

## Meeting Summary | July 28-29, 2010

### Altamont Scientific Review Committee

Developed by the Center for Collaborative Policy  
Reviewed and Approved by the SRC.

#### **SRC Members Present:**

**Joanna Burger** (via telephone)

**Jim Estep** (in person Day 1, via telephone on Day 2)

**Sue Orloff** (via telephone)

**Shawn Smallwood**

**Julie Yee**

#### **Key Outcomes**

##### **Draft Study Plan for Future Monitoring**

The SRC reviewed M53V2 Second Draft APWRA Study Plan for Future Monitoring and reached the following consensus recommendations for future monitoring:

- By August 7, the SRC would like to see a cost estimate breakdown of the reduced sampling approach, and the accompanying opportunities this would provide for conducting SRC recommended priority studies.
- The SRC prioritized the following studies: the burrowing owl distribution, abundance and mortality mechanisms study (P90, which the SRC plans to soon update); the detection probability (QAQC or double observer) study; and a search radius study on a subset of turbines to develop information to inform potential search radii for repowered turbines. The SRC agreed that the QAQC study should be part of the monitoring program, rather than a separate study.
- Monitoring should track searcher detection rates with scavenger removal, with supervisor confirming presence/absence and carcass condition
- The placed carcasses for the detection probability study should include a variety of species, and best efforts should be made to include raptors.
- Monitoring would not include the surveying of vacant addresses, unless they are internal to the string
- Diablo Winds would be removed from regular monitoring, with an appropriate subsample potentially selected for the search radius study

In addition, a majority of SRC members recommended that the Monitoring Team's proposed rolling panel design be applied to 40% of monitored turbines, with the remaining 60% at fixed turbine locations selected from the currently monitored turbines, rather than the original 50/50 proposal, as this may allow for greater comparability with current study data. Increase sample size as a buffer to account for turbine attrition.

**Assumptions for Measuring SRC-Recommended Baseline**

The SRC reviewed the Monitoring Team's memo on approaches to measuring the SRC-recommended new baseline (M55 New Baseline Memo). The SRC supported the memo's approach with the following changes:

- Develop an approach to representing baseline installed capacity that most accurately reflects the pre-management environment that would give credit for significant changes on the ground through hazardous turbine removal, attrition and repowering. Turbine removals to be accounted for would be the Flowind turbines, Buena Vista, Howden and Kenetech turbines.
- Revisit Assumption 1 and incorporate supporting evidence for its conclusion
- Explicitly incorporate the language of the SRC recommendations on the proposed Adaptive Management Plan and clarify that these recommendations were in regard to the proposed AMP.
- Incorporate straightforward performance metrics
- Tighten the introduction and clarify language in the first paragraph in regards to CUP conditions and Settlement Agreement conditions. Provide appropriate definitions of terms.
- Correct and/or rectify information in Table 1 and Table 9
- To address refinement of the 3-year-average baseline, the SRC recommended a process, modeled on Shawn Smallwood’s methodology used for the Tres Vaqueros turbines, and suggested that the settling parties identify which operating groups would be the focus of credit actions. SRC recommends patching best available rates for the larger groups only: Flowind, Buena Vista, Kenetech, and Howden.

**Action Items & Meeting Follow-Up**

Party	Due Date	Action
MT		Post spreadsheet for public review (baseline - installed capacity)
Joanna Burger and Jim Estep		Revise definitions list for next conference call meeting
CCP		Poll SRC for conference call meeting, including second week of September

*[Table of Contents to be added]*

**Meeting Account**

**Announcements & Updates**

Sandra Rivera of Alameda County gave the following updates:

- The final monitoring report is expected out the second week of August.
- Settling Parties are continuing their discussions, and the SRC-recommended new baseline will be part of the discussions

- The Adaptive Management Plan proposal is scheduled to go before the East County Board of Zoning Adjustments on August 16
- The Notice of Preparation for the conditional use permits environmental impact report will be issued soon in mid-August. There will be a scoping meeting on September 2 at the Dublin library, and information with more details will soon be going out. There will be a 45-day comment period into the first week of October. The SRC will have an opportunity to make comments during the scoping period.

## **Second Draft Study Plan for Future Monitoring**

### **Related Documents**

[M53V2 Second Draft Study Plan for Future Monitoring](#)

[P168 SRC Comments on MT Draft Study Plan for Future Monitoring](#)

Sandra Rivera of Alameda County said the study plan will need to be finalized in time to implement it by the new bird year, which will begin October 1. The Monitoring Team had previously called for finalizing the study plan by the end of July in order to implement it in a timely fashion.

