

## Meeting Summary | April 9-11, 2007

### Altamont Scientific Review Committee

Developed by the Center for Collaborative Policy  
Reviewed and Final Approval by SRC on 12 June 2007

#### Key Outcomes

- The SRC reviewed and discussed **research on management strategies** and its implication for reducing avian mortality in the Altamont. After discussing several strategies, SRC members agreed the strategies that appear to have the greatest potential of reducing raptor mortality are repowering turbines, the winter shutdown of turbines and re-siting risky turbines to less dangerous areas. Other strategies that may warrant additional studies include blade painting and erecting non-perchable pylons at the end of turbine rows to serve as flight diverters. Additionally, moving artificial rock piles that attract prey farther away from turbines might contribute to reduction in mortality. The other strategies discussed were alternative turbine models/types, habitat management and manipulation, prey-based strategies, sound as a deterrent (including radar), lighting, flight deterrents, alternative perches away from the wind turbines, and lockdown versus shutdown.
- The SRC recognized the importance of studying the specific effects of **adding pylons** and **removing risky end-row turbines** on raptor behavior and mortality. This could be accomplished partly by behavioral observations.
- The SRC recommended that **any relocated turbines be moved to lower risk sites** designated Tiers 4, 5 or 6, otherwise companies should consult on new locations with the SRC. The SRC supports flexibility in the companies' approach and the use of professional judgment. When a company decides to move a turbine to a site other than Tier 4, 5 or 6, or one that is not classified, or if the company has special considerations, the company should consult with the SRC.

Citation: Smallwood and Spiegel (June 2005); SRC previous recommendation regarding tiers; and Repowering a Portion of the Altamont Pass Wind Resource Area 1998 Draft Environmental Impact Report.
- After reviewing avian mortality data for the first of two years of monitoring at the **repowered Diablo Winds site**, SRC members were in strong consensus that continuing to gather data at Diablo Winds is critical, as repowering seems most likely to significantly reduce avian mortality. Also, the Settlement Agreement called for the SRC to incorporate data from the repowering projects to estimate any change in mortality. The SRC agreed that to do so would require uninterrupted data collection from Diablo winds in addition to collecting data from old turbines. To ensure this occurs, the SRC agreed to shift a portion of the monitoring program's proposed 2.5-year budget from "Addressing Additional SRC Requests" to a new line item to continue monitoring at Diablo Winds.
- The SRC agreed that a different approach is not needed to monitor Settling Party turbines versus non-Settling Party turbines. Factors contributing to reduced mortality are not easily isolated in data analysis because the non-settlement turbines are small in number and dispersed throughout the APWRA.

### Action Items & Meeting Follow-Up

Party	Due Date	Action
County	6/1/07	Seek AWI proposal on blade painting for June 07
Monitoring Team	6/1/07	Send revised draft of searching/observation protocols to SRC
CCP	5/15/07	Revise pooled species summary in meeting summary P14. Once approved, SRC to issue separate pooling paper
County	6/2007	Reconfirm requirement for removing derelict turbines under G1
Smallwood Bartlett	done	Re-Post Verification of Tier 1 & 2 Wind Turbine Shutdowns and Relocations, K Shawn Smallwood, 9 April 2007 (P22) on web after slight modification
CCP	N.A.	Date agendas
Estep	June SRC	Call/follow-up with Lindsay Museum
Bartlett	5/15/2007	Update P13 agreements summary/reformat for web
Rivera	5/1/2007	Repost on web updated G1 & G2
CCP	5/15/2007	Update Q&A on the Settlement Agreement & the SRC to improve clarity for public to introduce settlement-related issues (S11)
County	6/1/2007	Organize questions & feedback on power output data
SRC	NA	When reviewing documents, put initials/# of document in subject line
MT	6/1/2007	In 6-month report, include: <ul style="list-style-type: none"> <li>▪ table of 4 species and all raptors as function of different tower types and number of towers</li> <li>▪ analyze mortality close to operating turbines and not close to operating turbines for seasonal shut down data</li> <li>▪ include the turbine number and if that type can be locked down</li> </ul>
Companies	June 6, 2007	Cost estimate and feasibility of erecting pylons
Bartlett	6/1/2007	Include public comment under each agenda item
Rivera	6/1/2007	Confer with FWS regarding timing of moving rock pile and permitting requirements
Rivera & Washington		Confer with Chris Bazar regarding possible confidentiality legislation
Ed West	5/15/2007	Share research on sound as deterrent

