

**Draft NOTES | 2/3/2011 Conference Call
Altamont Pass Wind Resource Area Scientific Review Committee**

Prepared by the Center for Collaborative Policy is no
Reviewed but note yet approved by the SRC

All SRC Members Present

Discussion Topics

Review of Draft Burrowing Owl Behavior Study Design

Meeting Outcomes

- The SRC provided input on P194, the Burrowing Owl Behavior Pilot Study Proposal, which SRC Member Sue Orloff will revise for discussion at the February in-person meeting.

Next Meeting

In-Person Meeting February 16-17, 2011 in Oakland

Review of Draft Burrowing Owl Behavior Study Design

Related Documents

[P194 Orloff Burrowing Owl Behavior Pilot Study Proposal](#)

[P195 Orloff BUOW Cost Estimate Sheet](#)

[P145 Smallwood Fatality Monitoring Results 12-31-09](#)

Overview of Draft Burrowing Owl Behavior Study Design

Facilitator Mary Selkirk thanked SRC Member Sue Orloff for developing the first draft of a burrowing owl behavior pilot study proposal for joint discussion with the rest of the SRC and the Monitoring Team. The goal is to gather joint direction for Sue so she can revise the draft for the in-person meeting on February 16-17. Three SRC members provided written comments on the draft. A fourth SRC member said she would provide verbal comments during the meeting.

SRC Member Sue Orloff gave an overview of the proposal. She started with SRC Member Jim Estep's original proposal, which was part of the SRC's more broad-based burrowing owl study proposal. She tried to design it as a pilot study to determine if the method is effective. The goal is to answer the question of why mortality is high, and examine if predation might be a cause. She reduced the amount of night observation time from the original study plan, reduced the number of slope portions to be covered from 3 to 2, reduced the number of observation areas from 4 to 3, and eliminated control sites, to create a pilot involving a two-person team with one scope. The study would use historical mortality data to select observation sites.

The study proposal includes two evaluations of the effectiveness of the approach. After three observations, the SRC by conference call or an SRC committee could discuss and potentially modify the approach. After six surveys, there would be another evaluation and an opportunity to discontinue the study if it is considered not effective. If it is a good

technique, she would like to see winter observations, so there would be three seasons of data before repowering.

Monitoring Team Burrowing Owl Fatality Data

Jesse Schwartz of the Monitoring Team reviewed his analysis to date of burrowing owl fatality data. He found that a few strings have high burrowing owl fatalities, with one string, a large string in the southeast, showing 14 fatalities in the last six years. Other strings are relatively flat. He will be working with a GIS analyst to develop maps.

Brian Karas of the Monitoring Team said he had about a year of data, started in March 2010, of flushed burrowing owls and burrows found during searches. It would be interesting to look at the data in relationship to the fatality numbers.

Jesse Schwartz warned that adjusted burrowing owl fatality numbers amount to 0.002 burrowing owls per string per day, so it would be highly unlikely, when observing owl behavior, to view a fatality. An SRC member said the goal of the study would be to gain understanding of owl and owl predator behavior.

An SRC member suggested that risky behavior patterns might be visible.

Another SRC member said, given that report, that the behavior study may not need to focus on areas with observed high mortality. It might be advantageous to design the study to consider factors responsible for fatalities, such as topography, turbine type and turbine spacing?

Public Comment

Renee Culver of NextEra asked if there is an update on the amount of funds available for the burrowing owl study. There had been some discussion on the QAQC study and its impact on money for other studies. In response, Jesse Schwartz of the Monitoring Team said that information will be available once the budget is revised after the next QAQC study rotation.

Clarification about December 2010 In-Person Meeting Notes

Ariel Ambruster of the Facilitation Team asked for clarification from the SRC about the following language in the key outcomes from the SRC's December meeting:

“...the SRC agreed to recommend that available monitoring funds be allocated to a **burrowing owl study** incorporating the following elements:...

- Prior to the end of March 2011, a limited distribution and abundance study on non-monitored turbine strings in lower terrain, with report back to the SRC (MT to collaborate with Shawn Smallwood and Jim Estep to refine).”

SRC members recalled that they talked about routine recording of burrowing owls and burrows found during searches at monitored turbines, as well as the need to do burrowing owl census work in low terrain. In addition, there was a concern about whether there was a need to look at nonmonitored turbines, as repowered sites might not be in the vicinity of monitored turbines, and there might need to be information gathered in those areas.