Doug Leslie of the Monitoring Team gave an overview of the new draft, discussing changes in the document's organization. He noted a few key items:

1. The SRC recommendation to reconsider the search radius was moved in to the section on separate studies, as it would change the sampling protocol in a significant way.
2. The main reason for introducing the rotating panel is to try to robustly capture variation through time and across geography. The sample of panel data would be identified through a process of structured randomization.
3. This draft contains an analysis of data on the five operating groups originally proposed not to be sampled. As a result of this analysis, the Monitoring Team is now recommending that EnerTech turbines continue to be sampled.
4. The Monitoring Team would like to hear the SRC's opinion on whether to continue monitoring the repowered Diablo Winds turbines.
5. The proposal no longer contains the field sampling protocol, because it is not proposed to change.
6. Significant changes were made in the section on adjustment factors to make it clearer. The proposal is now closer to the original QAQC proposal with a supplemental carcass placement in order to achieve a sufficient sampling size.
7. If there are changes in the field, these would be addressed through an annual implementation review as part of the detailed implementation plan. Altamont is dynamic and changing, so the plan will have to be adapted each year to account for turbine removals, repowering, etc.

### **SRC Questions**

In response to a question, Monitoring Team members confirmed that adding back the EnerTech turbines changed the total number of turbines monitored.

In response to a question, Jesse Schwartz of the Monitoring Team said the revised sampling grid that will replace Figure 2 (after Page 6) would consist of Venn polygons that are spatially

balanced. This will be developed once the SRC has finalized its recommendation on sampling. An SRC member suggested using the WEST, Inc. block design, which is ready to go. This could be revised to incorporate changes in turbines.

An SRC member referred to Equation 2 on Page 11, and asked about the SRC discussion on expanding the annual fatality estimate to installed capacity and address. Monitoring Team members said both will be looked at, once the table of turbines is locked down by September.

### **SRC Comments on Draft Study Plan**

SRC members made the following initial comments on the draft study plan:

- Include KVS 33 turbines, but not the Howdens, which are no longer operating.
- A suggested scope for the double survey is to work toward a non-static searcher detection rate based on how many of the available carcasses are actually detected. In response, a Monitoring Team member said that might be expensive, but the Team would try to accommodate as much variability as possible.
- Add a buffer to the rolling panel sample size in order to safely account for later turbine changes or removals.
- Multiple SRC members praised the draft study for its writing and responsiveness.
- In regards to behavior monitoring mentioned on pages 9 and 17, the SRC' recommended that bird behavior monitoring be incorporated within the existing 10-minute observations. Behavior monitoring is important to inform repowering. Incorporating within existing monitoring could provide potential cost savings.
- The additions to the detection probability study are good
- Equations 1 and 2 on pages 10-11 need to be adjusted. In addition, there seems to be a problem on page 11 with F.
- On page 13, the document should clarify if the analytical approach is the same as baseline or not.
- On page 16, paragraph 2, the language about fresh raptors is no longer there. In response, Monitoring Team members said they have tried to simplify the double survey QAQC study.
- Two SRC members were concerned about the focus on turbine type. The SRC in its hazardous turbine ranking has focused on topography and geography. How does turbine type relate to the hazardous turbine criteria? Topography is the key factor in collision hazards. Fatality rates seem to correlate with turbine size, but not with turbine type. Will there be an unanticipated bias in using turbine type? The rationale for using this approach should be explained. Monitoring Team members agreed that the design should be shaped by topography. The purpose of using turbine type is to ensure that the design includes all clusters. The approach would be that recommended by the EPA, a stratified random survey approach.

### **Public Comment**

Mike Boyd of CARE said he is concerned that money has been expended on the Kestrel Burrowing Owl Study, yet the data are not considered sufficient, and we don't know if there has been a 50% reduction. He asked that nothing new be undertaken until it is clear that it won't adversely affect the program.

The SRC then moved to discussions on specific issues of the future monitoring plan.

### **Discussion on Possible Expanded Search Radius**

Two SRC members recommended that, in regards to the search radius, a study be conducted to develop information on the size of search radii needed for repowered turbines. A subsample of turbines could have an expanded search radius, with carcass data gathered in regards to the prior search radius so the implications of the different radii could be examined. It was recommended that this search radius subsample be implemented in October 2010 as part of the monitoring plan.

