

Meeting Notes

Date: June 26, 2009

Attendees: Altamont Pass Wind Resource Area SRC Analysis Subcommittee

Doug Leslie, ICF

Jess Schwartz, ICF

Brian Karas - BRC

Julie Yee – SRC Subcommittee

Shawn Smallwood - SRC Subcommittee

Subject: Discussion of Outstanding Analytical Issues

The SRC subcommittee met to review the outstanding issues regarding the analyses of Current Study and Baseline fatality data in the APWRA. The subcommittee made several recommendations for filtering criteria and other analysis issues, as follows.

Meeting Discussion:

General

- Database is almost complete. Current Study Fatalities table to be integrated with Baseline data Fatalities table shortly and given to Shawn Smallwood for review.

Filtering Criteria: How should fatality records be filtered?

Double Counting Filter – Using current methods, a fatality that is missed during one survey period is “adjusted for,” but is then counted when it is found during subsequent searches. Should carcasses that are missed be filtered out prior to analysis to prevent “over adjusting”?

- Recommendation: The consensus from the subcommittee was that there is no clear solution to this potential bias and that the bias is small enough to be relatively insignificant; therefore, this filter should not be used. *(See subsequent 7/9/09 email from Shawn Smallwood)*

Search Area Filter – search area filter of 125 meters disproportionately excludes records from Baseline versus Current Study. Should we change or remove this filter?

- The bias noted above may not be as prevalent as currently thought, according to BK, due to fixes to the database.
- Recommendation: Re-analyze the data using the current database. Characterize distribution of distances from turbine i) based on bird size for Current Study versus Baseline study; ii) including and excluding Diablo winds & “Howden” turbines; and iii) based on separate feather piles and other fatality types. Develop recommendations for search radius filter.

Fatality Back Date Filter – the average age of fatalities is older in the Baseline study than the Current Study. Should the age filter be abandoned or should a different filter be used for Baseline versus Current Study?

- Recommendation: Determined not to change the fatality back date filter.

Completed Record filter – this filter excludes more Baseline fatalities than Current Study fatalities. Perhaps some records filtered as incomplete should be retained?

- Recommendation: Records with incomplete data will be post-processed and reviewed to determine if exclusion is warranted. Attempt to establish more refined criteria to improve future analyses.

Estimate Adjustments and Error Reduction

Should feather piles or partial carcasses be treated differently? Feather spots have unique scavenger removal rate profiles and aging profiles. How do you treat them differently?

- Discussed the use of the KB data to resolve this question.
- Recommendation to (1) post-process KB feather pile and incomplete carcass daily scavenging data and (2) estimate feather pile removal rate. Review with SRC subcommittee at next meeting.
- Generate feather pile removal rate curve.

Should the analysis use “days dead” or search interval?

- Recommendation: It was determined to use “search interval.” It was concluded that the ability to age carcasses is currently too uncertain to effectively use “days dead” in analyses.

Monthly Search Interval Adjustment – there is too much variance in the search interval, which leads to greater imprecision in estimates of fatalities.

- Recommendation: Aggregate data by geography and by season to remove variance. Stratify search effort geographically (string & plot), and assess distribution. Estimate fatalities using string & plot-specific search intervals, and compare to adjustments using AWPRA-wide search interval.

7/09/09 Smallwood email on double-counting bias:

...there is no “double-counting bias.” This is something we’ve been over before, but it keeps popping back up. I sent Brian Karas a written proof of the non-existence of this bias, assuming the monitoring team adopts the scavenger removal methodology I normally use. Below is the explanation.

"The searcher detection rates we are using are averages of searcher detection trials reported in the literature. We are applying these average values to an average search interval, so we are not applying them to each search separately. I don't think this is really multiple counting... Imagine a search detection rate of 0.5 applied to a search interval achieved during 10 searches of a single turbine. If a bird carcass was available to be found during all 10 searches, but was found only on the 10th search, then the adjusted value would be 2. If it had been found during the first search, the adjusted value would be 2. If it had been found during the second search, the adjusted value would be 2. And so on. It makes no difference when it was found. This is one of the benefits of the approach we are using."