An SRC member suggested that SRC Member Shawn Smallwood develop a proposal for burrowing owl census work in low terrain (he has done census work in higher terrain at Tres Vaqueros), using the leftover funds that would be available. Shawn Smallwood said he would do so.

Page-by-Page Review of P194 Burrowing Owl Behavior Pilot Study Proposal

Call participants including members of the public, then walked through the document providing input, with SRC members Sue Orloff recording recommended changes.

Significant points raised included:

- In Introduction, suggest change to characterization of mortality rate during shutdown. Language will be changed to "appears to be high."
- In Issues and Concerns, Page 2, last bullet, disagreement with the phrase "Lack of understanding why there is high burrowing owl mortality occurring at non-operational turbines." Agreement to replace "is high" with "remains some."
- There have been a lot of daytime surveys, but fewer observations at night. Burrowing owls become active at dusk and might be undertaking risky behavior and higher flight patterns at night.
- In Study Plan, Page 3, regarding selecting survey areas, it seems important to select areas that are representative, and where owls are active. It may not be as important to select areas with high mortality. It seems important to view how owls behave around turbines.
- A key point would be to see if burrowing owls are routinely flying from their burrows to the tops of ridges where turbines are, if they are attracted to turbines for any reason.
- Page 3, Conduct Survey section: Concern that a small random sample would produce unequal results. It is important to ensure a balanced approach. For each of the six stations, randomly select three to start high and three to start low - then alternate from high to low for subsequent searches.
- In regards to use of pin flags to help orient the observations, it was noted that rocks on a hill might be used for this purpose as well, because they held temperatures and might be visible with the thermal imaging scope.
- It might be difficult to get horizontal and vertical distance during the day. One approach would be to do a pre-survey with the scope to mark out visible areas and burrows on a data form.
- SRC members agreed having a night vision scope available would be helpful, particularly for determining horizontal and vertical distances.
- SRC members preferred to see funds spent on behavioral observations rather than fatalities searches after each observational survey.
- SRC members agreed that if there is sufficient funding, it would be helpful to add a control site rather than expand nighttime surveys.

Public Comment

Renee Culver of NextEra asked how much of a focus the study will have on old generation turbines. She suggested building into the study the impacts of topography and positions of turbines, which would apply to repowered turbines. Diablo Winds might not be comparable to new repowered turbines.

Joan Stewart of NextEra said NextEra is most interested in what is going to happen with repowered turbines.

Further Discussion

A Monitoring Team member said this study seems really interesting for learning about flight behavior risk for repowered turbines. It is unlikely to produce a predation rate, and therefore might be in a backwards order of priority. Scientifically, it might be preferable to first have good distribution and abundance, then background mortality, and then flight behaviors.

An SRC member said there is almost no time left before repowering. All of these questions should be pursued immediately, as they are all important. Distribution is really important.

Public Comment

Renee Culver of NextEra asked if ICF would have an adjusted cost estimate for implementing the current monitoring program, so everyone understands how much money is available for other studies. In response, Doug Leslie of the Monitoring Team said he will have the scope and cost for the new budget, which begins in April. It should be the same.

Renee Culver said she would like to know how much money is on the table so decisions can be made, including current numbers given the removal of monitoring of the Contra Costa turbines.

Doug Leslie said the Monitoring Team has the equivalent of one person left over, given the number of personnel needed for the QAQC study and monitoring.

Next Steps

- Jesse Schwartz will bring burrowing owl mortality maps to the in-person meeting
- Renee Culver will look at the possibility of getting transmission line data for the maps
- Sue Orloff and Shawn Smallwood will complete their documents by February 11
- Brian Karas will produce a map and memo on Monitoring Team flushing surveys

Wrap Up and Next Steps

Next in-person meeting:

February 16-17

Tentative topics:

- Burrowing owl study - behavior, historic data, distribution & abundance
- QAQC Update
- Final monitoring & 09-10 reports status update
- Bird use data -- past & present

ATTENDEES

SRC

Joanna Burger

Jim Estep

Sue Orloff

Shawn Smallwood
Julie Yee

Consultants

Doug Leslie
Brian Karas
Jesse Schwartz

Identified Public

Renee Culver, NextEra
Jim Hopper, AES/SeaWest
Joan Stewart, NextEra

Staff

Sandra Rivera, Alameda County
Mary Selkirk, CCP
Ariel Ambruster, CCP