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March 17, 2010

California Energy Commission
Attn: Docket No. 09-AFC-5
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Abengoa Mojave Solar Project; Docket No. 09-AFC-5

Dear Docket Clerk:

Enclosed are an original and one copy of California Unions for Reliable Energy Data Requests, Set One. Please process the document, conform a copy and return the copy in the envelope provided. This document was previously provided via email.

Sincerely,

/s/

Elizabeth Klebaner

EK:bh
Enclosures

2219-036a

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March 17, 2010

VIA EMAIL AND U.S. MAIL

Scott D. Frier
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Re: Abengoa Mojave Solar Power Project (California Energy Commission Docket No. 09-AFC-5

Dear Mr. Frier and Mr. McMannes:

California Unions for Reliable Energy (CURE) submits its first set of data requests regarding the biological impacts of the Abengoa Mojave Solar Power Project (Project) and its compliance with the Warren-Alquist Act Species Act, pursuant to California Code of Regulations, title 20, section 1716(b). The requested information is necessary to: understand the Project; assess its compliance with all laws, ordinances, regulations, and standards; assess whether the Project will result in significant environmental impacts; and to determine adequate mitigation. CURE reserves the right to submit additional data requests on any topic that requires further information.

Written responses to these requests are due within 30 days, pursuant to California Code of Regulations, title 20, section 1716(f). If you are unable, or object to providing a response to any request, you are required within 20 days to submit a written notice of your objection(s) and/or inability to respond, together with a

statement of reasons, to Commissioners James Boyd and Anthony Eggert and to CURE.

Sincerely,

/s/

Elizabeth Klebaner

EK:bh
Attachments

STATE OF CALIFORNIA
California Energy Commission

In the Matter of: The Application for Certification for the Abengoa Mojave Solar Project	Docket No. 09-AFC-5

CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET ONE

March 17, 2010

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Attorneys for the CALIFORNIA UNIONS FOR RELIABLE ENERGY

The following data requests are submitted by California Unions for Reliable Energy. Please provide your responses as soon as possible, but no later than March 19, 2010, to each of the following people:

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Scott Cashen
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scottcashen@gmail.com

Please identify the person who prepared your responses to each data request. If you have any questions concerning the meaning of any data requests, please let us know.

Abengoa Mojave Solar Project

CURE Data Requests Set #1

BIOLOGICAL RESOURCES

Background: FEDERAL ENDANGERED SPECIES ACT COMPLIANCE

The Warren-Alquist Act requires that the Commission determine a project's conformity with other laws, ordinances, regulations and standards ("LORS") prior to issuing a license.[1] Thus, to gain Commission certification for the Project, Abengoa Solar Inc. (the "Applicant") will be required to demonstrate compliance with the federal Endangered Species Act (ESA). The Applicant anticipates compliance with the ESA either through an incidental take permit, issued by the U.S Fish and Wildlife Service ("USFWS") under Section 10 of the ESA, or through an incidental take permit resulting from formal consultation under Section 7 of the ESA. The Applicant expects Section 7 consultation would take place between the Department of Energy ("DOE") and USFWS with regard to the DOE's issuance of loan guarantees for the Project under the American Reinvestment and Recovery Act of 2009 ("ARRA").[2]

The Applicant submitted the second phase ARRA loan guarantee application on December 3, 2009 and anticipated that the DOE would initiate Section 7 consultation in either December or mid-February 2010.[3] Assuming the Applicant is selected for federal funding under ARRA, the Applicant presumes that Section 7 consultation will commence in advance of the DOE's environmental review of the Project under NEPA.[4] However, according to the DOE's February 22, 2010 response to CURE's NEPA notice request, the Applicant's loan guarantee application is currently not an active DOE project. Further, the FOIA response provides that the DOE has undertaken only the initial phase of financial and technical review. Thus, it appears that contrary to the Applicant's estimates, Section 7 consultation has not yet been triggered.

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[1] Pub. Resources Code § 25500.
[2] AFC, p. 5.3-96 and Applicant's Response to Data Request 1A, November 23, 2009, Response to Data Request Set 1A-58.
[3] *See* Applicant's Response to Data Request 1A, November 23, 2009, Attachment to Response to Data Request Set 1A-58 (Table reflecting Applicant's expected timeline for NEPA compliance).
[4] *See id*.

Although the Staff Assessment was published on March 15, 2010 and a Staff Assessment workshop will be held in April 2010, to date, the Applicant's submittals fail to demonstrate that compliance with the ESA is being pursued under Section 10 of the Act in the event that Section 7 consultation is not timely available or the Applicant is not selected for federal funding under the ARRA.

Data Requests:

1. Please provide the Applicant's incidental take permit application(s) for the take of federally threatened and endangered species pursuant to 50 C.F.R. § 17.22(b).

2. Please provide the common and scientific names of the species for which the Applicant requests incidental take authorization.

3. Please provide the complete description of the activity sought to be authorized under the incidental take authorization.

4. Please provide all correspondence between the Applicant and the USFWS regarding the Applicant's incidental take permit application.

5. If the Applicant is not in possession of an incidental take permit application for the Project, please state when the application will be made available.

6. If the Applicant does not expect to submit an incidental take permit application to the USFWS pursuant to 50 C.F.R. § 17.22(b), please state the reasons why.

