7	26.4	17.9	68.0
Totals	30.3	37.9	31.8	100.0

Table 2: Percentages by color class. Percentage of scenario 6 DFAs separated by level of disturbance and biological potential. The nine different colors in the table represent the breakouts of category combinations used in map-based analysis.

Totals for each of the color categories are as follows:

- Very High and High biological potential AND Very Low and Low disturbance = 184,899 acres (23.7% of those DFAs we examined).
- Very High and High biological potential AND Very High and High disturbance = 139,192 ac (17.9%).
- Very Low and Low biological potential AND Very High and High disturbance = 27,168 ac (3.5%).
- Very Low and Low biological potential AND Very Low and Low disturbance = 14,878 ac (1.9%).

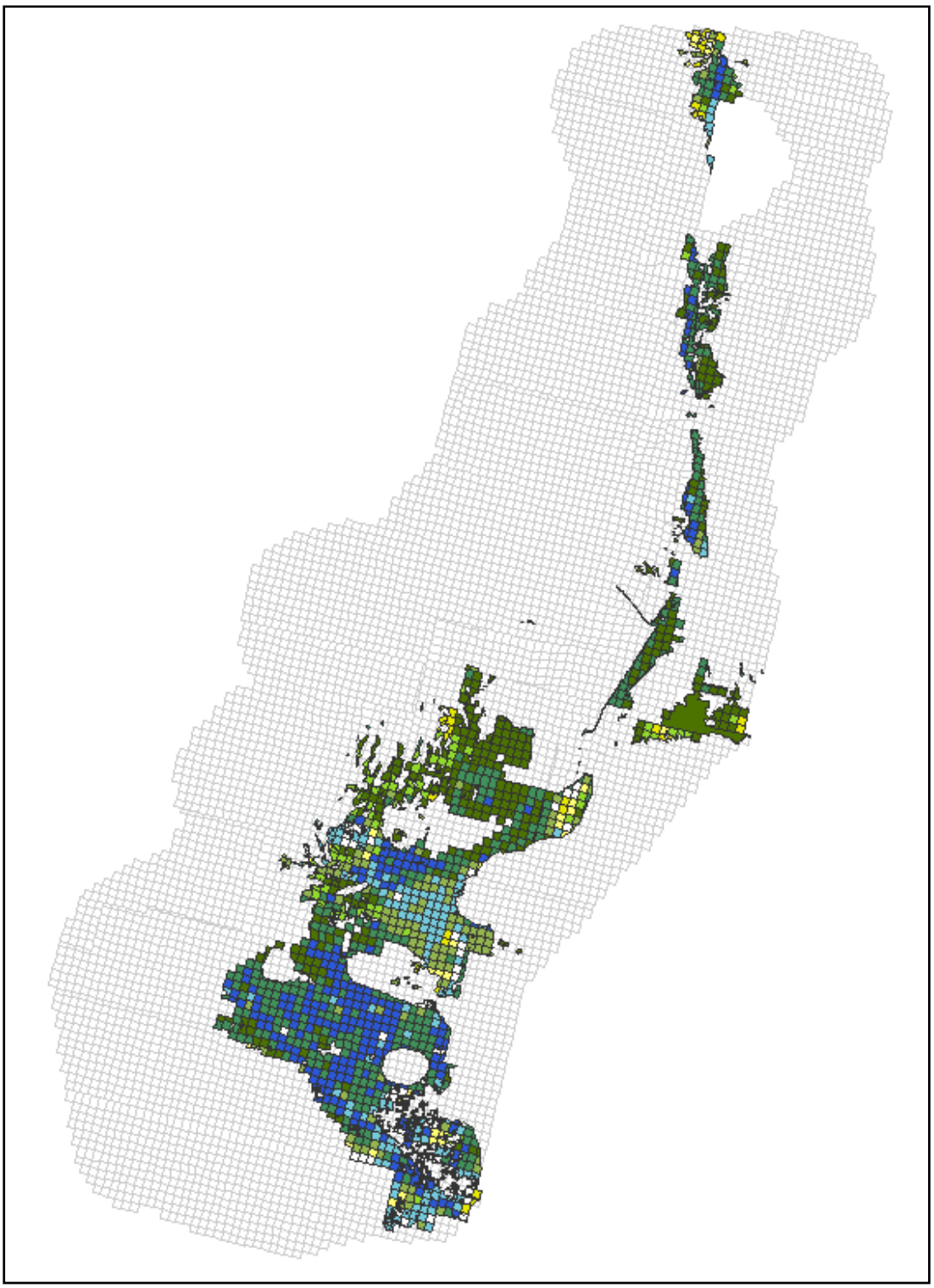
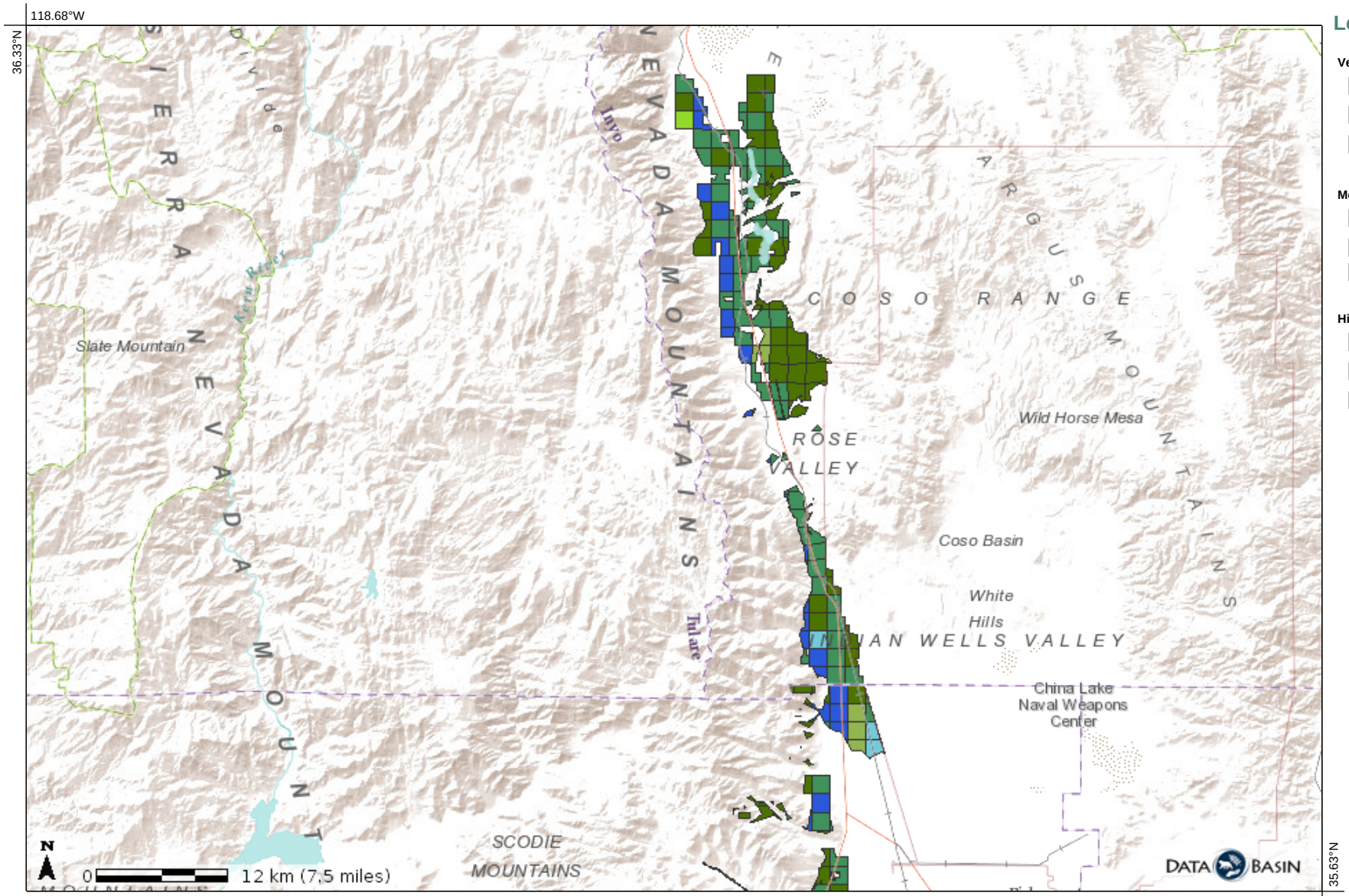


