NOTES | 12/13/2011 Conference Call
Altamont Pass Wind Resource Area Scientific Review Committee
Prepared by the Center for Collaborative Policy
Reviewed and Approved by the SRC

All 5 SRC Members Present

Discussion Topics
- Updates from Alameda County
- Monitoring Team Updates
- Report on Burrowing Owl Distribution & Abundance Study
- Bird Behavior Data Digitization

Meeting Outcomes
- The SRC reviewed results from the NextEra Burrowing Owl Distribution & Abundance Study and the Monitoring Team's latest preliminary bird fatality data

Action Items

<table>
<thead>
<tr>
<th>Party</th>
<th>Due Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRC</td>
<td>Feb. 16-17, 2012</td>
<td>Next in-person meeting</td>
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<tr>
<td>Monitoring Team</td>
<td>Feb 2-3</td>
<td>09-10 Draft Monitoring Report released</td>
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<td>Monitoring Team</td>
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<td>Publish 09-10 revised data and Oct-March data, and announce to public</td>
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</tbody>
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Updates from Alameda County
Avian Bat Protection Plan & Draft Repowering EIR
Sandra Rivera of Alameda County said the County and consultants are still working on developing an internal draft Avian Bat Protection Plan document. Because the schedule is delayed, she anticipates that the draft document will be presented to the SRC at an April meeting, rather than at their February 16-17 meeting. The SRC will still meet for two days February 16-17 to consider other items. The Avian Bat Protection Plan is one component of the repowering programmatic EIR. If additional components are completed, they would also be presented at the same time.

She clarified that the APWRA wind companies, Golden Gate and Santa Clara Audubon and Alameda County will review the draft document before it goes to the SRC.

AWI Request for Exemption from 2011-12 Seasonal Shutdown
Sandra Rivera informed the SRC that, based on the outcomes from the SRC's September meeting, AWI reconsidered and withdrew its request for an exemption from the seasonal shutdown that started in November 2011. AWI is continuing with its request to modify its permits, which includes a request to be exempted from seasonal shutdown for the remainder of the permit timeframe. If AWI's request was granted, its exemption from seasonal shutdown would start next year, in the 2012-13 winter season. An additional component of the permit modification request is a change in the phasing of permanent turbine shutdowns.
The existing permit calls for a 35% shutdown in 2013. AWI is requesting to continue operation of those turbines until 2015, when all turbines would be shut down. AWI's permit modification request would need a CEQA review, and Alameda County has recommended a full EIR.

**SRC Questions and Comments**

- An SRC member asked whether that environmental review would include an Avian Bat Protection Plan. Sandra Rivera responded that that study is specific to repowering.
- In response to a question, Sandra Rivera said the SRC's role in the process of considering the permit modification request would be similar to its role in the review process for the last request. SRC consideration of the scientific implications in regards to seasonal shutdown and permanent shutdown would likely be scheduled for spring 2012.

**Public Questions and Comments**

Mike Lynes of Golden Gate Audubon asked why an Avian Bat Protection Plan would not be required for the permit modification. It should be part of every environmental review going forward. There is no scientific reason to do such a study only for repowering, as its purpose is to reduce the impacts from turbines. In response, Sandra Rivera said Alameda County would consider that. The County's approach was to consider issues at a higher level and more comprehensively in the programmatic repowering EIR. Project-level EIRs looking at project-specific impacts would tier off of the programmatic EIR.

Tara Mueller of the State Attorney General's Office asked if the repowering EIR would address AWI, or if the company is not participating. In response, Sandra Rivera said the last information the County received was that AWI is proposing repowering, but does not have project-specific information yet.

Tara Mueller asked how the tiering would work, and if the NextEra project would be addressed completely within the programmatic EIR, or would have a project-level EIR as well. Sandra Rivera responded that the programmatic repowering EIR would include evaluation of current operations. The programmatic EIR could include NextEra project-specific environmental review, depending on whether the timing would allow for that. AWI and enXco would need to do separate EIRs because of the timing of their projects.