In a discussion among SRC and Monitoring Team on this proposal, the following points were raised:

- There is no existing information to help establish the appropriate search radius size
- What would be the criteria for establishing a study radius? How would the radius be assessed?
- It would be helpful to have information from a background mortality study so that the proportion of naturally occurring carcasses could be known.
- Other windfarms often choose a radius based on turbine height.
- It would be helpful to look at different turbine types of the same height, to examine if we are overweighting fatalities from one company's turbines or type.
- The study could be done to test a null hypothesis that there are not many carcasses outside the current search radius.
- Every new repowered turbine has the possibility of being different, so each type should be examined.
- There might be the possibility of solving the problem by using a physics model. The original search radius was identified by testing thrown turkeys and chickens.
- Some SRC members raised issues with this approach, noting that different birds are different shapes, so there could be complexities caused by that, as well as by steepness of terrain.

### **Discussion on Rolling Panel Design**

One SRC member had serious reservations about the rolling panel design which uses less than 50% of the sample at fixed stations selected from the currently monitored turbines for the trend analysis. She was concerned about comparability between the new balanced sample and current study sample, which was biased. Has the Monitoring Team done a power analysis to determine whether the number of turbines to be sampled from the current study period would be sufficient for statistical comparisons? It also would be important that data be comparable in regards to number, size, type, geography and topography.

In response, Jesse Schwartz said he did a bootstrap analysis that shows a very small loss of resolution.

Two SRC members suggested running a test on the last three years of data to help identify how much variation there could be for the different sampling methods, including the rolling panel design.

Jesse Schwartz also clarified that the current sample is widely distributed across the Altamont. Because sample size is being reduced to save costs, the Team wants to make some changes to ensure that it encompasses geographic and temporal variability. The great majority of turbines in the new sample will overlap with current study turbines. However, the Monitoring Team doesn't want to add constraints to the sample, to retain the ability to make sure that monitored turbines are not clustered. The rotating panel will allow the surveys to capture the dynamism in the ecosystem, such as bird use, ground squirrel variability and other factors.

An SRC member said she could understand both points of view, and agrees there is a potential bias to making the change. However, she feels it's more important to have the ability to control for turbine type bias, and therefore would support the Monitoring Team approach.

In response to a question, Jesse Schwartz said the rolling panel design will survey currently monitored turbines more than once every three years.

Jesse Schwartz said he would try to develop an approach that takes the SRC concerns into consideration. However, he prefers no hard and fast rules, as the new design will have to take into consideration a multiplicity of factors.

### **Public Comment**

Joan Stewart of NextEra said, in regards to search radius, Judd Howell did a study using a very wide search radius. An SRC member said this was a good point.

Renee Culver of NextEra mentioned the goal of providing funding for other studies, and asked that the Monitoring Team address comparative cost savings and benefits from taking this approach.

The Monitoring Team was asked why 50% was chosen for the rolling panel. In response, Monitoring Team members said the design is that recommended by the EPA, USGS and the US Fish and Wildlife Service (see M52).

SRC members raised the issue of changing the percentage so that the rolling panel is less than 50% of the sample. There can always be surprises in the Altamont, and this would be a safer step.

A majority of SRC members reached consensus on a recommendation to use 60% fixed and 40% rolling panel turbines.

SRC members also urged the Monitoring Team to maximize use of those turbines already monitored, in particular, the 38 overlapping strings in the common NREL set are an asset with 10 years of data. As long as those are kept in the sample, there should be no serious problems.

One SRC member suggested that the rolling panel be selected from within the current data set.

Monitoring Team members said that would be a design issue, and turbines chosen could be affected by the repowering schedule, hazardous turbine removals and other factors. There will not be comparability over time with the current study as repowering progresses, so the study will have to be re-factored when there are changes. One SRC member was concerned that randomness would be compromised by first selecting current study turbines.

### **Cost Savings**

One SRC member said his support for reducing monitoring is based on the assumption that the cost savings would be used for other studies.

Monitoring Team members said they have not yet calculated the budget or cost savings, however it will save a lot of money to reduce the number of turbines sampled almost by one half. The cost of the detection probability study depends on the size of the sample.

### **Additional Studies**

SRC members have been recommending that a burrowing owl study and a detection probability study be undertaken. County representatives have said that the purpose of scaling back monitoring would be to free funds for additional studies.

One SRC member said it would be preferable if one or two of the additional studies are included in the monitoring design, to ensure that top priority studies are undertaken. There is a concern that monitoring will be reduced and additional studies will not be undertaken.

Another SRC member said it needs to be clear that the SRC is not recommending additional studies, that these are studies the SRC has strongly recommended for several years.

### **Protocol on Monitoring Removed Turbines**

An SRC member asked if monitoring would continue on sites in which turbines have been removed. A Monitoring Team member said there is currently a gray area: turbines removed from within a string are still searched, and most turbines outside a string are searched. SRC members asked that the protocol be clear on what is to occur.

Monitoring Team members said they lack a hypothesis or protocol relating to when to monitor turbine addresses, and for how long. At a certain point, it starts to become part of background mortality. Their strawman would be to not search vacant turbine addresses.