Background: PROJECT SETTING AND DESCRIPTION

The Superior-Cronese and Fremont-Kramer Desert Wildlife Management Areas ("DWMA") are located along the southern border of the Project site.[5] The Mohave Ground Squirrel (MGS) Conservation Area lies south and east of the Project Area.[6] The AFC indicates the Project would avoid the Superior-Cronese DWMA except for a "small area" located just south of the interconnection facilities.[7] The AFC further indicates the MGS Conservation Area is present at the point where the Project would

[5] AFC, p. 5.3-7.
[6] AFC, p. 5.3-8.
[7] AFC, p. 5.3-7.

interconnect with the existing Kramer-Cool Water 230-kV transmission line.[8] The AFC concludes there would be no Project impacts to the MGS Conservation Area.[9] However, several of the maps provided with the AFC show the Project area extending into the MGS Conservation Area.[10]

Data Requests

7. Please indicate the amount of acreage that will be disturbed in the Superior-Cronese DWMA as a result of the Project.

8. Please indicate the duration of the disturbance to the Superior-Cronese DWMA as a result of the Project.

9. Please indicate the acreage of the area that will be disturbed in the MGS Conservation Area.

10. Please indicate the duration of the disturbance to the MGS Conservation Area as a result of the Project.

11. Please state whether the Project's impacts to the MGS Conservation Area are expected to be temporary.

12. Please provide the revegetation plan for any areas that will be temporarily disturbed.

13. Please state whether the Applicant proposes mitigation for impacts to the Superior-Cronese DWMA. If so, please provide the Applicant's proposed mitigation.

14. Please state whether the Applicant proposes mitigation for impacts to the MGS Conservation Area. If so, please provide the Applicant's proposed mitigation.

Background: BIOLOGICAL RESOURCE SURVEYS

The AFC indicates the California Department of Fish and Game ("CDFG") and USFWS representatives were consulted regarding the scope and type of surveys conducted during each of the survey years.[11] However,

[8] AFC, p. 5.3-8.
[9] *Id.*
[10] *See* AFC, Appendix F. (EDAW, Inc. 2009 Jan 12. Report summarizing results of the proposed Harper Lake Solar Project desert tortoise presence/absence surveys). Figure 3.
[11] AFC, p. 5.3-12.

the AFC does not discuss the results of these consultations, including the individuals consulted and whether all agency recommendations were implemented.

Data Requests

15. Please list the individuals from the CDFG and USFWS that provided survey guidance.

16. Please provide copies of any written correspondence between the Applicant and the agencies regarding the recommended focal species (or taxa) and survey methods.

17. Please document agency approval to forego each of the following survey efforts:

    a. additional trapping for Mohave ground squirrels, listed as threatened under the California Endangered Species Act.

    b. trapping for Mohave River voles, a rare species with potential to occur in the Project area.

    c. surveys for the Western burrowing owl in 2009, a California Species of Special Concern.

Background: SPECIAL-STATUS PLANT SURVEYS

The AFC indicates botanical surveys were conducted in 2007, 2008, and 2009.[12] In 2007, the botanical surveys were conducted by driving 15 to 25 mph throughout the Project area.[13] In 2008, biologists again conducted surveys while driving, although they also conducted focused botanical surveys at "key locations" within the Survey Area.[14] The focused surveys were conducted by walking meandering transects, with transects 15 to 100 feet apart.[15] The survey report does not map or specify the "key locations" that were surveyed. In 2009, the biologists conducted additional focused surveys. Although the survey report lists the dates that surveys were conducted, it does not identify the personnel that were used or the number of biologists that participated in the surveys.

[12] AFC, [BTR] Biological Technical Report, p. 8.
[13] AFC, Appendix F. (EDAW Inc. 2007 December. Harper Lake Solar Project Botanical Survey Report: San Bernardino County California). p. 5.
[14] AFC, Appendix F. (EDAW Inc. 2008 Nov [Rev. 2009 Feb]. Mojave Solar One Project Botanical Survey Report: San Bernardino County California). p. 6, 7.
[15] *Id.*, p 8.

According to the AFC, the results of the 2007 plant surveys were hampered by extremely low winter rainfall.[16] The 2008 surveys resulted in the detection of considerably more native species, thus the Applicant concludes the 2008 surveys were adequate to detect special-status plant species.[17] However, an increase in species richness is not sufficient evidence to justify the conclusion that target species would have been detected if they were present.

Each of the three survey reports (i.e., 2007, 2008, and 2009) indicates surveys adhered to the protocols established by the California Native Plant Society ("CNPS") and CDFG. However, adherence to these protocols requires:

(a) use of systematic field techniques in all habitats of the site to ensure a thorough coverage of potential impact areas;

(b) a sufficient number of visits spaced throughout the growing season to accurately determine what plants exist on the site;

(c) identification of plants to the taxonomic level necessary to determine whether or not they are rare, threatened or endangered;

(d) a detailed description of survey methodology;

(e) total person-hours spent on surveys;

(f) a description of reference site(s) visited and phenological development of rare, threatened, or endangered plant(s); and,

(g) references cited, persons contacted, herbaria visited, and the location of voucher specimens.[18]

The AFC and accompanying survey reports lack these elements.

Data Requests

18. Please provide a map of the roads that were driven to conduct vegetation surveys.

19. Please discuss how driving and meandering transects (at inconsistent spacing) constitute systematic field techniques.

20. Please indicate whether all habitats and impact areas were surveyed for special-status plant species.

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[16] AFC, Appendix F. BTR, p. iv.
[17] AFC, p. 5.3-27.
[18] California Department of Fish and Game. 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities. (Revision of 1983 Guidelines.) Sacramento, CA.

21. Please provide information on the specific locations at which protocol rare plant surveys were conducted, by month and year. In your response, please identify the "key areas" referenced in the 2008 survey reports, and specify the areas within the assessment area that were surveyed more than once.

22. For each botanical survey performed (i.e., 2007, 2008, and 2009), please provide the following, as required by the CNPS and CDFG protocols:

    a. the total number of hours each surveyor spent surveying in the field on each date.

    b. a description of the reference site(s) visited and phenological development of the target special-status plants, with an assessment of any conditions differing from the Project site that may affect their identification.

23. Please identify the local experts consulted and the herbaria that were visited for information on special-status plant species occurrence within the Project area and vicinity.

24. Please provide the mean rainfall and temperature data obtained by the weather station(s) nearest the Project site for 2007, 2008, and 2009.