### Approval of Meeting Summaries

The SRC approved summaries for the following meetings:

- February 5-7, 2007
- March 13, 2007 Conference Call

## Management Strategies

In previous meetings, the SRC has focused on how to measure change in mortality in the Altamont Pass Wind Resource Area. In this meeting, the SRC is shifting its focus to concentrate on:

- What strategies might reduce raptor mortality?
- How to evaluate the effectiveness of management strategies?
- How to improve strategies to reduce injury and mortality?
- What are the implications of implementing strategies on the monitoring program?

### Strategies in Conditional Use Permits -- What's Recommended and What's Required?

Sandra Rivera, the County's assistant planning director, discussed with the SRC the differences between Settlement Agreement conditions and permit conditions for non-settling parties. The SRC is not restricted from recommending to the County that settling companies implement management strategies not stipulated by the Settlement Agreement. Although not required, implementing additional strategies could meet the companies' interest to reach the 50% reduction in mortality. After 2009, when the adaptive management period begins, such actions could be required.

### Management Strategies in the Conditional Use Permits

<b>G1/Settling Parties</b>	<b>G2/Non-Settling Parties</b>
<b>Required:</b>	<b>Required:</b>
Electrical retrofit	Electrical retrofit
Removal of derelict & non-operating turbines	Removal of derelict & non-operating turbines
Seasonal shutdown	Seasonal shutdown
Tier 1 & 2 removal or relocation	Tier 1 & 2 removal or relocation
Tier 3 removal/relocation	Removal of artificial rock piles
<b>Subject to Consultation with Parties:</b>	<b>Subject to SRC Recommendation:</b>
Removal of artificial rock piles	Stop rodent control
Blade painting	Blade painting
	Removal of guy wires

### What Management Strategies Does Current Research Recommend?

The SRC reviewed and discussed research on management strategies and its implications for the monitoring program. The SRC identified the following management strategies for consideration:

- Habitat management & manipulation
- Alternative perching
- Prey-based strategies
- Flight deterrents
- Sound as deterrent
- Use of radar

- Blade painting
- Lighting
- New turbine types
- Winter shutdown: Four-month shutdown & preferred shutdown months
- Repowering
- Turbine siting (clustering, arrangements)
- Lockdown versus shutdown
- Permanent shutdown of high risk turbines

### Discussion Insights

- **Habitat Manipulation** can be difficult and impractical to implement because of the size of the wind farm, lack of habitat diversity on site, and the multitude of owners. Potential benefits from excluding cattle from the area around the turbines were discussed. Some species might benefit from efforts to move perches and prey bases to lower portions of slopes to draw them away from towers. However there are unlimited perches in the APWRA with fences, overhead lines and other sites making this somewhat ineffective.
- **Sound as Deterrent:** Avoiding sound habituation by avian species is difficult. Ed West has research which he will share with the SRC.
- **Use of Radar:** A recent study has shown that bats avoid airports with radar systems and that radar may be a possible bat deterrent.
- **Lighting** is a safety issue dictated by FAA regulation. Limitations on lighting to reduce its effect as a possible bird attractant may not be possible.
- **Flight Deterrents and End-Row Pylons:** Behavior studies have shown raptors often try to avoid flying through a string and are struck and die more often at the ends of rows. Behavioral monitoring is necessary to understand the benefit, if any, of flight deterrents. Examining the impacts to mortality after high risk or end row turbines are removed and conducting an isolated behavior study in response to these changes would be useful for informing future management decisions. The SRC discussed the potential of studying end-row pylons as flight deterrents. A cost estimate is needed for erecting non-perching pylons at ends of rows for study purposes. It might be impossible, although is very difficult, to convert derelict lattice towers at the ends of rows into structures that cannot be perched upon.
- **Repowering** appears to have benefits for three of the four target species, except perhaps red-tailed hawks, and more analysis of impacts to red-tailed hawks is needed. Industry reps say they would like to repower, but face many hurdles, including environmental uncertainties, obtaining financing, and resolving debt on current turbines. More data and analysis on the effect of repowering on lowering mortality rates on the four key species would help resolve uncertainties. Data currently being collected from Diablo Winds and access to data from the Buena Vista project would help in this regard.