One SRC member said a fatality found at an empty address could be background mortality or a carcass thrown by an adjacent turbine. It would be better to investigate background mortality away from turbines, to eliminate that potential confounding factor.

SRC members reached consensus on using installed capacity for monitoring, and on not surveying vacant addresses.

### **QAQC Species Recommendations**

SRC members said using a variety of species in the QAQC study would better reflect natural conditions, and would make it more challenging for blind surveyors to conclude that the carcass is a test bird. Potential sources for fresh carcasses are the Sacramento Airport and rehabilitation centers (for the latter, only those not euthanized by chemicals).

SRC members recommended that the Monitoring Team do the best it can to obtain multiple species, and at least make efforts to include raptors.

### **Adaptive Management Plan Consistency**

SRC members were asked what needs to happen to ensure that there is some integration between the future monitoring and adaptive management plans.

An SRC member suggested that, for consistency, the future monitoring plan include language regarding the burrowing owl and adjustment factors study from P167, SRC Consensus Recommendations on Adaptive Management Plan Proposal.

In addition, the Adaptive Management Plan emphasizes repowering, while the Future Monitoring Plan does not. Monitoring Team members said they could add language to the plan to describe how the DIP will account for repowering.

### **Treatment of Diablo Winds turbines**

An SRC member suggested that money could be saved by ending monitoring of these repowered turbines.

Joan Stewart of NextEra said the older turbines interspersed within Diablo Winds might confound efforts to expand data to other repowered sites.

SRC members suggested that unambiguous turbines within Diablo Winds be used surgically for the subset search radius study.

### **Public Comment**

Renee Culver of NextEra asked that if Diablo Winds is excluded, the Monitoring Team use historical averages to estimate its mortality. Monitoring Team members said Diablo Winds would be assumed to be constant for the purposes of analysis.

### **SRC Recommendations**

The SRC made the following consensus recommendations:

- By August 7, the SRC would like to see a cost estimate breakdown of the reduced sampling approach, and the accompanying opportunities this would provide for conducting SRC recommended priority studies.
- The SRC prioritized the following studies: the burrowing owl distribution, abundance and mortality mechanisms study (P90, which the SRC plans to soon update); the detection probability (QAQC or double observer) study; and a search radius study on a subset of turbines to develop information to inform potential search radii for repowered turbines. The SRC agreed that the QAQC study should be part of the monitoring program, rather than a separate study.
- Monitoring should track searcher detection rates with scavenger removal, with supervisor confirming presence/absence and carcass condition
- The detection probability study placed carcasses should include a variety of species, and best efforts should be made to include raptors.



- Monitoring would not include the surveying of vacant addresses, unless they are internal to the string
- Diablo Winds would be removed from regular monitoring, with an appropriate subsample potentially selected for the search radius study

In addition, a majority of SRC members recommended that the Monitoring Team's proposed rolling panel design be applied to 40% of monitored turbines, with the remaining 60% at fixed turbine locations selected from the currently monitored turbines, rather than the original 50/50 proposal, as this may allow for greater comparability with current study data. A buffer should be considered to account for turbine attrition.

## **Presentation on Upcoming Final Monitoring Report**

### **Related Documents**

[M56 Altamont Pass Bird Fatality July 2010 Presentation Slides](#)

Jesse Schwartz of the Monitoring Team gave a PowerPoint presentation on very preliminary results from the revised analysis that will be used for the upcoming final monitoring report, and on how that report will address some of the key SRC comments provided on the draft monitoring report. The presentation is available on the SRC website ([M56 Altamont Pass Bird Fatality July 2010 Presentation Slides](#)).

During discussion between the SRC and the Monitoring Team, the following points were raised.

- In regards to Slide 11, Fatalities Detected, there is a potential issue with a different average search interval for baseline. Shawn Smallwood and Brian Karas were asked to work on the issue to reconcile any data differences.
- Regarding Slide 24, an SRC member said that in 1998, it is possible that a different protocol was used that treated feather piles differently than later in monitoring. Definitions should be added.

## **Assumptions for Measuring SRC-Recommended Baseline**

### **Related Documents**

[M55 New Baseline Memo](#)

[P176 Yee Proposal for Adjusting Baseline](#)

### **Discussion of New Baseline Memo**

Jesse Schwartz of the Monitoring Team reviewed M55 New Baseline Memo. He said, in the conclusions and recommendations, he is recommending a simple accounting system and a probabilistic approach that would incorporate learning from new information.