Background: MOHAVE GROUND SQUIRREL SURVEYS AND HABITAT ASSESSMENT

Three trapping grids were used to sample for Mohave ground squirrels, listed as threatened under the California Endangered Species Act, in 2006 and 2007. Two of the grids were located on the Project site, and one grid was located south of the Project site.[19] According to the biologist that conducted the trapping, annual plants were sparse in 2006 and absent in 2007 due to below average rainfall.[20,21]

According to the AFC, Dr. Phil Leitner conducted Mohave ground squirrel habitat assessments for the Project.[22] The Applicant's impact assessment and Project mitigation appear to be based on Dr. Leitner's assessments. The AFC provides two habitat assessments prepared by Dr.

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[19] AFC, p. 5.3-14.
[20] AFC, Appendix F. (LaBereaux DL. 2007 Aug 1. Mohave ground squirrel survey at the proposed solar thermal power plant site near Harper Lake, San Bernardino County, California).
[21] AFC, Appendix F. (LaBereaux DL. 2006 Aug 9. Mohave ground squirrel survey at the proposed solar Harper Lake Dairy Park, San Bernardino County, California).
[22] AFC, p. 5.3-14.

Leitner; however, only one of the assessments appears to cover the Project area. The other assessment is for "six sections north of Harper Lake." However, the Project is located south of Harper Lake. In Dr. Leitner's Project assessment, Dr. Leitner states his conclusions are "preliminary" and are based upon a single field visit.[23]

Data sheets that accompany the 2008 botanical survey report have several notes that indicate Mohave ground squirrels were detected.[24] These notes were crossed out to instead indicate detection of antelope ground squirrel.[25]

Data Requests

25. Please discuss how the lack of annual plants in the sampling area during the 2006 and 2007 Mohave ground squirrel trapping surveys may have influenced Mohave ground squirrel trapping results.

26. Please indicate whether the Applicant plans to conduct any more trapping or habitat assessments for the Mohave ground squirrel.

27. Please clarify whether Dr. Leitner conducted assessments of Mohave ground squirrel habitat at the Project site beyond what is presented in Dr. Leitner's May 1, 2008 report.

28. Please discuss why the botanical survey data sheets were changed to indicate detection of antelope ground squirrel instead of Mohave ground squirrel and identify the individual that made the modification.

Background: IMPACTS TO MOHAVE GROUND SQUIRREL HABITAT

The AFC concludes the Project would impact 428.4 acres of allscale vegetation that provide potential Mohave ground squirrel habitat.[26] In the habitat assessment Dr. Leitner conducted for the site, he concluded the monotypic stand of allscale on the Project site "does not provide food resources to support a permanent Mohave ground squirrel population."[27] There does not appear to be any open (i.e., available) literature that supports Dr. Leitner's conclusion.

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[23] AFC, Appendix F. (Leitner PL. 2008 May 1. Mohave ground squirrel habitat assessment: Harper Lake Solar Project preliminary review).
[24] AFC, Appendix F. (EDAW Inc. 2008 Nov [Rev. 2009 Feb]. Mojave Solar One Project Botanical Survey Report: San Bernardino County California). Appendix D.
[25] *Id.*
[26] AFC, p. 5.3-33.
[27] *Id.*

Dr. Leitner further concluded "[t]he fact that two years of protocol trapping failed to detect the State-threatened Mohave ground squirrels in the saltbush habitat in the NW 1/4 of Section 29 indicates that this parcel does not support a permanent population."[28] This conclusion appears to conflict with guidance issued by the California Department of Fish and Game, which states: "[I]f a survey conducted according to these [protocol] guidelines results in no capture or observation of the Mohave ground squirrel on a project site, this is not necessarily evidence that the Mohave ground squirrel does not exist on the site or that the site is not actual or potential habitat of the species."[29]

Dr. Leitner's conclusion also appears to conflict with accepted knowledge that Mohave ground squirrel trapping generally results in very low capture rates even when the squirrels are known to be present. In the status review he recently conducted for the species, Dr. Leitner wrote: "[m]ost protocol surveys carried out in recent years have not resulted in detection of the species."[30] He also wrote:

> The significance of negative records must be interpreted carefully as well. When regional surveys or protocol trapping fail to detect Mohave ground squirrels, *it is important to keep in mind that this in itself cannot be used as evidence that the species is absent or that the area does not provide habitat for the species*. There are a number of other circumstances that could result in lack of captures, such as locating a trapping grid in a small patch of marginal or unsuitable habitat, abundance of natural foods that reduce the attractiveness of the bait, low population density due to a series of dry years, or trapping early in the season before juveniles begin their dispersal movements.[31]

Finally, the Applicant's assessment of impacts to Mohave ground squirrel habitat does not appear to incorporate Project impacts to other vegetation types that may provide habitat. These include Mojave Creosote Bush Scrub, Mojave Desert Wash Scrub, Desert Sink Scrub, Tamarisk Scrub, and Fallow-Agricultural-Ruderal.[32]

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[28] AFC, Appendix F. (Leitner PL. 2008 May 1. Mohave ground squirrel habitat assessment: Harper Lake Solar Project preliminary review).
[29] California Department of Fish and Game. 2003. Mohave ground squirrel survey guidelines. California Department of Fish and Game, Sacramento, California.
[30] Leitner P. 2008. Current status of the Mohave ground squirrel. Transactions of the Western Section of the Wildlife Society 44:11-29.
[31] *Id.* (emphasis added).
[32] *See* AFC, p. 5.3-25.

Data Requests

29. Please provide a copy of the Leitner and Leitner (1998) study cited in the Mohave ground squirrel habitat assessment.

30. Please clarify whether the Leitner and Leitner (1998) study cited in the ground squirrel habitat assessment tested Mohave ground squirrel food *requirements,* or whether it collected observational data on food *preferences*.

31. Please provide any studies that support the conclusion that two years of negative trapping results indicate absence of a permanent Mohave ground squirrel population.

32. Please provide criteria used to define "permanent population"[33] with regards to a Mohave ground squirrel population, especially in the context of the organism's adaptive population dynamics.[34]

33. Please provide a reference to scientific literature that supports the AFC's conclusion that small, isolated patches of allscale (such as the ones present on the Project site) cannot support resident populations of Mohave ground squirrels.[35]

34. Please identify the "protocol trapping efforts in monotypic allscale stands on abandoned agricultural land in Kern and Los Angeles counties" referenced on page 5.3-53 of the AFC.