**Report on Burrowing Owl Distribution & Abundance Study**

**Related Documents**

[P228_Smallwood et al for NextEra Burrowing Owl Distribution and Abundance Study](#)

[P229_Smallwood et al Progress Monitoring Burrowing Owl Burrow Use](#)

Shawn Smallwood reviewed his burrowing owl distribution and abundance study for NextEra and the results to date of surveys of burrowing owl burrows, detailed, respectively, in P228 and P229 (links provided above). A member of the Monitoring Team has participated in both studies. In the surveyed sample polygons, researchers found 231 nesting pairs of burrowing owls and estimate 635 pairs in the APWRA during spring 2011. Nesting density averaged 3.20 pairs per square kilometer (Figure 4 in P228 is a map of surveyed
densities). Distribution appears to be dynamic and clustered, with most nests occurring in similar conditions, usually low on slopes. Attrition at nest burrows is high by the end of the nesting season.

Shawn Smallwood said an emerging problem the SRC needs to think about is that, as monitoring is conducted with longer search radii for the larger repowered turbines, searchers are likely to encounter more low-slope fatalities, which would likely be feather piles. Many of the fatalities may not be turbine-related, but caused by predation.

**SRC Questions**

SRC members raised the following questions:

- Is there a slight bias in survey methodology favoring valley bottoms? Response: every sampling unit contains valley bottoms and ridge tops. The design encourages the incorporation of drainage basins in a plot, based on the assumption that owls would organize themselves within a drainage basin. This approach would not favor any slope aspect. If there is any bias, it would not be slope, but elevation.
- In response to a question, Shawn Smallwood said that densities found in extended surveys have been equal to or higher than initial surveys.
- With the extent of estimated burrowing owl mortality, would it be possible to sustain the numbers of breeding pairs the survey estimates? Response: The results, reflecting only one year of data, cannot answer that. It's unclear how many owls are being killed by turbines versus other causes. A more extensive view would be needed.
- Is there any information on reproductive success? Response: that wasn't studied, but survey areas did count the number of young owls viewed outside burrows. Success appeared to be good initially, followed by heavy predation.
- What is the extent of unoccupied suitable habitat? Response: P229 shows plenty of unoccupied areas. There are areas with low density now known to have had high density in the past. The population appears to be spatially dynamic.
- How has this study changed your view of the burrowing owl problem in the Altamont? Response: There are a lot of owls, and the Altamont is an important conservation site for owls in California. It's unclear what turbines mean to owls. Repowering would probably be a benefit to burrowing owls -- at Buena Vista, there has not been a single burrowing owl fatality since repowering.
- Question: Does the design favor areas at the top of the slope? Response: It could be. This seemed to be the least problematic approach.
- Question: How much of the areas surveyed did not contain turbines? There were a lot of areas sampled without turbines, in order to sample throughout a polygon.

**SRC Comments**

SRC members raised the following issues in discussion:

- It may be possible to run sensitivity analyses on the abundance estimates, taking into consideration all the caveats, and look at longer-term persistence within a reasonable range of fecundity, using what-if scenarios given various ranges of mortalities.
- It makes sense to design the methodology in this way. It would be interesting to see what differences there might be between lower and upper slopes, or any areas that might be less represented in the sampling.
Public Comment
Brian Karas of the Monitoring Team asked if detection during the time of year with tall grass could have been significantly different. In response, Shawn Smallwood said he doesn't believe it's an issue because surveyors sampled until they were satisfied they had found all breeding pairs.

Brian Karas said the mapped populations were similar to those developed by the Monitoring Team in M71 to show burrowing owl mortality.

Renee Culver of NextEra asked if there is more confidence in detection in the spring versus the fall. In response, Shawn Smallwood said there is more confidence only in the estimate of the number of burrowing owls. In the fall, surveyors are confident about the number of burrows, but there is uncertainty about the number of owls.

Doug Leslie of the Monitoring Team asked if there is value in continuing the study to complete a full calendar year, and to look at how changes in distribution and abundance affect the risk profile over time. Shawn Smallwood agreed, adding that the only way to learn about risk would be to link locations of burrowing owls to actual fatalities, as owls could be near turbines but not use the slopes.

Bird Behavior Data Digitization
Shawn Smallwood, who has been digitizing bird use and behavior data collected by the Monitoring Team, provided an update. He suggested the SRC encourage the Monitoring Team to have crew members enter use and behavior data to save time and errors. He believes it is a highly valuable dataset and is still working on digitizing it, but needs to get it done. There have been challenges because of a lack of key variables to connect data on observation sessions with the behavior data. For example, there are data sheets lacking a date or a start time.

