



Memorandum

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Date:	October 13, 2010
To:	Sandra Rivera
Cc:	Altamont Pass Wind Resource Area Scientific Review Committee
From:	The Monitoring Team
Subject:	Search Radius Study—Analysis Subcommittee Meeting Summary

During the last Scientific Review Committee (SRC) in-person meeting on July 28 and 29, the SRC articulated their priorities for research in the Altamont Pass Wind Resource Area (APWRA). These priorities were Avian Fatality Monitoring, implementation of the QA/QC Study, and implementation of the Burrowing owl study. However, there was general agreement that the Burrowing owl study plan was in need of updating and revision. There were also discussions concerning a study to examine the effects of an increased search radius on fatality estimates. This research study option was identified as a fourth priority toward the end of the meeting. It was determined that if the budget would allow implementation of the search radius study, then a subsample of the Diablo turbines would be put back into the search rotation. The Diablo turbines had previously been excluded from the new sampling scheme at the request of the SRC. The next meeting of the SRC was a conference call on September 28, 2010. During this meeting the SRC recommended the monitoring team to cancel implementation of the proposed burrowing owl distribution and abundance study and to implement a search radius study instead.

Details concerning the study design and objectives were not discussed at either of these meetings. Therefore, at the direction of the County, the monitoring team initiated a conference call with the analysis subcommittee of the SRC (Shawn Smallwood and Julie Yee) on October 4, 2010.

The monitoring team indicated to the subcommittee that approximately 156 fatality records were obtained from searches of the Diablo turbines over a period of approximately 4.5 years. This means we can expect approximately 35 fatalities per year, assuming that the increased search radius does not result in documentation of additional fatalities. Because this would be considered a minimal sample size for the study, the subcommittee directed the monitoring team to make every effort to sample all of the Diablo turbines to maximize the sample size. It was then agreed that the number of old generation turbines that need to be searched as part of the search radius study should be enough to provide at least an equivalent number of fatalities based on past monitoring history. However, if budget allows, the subcommittee would like to see a buffer of approximately forty percent to ensure adequate sample sizes.

It was also agreed that the extended search radius would be double the current search radius, i.e. 150 meters for the Diablo turbines and 100 meters for the old generation turbines. Finally, it was determined that searches will be conducted to the current search radius and all fatalities observed—even if they are outside the search radius—would be processed as they currently are, and only then will the search be conducted out to the new search radius. This method ensures that turbines included in the search radius study can also be used as part of the overall monitoring effort without needing to *adjust* the data to account for different search radii.

The objectives of the search radius study are to first determine an appropriate search radius for the larger new generation turbines which would allow future monitoring of repowered turbines to remain comparable to old generation turbines, and second to come up with an adjustment factor that accounts for the number of birds that may be missed due to the search radius being too small, and to determine if the proportion of fatalities missed is proportional between the two turbine types (i.e. new generation and old generation turbines).