### Concluding Observations

After reviewing the strategies, SRC members agreed the strategies that appear to have the greatest potential of reducing raptor mortality are, in order:

- Repowering turbines

- Winter shutdown of turbines
- Re-siting risky turbines to less dangerous areas

Other strategies that may warrant additional studies include blade painting and erecting non-perchable pylons at the ends of turbine rows to serve as flight diverters. Additionally, moving artificial rock piles, which attract prey, farther away from turbines might contribute to a reduction in mortality.

### **SRC Agreement on Relocating Turbines**

The SRC recommended that any relocated turbines be moved to lower risk sites designated Tiers 4, 5 or 6, otherwise companies should consult on new locations with the SRC. The SRC supports flexibility in the companies' approach and the use of professional judgment. When a company decides to move a turbine to a site other than Tier 4, 5 or 6, or one that is not classified, or if the company has special considerations, the company should consult with the SRC.

Citation: Smallwood and Spiegel (June 2005); SRC previous recommendation regarding tiers; and Repowering a Portion of the Altamont Pass Wind Resource Area 1998 Draft Environmental Impact Report.

### **SRC Agreement on Monitoring Program: Pylons and End-Row Turbines**

The SRC recognized the importance of studying the specific effects of adding pylons and removing risky end-row turbines on raptor behavior and mortality.

### **SRC Agreement on Monitoring Two Sets of Conditional Use Permits**

The SRC and the County also discussed the question of monitoring the 920 non-settling turbines, which are a small sample size and are dispersed throughout the APWRA, and whether it is possible to avoid confounding factors. One monitoring program will suffice for evaluating the two sets of conditions.

The SRC agreed that a different approach to monitoring for Settling Party turbines and non-Settling Party turbines is not needed. However, it will be difficult to isolate effects on the non-settling party towers compared to the settling parties. Factors contributing to reduced mortality are not easily isolated in data analysis because the non-settlement turbines are small in number and dispersed throughout the APWRA.

### **Follow-Up Required**

- County to repost updated Conditional Use Permits G1 & G2 on web.
- The following strategies will be discussed further: four month shutdown, shutdown during other months, permanent shutdown of high risk turbines, and new turbine types.
- County to seek AWI proposal on blade painting for June 07.
- Companies to provide unit cost estimate and feasibility of erecting non-perching pylons: two pylons per end, a few feet apart, at a distance equal to spacing between turbines composing the row of turbines, on a moderate slope.
- The SRC discussed that the MIT might develop a new model, with a target date of June, using the last 1.5 years of data to reevaluate existing tier classifications and

classify the 700-800 unclassified turbines. The SRC will have to confirm that this is a priority at a subsequent meeting.

## **Seasonal Shutdown Data Report**

WEST Inc., one of the Monitoring Team consultants, presented a preliminary analysis of winter turbine shutdown in the APWRA from January 2005 to October 2006, as an addendum to the MT report "Wildlife Monitoring at Altamont Pass, Winter 2005 -- Early Fall 2006, Preliminary Draft Results" (2006). The report includes analysis of the first year of winter shutdown from November 2005-February 2006, as well as various temporary shutdowns of the Patterson Pass Project, the Santa Clara site and the AES SeaWest Ralph site. For the full Alameda County APWRA winter shutdown, half of the area, north of Altamont Pass Road and Interstate 580, shut down for the first two months, with the southern half shut down for the latter two months. According to the report, fatality rates were about 50% higher at operating turbines than at turbines shut down during the winter. The figure was 70% when including data from the three temporary shutdowns. There was a substantial difference between the north and south areas. In the southern turbine field, the same number of fatalities was found during both operating and shutdown periods.