Figure 1: Biological potential and level of disturbance for scenario 6 DFAs in the CBI Tehachapi study area (see Table 2 for the classifications associated with each color).



Legend

Very Low and Low Disturbance

- Very High and High Biological Potential
- Moderate Biological Potential
- Low and Very Low Biological Potential

Moderate Disturbance

- Very High and High Biological Potential
- Moderate Biological Potential
- Low Biological Potential

High and Very High Disturbance

- Very High and High Biological Potential
- Moderate Biological Potential
- Low and Very Low Biological Potential

Map details

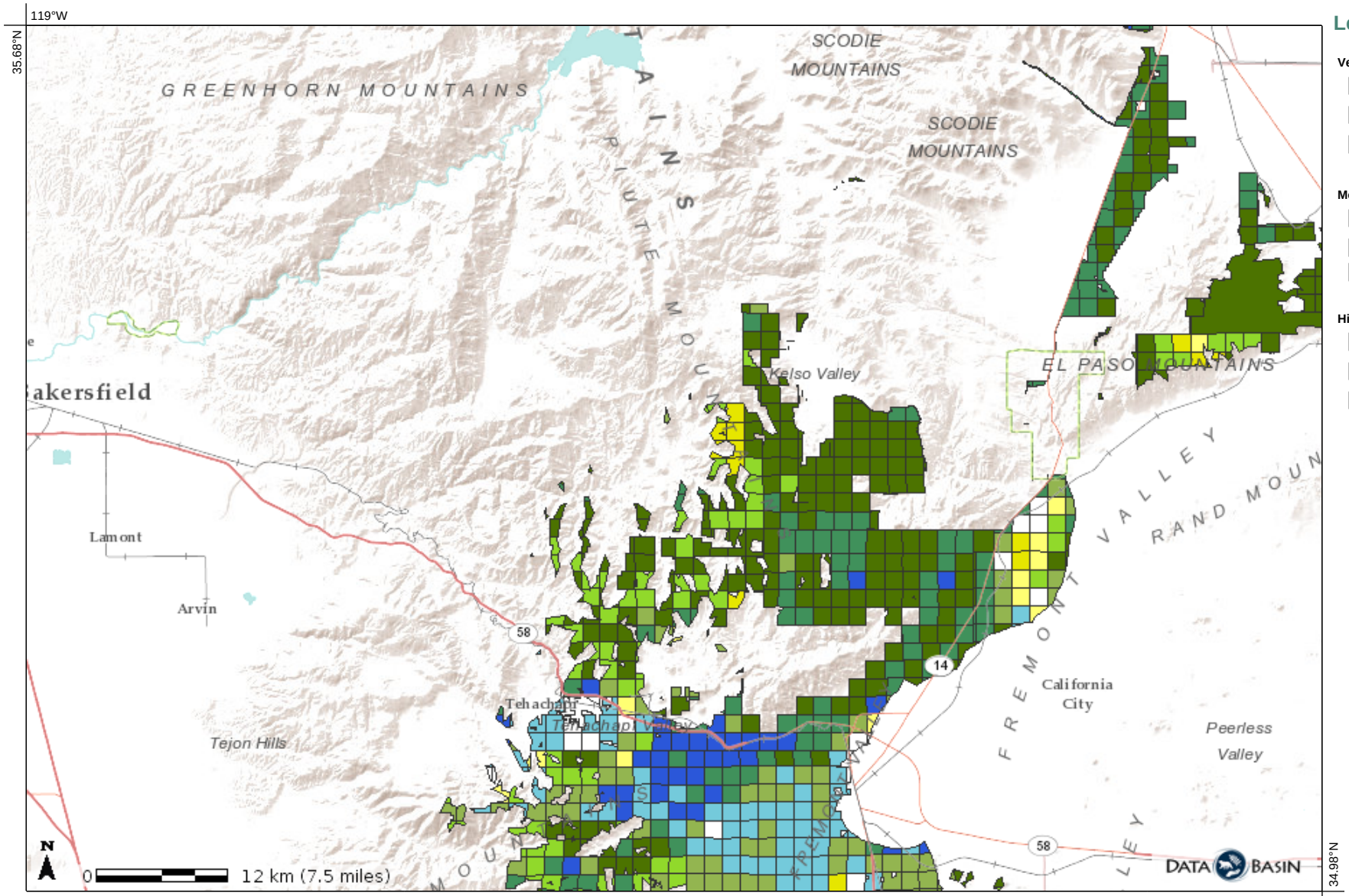
Map Contents

Tehachapi Biological Potential Vs Disturbance - WindDFA - 2012.05.11

http://app.databasin.org/app/pages/datasetPage.jsp?id=5947cbf12432420d9c763ffaabf09207

Credits: CBI

Layers: - Very Low and Low Disturbance
- Moderate Disturbance
- High and Very High Disturbance



Legend

Very Low and Low Disturbance

- Very High and High Biological Potential
- Moderate Biological Potential
- Low and Very Low Biological Potential

Moderate Disturbance

- Very High and High Biological Potential
- Moderate Biological Potential
- Low Biological Potential

High and Very High Disturbance

- Very High and High Biological Potential
- Moderate Biological Potential
- Low and Very Low Biological Potential