35. Please provide evidence that Mohave ground squirrels were known to occur in other habitats in the vicinity of the referenced Kern and Los Angeles counties trapping efforts.[36]

36. Please confirm that in his status review, Leitner (2008) accurately reported "[p]rotocol trapping has been conducted at 52 grid locations in the desert portion of Los Angeles County during the period 1998-2007, but no Mohave ground squirrels have been detected by this method."[37]

37. Please indicate how many of the Mohave ground squirrel trapping efforts in Kern and Los Angeles counties referenced on page 5.3-53 of the AFC were south of State Route 58.

38. Please confirm that Leitner and Leitner (1989) captured Mohave ground squirrels at their Coso study "Site 1".

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[33] *See* AFC, p. 5.3-54.
[34] *See* Harris JH, P Leitner. 2004. Home range size and use of space by adult Mohave ground squirrel, *Spermophilus mohavensis*. Journal of Mammalogy, 85(3): 517-523.
[35] AFC, p. 5.3-53.
[36] *Id.*
[37] Leitner P. 2008. Current status of the Mohave ground squirrel. Transactions of the Western Section of the Wildlife Society 44:11-29.

39. Please state whether Dr. Leitner has reviewed the following studies or literature:

    a. Aardahl and Roush (1985)[38]

    b. Recht (1977)[39]

    c. Gustafson (1993)[40]

    d. Laabs and Allaback (1991)[41]

    e. Rempel and Clark (1990)[42]

    f. Wessman (1977)[43]

40. Please clarify whether the AFC's reference to the Project Area being "inspected again in April 2008," and during which there was no sign of Mohave ground squirrels or active burrows, refers to Dr. Leitner's single site visit or a different survey effort.[44]

Background: IMPACTS TO MOHAVE GROUND SQUIRREL

The Mohave ground squirrel is listed as threatened under the California Endangered Species Act. The Applicant proposes to provide compensation for impacts to Mohave ground squirrel habitat at a compensation ratio of 0.5:1.[45] However, the Applicant's proposed

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[38] Aardahl JB, P Roush. 1985. Distribution, relative density, habitat preference and seasonal activity levels of the Mohave Ground Squirrel (*Spermophilus mohavensis*) and Antelope Ground Squirrel (*Ammospermophilus leucurus*) in the western Mojave Desert, California. US Bur. of Land Manage. Rep., Calif. Desert Dist., Riverside (CA). *See* Appendix M of Bureau of Land Management. 2005. Final environmental impact report and statement for the West Mojave plan: a habitat conservation plan and California desert conservation area plan amendment. Moreno Valley (CA): U.S. Dept. of the Interior, Bureau of Land Management, California Desert District.

[39] Recht MA. 1977. The biology of the Mohave ground squirrel, *Spermophilus mohavensis*: home range, daily activity, foraging, weight gain and thermoregulatory behavior. Ph.D. Thesis. Univ. California, Los Angeles. 117 pp.

[40] Gustafson JR, State of California, Department of Fish and Game. 1993. A status review of the Mohave ground squirrel (*Spermophilus mohavensis*). A report to the California Fish and Game Commission in response to Kern County's petition to delist the Mohave ground squirrel as a Threatened Species. Nongame Bird and Mammal Section Report 93-9.

[41] Laabs D, M Allaback. 1991. Mohave Ground Squirrel study: El Mirage Cooperative Management Area, San Bernardino County, California. Santa Cruz (CA): Biosearch Wildlife Surveys. Report to the U.S. Bureau of Land Management, Riverside (CA).

[42] Rempel RD, DJ Clark. 1990. 1990 Indian Wells Valley Mohave Ground Squirrel survey, interim report. Calif. Dept. Fish and Game (Fresno). Draft rep.

[43] Wessman EV. 1977. The distribution and habitat preferences of the Mohave ground squirrel in the southeastern portion of its range, Calif. Dep. Fish Game, Wildl. Manage. Branch. Admin. Rep. 77-5.

[44] *Id.* p. 5.3-54.

[45] *Id,* p. 5.3-53.

compensation ratio is inconsistent with the recommendations of the biologist that conducted trapping on the Project site. Specifically, the biologist recommended a ratio of 1:1 for portions of the Project site adjacent to undisturbed habitat.[46]

Data Requests

41. Please indicate the vegetation communities for which Mohave ground squirrel presence is assumed.

42. Please provide all correspondence between the Applicant and the CDFG regarding the habitat impact assessment and proposed compensation ratio.

43. Please indicate which of the vegetation communities discussed in the AFC do not provide food or cover resources for Mohave ground squirrels, and cite to scientific literature or that supports applicant's conclusion(s).[47]

Background: MITIGATION FOR IMPACTS TO MOHAVE GROUND SQUIRREL

The AFC provides a mitigation strategy for Mohave ground squirrel. However, it does not specify any Mohave ground squirrel avoidance and minimization measures, similar to the ones being proposed for Project impacts to desert tortoises, burrowing owls, and other special-status wildlife.

Data Request

44. Please discuss the measures that will be implemented to avoid and minimize impacts to Mohave ground squirrels.

Background: WESTERN BURROWING OWL SURVEYS

The Western burrowing owl is a Species of Special Concern under the California Endangered Species Act. The AFC indicates the Applicant conducted burrowing owl surveys according to California Burrowing Owl Consortium ("CBOC") Guidelines.[48] Potential owl burrows were mapped during desert tortoise surveys. In areas without suitable desert tortoise habitat, biologists walked transects with 100% visual coverage to map any

[46] AFC, Appendix F. (LaBereaux DL. 2007 Aug 1. Mohave ground squirrel survey at the proposed solar thermal power plant site near Harper Lake, San Bernardino County, California).
[47] *See* AFC Section 5.3.5.2.1.
[48] AFC, p. 5.3-15.

potential burrows.[49] The Applicant's survey reports label the burrows that were monitored during the surveys. However, these burrows are not mapped, making it impossible to determine where monitoring occurred.