In public comment, William Damon of AWI distributed graphs showing a spike in raptor fatalities in the month after shutdown at his company's turbines, particularly in March of one year (a migration period). He suggested that there might be a habituation effect from the shutdown, meaning that when the shutdown is terminated more birds collide with the turbines that had recently not been operating.

SRC members were concerned about the high number of fatalities recorded during shutdowns. SRC and MT members discussed several questions raised by reporting of the results:

- To what extent are burrowing owl feather spots predator-related fatalities?
- What is the extent of background raptor mortality?
- How close were the fatalities attributed to shut-down towers found from nearby operating turbines?
- Were there any aspects of the environmental setting, such as end row or top of ridge, associated with fatalities?
- Were the data affected by some shutdown searches occurring after turbines had been turned on?
- Some turbines are not locked down when they are shut down and could slowly rotate with the wind, at about five rotations per minute. Could this rotation have any impact on raptor mortality?
- Is there a habituation effect from shutdown?

The Monitoring Team will attempt to analyze the second year of winter shutdown data for a cumulative report at the SRC's June meeting.

## **Follow-Up Required**

The SRC asked that the report include:

- Data by locked/unlocked turbine type
- Data by month to look at March issues
- A table of 4 species and all raptors as function of different tower types and for the number of towers
- Analysis of mortality at turbines close to operating turbines and not close to operating turbines
- More data, including cause of death attributed to each bird.

## **Diablo Winds Monitoring Data and Methods**

The SRC reviewed the MT's avian mortality data for the first of two years of monitoring at the repowered Diablo Winds site to consider how to incorporate the Diablo Winds data into the full monitoring program to count toward the 50% reduction. Seven raptor fatalities were found the first year, of which red-tailed hawks were the most common. The data analysis of the thirty-one 600 kW Diablo Winds turbines produced an unadjusted mortality estimate of 0.34 collision-caused deaths per megawatt per year for all raptors combined, compared to 1.0 per megawatt per year in the Smallwood and Thelander 2004 CEC report. In looking at the mortality data for all birds and bats, SRC members noted that more than one third of bird fatalities occurred near two of the 31 turbines, which raises questions about environmental factors at those turbines sites. Consultants are just completing the second year of monitoring this month and have no funds to continue monitoring the Diablo Winds project.

### **SRC Agreement on Diablo Winds Monitoring**

SRC members were in consensus that continuing to gather data at Diablo Winds is critical as repowering seems likely to reduce avian mortality significantly and more directly comparable data is needed, and because the settlement parties expected the SRC to incorporate data from the repowering projects into the overall analysis stemming from the monitoring program. To ensure this occurs, the SRC agreed to shift a portion of the monitoring program's proposed 2.5-year budget from "Addressing Additional SRC Requests" to a new line item to continue monitoring at Diablo Winds. These mortality data will allow the monitoring team and the SRC to evaluate repowered versus non-repowered sites. These data will be critical to adaptive management strategies.

## **Settlement Issue: FPLE Request for Tier 1 & 2 Credits for Removing or Relocating Turbines**

FPLE is seeking credit for removing or relocating 96 turbines in place of a settlement requirement to remove all its Tier 1 & 2 turbines. The SRC in February 2007 considered the credit request and asked FPLE to provide further information.<sup>1</sup> At this meeting, FPLE presented its data and maps on the removed and relocated turbines, including fatality data from 1989-2006. FPLE reported that it permanently removed or relocated 96 turbines in 2004. Of these, FPLE left 42 lattice towers as end-row pylons. In April 2006, FPLE removed 22 of these 42 lattice towers. FPLE is seeking credit for each of the removals and relocations as the settlement requires FPLE to remove 60 high risk

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<sup>1</sup> See [February 2007 Meeting Summary](#) for more details on the February FPLE presentation and SRC discussion.

turbines (designated Tier 1 & 2) if the credit is not granted. So far it has removed 10 of the 60 through attrition. Of the ten, 5 were Tier 1 (22 Tier 1 remaining), and 5 were Tier 2 (28 Tier 2 remaining). As part of the credit proposal, FPLE said it would continue to remove Tier 1 & 2 turbines through attrition.