Map details

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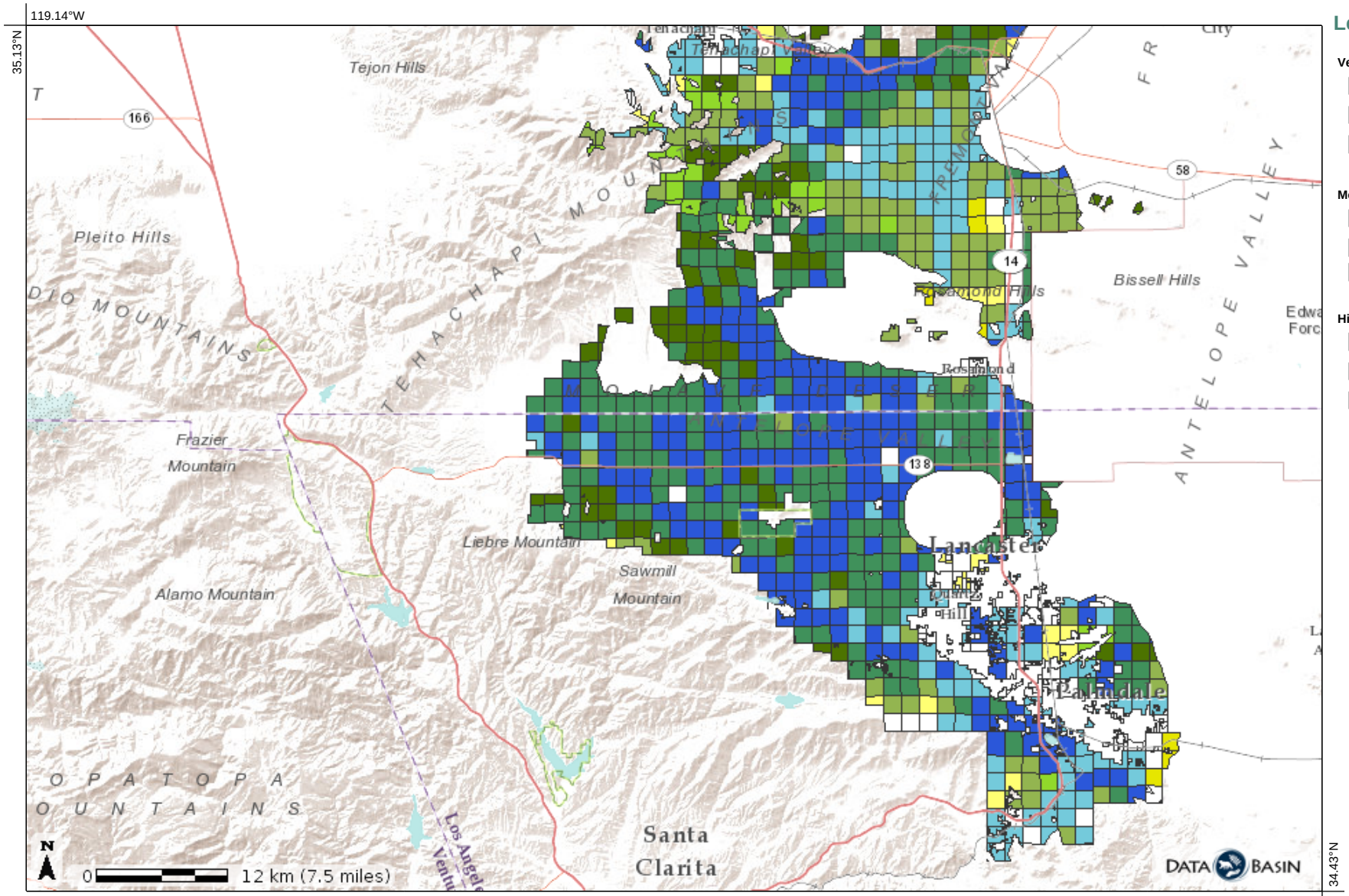

Legend

Very Low and Low Disturbance

- Very High and High Biological Potential
- Moderate Biological Potential
- Low and Very Low Biological Potential

Moderate Disturbance

- Very High and High Biological Potential
- Moderate Biological Potential
- Low Biological Potential

