CONFERENCE CALL AGENDA
BEACON SOLAR ENERGY PROJECT
(08-AFC-02)

MONDAY, JUNE 9, 2008 (1:00 p.m. to 2:00 p.m.)
***Call-#:* 800-988-0490 *Passcode #:* 46750**
Call Leader: Bill Pfanner

Conference Call Objectives:

To get advice from USFWS and CDFG on:

- the necessary elements of raven monitoring/control plan, and
- recommendations for evaporation pond design to minimize raven and migratory bird use.

Agenda

1. Introductions

2. Raven monitoring/control plan
   - Objectives of raven monitoring
   - Objectives of raven control
   - Level of specificity needed in applicant's plan?

3. Evaporation pond monitoring/remediation plan
   - Recommendations on pond design to minimize migratory bird use
   - Objectives of bird use/water quality monitoring
   - Objectives of bird use control plan/remediation
   - Level of specificity needed in applicant's plan?

4. Next steps?

CONFERENCE CALL MEETING NOTES
BEACON SOLAR ENERGY PROJECT
(08-AFC-02)
MONDAY, JUNE 9, 2008 (1:00 p.m. to 2:20 p.m.)

Participants

Name	Affiliation/Role on Project
Babula, Jared	CEC/Legal
Blackford, Ashleigh	USFWS/Raven mgmt expert
Cordonnier, Laurel	CEC/Biologist
Koss, Rachael	California Unions for Reliable Energy
Foster, Jared	WorleyParsons/Beacon Solar project engineers
Gulesserian, Tanya	California Unions for Reliable Energy
Head, Sara	ENSR Project Manager
Hohman, Judy	USFWS
Karl, Alice	Desert tortoise expert
McCormick, Kim	2081/CESA permitting consultant
Palo, Gary	Beacon Solar/Project Director
Pfanner, Bill	CEC/Project Manager
Quon, Lyndon	EDAW/Supervising biologist
Sanders, Susan	CEC/ Biologist
Stein, Kenny	Beacon Solar/Environmental Manager
Tenneboe, Annette	CDFG/CESA-CEQA review Kern Co.
Ward, Misa	CEC/Biologist
York, Rick	CEC/Supervising biologist

Conference Call Objectives

To get advice from USFWS and CDFG on the necessary elements of a raven monitoring/control plan, to discuss recommendations for evaporation pond design to minimize raven and migratory bird use, and to discuss water quality and bird use monitoring at the evaporation ponds.

Introductory Remarks

Bill clarified that today's call will not address project-specific details which are more appropriately reserved for a public workshop. The objectives of this conference call will be to identify the objectives of the raven monitoring/control plan and an evaporation pond monitoring program, and get some suggestions from resource agencies as to necessary elements of these plans. Susan reiterated Bill's points about the intent of the conference, noting that at the end of the call the applicant should have a clear idea about resource agency expectations on the objectives and level of detail needed in their monitoring/control plans.

Kenny noted that in the past, using the Application for Certification (AFC) process, many of the details in the California Department of Fish and Game (CDFG) permits are worked out after the California Energy Commission (CEC)

license is granted. He asked if CDFG and U.S. Fish and Wildlife Service (USFWS) wanted these developed before the license is granted.

Annette affirmed that CDFG also wanted the details of the monitoring plan worked out before they issue the Incidental Take Permit (ITP). Judy clarified that the mitigation/monitoring plans needed to clearly state what the applicant is committed to doing, that information should be included to demonstrate that impacts to desert tortoise would be minimized and mitigated to the maximum extent practicable, and that an adaptive management component should be included in the plan that allows for modifications. Kenny agreed that it would be good to include as much detail as is possible, and working that out now will allow Beacon to identify those things that might be difficult to accomplish.

Misa discussed the new approach to the CDFG ITP process in relation to the CEC licensing process. All the specifics of the ITP need to be covered under the CEC Conditions of Certification. Kim clarified that the new approach is relevant to the California Endangered Species Act (CESA) ITP, but noted that on the federal level, the low effect Habitat Conservation Plan (HCP) that is being prepared for the project and the associated ITP is an independent federal permit that will not be covered under the CEC licensing process.

All parties agreed that there was value in working out the federal and state requirements for a raven monitoring/control plan early so both resource agencies would be satisfied. That would also provide consistency amongst requirements from CDFG, USFWS and CEC.

Raven Monitoring

Susan asked for suggestions on what the objective of the raven monitoring plan should be. Susan identified two purposes of the monitoring effort: to determine if (1) there are any changes in numbers, nesting activities of ravens from baseline to post-project, and (2) depredation levels on tortoises increased. Alice stated that the effect on desert tortoise (DT) depredation levels was likely not measurable given today's techniques. Everyone agreed that DT depredation levels would be difficult to measure, and would require an indirect assessment, possibly through a change in nesting (number and location) and/or prey items below the nests. Kenny thought it made more sense to monitor changes in raven baseline numbers rather than seek some indirect index of DT predation.