One SRC member requested additional time and spent the evening reviewing the maps and APWRA-wide FPLE mortality data to determine if other areas with mortality issues might need to be addressed. The SRC member proposed removing one additional string containing turbines 4286 to 4294, which accounted for 8 out of 12 fatalities reported in unremoved Tier 1 turbines. She also proposed erecting non-perching pylons at a few end-row locations that were associated with past fatalities for study. The entire SRC reached consensus on a compromise position that FPLE would receive credits after removing one string of Tier-1 turbines (4286 to 4294) and agreeing to participate with an end-of-row pylon study.

Later, FPLE responded that it could not support the pylon portion of the proposal, saying it was unfair to put the responsibility of the study on one company. FPLE said it would participate if other companies agreed to do so, but was unwilling to make a commitment as part of the credit issue without knowing the cost of erecting pylons. The SRC discussed delaying a decision to the June meeting so that the cost of a pylon study could be considered in the SRC decision. At least one member felt that implementing the pylon study is important and linking it to the credit could provide a catalyst to initiate the study. Other members felt delaying the decision was unfair to FPLE and urged a decision on the matter.

The SRC was unable to develop a consensus recommendation on the FPLE request for credit. Three SRC members supported granting credit with removal of the indicated string. Among the three members in the majority, one SRC member believed FPLE made a good-faith effort and should not be penalized for being proactive. That effort, coupled with the indicated string removal, produced equal or greater reductions in mortality than removal of Tier 1 & 2 turbines, according to a comparison of WRRS data. This member felt that the pylon study requirement would be an unfair burden on one company. The second SRC member viewed the string removal plus the good-faith effort of previous removals as a reasonable trade-off for Tier 1 & 2 turbines. While believing the pylon study to be important, this member did not want to see it linked to this issue. The third would have felt more comfortable if she had time to verify the FPLE statistics were using data from a scientific study such as Smallwood and Thelander 2004 rather than on WRRS, but believed FPLE's removal actions appeared to be associated with more fatalities than Tier 1 & 2 turbines so the intent of the Tier 1 & 2 removal appeared to have been achieved. This SRC member did not support the pylon requirement as part of this decision, seeing it as a penalty for FPLE.

A fourth SRC member was undecided. This member wanted to link the credit to a FPLE commitment to a pylon study or other activity that might help achieve the 50% reduction in mortality.

The fifth SRC member did not support granting the credit. This member felt it is incumbent upon the SRC to assist the companies in achieving the 50% reduction and



does not believe the companies will be able to achieve the 50% reduction in 3 years with the strategies committed to date. The member believes the potential mortality reduction that might result from removing the high risk turbines could help achieve the 50% target. His other major reason for not supporting the credit was because he was not convinced by the evidence provided that the turbines removed were removed to reduce mortality or that they would have reduced mortality any more than any other turbines.

Under the SRC charter, a split SRC decision is forwarded to the Planning Director for a decision. If necessary, the facilitator will prepare a memo to the Planning Director on the three-member and other members' opinions on the FPLE credit issue reflecting the range of perspectives. The SRC will have an opportunity to review the memo before it goes to the Planning Director. If an individual SRC member wants to provide a separate dissenting opinion, it would be attached.

#### **Follow-Up Required**

SRC members agreed it is critical for the MT to monitor the end-row effect where FPLE has removed an end-row turbine in the sample in the northwest quadrant to see if mortality occurs at the new end-row turbine.

The SRC also discussed looking at the environmental conditions of the string proposed for removal to examine possible factors related to the high number of fatalities.

### **Lindsay Museum Outcome Data**

Reviewing the "Altamont Searching & Observation Protocol" at the February 2007 meeting, some SRC members raised questions about Lindsay Museum release and euthanizing procedures for injured raptors. The SRC asked AIC to report on the outcome of birds transported to Lindsay.