SRC questions and comments on M55:

- Table 1 has different numbers for baseline. Monitoring Team response: this should be rectified.
- In regards to Assumption 1 that fatality rates are predominantly influenced by turbine type and turbine size (page 4), Orloff and Flannery found that tower type related to fatality rates, but Smallwood did not. Both found that topography and position in row were key factors. Did the Monitoring Team test turbine type? Is that

why it is the focus? In response, Monitoring Team members said that turbine type is a proxy for rotator speed, height and other such factors. It was suggested that the Monitoring Team include material to back up the focus on turbine type.

- The first two pages should be tightened.
- The first paragraph should clarify the difference between the Conditional Use Permit and the Settlement Agreement.
- Table 9 on page 14 has a typo in the header.
- Include the assumption that winter shutdown has decreased fatality rates.
- Include the SRC recommendation from P167.

SRC members agreed that the overall approach described in the document works for them.

### **Public Comment**

Emre Ergas of NextEra asked whether, in the introduction, the intent of the three-year period is to replace the old baseline, or to set up a new starting point. Winter shutdown and hazardous turbine removal are not factored in, because no effect was found. Another mitigation action was the attrition of turbines. He asked why the year 2005 was chosen, rather than 2000 or 2001.

In response, Jesse Schwartz said the SRC had recommended the year 2005. The fact that rates were higher in 2007 indicates that the variation in rates was probably not related to mitigation.

One SRC member said the intent for recommending the year 2005 was to be able to represent installed capacity prior to the current study period and the Settlement Agreement.

Ariel Ambruster of the facilitation team said she would bring in notes from the SRC call discussion on this item to clarify the issue of why certain timeframes were recommended.

Mike Boyd of CARE asked why data from 2002-03 was dropped. In response, Jesse Schwartz said it could be brought in. Mike Boyd said the number 1300 was the result of prolonged settlement discussions. He sees no value in changing the baseline.

### **Discussion of Yee Baseline Adjustments Memo**

Julie Yee reviewed P176, her latest analysis, developed to demonstrate how the current study period could be adjusted to better represent the baseline in regards to seasonal shutdown and turbine removals. Her previous analysis did not address compensatory mortality, that is, any reduction in mortality due to seasonal shutdown or turbine removal which is offset by an increase in mortality later or elsewhere which would not have otherwise occurred. She presented an initial analysis to test for a potential spike in mortality after shutdown turbines are first turned on. In this case, she added a covariate to represent those intervals in which turbines are first turned on. Her results were not statistically significant, but the direction of her estimates support the hypothesis that there is some compensatory mortality. Based on the analysis, she would propose that a probabilistic model can be used to estimate the shutdown effects and compensatory mortality, to adjust the current study as the new baseline. Additionally, covariates could be added to the model to represent turbines of different hazard classes. If this works, it could be useful for adaptive management, to inform the evaluation of management actions and future recommendations.

In response to questions, she agreed that this approach could also be used to inform recommendations on turbine removal for repowering and unproductive turbines.

One SRC member noted that the results showed a large seasonal effect for red-tailed hawks. Perhaps the SRC might want to consider different values for different species.

### **Public Comment**

Mike Boyd of CARE said he is concerned that, because of all of the inter-seasonal and interannual variability, he doesn't see the real value in modifying the existing baseline. When 1300 was picked, it was higher than it needed to be, to err on the side of caution. What hasn't been talked about is the confidence level in the analytical results. He doesn't see how he could accept a lower baseline, and would need an evidentiary basis.

SRC Member Shawn Smallwood said the 1300 number was the upper end of a range from an analysis he did in 2004. He provided a range because there were no adjustment factors he felt good about. The current baseline is not a great one, and may be biased low, because of its reliance on the CEC turbines.

SRC members complemented Julie Yee, saying she took an innovative approach with the analysis.

### **SRC Discussion on Representing Installed Capacity for the SRC-Recommended Baseline**

Sandra Rivera of Alameda County said she would like the SRC to take action on this item today, so that the recommendation can go to the settling parties for discussion.

Associate Facilitator Ariel Ambruster reviewed her notes for the group of their previous discussion on this item. While the SRC had recommended looking at both permitted and installed capacity, the notes did not indicate that they had recommended a timeframe for representing installed capacity.

An SRC member suggested using the same timeframe as baseline, 1998-03, in order to retain the same spirit. Two other SRC members agreed.

Monitoring Team members said, however, that they need a point for the analysis.

SRC members, Monitoring Team members and Settling Party representatives had an extensive exploratory discussion on various approaches to representing baseline megawatts that would be relatively uncomplicated, and yet capture the reality of turbine distribution on the ground prior to removal of turbines and implementation of repowering.