How far from the project boundaries should monitoring occur? Alice recalled a 2003 paper by Kristan and Boarman suggesting that nesting ravens generally remain within 400 m of the nest, so probably about 0.5 km is an appropriate radius. Annette would be more comfortable expanding that; she thought the monitoring should include the Honda test track. Kenny pointed out that Beacon should not be required to monitor for other projects. Alice thought Honda might

have their own raven monitoring program, and that it might be possible to get data from that program.

Kim asked about CDFG/USFWS expectations as to how to establish a baseline. Neither CDFG nor USFWS currently have a template for raven monitoring protocol, although USFWS is developing one for counting ravens at landfills, and there may be an ongoing monitoring program at the Hyundai automotive test track south of California City. We discussed point counts and driving routes to look for nests and count ravens. Ashleigh thought that point counts provided a more objective baseline, and Alice agreed, but doing point counts for ravens would result in a lot of zeros with no data. Instead, it would be best to standardize the driving routes and time spent surveying, and conduct counts at selected locations as part of the driving survey. Standardized times at specific points on a set route might lead to more objective results that could be used for among-year comparisons. Ashleigh thought that point counts would work if they were not closely spaced in a transect style. A discussion of documenting nesting pairs of ravens followed. Ashleigh thought nest counts should be done in addition to the point counts, and could be accomplished in a couple of one-day efforts during the breeding season.

Alice said that ravens are easy to see and count, widespread, and are very diverse in their behaviors. The baseline information will need to establish what is going on with ravens within a few miles of the project area, then monitoring will need to pay attention to those elements and how they might change with the project. Based on a year-plus pre–construction survey that she did in Imperial County, she suggested possibly including surveys in the breeding season (maybe one survey every two weeks?) and in fall to look at patterns of dispersing young. Annette suggested that CDFG's raptor monitoring protocols could be useful in developing a raven monitoring control program.

Kenny asked how one determines if changes in raven numbers are due to the project, or to some other factor? Alice noted that is one reason to get a good baseline count that covered as many years and seasons as possible. It is possible to get a lot of information in multiple one-day surveys. Susan suggested a spatial control or replicate site, located in a similar area, to provide information on regional changes in raven numbers. Alice agreed with the concept in principle, but felt that it might be hard to find a comparable site or sites for replicate controls. Susan suggested that just knowing what ravens were doing in the general area could indicate regional changes, if any. Alice agreed, although identified that this is a much larger effort and suggested that we might look at other raven monitoring programs in the area for this information.

What should the intensity and duration of monitoring be? Judy said that USFWS wanted to see monitoring for the life of the project. Alice said the advantage of monitoring several years in a row would be to document the range of variation annually and seasonally. It is not necessarily a big effort; a lot of information can

be gathered in one day. Kim asked if monitoring was needed every year. If control measures seemed to be working, adaptive management would allow for changes in monitoring as needed.

When to establish the baseline numbers? Kenny said the goal was to start construction as early as June 2009, so there is not much time to get baseline data. We agreed that construction activities may change the baseline numbers, even with implementation of practices such as keeping trash under cover. Alice identified that while the latter was probably true, and only monitoring begun prior to construction would constitute a true baseline, monitoring results obtained during construction might be useful in identifying baseline raven numbers, given the strict mitigation measures for the project.

Kenny asked if there was any precedent or protocol out there for this level of effort, or if they should just propose something? We all agreed that the surveys needed to start as soon as possible to get baseline information before construction. Kenny said they would try to pull a draft together over the next couple of weeks, bring it back to the agencies, then have a follow-up call to get buy-in before starting the surveys this year. USFWS, CDFG and CEC agreed with this approach.

Raven Control

Susan asked about the objectives of a raven control plan: what does the applicant do with the monitoring data, what are the triggers for action (increase in raven numbers? nesting activity?), and what are the proposed actions to remedy a problem? Kenny and Kim said that would need to be spelled out in some detail. Kim asked USFWS what thresholds would trigger the implementation of a control program. Ashleigh noted that the trigger should be related to a change in the number of ravens or raven activities such as nesting at the site, not necessarily an increase (or decrease) in desert tortoise predation.

Kenny asked about possible remedies. Is it possible to include mitigation that involves reducing raven number in some area distant from the project area? For example, contributing to funding for desert tortoise enhancement programs in Desert Wildlife Management Areas?

Judy responded that they would first need to evaluate how effective the existing measures were in reducing raven numbers onsite, where the impacts were, to determine if some adjustment was needed. Off-site mitigation might be an option if other measures were not effective.