High and Very High Disturbance

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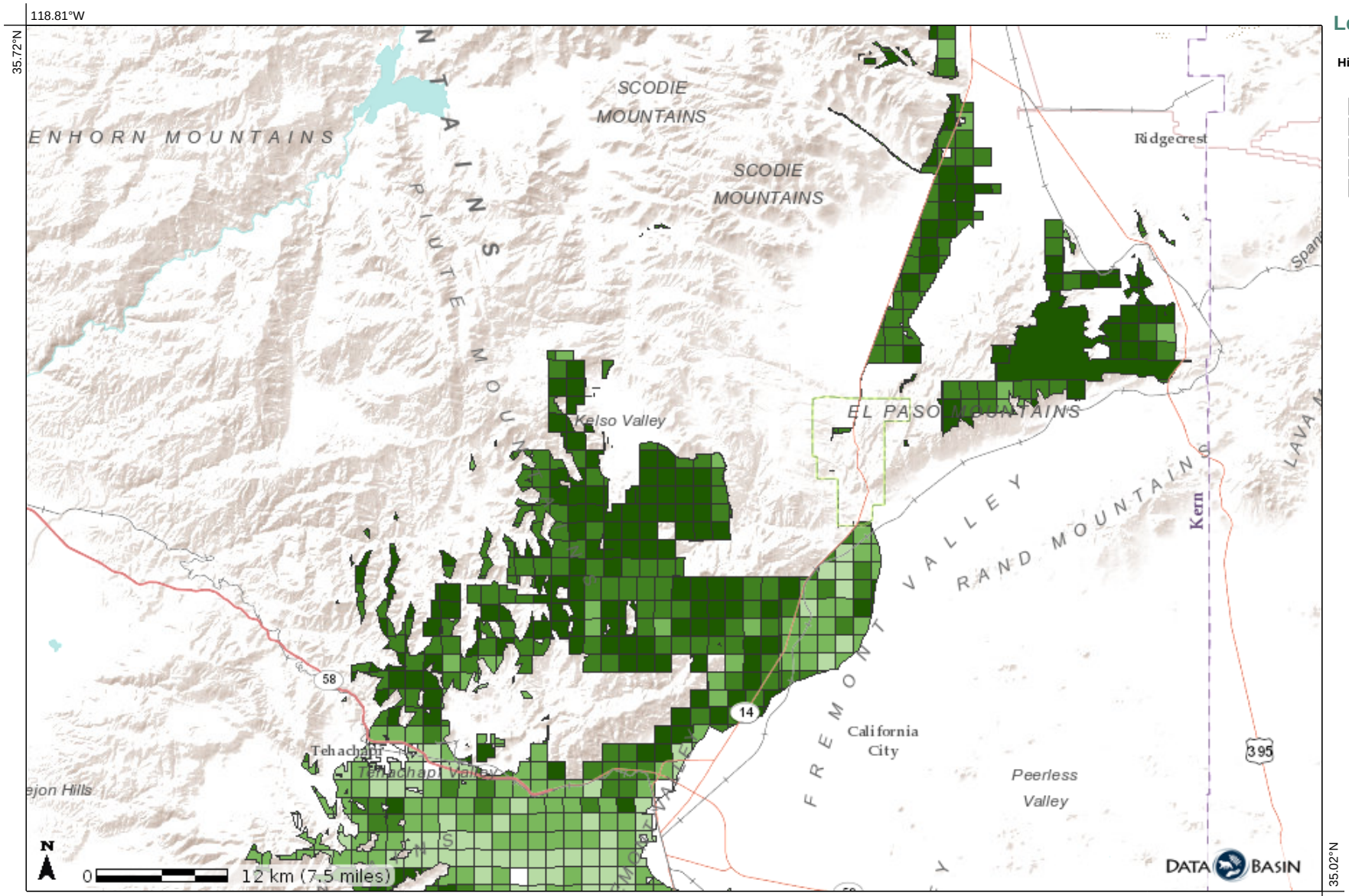


