NOTES | 4/12/2012 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
QAQC Subcommittee Update and Discussion
Meeting Summary Approval

Meeting Outcomes

- The SRC reviewed assumptions for an analytical approach to estimating detection probability proposed by SRC Member Julie Yee and provided feedback. Overall, the SRC supported initiating analysis based on the assumptions, but supported a sensitivity analysis approach to test the validity of certain assumptions.

Action Items

Party	Due Date	Action
SRC	**May 9-10, 2012**	**Next in-person meeting – 1.5 days long**
Monitoring Team	Week of April 23	09-10 Draft Monitoring Report released
CCP	4/13	Will help USFWS with SRC listserv, website access
Monitoring Team	5/9	Will report on any issues raised by recently received public input on fatality data
Monitoring Team		To post data dictionary once updated

Updates from Alameda County

Sandra Rivera of Alameda County provided the following updates:

Annual Draft Bird Fatality Report

The Monitoring Team will distribute the report the week of April 23.

Burrowing Owl Surveys

The County will mediate off-line the administrative issues around Monitoring Team staffing and direction in regard to spring burrowing owl surveys.

FloDesign Study

The proposed study design to look at avian fatality impacts from the new FloDesign turbine design that went before the SRC in September 2011 was for a sample of 10 turbines at the enXco field at Patterson Pass. The study was recently granted significant funding from the California Energy Commission's Public Interest Energy Research (PIER) program, which will allow for an expanded sample. Shawn Smallwood has started preliminary monitoring prior to finalizing the expanded study proposal he will bring to the SRC in May. The initial monitoring focuses on existing AES turbines in order to provide a baseline for which the new FloDesign turbine monitoring data will ultimately be analyzed.

Renee Culver of NextEra organized a coordination meeting April 10 to consider how study surveys could be coordinated with Monitoring Program and WRRS monitoring. Participants in the meeting have developed interim protocols which will be followed until the SRC provides guidance in May. The County would like to develop a memorandum of agreement, similar to that used with CalWEA.

SRC Questions and Comments on Updates

- In response to questions, Shawn Smallwood said he has not yet finished developing the list of turbines he would be monitoring, but it would overlap with the Monitoring Program. EnXco, which was originally going to host the study, has withdrawn. The study will instead take place with AES SeaWest turbines. The SRC raised the issue of possible interference with ongoing monitoring of which AES is a participant and that at the very least incorporating another monitoring program within the framework of the existing program will require close coordination. Shawn Smallwood will issue his study plan before the meeting for SRC and public review.

QAQC Subcommittee Update and Discussion

Related Documents

P236_Yee Altamont Detection Probability Estimate Using QAQC

At the February SRC meeting, the SRC directed that Member Julie Yee meet with the Monitoring Team, as the Analysis Subcommittee, to consider an approach to analyzing QAQC Study data. The committee has met for discussions and Julie Yee developed P236, which proposes a set of assumptions, which would be part of the structuring of the analytical model to develop an estimate of detection probability. She said she has attempted, in developing the assumptions, to capture the collective thinking that has occurred at SRC and subcommittee meetings. Developing an analytical approach is complex because the data are drawn from both artificial placement trials, in which carcasses were placed at monitored strings to measure detection error, as well as from naturally placed carcasses, which are found potentially multiple times during the course of monitoring. Each type of data must be used appropriately. It will be important to keep the analysis as simple as possible, to make it manageable. If not, the analysis may have to estimate more pieces of the detection probability function. Estimating fewer pieces, with more data per piece, would likely result in a more accurate estimate than a function with many pieces, with fewer data per piece. Her goal was to simplify and aggregate together similar enough pieces. This would maximize the potential effective sample size for each piece.

Julie Yee reviewed the document and sought input from the SRC and others on the call on the following questions:

- Which aspects do not reflect everyone's thinking?
- Is this approach thinking about data in a way that makes sense?
- Can the SRC accept these assumptions as something to work with?

SRC Questions

SRC members raised the following questions:

- Do we want to know what happens to each carcass? In response, Julie Yee said the knowledge of individual carcass detection histories will be important, and some of

that history can be implied by the data. However, there is not a great level of control of the data to determine precise histories. It is possible to have different carcasses entering the dataset at different ages and under different conditions, and part of this strategy will be to model the data with age as a covariate to fit a curve to that relationship.

Julie Yee and the rest of the SRC and call participants discussed the three broad assumptions presented in the paper.

Assumption A1
Julie Yee said she would like to be able to look at data from different months and seasons and assume that detection probabilities from different months are the same. There may not be enough data for individual seasons to achieve confidence for independent estimates between seasons.

Brian Karas of the Monitoring Team noted that the recent placed carcass surveys occurred from November to January, when vegetation would be short, and visibility high.

