

**Altamont Pass Wind Resource Area Scientific Review Committee  
Technical Workshop on Monitoring Protocols  
December 5, 2006  
Summary**

The Altamont Scientific Review Committee (SRC) held a technical workshop to present and receive feedback on the:

- Preliminary Draft Results: Wildlife Monitoring at Altamont Pass, Winter 2005-Early Fall 2006
- Draft Avian Monitoring Protocols for Altamont Pass

More than 20 stakeholders asked questions and provided feedback on the preliminary analysis and draft protocols. This document summarizes the discussion.

**Part I. Preliminary Draft Results: Wildlife Monitoring at Altamont Pass, Winter 2005-Early Fall 2006**

Clarifying Questions (Q) / Answers

- Q: Are turbine sizes in the sample in relative proportion to actual turbines operating?
  - The turbines were selected to ensure representation in the different categories to have a statically significant sample.
- Q: Were only incidental finds on a search plot counted?
  - Yes, but a few outside the plot were assigned to the nearest turbine.
- Q: Did sampling continue during the seasonal shutdown?
  - Yes.
- In the report, you describe the sample as drawn from all participating companies. Who didn't participate?
  - North Wind
- Were the searches in both Alameda and Contra Costa County?
  - Yes.
- Was the mean interval 50 days?
  - Yes, with one 90 day gap.
- How is the data being compared to CEC data? How you are going make comparisons?
  - Scientists will eventually compare incidental finds. 2004 CEC report did not have access to WRS (wind company) data so this analysis must account for that change. Analysis will also have to factor in the seasonal shutdown.

Feedback—None provided.

**Part II. Draft Avian Monitoring Protocols**

## Clarifying Questions and Discussion

- Regarding the 2500 turbines: What does 2000 consistently mean?
  - Monitoring program starts with 2500 so at least 2000 are available at the end of the study because turbines are removed or become inoperable over time.
- Will photos be available right away for the person presuming cause of death?
  - Yes, but not all the photos are definitive because the searcher can't touch the bird. There will be 3-5 or more photos.
- Regarding 2000 turbines for 80% rate; this is not accurate. Power is to measure whether change has occurred but not how much. If program seeks to measure 45 percent reduction plus or minus a max error of 10 percent, then 2000 turbines are needed for the sampling size.
- How are the 200 high risk turbines defined for the Sample Design on American Kestrels and Burrowing Owls?
  - By high risk bird fatalities for these species.
- Regarding the part of the study where you'll be monitoring the 200 turbines every other day, since looking at frequency, will that information supplement understanding related to small bird scavenging?
  - Yes. For example, if the monitoring team finds a fresh burrowing owl in an area outside the 200-turbine sample, the team hopes to use the fresh bird to better understand scavenging losses.
- Through the sample design, the study is not trying to figure out how many owls are being killed, the objective is to find out how long it takes for them to disappear.
- You're saying that when you find information on other birds, you will also use it to correct scavenging information? There will be a mechanism for integrating the information?
  - Yes, to the extent possible.
- What are different categories for cause of death? Specifically curious about birds that might have been poisoned.
  - There are times when monitors can't be 100 percent sure about cause of death. Even necropsy results won't say; results would likely say "trauma." Often there is a debate on the questionable ones.
- The person is concerned about past programs that killed ground squirrels and that the birds might be contaminated from those animals.
  - **Response:** The SRC will take this under consideration.
  - Additional comment: In an initial 92 study conducted by Orloff, necropsies were done and could determine if there has been poisoning (by the way the blood coagulates). In that study testing showed no signs of bird poisoning.
- What happens when a bird obviously shouldn't be included? Ex. Bird that seems electrocuted.
  - The senior scientists will reach consensus on whether to include it.