Data Requests

45. In accordance with CBOC protocol, please provide a map of the burrows that were monitored during the 2007 and 2008 burrowing owl surveys.

46. Please indicate whether the 2007 and 2008 burrowing owl surveys included monitoring in the eastern portion of the Project Area where four burrowing owls were detected during the 2006 reconnaissance surveys.

Background: WESTERN BURROWING OWL IMPACTS AND MITIGATION

The Applicant's proposed mitigation for impacts to burrowing owls includes passive translocation of owls, installation of artificial burrows, and post-translocation monitoring. According to the AFC, "[t]here are currently no data to support CBOC Guidelines for the minimum amount of acreage to support a pair of WBOs; however, the most intensively used areas of nesting WBOs is within approximately 2000 feet from nest sites. As such, a 20-acre conservation area would likely provide enough habitat for two (2) pairs of WBOs."[50] Two thousand feet from a nest site is equivalent to approximately 288 acres.[51] Therefore it is unclear why the applicant concluded 20 acres would provide habitat for 2 pairs of owls.

CDFG mitigation guidelines state the project sponsor should provide funding for long-term management and monitoring of the protected lands, and that artificial burrows should be at least 50 meters from the impact zone. CDFG's definition of an impact includes destruction and/or degradation of foraging habitat adjacent to (within 100 m) an occupied burrow.[52] The Applicant's proposed burrowing owl conservation area appears to be immediately adjacent to the solar field, which, by definition, precludes it from offsetting impacts (impacts will simply be different).[53]

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[49] AFC, Appendix F. (EDAW Inc. 2009 Jan 9. Report summarizing results of the proposed Harper Lake Solar Project burrowing owl presence/absence surveys).
[50] AFC, p. 5.3-49.
[51] Area of a circle = $\prod * r^2$
[52] State of California, Department of Fish and Game. 1995. Staff Report on Burrowing Owl Mitigation. Available at: http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html#Birds.
[53] AFC, Figure BR78-1.

Data Requests

47. Please provide a citation for the statement that most intensively used areas of nesting burrowing owls is within approximately 2000 feet from nest sites.

48. Please provide the rationale for the conclusion in the AFC that a 20-acre conservation area would likely provide enough habitat for two (2) pairs of western burrowing owls, including citations to scientific literature if possible.

49. Please state how the amount of compensation habitat for burrowing owls will be determined.

50. Please discuss the current habitat conditions within the proposed conservation area with respect to the habitat needs of the western burrowing owl and indicate whether the proposed conservation area will be at least 100 meters from Project features after Project construction.

51. Please discuss the actions that will be taken for the long-term management and monitoring of the proposed conservation area. Your response should state whether the Applicant plans to provide funding for the management and monitoring of the proposed conservation area and whether a conservation easement will be established for private lands acquired for compensation purposes.

52. If a conservation easement will be established, please state whether such lands will be preserved in perpetuity.

56. If a conservation easement will be established, please identify the proposed fee title holder.

57. Please provide copies of mitigation monitoring reports prepared by the applicant's consultant that document the results of other burrowing owl translocation projects.

Background: RAPTOR SURVEYS

The AFC states surveys were conducted for raptors during the spring and winter of 2007.[54] According to the applicant's raptor survey report, the surveys were conducted on June 6, 12, and 20, 2007. These dates *do not* encompass the winter season.

[54] AFC, p. 5.3-16.

Data Request

58. Please clarify whether a winter raptor survey was conducted.

59. If a winter raptor survey was conducted, please provide the methods that were used and the survey results.

Background: DESERT TORTOISE SURVEY EFFORTS

The Desert tortoise is a federally listed threatened species. The AFC states that desert tortoise surveys were conducted in 2007, 2008, and 2009. Although the applicant stated surveys were conducted according to USFWS survey protocol, intensive surveys apparently were not conducted. The USFWS protocol recommends an "intensive survey" to determine the accuracy of the surveyor in locating desert tortoise sign during presence-or-absence surveys.[55] According to the protocol, the size of the intensive survey area should be five percent of the size of the project area. In the intensive survey area, the surveyor conducts surveys using transects 10 feet wide rather than 30 feet, then compares the results with the initial survey effort.

The applicant's 2007 desert tortoise survey report states "[s]ince only 116 acres of native Mojave creosote bush scrub occur within the Project area, the need to conduct a 5 percent control method survey [i.e., intensive survey] was not recommended."[56] The report does not specify whether the resource agencies made (or agreed to) the recommendation to skip intensive surveys.

The 2007 survey report first states that biologists conducted desert tortoise surveys between May 1 and May 21, 2007,[57] and then states that surveys were conducted between May 26 and June 5.[58]

The 2008 survey report states desert tortoise surveys were conducted in all areas with suitable habitat.[59] However, the report does not define what was considered suitable habitat or specify the areas that were surveyed.

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[55] US Fish and Wildlife Service. 1992. Field survey protocol for any non-federal action that may occur within the range of the desert tortoise. Available from: Fish and Wildlife Service, Ventura (CA).
[56] AFC, Appendix F. (EDAW, Inc. 2007 Dec. Harper Lake Solar Project desert tortoise presence/absence survey: San Bernardino County, California). p. 10.
[57] AFC, Appendix F. (EDAW, Inc. 2007 Dec. Harper Lake Solar Project desert tortoise presence/absence survey: San Bernardino County, California). p. 9.
[58] AFC, Appendix F. (EDAW, Inc. 2007 Dec. Harper Lake Solar Project desert tortoise presence/absence survey: San Bernardino County, California). p. 11.
[59] AFC, Appendix F. (EDAW, Inc. 2009 Jan 12. Report summarizing results of the proposed Harper Lake Solar Project desert tortoise presence/absence surveys). p. 4.