SRC Comments
SRC members raised the following issues in discussion:

- Look at seasonal data to the extent possible. There could be major differences in searcher efficiency in different seasons, because of the growth of vegetation and other conditions. We need to do our due diligence to attempt to account for these season-specific variations.
- If additional work is indicated in the future, the SRC could recommend which seasons to undertake the work to fill in data gaps. This could be considered for monitoring design in the next bird year. There would be no need for constant studying, but it is something to be studied periodically over the long-term to see that data do not change substantially.
- This seems like a reasonable assumption for analyzing existing data, but it is important to just keep the issues in mind.
- Make the assumption, but look at data across seasons.

Monitoring Team member Brian Karas said there may be other data from Monitoring Team removal studies that, once pooled, could be used as additional data for estimating detection probabilities.

Assumption A2
This assumption would allow the use of double-observer detection data to evaluate detection rates. The assumption hinges on whether or not the detectability of carcasses in double-observer detection data are representative of the detectability of carcasses in the Altamont in general.

SRC Comments
SRC members raised the following issues in discussion:

- There should be an underlying rationale for lumping categories, other than the desire to increase the sample size.

Public Comment

Renee Culver of NextEra asked if this assumption could affect different size class groups differently. For example, feather spots are usually only found for burrowing owls. Would this affect the estimate of that size class versus other size classes? In response, Julie Yee said these were good comments. The data analysis could compare the double detection and trial data sets to see if there was a pronounced difference between the two groups. This could be investigated.

Brian Karas of the Monitoring Team said the status check data could be used to compare the two groups to see if there is a different searcher efficiency rate between them.

Doug Leslie, Monitoring Team Project Manager, suggested the analysis could be approached, similar to a sensitivity analysis, by running the model and then relaxing assumptions when possible. It's easier to start with simple assumptions and then investigate the complexities.

Two SRC members said they could support the assumption if tested and validated through a sensitivity analysis approach, and none were opposed.

Assumption A3

Julie Yee said she and the Monitoring Team have discussed looking at whether there may be two parts of a curve to fit:

1. Fresh carcasses with good age estimates, for which detection probability can be estimated for lower carcass ages.
2. "Mature" carcasses that have been in the field, for which detection probabilities decrease as a function of time, rather than of age. These data can be used to estimate detection probabilities for higher carcass ages.

SRC & Public Comments

SRC members and members of the public raised the following issues in discussion:

- The only potential problem is that the definition of "mature" is season-dependent; carcasses dry out quickly in summer, perhaps as quickly as four days, while they can take longer than one month to dry out in winter. Detectability depends on state of body decomposition.
- Maturity of the carcass is also dependent on carcass size and the condition of the remains
- Two SRC members suggested running the analysis with the assumptions and seeing what happens. The SRC would consider the implications once data are available.

Public Comment

Renee Culver of NextEra asked how it would be determined where on the curve to place the transition. Julie Yee said the analysis doesn't necessarily need to place the carcass on the curve, but could pool the detection outcomes of all mature carcasses at different intervals to estimate a rate for the day-to-day reduction in detection probability which is then used to construct the higher age range of the curve for all mature carcasses.

Shawn Smallwood said he thought it was a great discussion. In August and September, there might be an opportunity to use the FloDesign study to do more trials with placed birds and found carcasses. Jesse Schwartz of the Monitoring Team said he supported leveraging whatever opportunities are available. Doug Leslie, Monitoring Team Project Manager, suggested that Shawn Smallwood include a proposal in the study plan that the SRC will consider at its May meeting.

Heather Beeler of the US Fish and Wildlife Service, an eagle permit specialist, said this discussion is hugely important. Scavenger removal and observer bias greatly influence estimates of turbine-related avian fatalities. She emphasized the importance of examining seasonal differences and of making study assumptions transparent. She will be participating in meetings and hopes to learn from everyone. She has been trying to get on the listserv and access SRC meeting materials.

Outcome of Discussion:
SRC members concurred with an approach of initiating the analysis based on the three assumptions, followed by systematically testing whether there were differences within the lumped data sets, such as investigating the data for each season, and comparing the analytical outcomes for placed versus found carcasses. The SRC would then review the outcomes to decide on a path forward.

Meeting Summary Approval

Related Documents

P226_SRC Meeting Summary September 2011
P235_SRC Meeting Summary February 2012

SRC members approved the draft meeting summaries without any changes.

Next In-Person Meeting: May 9-10, 2012

Topics

- Latest draft bird fatality report
- QAQC follow-up
- Consideration of 2012-13 bird year monitoring
- FloDesign turbine design study
- Briefing on solar farm proposal
- Work plan and proposed schedule for remainder of 2012

ATTENDEES

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