Key points made during the discussion included:

- SRC Member Shawn Smallwood, who conducted the baseline study, said he was not sure what the best year would be to represent that study. He suggested choosing a middle year such as 2001, which would work for a credit for removal of Flowind turbines. Kris Davis of Drinker Biddle said his clients anticipated 2001 as a midpoint,

- which may make the most sense, as no one would have the upper hand. Another SRC member said this would make sense with the data and be less arbitrary.
- Another year suggested by Renee Culver of NextEra was 2005-2006.
  - Sandra Rivera suggested picking a year that accounts for the credit, and then having the Monitoring Team look at how that would play out at the operating group level. The SRC could agree to use Shawn Smallwood's method for Tres Vaqueros. Another SRC member liked the Tres Vaqueros approach. [Speakers at the time referenced Buena Vista, but the relevant research was at Tres Vaqueros.]
  - A Monitoring Team member raised the issue of a risk in creating a "Frankenbaseline" created from a pastiche of different data. He proposed using the mortality rates from the baseline's common NREL turbines.
  - One SRC member liked the Frankenbaseline, because it attempts to give credit for each company's mortality reduction, such as the Flowind turbines that were later replaced by Diablo Winds repowered turbines. Perhaps turbine size could be used to insert fatality rates for these turbines, in order to assign fatality rates to them.
  - Participants noted other turbines aside from the Flowind turbines that would have to be accounted for: Buena Vista, Howden and the Kenetech turbines removed in 2002-2004. Another possible group might be the CWVS turbines at the Johnson site, suggested by Jim Hopper, which were removed in 2005. SRC and Monitoring Team members were inclined to see this latter group as constituting only a relatively small number of megawatts, and therefore below the threshold of concern.

### **Public Comment**

Emre Ergas of NextEra asked if the Monitoring Report would help the SRC make a decision. If there is incomplete information on pre-Buena Vista and Flowind turbines, which were partially monitored, when they were failing, how would that impact the new baseline measurement? He asked what the timeline is for the Monitoring Report. In addition, he said Diablo Winds and Buena Vista would need to be accounted for. Using the 2001 year as installed capacity would miss the benefits of attrition of older turbines that occurred in 2005. In addition, he hopes that the new baseline accounts for the benefits of hazardous turbine removal and seasonal shutdown.

Monitoring Team members said the report would be out in two weeks.

Emre Ergas of NextEra asked Jesse Schwartz why he believes this question needs to go to the Settling Parties. Whatever approach mirrors the old baseline is best.

Jesse Schwartz responded that it wouldn't be possible simply to pick a year, such as 2005, or 1999. Instead, decisions need to be made at an operating group level about what timeframe would best represent that operating group. The approach would be to apply the best available rates, determined group by group.

Three SRC members said the approach should be conservative, rather than making minor changes on a piecemeal basis. Further, justifications should be made for each approach for clarification.

Sandra Rivera suggested that the Settling Parties consider what the bookends should be, and look at only larger changes.

SRC Member Julie Yee said the approach outlined in her document could be applied to hazardous turbine removal, and that model could be added without the need to choose a particular year or rate. This should not be too complicated, as long as it is known what hazardous turbine removals were during the baseline period.

### **SRC Direction**

SRC Members and participants agreed that the M55 approach be modified to develop a measurement for baseline installed capacity that incorporates credits for large changes on the ground from turbine removals and repowering, to most accurately represent the pre-management action baseline environment. Turbine removals to be accounted for would be the Flowind, Buena Vista, Howden and Vasco Winds Kenetech turbines removed in 2002-2004.

### **Next Steps**

- Shawn Smallwood will ask the East Bay Regional Park District to allow him to release his Buena Vista reports
- The Monitoring Team will post their spreadsheet for public comment

### **General Public Comment Period**

There were no public comments.

### **Meeting Summary Approval**

#### **Related Documents**

[P157 SRC Meeting Summary April 2010](#)

Four members of the SRC approved the meeting summary. The facilitation team will contact the fifth member, Jim Estep. If he differs from the approval, the item will be brought back to a future meeting for consideration.

### **SRC Consideration of CalWEA Altamont Study Plan**

#### **Related Documents**

[P172 CalWEA Cover Memo to SRC 06-18-10](#)

[P173 CalWEA Research Plan 6-18-10](#)

[P174 SRC Comments on CalWEA Research Plan](#)

Bill Warren-Hicks of EcoStat Inc., who is designing the CalWEA research plan, told the SRC that he and his group are taking to heart the SRC suggestions. They have dropped a number of experiments that could be associated with swamping the Altamont. In addition, they are conducting quality assurance to look at overlaps and differences. The CalWEA study would generate more data for a more rigorous analysis, while the Monitoring Team provides the Altamont with a seasonal number. He doesn't see a way to integrate the two. A major difference is that the Monitoring Program uses natural birds. To respond to this difference, his group has conducted a heavy search for raptors, and found some kestrels. He has called the Sacramento and San Jose airports. He is in the process of trying to respond to

the issues raised by the SRC, and the kestrel issue will take additional time. He is looking for options to find a monitoring team. He is writing up the changes. By Friday of next week, his advisory group wants to be able to make a go/no go decision.