Data Requests

60. Please provide the dates in 2007 that protocol surveys for the desert tortoise were conducted.

61. Please provide a map that depicts the areas where desert tortoise protocol surveys were conducted during each of the following years;

    a. 2007

    b. 2008

    c. 2009

62. Please clarify whether the resource agencies made (or agreed to) the recommendation to skip the intensive surveys discussed in the protocol and provide documentation if possible.

Background: PREVIOUS DESERT TORTOISE STUDIES

The biologist that conducted the surveys for Mohave ground squirrels in 2006 reported detection of two adult desert tortoises, one of which was marked "HLR 102" from a previous study.[60] Information from previous desert tortoise studies in the region may provide information on tortoise movement, population status, demographics, and other parameters useful in evaluating Project impacts.

Data Request

63. Please identify the previous desert tortoise study referenced in the Mohave ground squirrel survey report and provide contact information for the principal investigator.

Background: DIRECT IMPACTS TO DESERT TORTOISE

The AFC provides inconsistent information on the Project's impacts to desert tortoise habitat. The Biological Resources Technical Report indicates the Project would impact 531 acres of desert tortoise habitat,[61] whereas the biological resources chapter of the AFC indicates the Project would impact 428.4 acres.[62] The latter value inexplicitly excludes impacts to Mojave Creosote Bush Scrub, Mojave Desert Wash Scrub, Desert Sink Scrub, and other potentially suitable desert tortoise habitats.

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[60] AFC, Appendix F. (LaBereaux DL. 2006 Aug 9. Mohave ground squirrel survey at the proposed solar Harper Lake Dairy Park, San Bernardino County, California). p. 17.
[61] AFC, Appendix F. BTR, p. 46.
[62] AFC, p. 5.3-31.

The AFC concludes "none of the Project Area is considered to be occupied DT habitat" despite the detection of a live desert tortoise during reconnaissance surveys in 2006, and detection of desert tortoise sign during all three years (i.e., 2007-2009) of focused survey efforts.[63] The conclusion presented in the AFC conflicts with guidance issued by the USFWS, which states "[o]ccurrence of either live tortoises or tortoise sign (burrows, scats, and carcasses) in the action area indicates desert tortoise presence and therefore requires formal consultation with USFWS."[64]

Data Requests

64. Please clarify the amount of potential desert tortoise habitat that would be directly and indirectly impacted by the Project. In your response, please demonstrate how the value was calculated.

65. Please indicate whether desert tortoises eat alfalfa.

66. Please state whether desert tortoises have the potential to occur in the alfalfa field located within the Project area.[65]

67. Please provide justification for the conclusion in the AFC that "none of the Project Area is considered to be occupied DT habitat."

Background: INDIRECT IMPACTS TO DESERT TORTOISE

Ravens are known to be a significant threat to desert tortoise populations. The AFC concludes the Project's contribution of additional perching and nesting sites (from transmission lines) and water (from evaporation ponds) is not likely to result in a further increase in ravens because of existing features at Harper Lake SEGS.[66]

The AFC further concludes indirect impacts to desert tortoise habitat from deposition of sediment loads during heavy rains would be minimized by grading and compacting the entire site, and that indirect impacts of the altered drainage pattern would be minimized by Project design (which are not articulated). The AFC states any runoff that generates within the Project Area currently is limited to sheet flow.[67] However, grading of the site and compaction of the soils may increase the amount of sheet flow (i.e., due to less infiltration). Thus, additional information is required to evaluate the validity

[63] AFC, p. 5.3-31.
[64] US Fish and Wildlife Service. 2009. Preparing for any action that may occur within the range of the Mojave desert tortoise (*Gopherus agassizii*). Available from: Fish and Wildlife Service, Ventura (CA).
[65] *See* AFC, p. 5.3-7.
[66] AFC, p. 5.3-32.
[67] AFC, p. 5.3-9.

of the AFC's conclusions regarding Project impacts to desert tortoise habitat from sediment loads during heavy rains.

Data Requests

68. Please provide data on the existing abundance of ravens in the Project Area and explain how the abundance estimate was obtained.

69. Please indicate whether the Applicant assumes the common raven is a density-dependent species.

70. If the Applicant assumes ravens are density-dependent, please provide justification for the conclusion in the AFC that the local raven population is not likely to increase as a result of the Project (i.e., the population is currently at maximum density).

71. Please discuss the measures that will be implemented to mitigate increased sheet flow on desert tortoise habitat.

72. Please specify the design features that will be implemented to minimize the impacts of altered drainage patterns to off-site habitats.

Background: MITIGATION FOR DESERT TORTOISE

The Applicant's proposed mitigation for impacts to desert tortoises includes conducting a clearance survey in "areas with shrub cover."[68] The proposed measure is too vague to be effectively evaluated. Furthermore, the Applicant's survey data led to the conclusion that a desert tortoise had "walked onto the barren, abandoned agricultural field within the last several years."[69] Therefore, clearance surveys that exclude barren areas may result in the take of tortoises.

Data Requests

73. Please specify the portions of the Project Area where desert tortoise clearance surveys will occur.

74. Please discuss the status of the Project's desert tortoise translocation plan.

[68] AFC, p. 5.3-43.
[69] AFC, p. 5.3-52.

Background: IMPACTS TO SOUTHWESTERN WILLOW FLYCATCHER

The Southwestern willow flycatcher is an endangered species under the ESA. The AFC concludes suitable willow flycatcher breeding habitat does not occur within the Project area.[70] Southwestern willow flycatchers breed in stands of tamarisk.[71] Tamarisk scrub occurs in the Project area and will be impacted by the Project.[72]

A willow flycatcher was observed within the Project area on June 12, 2007.[73] The AFC concludes the bird was likely a "transient".[74] The AFC reports that this date is within the known spring migratory period for the northern subspecies (*Empidonax traillii brewsteri*). However, the AFC appears to conclude the bird that was observed was the southern subspecies (i.e., southwestern willow flycatcher).[75] In addition, almost all willow flycatchers would have been at their breeding grounds by June 12th.[76,77]

Data Requests

75. Please provide support for the conclusion in the AFC that the willow flycatcher that was observed within the Project Area on June 12, 2007 was likely a transient.

