NOTES | 8/17/2007
Altamont Pass Wind Resource Area Scientific Review Committee Conference Call

Prepared by the Center for Collaborative Policy
Edited by the SRC
Final SRC Approval 12/11/07

Overview

The SRC approved several meeting summaries and the SRC written decision on the FPLE credit request.

The SRC agreed that the monitoring period is three years for the Altamont-wide study, November 2006 to November 2009, consistent with the settlement agreement. The SRC is still discussing which statistical method the SRC would recommend (i.e. how) to measure the 50% reduction.

Action Items

MT—Circulate profiles / bios of new team members.

Meeting Summaries Approved

P34_Meeting Summary Call 6/12/07

P35_Meeting Summary Call 7/3/2007

SRC Approved Document on FPLE Credit Decision

P40_SRC on FPLE Credit (Updated 8/15/07)

Monitoring Team Update

WEST has decided to withdraw from the monitoring team (MT). UC Santa Cruz is revising the budget and reconfiguring the team. Jones & Stokes Ed West and Lars Mobrand, a biometrician, will do primary report writing and data analysis. J&S has capable in-house biometrics staff and will rely on review from University statisticians. The MT recognizes the sensitivity and benefit of outside review and will use consultants for this purpose. As planned all along, data entry is scheduled to be transferred to UC Santa Cruz.

One field crew person will leave with WEST. Brian Latta will be in the field supervising the crew. BRC has taken over the house lease and the car leases under WEST. The MT is interviewing field crew to fill this position and to conduct the burrowing owl and American kestrel study. By week of August 27, the study crew should be ready for training. There have been no gaps in data collection or activities on the ground.

There was a question about raw data sheets being sent directly to FPL. The MT clarified that FPL needs data for the WRRS (companies' database for fatalities) for its permits. FPL would typically copy the data sheets and hand them back to the MT for efficiency. In the future, the university will summarize the data and submit it to FPL.

Monitoring Period and Measuring Reduction

Issues

1. Length of the Monitoring Period (P43 and P44)
2. What constitutes 50% / how to measure 50% reduction

Related Materials

All documents located on the Analyses / Reports Page
P43_Smallwood Memo: Opinion of Some SRC Members that the Period over which Post-Management Mortality will be Estimated Remains Undefined, 26 July 2007
P44_Smallwood: Effects of Monitoring Duration and Inter-Annual Variability on Precision of Wind-Turbine Causes mortality Estimates in the Altamont Pass Wind Resource Area, California, 26 July 2007
P45_Yee Email: Monitoring Period and Using Averages to Measure Reduction, 26 July 2007 (response to P43 and P44)

SRC Agreement on 3-Year Monitoring Period

The monitoring period is three years occurring from November 2006 to November 2009.

Discussion

After some confusion in several recent discussions, the SRC discussed the length of the monitoring period for the Altamont-wide monitoring program and agreed that the monitoring period would run from November 2006 through November 2009 consistent with the settlement agreement. Although the SRC charge is to assist the County of Alameda with determining how to measure the effects of mitigation measures, the SRC has not decided on the statistical methodology to determine the percent reduction.

How to Measure 50% Reduction

The SRC has previously discussed, but did not reach a formal decision, on using the CEC 2004 Smallwood & Thelander study as the baseline, and using the monitoring period (Nov 06 to Nov 09) as post-mitigation data. This would require re-analyzing the CEC data from this study to make it consistent with this Altamont-wide study program. Scientists would compare three years of data to the baseline.

The SRC is discussing the pros and cons of several methodologies, which each have limitations, and are affected by the companies' decisions to implement management strategies during the three-year monitoring period.

Simplified Explanation of Options Discussed

"Point Estimate"

Look at percent reduction between baseline and three-year point estimate.

X= Baseline

Y = Average Mortality for three years ending in Nov 2009

[(Y-X)/X]×100%= Percent Change

A negative value for percent change is a percent reduction, while a positive value is a percent increase. Note: The power analysis that determined the number of turbines in the sample was contingent on comparing the baseline to a three-year average, not just the November 2009 value.

"Trend Analysis with Regression"

Draw a trend line through the three points to estimate mortality at the end of year 3 (Nov 2009). If Mortality in year 1 = a, Mortality in year 2 = b, mortality in year 3 = c, then draw an (x,y) plot with the coordinates (1,a), (2,b), and (3,c), and draw a trend line through these points.

Notes: Demonstrates reduction over time; however, this type of analysis may be inappropriate due to few degrees of freedom (i.e., small number of years compared). In trend analysis, many unknowns exist. The data in years 1 and 2 may not have much bearing on the estimate at year 3 or November 2009. In the Point Estimate approach, all the data go into estimating the single value of "Y."

"Average Mortality Reduction Compared to Baseline"

(Percent reduction year 1 + percent reduction in year 2 + percent reduction in year 3)/3 = average mortality reduction.

Percent reduction each year is determined by comparing that year's adjusted fatality rate to the baseline. Three-year average has to be at least 50% (plus or minus 10%).

Discussion

The SRC needs data to decide on the best approach for arriving at an estimate of % reduction; however, it also needs to agree on the methodology in advance. The analysis needs to be tailored to the mitigation. If the companies introduce new strategies during the monitoring period, then the trend analysis may or may not be appropriate. If the companies don't introduce new strategies, then the SRC might recommend doing a point estimate. One member of the MT observed that both methods could offer insights. The SRC has identified these issues as potential problems and will likely issue a memo to the settlement parties so they can engage in a full discussion on this topic. If the parties don't perform mitigation soon, it could compromise the results of the analysis. The SRC will decide whether to send this memo at their in-person meeting in August.

Outcome

Develop a strategy for the memo after the discussions at the August 2007 in-person meeting.

Participants

SRC
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Sue Orloff
Shawn Smallwood
Julie Yee

Identified Members of Public
Joan Stewart, AIC & FPLE

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