Legend

High Ecological Value

Displaying: **High Ecological Value**

- Very High
- High
- Moderate
- Low
- Very Low

Map details

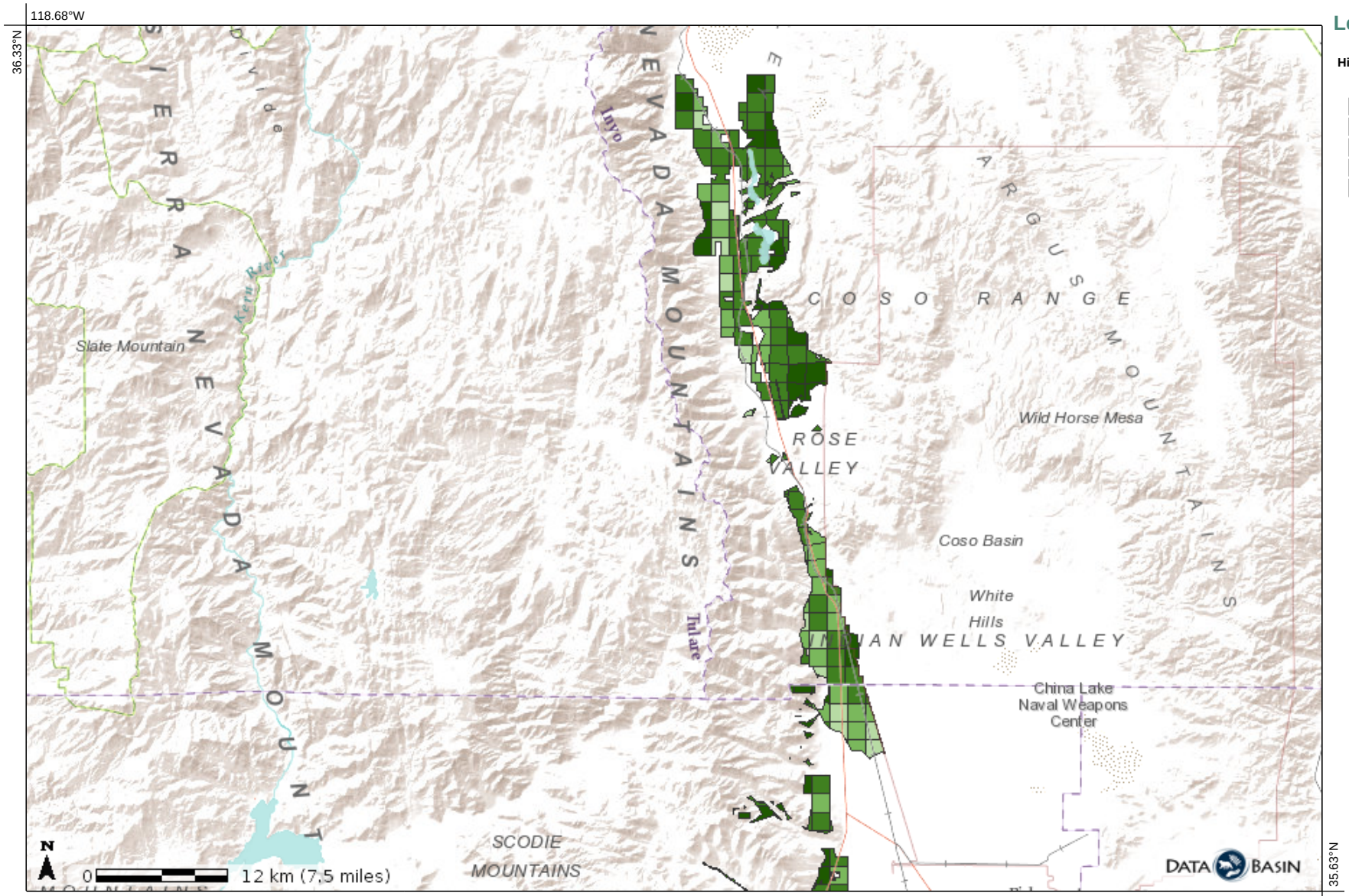
Map Contents

Tehachapi Biological Potential Vs Disturbance - WindDFA - 2012.05.11

http://app.databasin.org/app/pages/datasetPage.jsp?id=5947cbf12432420d9c763ffaabf09207