- Correction factors. Many birds not killed by turbine but they die on the ground because they can't protect themselves from predators. Maybe a bird will be lying under a bush; won't assume nearest turbine. These are separated.
  - All are reported and analyzed. Some will be 'undetermined' – the undetermined mortality will be analyzed.
- Can we assume you'll look for the age of the carcass?
  - Yes. The monitoring team, in consultation with the SRC, will make an acceptable protocol for those categories.
- Standards and criteria: How do you define a fresh kill for example?
  - The team will have a common set of criteria.
- How many bones and feathers to designate a fatality?
  - Feather clumps are typically considered a death.
- There should be some understanding of what the criteria will be at a turbine.
  - The criteria will be transparent and shared.
- A key is what is the objective of the analysis? Need to use the same definitions so monitoring has comparative data. There will be many unknown cases. Only way to know would be to do background fatality estimates, which are very expensive and typically not that informative (just categorize as "trauma"). Monitoring team will develop consistent definitions.
- Why did the SRC decide to go with 30 days for the search interval? Carcass removal trials aren't ideal with the other birds. And, the statewide guidelines are recommending 15 days. So given that, it seems like every 2 weeks is the current paradigm.
  - The personal preference would be every 2 weeks; however, 1 month is sufficient for the larger birds. And that is why the sample design for American kestrels and burrowing owls supplements the Altamont-wide study.
  - Any study has constraints. What the SRC and monitoring team are trying to do is to live within a budget and design a really good study for the larger species but back that up with a shorter interval study. And the SRC sees this as an adaptive management strategy. The SRC wants to do both.
- If more intensive study shows significant losses will you do more frequent surveys? Or will you just do an adjustment?
  - Scientists will have to look at the data and decide how to proceed.
- Is the monitoring team using Hunt's data? 40 to 50 percent of eagles that died were natural causes not turbines.
  - Hunt was saying that 40 to 50 percent were killed by other sources such as water towers, cars, etc.
- Are you using that data? Yes, we use that data. And we communicate with him.
- The proposal is to do 3 additional years of study.
  - Yes. Correct.

- How will this study feed into the EIR coming down the road?
  - Understand that it will feed in; but haven't had those conversations explicitly. People should be aware of the coming EIR.
- Will the 45% reduction be collective or 45 percent for each target species?
  - That is the 4 species combined. The SRC did talk about this extensively. That is the way the language has been interpreted.
- Does that mean that you are changing from reducing all species individually by 45 %?
  - I think the SRC interpreted the permits as a collective combined goal. If there are additional thoughts, the SRC would like to hear them.
  - The resolution did end up ambiguous. This can affect management recommendations.
  - Some thought a reduction on all species was not possible so the interested parties picked 4 species; however, the speaker doesn't think that pooling was envisioned.
  - Response. It would be nice to understand how that was derived. If the permits are aiming for 45% reduction, then the sample size needs to be 2000 turbines. If the permits are trying to look at individual species with the same degree of scientific certainty, the sample size will need to increase. The SRC intends to look at individual species, but not with the same degree of certainty that is will examine the pooled species.
  - If the selection of the species and the selection of the target was initially made by Scott Horon. We talked to him and his staff to see what he meant. He meant a collective reduction; but that may be wrong; contact Service to see what they had in mind.
  - County Rep: Did evolve through many places. I don't disagree that this is ambiguous language. The SRC has great expertise and the county wants them to provide input. If the SRC needs to contact the Service agency that is fine.
- Like to bring up idea that main focus revolves around golden eagles. If golden eagles are lumped with the other 3 species then a reduction of golden eagle mortality is unlikely. If looking at 80% owl reduction, SRC must realize that red-tailed hawk fatalities are difficult to reduce.
  - The SRC plans to examine individual species; however, the degree of certainty for individual species will not be the same as that for the pooled species.
- Cost issue: How does study cost match with the county cap?
  - The SRC is working to reconcile cost with a sample size adequate to measure the effects of the conditional use permits. First the SRC is designing the best possible study.
- Where does the money come from?
  - The County conditional of use permit (i.e. the wind companies).
- A wind company owner noted the stress that these costs have on remaining a viable business.
- Noted from SRC member Joanne Burger: I am the outsider. I have been on many national committees. Many more contentious. In the two meetings I've been to you've put together a scientific committee that wants to move forward in a way that doesn't waste money and the money would be the most effective that it can be. Considerations are balanced with doing the study right the first time. What is the best way to get answers to move forward?

### **Part III. Participants Who Signed In**

Chris Bazar, Alameda County  
Ian Crave  
Bill Damon, Altamont Winds  
Terry Dugan, MRP Ranch  
Wally Erickson, WEST, Inc.  
Tara Happy, AIC/FPLE  
R. Koebe, Altamont Winds  
Kathy Lee, Ralph Property  
Nan Leuschel, Ralph Property  
Dail Miller, J&S  
Jeff Miller, CBD  
Tara Mueller, California DOJ  
Samantha Murray, Golden Gate Audubon  
Sandra Rivera, Alameda County  
R. Seymanski, Altamont Winds  
Steve Steinhour, Seawest  
Joan Stewart, FPE/AIC  
Dale Strickland, WEST  
Carl Thelander, BRC  
Ed Taylor, GREP  
Brian Walton, University of California  
Ed West, J&S  
Rick Wiebe, CBD

#### **SRC Members**

Joanna Burger  
Jim Estep  
Sue Orloff  
Shawn Smallwood  
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