

## Meeting Notes

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**Date:** July 24, 2009

**Attendees:** Altamont Pass Wind Resource Area SRC Analysis Subcommittee and Monitoring Team

Doug Leslie, ICF

Jesse Schwartz, ICF

Brian Karas - BRC

Julie Yee – SRC Subcommittee

Shawn Smallwood - SRC Subcommittee

**Subject:** Discussion of Outstanding Analytical Issues

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The SRC subcommittee met to review the outstanding issues regarding the analyses of Current Study and Baseline fatality data in the APWRA.

### Meeting Discussion:

#### *Seasonal Shutdown Analyses*

Baseline Study and Current Study– For basic comparisons in Seasonal Shutdown analyses, what turbines should be included in the analysis and what comparisons should be made (i.e. only turbines common to both baseline and currently study)?

- Using turbines common to both would make for a clean comparison. Winter months to winter months.
- Discussed the possibility of looking at fatalities over the entire year versus just the fatalities occurring during the shutdown period. Because most of the energy at the Altamont is generated during the non-shutdown period, the comparisons between entire years would be skewed by variation in seasonal patterns.
- Recommendation: Look at it but don't waste too much time on it.

- There was a discussion of all the variables, including turbine types and turbine height, that could be incorporated into the analyses. These will be taken into account as best we can when we stratify by plot, season, etc.
- Discussed using the equations in Smallwood (2007, Document S-19) to look at percent fatality reduction, using baseline fatalities at NREL strings during the winter shutdown period. Agreed that it was worth looking at but not the top priority.
- The possibility of examining fatalities on a scale shorter than seasons was discussed but the recommendation was to abandon this approach because of the inaccuracies in our ability to backdate fatalities accurately.

How should operating hours be accounted for in the analyses?

- We only have a monthly summary of operating hours for the baseline study, which limits the number of ways we can look at fatalities per megawatt. As it stands, we can only look at summarizing operating hours in the current study by month to make it comparable with baseline data.

### ***Bird Data Analyses***

Should an analysis using bird use data be included? If so, how do we get a standardized index of trends in bird use over time given the change in field methods?

- Using the full data set is not feasible because the study data is not tabulated; there are 4,000 data sheets with over 35,000 records to digitize (estimated 6 person months to compile)
- Discussed the problems with having different viewsheds and differences in detectability of different species.
- Recommendation: look at data for individual species.
- Recommendation: Use species detection rates developed by Smallwood et al. (in press) to standardize observation data to a common radius.

### ***KB Data Integration***

The subcommittee discussed applicability of KB data to the seasonal shutdown analysis and other reports.

- Decay curves derived from the KB data were presented for whole carcasses, partial carcasses, and feather spots. The 3 curves differed substantially. Initial review of data showed that whole carcasses had a steep decay curve; partial carcasses and feather spots showed more linear, shallow decay curves<sup>1</sup>.

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<sup>1</sup> See attached graphs.

- The group discussed whether adjustment metrics should be based on these curves or other sources. Also discussed how to use these curves. Combining curves to account for carcass transition was discussed.
- Recommendation: Review these curves with the full SRC to determine if/how to use the decay curves in calculating the fatality rates.