76. Please explain the conclusion in the AFC that the stands of tamarisk in the Project Area do not provide suitable habitat for the willow flycatcher.

Background: IMPACTS TO SWAINSON'S HAWKS

The Swainson's hawk is listed as threatened under the California Endangered Species Act. Suitable nesting and foraging habitat for Swainson's hawks occurs within the Project area, and Swainson's hawks

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[70] AFC, p. 5.3-21.
[71] Sogge MK, RM Marchall, SJ Sferra, TJ Tibbitts. A southwestern willow flycatcher natural history summary and survey protocol. 1997 May. Technical Report NPS/NAUCPRS/NRTR-97/12.
[72] AFC, Appendix F. BTR, p. 43.
[73] AFC, p. 5.3-21.
[74] AFC, p. 5.3-21.
[75] *Id.*, p. 5.3-20.
[76] *See* Bombay HL, TM Benson, BE Valentine, RA Stefani. 2003 May 29. A willow flycatcher survey protocol for California. Available at: www.dfg.ca.gov/wildlife/nongame/docs/wifl_2003_protocol.pdf
[77] Grinnell J, AH Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608 pp.

were detected within both the Project area and one-mile buffer.[78] The AFC concludes impacts to Swainson's hawks have the potential to be significant *only* if the species nests within a 0.5-mile radius of the Project area.[79] However, telemetry studies have shown that Swainson's hawks may travel up to 18 miles from their nests in search of prey.[80] CDFG recommends mitigation for impacts to foraging habitat within 10 miles of an active Swainson's hawk nest.[81,82]

The applicant's proposed avoidance and minimization measures for impacts to Swainson's hawks include conducting a nesting season survey of the Project site and surrounding 0.5-mile buffer, "per the recommended CDFG survey methodology."[83] Importantly, the survey periods defined in the protocol are for a "typical" year for the majority of Swainson's hawks from San Joaquin County to Northern Yolo County. Consequently, the protocol states the survey dates should be adjusted in consideration of early and late nesting seasons, and geographic differences.[84]

Data Requests

77. Please provide justification for the conclusion that Project impacts to Swainson's hawks would be significant only if the species nests within a 0.5-mile radius of the Project area.

78. Please provide the schedule for the proposed Swainson's hawk nest surveys, including the dates (or range) surveys will be conducted within each designated survey period.

Background: IMPACTS TO AMERICAN PEREGRINE FALCONS

The American peregrine falcon is fully protected under the Migratory Bird Treaty Act. An American peregrine falcon was detected within the Project area on August 14, 2007.[85] The AFC presents the conclusion that the

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[78] AFC, p. 5.3-21.
[79] *Id.,* p. 5.3-33.
[80] California Department of Fish and Game. 1994. Staff report regarding mitigation for impacts to Swainson's hawks (*Buteo swainsoni*) in the Central Valley of California [internet]. Available from: <http://www.madera-county.com/rma/archives/uploads/1188143775_Document_upload_23w.pdf>.
[81] For the Central Valley; mitigation guidelines for other regions are not available.
[82] *Id.*
[83] AFC, p. 5.3-46.
[84] CDFG. 2000 May 31. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Swainson's Hawk Technical Advisory Committee.
[85] AFC, p. 5.3-21.

bird was likely a transient and that at most peregrine falcons may use the area in the vicinity of the survey area as a peripheral and occasional part of its home range.[86] American peregrine falcons breed near wetlands, lakes, rivers, or other water. They typically nest on high cliffs, banks, dunes, or mounds. They are also known to nest on human-made structures, and occasionally in old nests of other raptors or in tree or snag cavities.[87] Because marshland and human-made structures are present on and directly adjacent to the Project site, the applicant needs to provide justification for its conclusions.

Data Requests

79. Please provide justification for the conclusion in the AFC that the American peregrine falcon that was detected was likely a transient.

80. Please provide a discussion of Project impacts to, and mitigation for, American peregrine falcons.

Background: IMPACTS TO YELLOW WARBLERS

A yellow warbler, a California Species of Special Concern, was detected within the Project area during the May 2007 surveys.[88] The AFC states "[s]uitable breeding habitat for this species does not occur within the Project Area or the one-mile buffer; therefore, this individual was likely a migrant and was not mapped."[89] The yellow warbler is a nocturnal migrant that usually arrives in California in April.[90] Grinnell and Miller (1944) report it being a summer resident from mid-April to mid-August,[91] and Dunn and Garrett (1997) indicate it breeds from April to late July.[92] Yellow warblers will breed in tamarisk communities.[93] Tamarisk scrub occurs in the Project area and will be impacted by the Project. Consequently, the Applicant needs to provide a discussion of impacts to, and mitigation for, the yellow warbler.

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[86] AFC, p. 5.3-82.
[87] Zeiner DC, WF Laudenslayer Jr., KE Mayer, M White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California.
[88] AFC, p. 5.3-84.
[89] *Id.*
[90] Zeiner DC, WF Laudenslayer Jr., KE Mayer, M White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California.
[91] Grinnell J, AH Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608 pp.
[92] Dunn JL, KL Garrett. 1997. A field guide to warblers of North America. Houghton Mifflin, Boston.
[93] Brown BT, MW Trosset. Nesting-habitat relationships of riparian birds along the Colorado River in Grand Canyon, Arizona [USA]. Southwestern Naturalist, v.34, n.2, 1989:260-270.

Data Requests

81. Please provide the Applicant's criteria for the use of the term "transient" (e.g., with respect to the willow flycatcher) and the criteria for the use of the term "migrant" (e.g., with respect to the yellow warbler).

