

DOCKETED

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Ivanpah Solar Energy Generating System (Ivanpah) Avian & Bat Technical Advisory Committee (TAC) Meeting

Nipton, California. February 6, 2014 - Meeting Notes

TAC Members Present: Co-Chair, Roger Johnson – CA Energy Commission (CEC)
Co-Chair, Mark Massar – USDOJ - Bureau of Land Management (attending on behalf of BLM for Larry LaPre, Ph.D.) (BLM)
Amedee Brickey – US Fish and Wildlife Service (USFWS)
Magdalena Rodriguez – CA Dept. Fish and Wildlife (CDFW)
Mitch Samuelian – Ivanpah Operations (ISEGS)
Ray Kelly – Solar Partners LLC (SP)

Invited Guests: Brian Boroski, Ph.D. – HT Harvey & Associates (HTH)
Dave Johnston, Ph.D. – HT Harvey & Associates (HTH)

Next meeting: TBD

Introductions – Solar Partners/Ivanpah Operations

- Safety overview
- Ivanpah ownership structure
- Attendee Introductions (TAC members and invited guests)
- Visiting USFWS personnel - Bill Woody, Chief of Enforcement, Office of Law Enforcement (OLE), Jill Birchell, Special Agent-In-Charge, and Mike Clark, Special Agent who were separately visiting the site briefly stopped in to the TAC meeting and were introduced at the end of the meeting.

Procedural Issues

- TAC attendance, invitees, meeting schedules and meeting location,
 - Attendance - appointment of alternate TAC members
 - Discussed whether TAC members should formally appoint alternates from their agency if unable to attend - e.g., Mark Massar attending for Larry LaPre
 - No formal recommendation for TAC alternates because we can probably schedule meetings far enough in advance.
 - Schedule -Four meetings planned per year under ABMMP with additional meetings as necessary.
 - Location -SP can provide online facilities for future meetings, if requested, to facilitate TAC member participation
- TAC – process and authority
 - TAC process
 - Discussed that Ivanpah TAC makes recommendations to CEC and BLM, which is different from Ocotillo TAC, for example, which has a formal process to make new requirements on the facility
 - TAC authority
 - Discussed potential modifications to ABMMP and need for data before modification recommendations. See notes on discussion items below.

Update on ABMMP Monitoring Efforts

- HTH presentation on monitoring efforts to date
 - HTH qualifications
 - Survey Effort – Over 3,000 person hours spent searching for fatalities from 30 Oct 2013 – 5 Feb 2014
 - Mortality update provided for systematic survey effort (30 Oct 2013 – 5 Feb 2014 time period)
 - 53 total fatalities (including clearance of detections for all three unit survey areas)
 - 29 fatalities (54%) unknown cause

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- 12 fatalities (23%) showing signs of singeing (this includes birds that were injured and then died)
- 9 fatalities (17%) showing signs of collision (presumed or confirmed from mirrors)
- 3 fatalities (6%) have been bats
- Monitoring Issues
 - CEC requested an explanation of frequency, methods and timing of the surveys and the relationship to the searcher and scavenger efficiency trials
 - HTH described how the frequency was established in the plan
 - HTH described how the searcher trials are blind trials (not known to the searchers) and a third party (the CEC-approved designated biologist) assists with carcass placement for the trials. No searcher efficiency trials had been conducted to date.
 - HTH also described the reasons for the use of naturally occurring avian species for the searcher and scavenger trials
 - USFWS discussed desire to better understand mortality risks and potentially move towards development of a risk model; CEC requested (a) inclusion of operational data with mortality; (b) marking survey plots on the ground or marking pylons at the corners of the plots.
- Action Items:
 - (a) SP to provide operational data to HTH for integration into mortality analysis
 - (b) HTH to examine if marking the plots will adversely affect or bias the plan results and report at the next meeting

Discussion on Avian and Bat Monitoring

Data Availability and Permits for Collection

- Bat mortality data
 - HTH indicated that all bat mortalities were located at or in the near vicinity of the Air-Cooled Condenser (ACC)
 - SP is proceeding with procuring design engineering to install protective netting on the ACC as a Best Management Practice (BMP)
- Action: SP will report the status of this BMP at the next TAC meeting
- Monitoring data availability
 - CEC presented a GIS spatial database and requested that all raw data be available to CEC
 - SP explained that reports contain the data that is collected; confidential photographic data is available at the facility
 - CEC requested to review the photographs of fatalities; CDFW, BLM and USFWS also requested a review. SP produced the requested items for review and HTH agreed to ensure all plan-specified viewpoints are recorded.
 - SP ensured agencies that confidential information (photographs) are available on request; CEC requested direct access
- Action: SP to investigate availability of secure website
- Scientific collection permits
 - CDFW requested a discussion of the facility compliance with the California Endangered Species Act Collection permit. HTH explained that their staff possesses the required state permits.
 - USFWS informed the committee that the USFWS Office of Law Enforcement (OLE) necropsy report will be available for the TAC in the near future.

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USGS Study

- USFWS described the USGS study proposal. The proposal is designed to test the ability of various technologies (radar and video) to document avian interactions with concentrated solar flux near the power towers. The test is proposed to take place over ten (10) days during the last week of April 2014. Specifically, radar, infrared, thermal and video imaging techniques are being tested during the study. In addition, the USGS staff will test the effectiveness of insect trapping techniques within the facility.

Potential Range of Flux Impacts

- Flux incineration theory
 - CEC discussed light/smoke flashes near the boiler (sometimes described as "streamers"), speculating that such phenomenon could result from birds "incinerating" and whether if the phenomenon were occurring that it could result in under reporting of mortality.
 - Ivanpah Operations explained that the flashes of light could result from debris emitted from the towers during tower cleaning; personnel and HTH are finding insects, trash and debris with evidence of singeing on the ground near the power towers. Evidence of singed insects and debris was produced at the meeting for member examination.
 - HTH also described how the survey results and physical evidence collected to date do not support the theory that birds are being incinerated. HTH has found only birds with evidence of feather damage suspected to be from flux and no birds with extreme charring. Fatalities with extreme charring and/ or partially incinerated specimens would be expected if birds are exposed to flux levels that in the worse-case scenario results in them being "incinerated".
- Action - the group discussed the USGS study and noted that the equipment to be tested may add to the understanding of the source of the light flashes. The use of video cameras and recorded imagery was discussed by the group. All of these imagery techniques were tabled until the USGS tests the applicability of equipment and provides a summary of their results.
- Potential for flux to lead to fatalities that may be located outside of the survey area.
 - HTH described that if injured birds were leaving the project then there should be a Positive Skewed distribution of bird singeing going from the tower out into the heliostat field. HTH suggests that the data needs to be reviewed prior to determining that an extension of the survey area is warranted.
 - HTH reported that some unsigned bird carcasses with were discovered offsite when biologists were hiking out to conduct point count bird surveys.
- Action Items –
 - HTH to present spatial distribution of bird singeing;
 - USFWS recommended reviewing the USGS study and the spring monitoring reports that may provide additional information when available

Next Steps

- ABMMP Report
 - The TAC requested confirmation of the schedule for the winter season report.
 - HTH stated that the ABMMP requires the delivery of the final report to the TAC within 3 months after the close of each 3-month season (winter, spring, summer and fall). Winter is over in March, therefore, the report will provided to the TAC by end of June, and earlier if possible.
 - HTH Harvey requested approval of three biologists from CEC.
- Next Meeting Date

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- No date was set for the next meeting

The meeting was adjourned. Several members reviewed the fatality records at the facility following the meeting.