Alice asked USFWS about solutions that might be available for eliminating problem ravens that did not violate state and federal law. Are lethal options a possibility? Shooting, avicides, and trapping/euthanizing are options discussed in the 2008 Environmental Assessment for raven control that USFWS recently

prepared[1]. Judy said that the project owner would need to coordinate with CDFG to come up with some recommendations. Annette said that CDFG was working on redefining the definition of "take" for raven nests that may affect nest removals. There is no CDFG depredation permit or mechanism for shooting; they prefer designing projects so that they do not attract ravens, such as reducing the attractiveness of evaporation ponds and reducing perching/nesting opportunities.

Evaporation Ponds

Annette said that the proposed evaporation ponds (three ponds, about 8 acres in size each) might not only attract ravens, but other migratory birds. If water quality/contaminants are a problem, impacts to migratory birds could result. USFWS is also concerned about such impacts.

Rick said that some things have been done at evaporation ponds at nearby SEGS facilities that might be informative (e.g., avoiding shallow gradient shorelines, which might attract migratory shorebirds; keeping water in the ponds year round at sufficient depth to deter bird use). Currently there are high salinity water quality problems at the SEGS ponds which are lethal to wildlife and birds.

Kenny said he was looking for suggestions on how to reduce the attractiveness of the evaporation ponds for wildlife, and could contact the folk at the existing SEGS facilities for recommendations. Those projects have been in place for awhile and they might have suggestions for reducing bird use, including identifying an appropriate freeboard limit for the ponds and the optimal side slope.

Ashleigh asked what is known about the water quality for the proposed Beacon evaporation ponds. Kenny replied that Beacon knows the constituents of the water that will be going into the ponds. Judy wanted to know how often they will be cleaning out the ponds, and whether the water quality will change over time. Kenny said that issue will be addressed in the CDFG and USFWS ITP applications and in responses to CEC data requests. Ashleigh mentioned that netting might be used over the ponds, and more information on this could be found at the migratory bird website. Jared Foster said that they had looked into that, but that it had interfered with evaporation rates. Alice said that there are other covers that promote evaporation, but all are expensive and need to be replaced with time. Jared discussed this with some experts, and commented on the ineffectiveness of hazing, but thought we might want to consider a grid system of monofilament lines over the ponds. Alice pointed out that those can entangle birds, and possibly bats as well

[1] *U.S. Fish and Wildlife Service. 2008. Final Environmental Assessment to Implement a Desert Tortoise Recovery Plan Task: Reduce Common Raven Predation on the Desert Tortoise. March 2008.*

Annette wanted to see some bird use monitoring at the ponds during operations. Judy agreed, and both also wanted to see water quality monitoring. Alice said, based on her involvement at the Blythe Energy Project that focused on nesting birds, that monitoring needs to include at least the nesting and migratory seasons. Lyndon said they have some pre-project bird use data, but didn't know how useful it would be to collect additional pre-project monitoring data for a baseline.

Kenny agreed that pre-permitting bird monitoring data would not be of much use, and pointed out that this is different than the raven issue because there is not the desert tortoise endangered species nexus. They will be addressing migratory bird issues as part of the CEC permitting process, with USFWS and CDFG input, but it will not be addressed in the ITP or HCP process. Annette agreed with that.

Susan asked about potential impacts to snowy plovers because they have been recorded nesting at nearby Koehn Lake. Ashleigh had recently conducted surveys in that area and found they are absent this year. They are highly dependent on water levels in the lake. Alice asked if the water quality in Koehn Lake was known. Ashleigh said that the snowy plovers feed on brine flies, and may be more tolerant of high salinity levels than some of the waterfowl species.

Next Steps

Kenny said they will develop a draft raven baseline monitoring plan soon, and will circulate that to USFWS, CDFG and CEC for review and discussion.

Bill said we have adopted a somewhat unusual process on this early analysis of mitigation measures like the raven monitoring plan. We are trying to anticipate issues and develop solutions early in the process. Bill thought it would be productive to publically notice future calls to provide opportunities for all interested parties to participate. That way we could address substantive issues in the most transparent way possible, with maximum public involvement. If there is a lot of public interest, the CEC likely will shift the forum to a workshop rather than a conference call. Jared Babula added that the advantage of this upfront approach is that everyone has opportunities to participate in and resolve potentially significant issues early in the process.

Kenny said that Beacon has no problem with that approach, and agreed it was more productive to get many of the technical details worked out in advance. Gary added that Beacon Solar supports whatever the resource agencies and CEC think is an appropriate approach.

Susan said that another important pending issue was the re-routing of the desert wash, and that another conference call might be useful to discuss those issues. Gary also supported that approach, and Kenny said that they are working hard

on refining their Streambed Alteration Agreement (SAA) application, which may provide a lot of the information the resource agencies are seeking. Beacon has scheduled a site visit with the CDFG staff who will be reviewing the SAA application on June 12, the day after the June 11th CEC site visit and workshop.

Once the SAA is submitted, all participants on the call agreed to find a time for another conference call or workshop to discuss issues relating to re-routing the desert wash. This call or meeting will be noticed so that all interested parties can participate.