### **SRC Discussion**

An SRC member said CalWEA has done a really good job, and hopes the two groups can work out their differences. Getting raptors goes a long way to resolving the SRC concerns about swamping and relevant species. Another source might be the raptor rehabilitation network.

One SRC member said CalWEA must be careful not to use birds from that source that have been chemically euthanized, which would create a bias.

### **Public Comment**

Mike Boyd of CARE said he is concerned that study will add bias to the monitoring program, and he believes it violates the terms of the use permit. It is important to make sure that government money being spent on the study will not affect competitive advantage.

## **Definition of Avian & Topographic Terms**

### **Related Documents**

#### [P160 SRC - NCCP Definitions](#)

The SRC subcommittee of Jim Estep and Joanna Burger reviewed the draft definitions they prepared ([P160 SRC - NCCP Definitions](#)), which were requested by the APWRA Conservation Plan Committee. They noted that they had to make assumptions about the desired context for the words in some cases, such as items 11 and 13. In some cases they used definitions developed by Curry and Kerlinger and used in the 1998 Altamont Repowering EIR and that are commonly used in discussions of topographical features in the Altamont. The document contains a discussion of relocating to safer locations from "risky" areas, and includes drawings for each description.

One SRC members felt that the 1998 EIR was not an appropriate source for those definitions.

Joan Stewart of NextEra suggested that those definitions could be included, with additional text explaining that the terminology has changed, and is dependent on context. Two SRC members agreed.

SRC members recommended the following changes to the document:

- Put a sign for "approximate" in front of slope numbers.
- Indicate the source of the definition if it is not from the SRC.
- Add language saying the definition is "modified from" so that it reflects what SRC members think.
- Remove Canyon, and make Dip, Notch and Draw subsets of Saddle

### **Next Steps**

- Joanna Burger and Jim Estep will revise the definitions based on the day's discussion, for SRC review and approval at the next conference call meeting.

## **Agree on SRC Reporting Outcomes**

This agenda item is generally held for SRC members to agree on language describing key outcomes from the meeting, for distribution to the public. On this occasion, it generated a discussion among SRC and Monitoring Team members that reopened some of the items agreed to earlier in the meeting. Because two SRC members were participating by telephone, rather than in person, it became too difficult to finalize key outcomes language.

Key items raised in the discussion include:

- Integrate the QAQC and search radius studies into the monitoring plan to inform repowering. The burrowing owl study is the only separate study.
- The SRC is in a position of making these decisions in a vacuum, because budget figures aren't available.
- The QAQC will be less expensive if it is integrated.
- The Monitoring Team needs more specifics on the burrowing owl study to evaluate it for its effectiveness and cost.
- Doug Leslie of the Monitoring Team said, while the future monitoring plan will be implemented on October 1, the QAQC study, search radius study and burrowing owl study do not need to be implemented on that date.
- One approach discussed was to refine the burrowing owl study for implementation next year. A proposed compromise approach would be to leave funding for a pilot burrowing owl study to help with the study design.

## **Public Comment**

Joan Stewart of NextEra asked whether monitoring Diablo Winds would provide information needed for the different models of repowered turbines that are likely to be introduced. It was suggested that monitoring Diablo Winds be postponed until repowering, when that question can be assessed. Two SRC members agreed with this point.

Renee Culver of NextEra said she would like to look at the QAQC budget if the study is done independently.

## **SRC Agreement**

SRC members reached consensus that the QAQC study should be part of the monitoring plan.

## **Next Steps**

- The Monitoring Team will develop the Future Monitoring Plan Detailed Implementation Plan (DIP) the first week of September.
- SRC members will be polled for their availability for the second week of September in order to hold a conference call workshop on the DIP.
- The Monitoring Team will move ahead with the monitoring plan as designed, and consider the CalWEA study if it is finalized and presented for further review and consideration.