The Lindsay Museum provided information on about 30 injured birds transported to Lindsay during 2004-06. The outcomes of all but one were euthanization. The question is whether some injured birds have treatable injuries and could be rehabilitated. The SRC agreed to contact Lindsay's rehabilitation director to discuss the facility's philosophy and protocol.

#### **Follow-Up Required**

Jim Estep will follow up with the Lindsay Museum director and report back at the June SRC meeting.

### **Compliance Reporting and Permits**

#### **Compliance Reporting Updates**

The County presented an updated compliance schedule (P17) for Settlement Agreement conditions (Exhibit G-1).

## **Verification of Compliance**

The SRC and the County discussed various methods of verifying wind farm compliance with permit conditions. The permits do not call for a specific verification or compliance monitoring. Such a program is usually established to monitor mitigation called for in an EIR; in this case, the CEQA process has not yet occurred.

Verification possibilities include:

- Company reports
- Photographs
- Annual tours by SRC
- Monitoring Team records data while in the field (limited to sampling sites)
- County uses third-party verification or monitoring

SRC members agreed to advise the County that they consider the ideal method to be third party verification. If that is not possible, a report from the MT from sampled sites would be the next best alternative. The SRC will continue to welcome company reports at its meetings and to visit the wind farm annually to see mitigation measures firsthand.

## **Discussion with Companies on Permits**

Several companies had follow-up questions and reports from previous SRC meetings and recommendations. These discussions are summarized briefly here.

### **Report on Retrofitting Electrical Power Lines -- AIC/FPLE**

AIC presented a report including photographic and graph exhibits (P25 with Exhibits A-C) describing and illustrating its activities to implement Avian Power Line Interaction Committee's (APLIC) Suggested Practices for Avian Protection on Power Lines. AIC reported that protection is not foolproof and that avian electrocutions occur, particularly on risers, even with retrofit. The company believes it is doing as much as it can short of putting electrical systems underground. Although not required, putting wires underground when repowering is standard practice.

### **Criteria and Removal Issues for Derelict and Non-Operating Turbines – AWI**

AWI discussed the definition of the term "derelict/non-operating," saying it has interpreted the term to mean towers that it does not believe will be back in operation in the foreseeable future. Both AWI and FPLE are keeping some empty towers in order to transfer Tier 1 & 2 turbines to them.

### **End-Row Towers – FPLE**

SRC members asked FPLE if any of its end-row derelict towers could be made unperchable. All the towers are lattice. FPLE reported that it had tried to install barriers to lattice towers, but the cloth strapped around the lattice towers could not withstand the winds and blew off, and the raptors perched on the maintenance platforms.

### **Rock Piles**

AIC reported it has had trouble getting a map of rock piles that are required to be moved downhill from towers. AIC requested a definition of "human-made" rock piles because determining if a rock pile is natural or not is difficult. Shawn Smallwood

reported that Alameda County has a map of all human-made rock piles at sites sampled by Smallwood and Thelander. Some SRC members suggested that AIC work with the Monitoring Team to determine human-made rock piles. The Monitoring Team is to report to the SRC in June on fatalities associated with rock piles. Because moving rock piles may impact special status species such as tiger salamanders, a lengthy federal Endangered Species Act permitting process may be necessary before piles can be moved.

#### **Follow-Up Required**

County to confer with FWS regarding the timing of removing rock piles and required permitting

#### **Permittee Questions about SRC Recommendations**

In response to questions that have arisen about previous SRC recommendations, the SRC urged the permittees to e-mail the County and/or SRC when they have a question or implementation concern about SRC recommendations. The SRC can then respond to the issue at its next conference call or regular meeting. Company representatives said they preferred dealing with one contact point, so they can e-mail the County, which will forward the concern onto SRC members.

In addition, the SRC will provide research citations for its recommendations, when appropriate, so permittees can review the relevant research on the recommended strategy.

#### **SRC Protocols & Brown Act**

##### **Summary of SRC Agreements & Recommendations**

A new document (P13) and web page will list all SRC agreements and recommendations for the public to see. The SRC will review and update it after each meeting. The items will be organized by topic. Outdated items will be retained and changes noted.