SRC Member Mike Morrison said his standard protocol is to have field crew members enter each other’s data at the end of each day. If there are typos, the searcher is likely to remember at that time.

Doug Leslie of the Monitoring Team said the Team's database system may aid in checking the errors, and could replicate the database structure in about a week, once the files are received.

Shawn Smallwood said it appears there has been methodological drift by the crew over time. There needs to be communication between the crew and the analyst to ensure the methodology remains constant.

Public Comment
Renee Culver of NextEra requested that a document be developed mapping how the protocols have changed.

Monitoring Team Updates
Related Documents
Monitoring Update
Jesse Schwartz of the Monitoring Team, with the aid of PowerPoint slides shown in M86, gave a quarterly update on fatality monitoring. He noted the following items:

- The Monitoring Team has fully transitioned to paperless field data collection, except for bird behavior data.
- 2010 bird year (October 2010 through September 2011) data is now under review, and the Team hopes to have a dataset available for public review shortly, with a review cycle possible before the February SRC meeting.
- For the 2011 bird year beginning in October 2011, there are 1,200 total turbines in the monitoring design, with more than one third of the monitored turbines part of a rotated panel (the rest are monitored every year).
- There were clearing searches and shutdown in November, and the winter shutdown is now in full effect.
- The plan is to release the last three months of data in January.

Doug Leslie, Monitoring Team Project Manager, said the Team expects to produce the monitoring report two weeks before the next SRC meeting. If Shawn Smallwood is able to complete digitization of bird use data, the report would include bird use, including trends in relative use through time and how that information correlates with fatality estimates.

Shawn Smallwood said he expects the digitization will be complete in two weeks, and would be suitable for temporal, but not spatial, trends.

SRC Discussion
SRC members affirmed that they would like to see the report include bird use information.

Preliminary Results for 2010-11 Bird Year
These are shown in slides 3-5. For Slide 3, Jesse Schwartz provided a clarification: the figures listed under the heading "Annual Average" reflect 2005-09 raw detections and show annual average level of effort. The Focal Species table compares the number of raw detections during the 2010 bird year with the average number of annual detections in previous years. For example, in the 2010 bird year, fewer burrowing owl and more red-tailed hawk carcasses were found.

Slide 4 shows carcass placements in the 2010 bird year, which includes not only fresh carcasses, but age, partial carcasses and feather spots. The distribution of placement is biased away from small raptors.

Public Comment
In response to a question from Renee Culver of NextEra, Monitoring Team member Brian Karas said the numbers do not include clearing searches.

In response to a question from Brian Karas, Jesse Schwartz said the lower number of APWRA turbines has resulted in a slightly lower amount of megawatts searched and a slightly longer search interval this year.
QAQC Study Birds Collected
Slide 5 shows carcasses collected to be placed for the QAQC Study. With the help of SRC Member Sue Orloff, the Team obtained 30 small, whole fresh carcasses, including 8 small raptors. The carcasses are part of a double-blind sample, and there will be daily fatality checks for 30-60 days, depending on resources. All carcasses should soon be placed. Once all the carcasses become undetectable, the Monitoring Team and SRC Member Julie Yee can analyze results and consider which carcass detection model to agree upon.

SRC Discussion
While all the carcasses are fresh, all or most were euthanized, and might contain chemicals that could affect carcass attractiveness to scavengers. SRC members said the Monitoring Team should note the records for each carcass and look for evidence of less scavenger interest in those cases.

SRC members asked if the QAQC information would be available in February. Jesse Schwartz said the report would include the trend without the new curves, and the dataset could be reevaluated after the SRC and Team are comfortable with the functions.

Next Steps
Next in-person meeting:
February 16-17, 2012
- Main Topic: Monitoring Team Report
- Possible topic: QAQC data (after subcommittee looks at data) and consideration of future approach to detection probability: stop entirely, less intensive, or hybrid

ATTENDEES
SRC
Joanna Burger
Jim Estep
Mike Morrison
Sue Orloff
Julie Yee

Consultants
Doug Leslie
Brian Karas
Jesse Schwartz

Identified Public
Renee Culver, NextEra
Jim Hopper, AES/SeaWest
Mike Lynes, Golden Gate Audubon
Tara Mueller, State Attorney General’s Office
Shawn Smallwood, consulting scientist to NextEra
Joan Stewart, NextEra

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