## **Future SRC Meetings**

### **In-Person Meetings**

SRC members identify the following tentative time frames for future in-person meetings:

- Between September 27-29: 2-day meeting

### **Conference Call Meetings**

- SRC members will be polled for their availability for the second week of September

## **Documents Circulated at Meeting**

[M53V2 Second Draft Study Plan for Future Monitoring](#)

[P168 SRC Comments on MT Draft Study Plan for Future Monitoring](#)

[M55 New Baseline Memo](#)

[P176 Yee Proposal for Adjusting Baseline](#)

[P157 SRC Meeting Summary April 2010](#)

[P172 CalWEA Cover Memo to SRC 06-18-10](#)

[P173 CalWEA Research Plan 6-18-10](#)

[P174 SRC Comments on CalWEA Research Plan](#)

[P160 SRC - NCCP Definitions](#)

P100\_SRC Document List with Reference Numbers

## **SRC Meeting Participants**

### **SRC Members Days 1 & 2**

Joanna Burger (via telephone)

Jim Estep (on Day 2 via telephone)

Sue Orloff (via telephone)

Shawn Smallwood

Julie Yee

### **Staff**

Sandi Rivera, Alameda County, Days 1-2

Andrea Weddle, Alameda County, Days 1-2

Mary Selkirk, Facilitator, Days 1-2

Ariel Ambruster, Associate Facilitator, Days 1-2

### **Monitoring Team**

Doug Leslie, ICF International (formerly ICF Jones & Stokes), Day 2

Jesse Schwartz, ICF International (formerly ICF Jones & Stokes), Days 1-2

### **Others**

**(Meeting sign-in is optional)**

Renee Culver, NextEra, Days 1-2

Kris Davis, Drinker Biddle, Days 1-2

Chris Dreiman, enXco, Day 1

Emre Ergas, NextEra, Days 1-2 (via telephone)

Jim Hopper, AES/SeaWest, Day 2 (via telephone)

Mike Lynes, Golden Gate Audubon, Day 1



Ryan McGraw, AWI, Day 1  
Mary Selkirk, Center for Collaborative Policy, Days 1-2  
Joan Stewart, NextEra, Days 1-2  
Craig Weightman, CDFG, Days 1-2

## List of SRC Agreements Developed July 28 & 29

(Compiled from this document)

### Key Outcomes

#### Draft Study Plan for Future Monitoring

The SRC reviewed M53V2 Second Draft APWRA Study Plan for Future Monitoring and reached the following consensus recommendations for future monitoring:

- By August 7, the SRC would like to see a cost estimate breakdown of the reduced sampling approach, and the accompanying opportunities this would provide for conducting SRC recommended priority studies.
- The SRC prioritized the following studies: the burrowing owl distribution, abundance and mortality mechanisms study (P90, which the SRC plans to soon update); the detection probability (QAQC or double observer) study; and a search radius study on a subset of turbines to develop information to inform potential search radii for repowered turbines. The SRC agreed that the QAQC study should be part of the monitoring program, rather than a separate study.
- Monitoring should track searcher detection rates with scavenger removal, with supervisor confirming presence/absence and carcass condition
- The detection probability study placed carcasses should include a variety of species, and best efforts should be made to include raptors.
- Monitoring would not include the surveying of vacant addresses, unless they are internal to the string
- Diablo Winds would be removed from regular monitoring, with an appropriate subsample potentially selected for the search radius study

In addition, a majority of SRC members recommended that the Monitoring Team's proposed rolling panel design be applied to 40% of monitored turbines, with the remaining 60% at fixed turbine locations selected from the currently monitored turbines, rather than the original 50/50 proposal, as this may allow for greater comparability with current study data. A buffer should be considered to account for turbine attrition.

#### Assumptions for Measuring SRC-Recommended Baseline

The SRC reviewed the Monitoring Team's memo on approaches to measuring the SRC-recommended new baseline (M55 New Baseline Memo). The SRC supported the memo's approach with the following changes:

- Develop an approach to representing baseline installed capacity that gives credit for significant changes on the ground through hazardous turbine removal, attrition and repowering, to most accurately represent the pre-management action baseline environment. Turbine removals to be accounted for would be the Flowind turbines, Buena Vista, Howden and Kenetech turbines.
- Revisit Assumption 1 and incorporate supporting evidence for its conclusion

- Explicitly incorporate the language of the SRC recommendation and clarify that it is in regard to the proposed Adaptive Management Plan
- Incorporate straightforward performance metrics
- Tighten the introduction and clarify language in the first paragraph in regards to CUP conditions and Settlement Agreement conditions
- Correct and/or rectify information in Table 1 and Table 9
- To address refinement of the 3-year-average baseline, the SRC recommended a process, modeled on Shawn Smallwood's methodology used for the Tres Vaqueros turbines, and suggested that the settling parties identify which operating groups would be the focus of credit actions. SRC recommends patching best available rates for the larger groups only: Flowind, Buena Vista, Kenetech, and Howden.