##### **Follow-Up Required**

Facilitator to update P13 agreements summary and reformat for web

#### **SRC in the Permits**

##### **Exhibit D & SRC Charter Consistencies**

The SRC agreed to recommend changes in Exhibit D to make its language consistent with the SRC Charter.

##### **Subject to Confirmed Determination**

In Exhibit G some mitigation measures are subject to “confirmed determination by the SRC.” The SRC agreed to recommend that the County revise the language to “on recommendation of the SRC” so that the SRC is no longer in the role of verifying company compliance.

## **Upcoming Meeting Dates**

### **Conference Calls**

- 4/23/07, 10-11:30 a.m.
- 5/8/07, 9:30-11 a.m.
- 5/29/07, 9:30-11 a.m.

### **Three-Day**

- June 11-13 (hold July 10-12 tentative)

## **Future SRC Agenda Items for June 2007 or Beyond**

- Study on small birds and bats at APWRA
- How to evaluate impacts on avian species & ecosystems for future review
- Whether to incorporate additional correction factors (besides scavenger removal & search efficiency)
- FAA light requirements presentation (possibly Al Manville or Wally Erickson)
- Winter shutdown (which months and how long)
- Pylons study
- Relative abundance power analysis
- Repowering evaluation
- Lindsay Museum follow-up
- Permanent shutdown

## **SRC Meeting Participants**

### **SRC Members Day 1, 2 & 3**

Joanna Burger  
Jim Estep  
Sue Orloff  
Shawn Smallwood  
Julie Yee

### **Staff**

Gina Bartlett, Facilitator, Days 1-3  
Sandi Rivera, Alameda County, Days 1-3  
Brian Washington, Alameda County, Day 3  
Ariel Ambruster, Facilitator Assistant, Days 1-3

### **Monitoring Team**

Wally Erickson, WEST, Inc. Days 1- 2  
Brian Walton, UCSC, Days 1-2  
Ed West, Jones & Stokes, Day 1

### **Others**

#### **(Meeting Sign-in is optional)**

William Damon, Altamont Winds Inc., Day 1  
John Moorman, enXco, Days 1-3  
Elizabeth Murdock, Golden Gate Audubon, Parts of days 1 & 3  
Jon Nesmith, UC Berkeley, Day 2  
Karen Smith, AIC, Day 1  
Steve Steinhour, SeaWest Power Res., Day 1  
Joan Stewart, FPLE and AIC, Days 1-3

## **Appendix: List of SRC Agreements developed April 9, 10 & 11**

(Compiled from this document)

### **Diablo Winds Monitoring**

SRC members were in consensus that continuing to gather data at Diablo Winds is critical as repowering seems likely to reduce avian mortality significantly and more directly comparable data is needed, and because the settlement parties expected the SRC to incorporate data from the repowering projects into the overall analysis stemming from the monitoring program. To ensure this occurs, the SRC agreed to shift a portion of the monitoring program's proposed 2.5-year budget from "Addressing Additional SRC Requests" to a new line item to continue monitoring at Diablo Winds. These mortality data will allow the monitoring team and the SRC to evaluate repowered versus non-repowered sites. These data will be critical to adaptive management strategies.

### **Monitoring Program: Pylons and End-Row Turbines**

The SRC recognized the importance of studying the specific effects of adding pylons and removing risky end-row turbines on raptor behavior and mortality.

### **Monitoring Two Sets of Conditional Use Permits**

The SRC agreed that a different approach to monitoring for Settling Party turbines and non-Settling Party turbines is not needed. However, it will be difficult to isolate effects on the non-settling party towers compared to the settling parties. Factors contributing to reduced mortality are not easily isolated in data analysis because the non-settlement turbines are small in number and dispersed throughout the APWRA.

### **Relocating Turbines**

The SRC recommended that any relocated turbines be moved to lower risk sites designated Tiers 4, 5 or 6, otherwise companies should consult on new locations with the SRC. The SRC supports flexibility in the companies' approach and the use of professional judgment. When a company decides to move a turbine to a site other than Tier 4, 5 or 6, or one that is not classified, or if the company has special considerations, the company should consult with the SRC.

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