Credits: CBI

Layers: - High Ecological Value



Legend

High Ecological Value
Displaying: **High Ecological Value**

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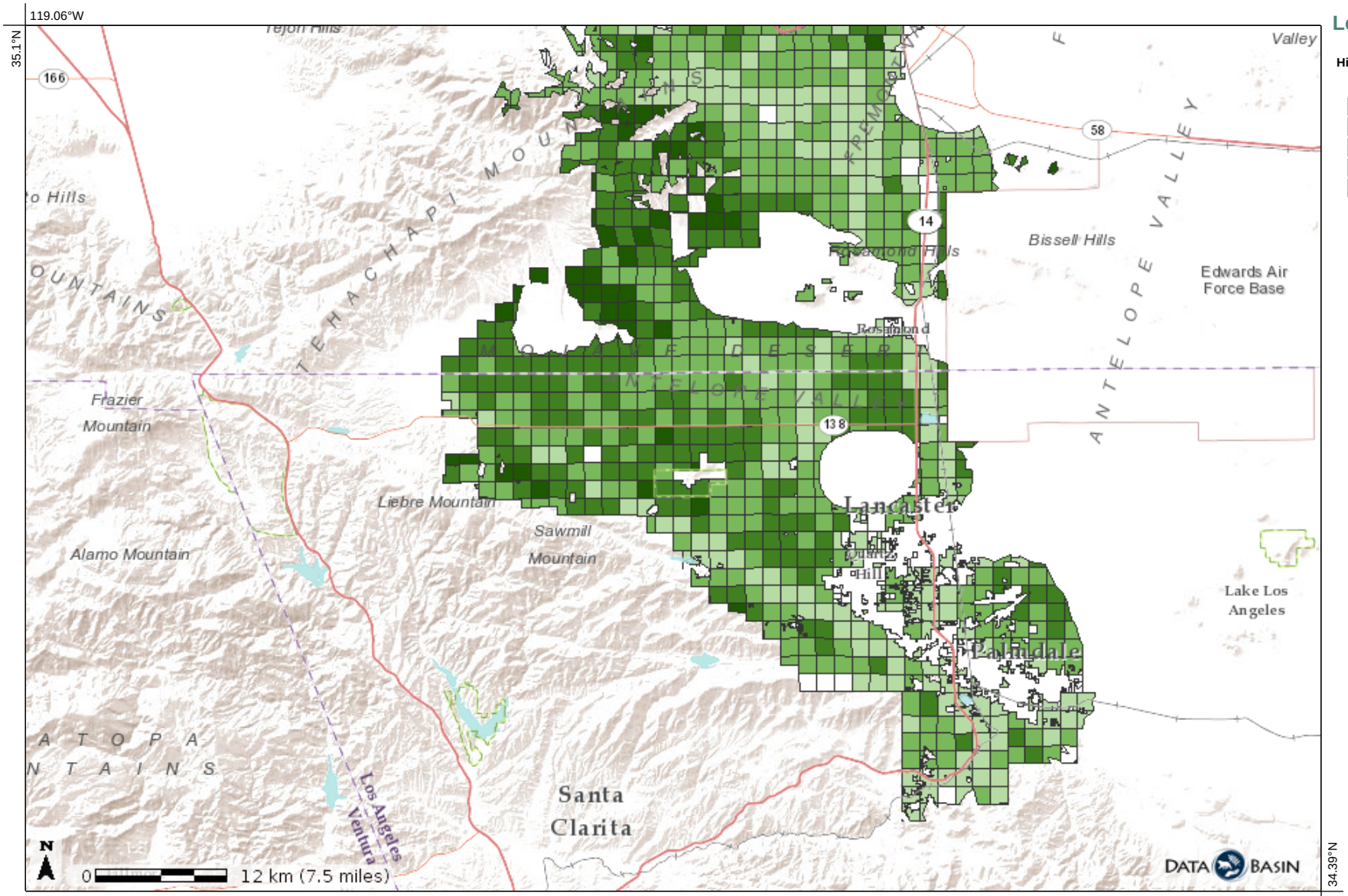
119.06°W
35.1°N
34.39°N
117.77°W
Legend
High Ecological Value
Displaying: High Ecological Value
Very High
High
Moderate
Low
Very Low
166
58
14
138
Valley
Bissell Hills
Edwards Air Force Base
Rosamond
Frazier Mountain
Liebre Mountain
Sawmill Mountain
Alamo Mountain
Lancaster
Palmdale
Lake Los Angeles
Santa Clarita
Los Angeles
Ventura
ANTELOPE VALLEY
TEHACHAPI MOUNTAINS
0
12 km (7.5 miles)
DATA BASIN
California

Map details

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