82. Please provide a discussion of Project impacts on yellow warbler breeding and migratory stopover habitat.

83. Please discuss the measures that will be implemented to mitigate impacts to yellow warblers and their habitat.

Background: IMPACTS TO SHORT-EARED OWLS

The short-eared owl is a California Species of Special Concern. According to the AFC, "[o]ne short-eared owl was observed within the Project Area during reconnaissance surveys in 2006 (Figure 5.3-8); however, because this species tends to be active both day and night and no subsequent observations were recorded, it is likely that this individual was a transient and did not breed within the Project Area." This is not an accurate depiction of existing conditions and potential Project impacts. Short-eared owls are primarily crepuscular.[94] Suitable nesting habitats include marshes and irrigated alfalfa or grain fields.[95] At Harper Dry Lake, multiple short-eared owl nests have been detected over multiple years.[96] In 1980, nests were reported to be in a marsh adjacent to alfalfa fields experiencing a rodent boom.[97] Although most of the agricultural fields have been out of production since then, short-eared owls still occur in the area during the breeding season.[98] During the winter, up to 150 short-eared owls have been present in the marshes and fields of the Harper Dry Lake area.[99]

The AFC lacks a discussion of potential Project impacts on, or mitigation for, short-eared owls. Furthermore, although the applicant conducted three mornings of raptor surveys in 2007, the methods that were used were not conducive to detecting short-eared owls. Specifically, the surveys were conducted from late-morning to early-afternoon when short-eared owls are

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[94] Shuford WD, T Gardali, editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
[95] *Id.*
[96] *Id.*
[97] *Id.*
[98] *Id.*
[99] *Id.*

generally not active, and they were done while driving (short-eared owls are frequently detected when flushed).[100]

Data Requests

83. Please provide justification for the conclusion that the short-eared owl that was detected was likely a transient and did not breed in the Project area.

84. Please provide a copy of the reconnaissance survey report referenced in the AFC (i.e., EDAW 2006).

85. Please provide copies of the BLM nest record cards for the Harper Dry Lake area.

86. Please discuss all attempts to document birds breeding in the Biological Resources Survey Area.

87. Please provide a discussion of Project impacts to, and mitigation for, short-eared owls.

Background: IMPACTS TO PRAIRIE FALCONS

The Prairie falcon is on the CDFG Species Watch List. The AFC concludes suitable nesting habitat for prairie falcons does not occur in the Project area.[101] However, Prairie falcons were detected twice within the Project area.[102] Therefore, the Project site may provide foraging habitat for the species. Despite this, the AFC fails to discuss impacts to, and mitigation for, prairie falcon *foraging* habitat.

Data Request

88. Please provide a discussion of Project impacts to, and mitigation for, prairie falcon foraging habitat.

Background: IMPACTS TO MERLINS

A merlin, a California Species of Special Concern, was documented in the fallow agricultural fields in the Project area during both desert tortoise and burrowing owl surveys in 2008.[103] The AFC states merlins are not

[100] AFC, Appendix F. (EDAW, Inc. 2007 Aug 3. Results of the proposed Harper Lake Solar Project raptor surveys).
[101] AFC, p. 5.3-23.
[102] *Id.*
[103] *Id.*

expected to breed on-site due to lack of appropriate woodland habitat.[104] However, the special-status listing applied to merlins is associated with non-breeding and wintering individuals. Therefore, a discussion of Project impacts to, and mitigation for, merlins is required.

Data Request

89. Please provide a discussion of Project impacts to, and mitigation for, merlins.

Background: IMPACTS TO COOPER'S HAWKS

The Cooper's hawk is a California Species of Special Concern. A Cooper's hawk was observed flying over the Survey Area during desert tortoise surveys in 2008.[105] The AFC concluded Cooper's hawks would not be expected to nest within the Survey Area due to lack of suitable habitat, and that Cooper's hawks typically nest in relatively large trees and areas with dense patches of trees.[106] For the Swainson's hawk, the AFC concluded suitable nesting habitat was present in the Project area "in the form of large ornamental trees."[107] Furthermore, Cooper's hawks are reported to nest in forests, or in groves of trees along rivers, *but also in low scrub of a treeless area*.[108] Therefore, it appears suitable nesting habitat for Cooper's hawks may be present in the Project area.

Data Requests

90. Please provide the date the Cooper's hawk was detected within the Survey Area.

91. Please provide a discussion of Project impacts to, and mitigation for, Cooper's hawks.

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[104] AFC,Appendix F. BTR, p. 24.
[105] AFC, p. 5.3-23.
[106] *Id.*
[107] *Id.*, p. 5.3-21.
[108] Baicich PJ, CJ Harrison. 1997. A guide to the nests, eggs, and nestlings of North American Birds. 2nd ed. London: Academic Press.

Background: IMPACTS TO HARPER DRY LAKE ACEC

Harper Dry Lake historically provided important habitat for thousands of birds.[109] In 1989, prior to the construction of the SEGS VIII and IX Harper Lake Unit, there were three discrete marsh areas in Harper Lake.[110] The wetland area was recognized as a uniquely important resource within San Bernardino County.[111] The wetland has historically benefited from runoff due to agricultural activity in the region and prior geotechnical and hydrogeological studies done on the site suggest that "given a fairly regular periodic supply of water, a wetland could persist."[112] The construction of the Project would preclude any potential agricultural activity on the site that could supply water to the Harper Lake wetland adjacent to the Project site. The AFC provides little information on how the Project would affect BLM's habitat restoration efforts other than stating (a) the Project "can implement selected on-site features, which *could* protect the remaining (and potentially restored) wetlands"; and (b) "[v]egetated buffers between the Project Area and wetland *could* be designed and installed."[113] The AFC concludes these mitigation measures *could* reduce or prevent the movement of sediment and filter or settle out pollutants from runoff water into the wetlands.[114] Despite this conclusion, the AFC appears to lack any specific mitigation for potential Project impacts on the present and future values of habitat associated with Harper Dry Lake.

Data Requests

92. Please clarify how the Project's proposed pumping of groundwater and alterations to hydrology will impact the vegetation communities within Harper Dry Lake.

93. Please discuss whether the Project will contribute to the BLM's Harper Dry Lake ACEC Wetlands Restoration Project.

94. Please provide a copy of "BLM 2007", which was cited in the AFC.[115]

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[109] Bureau of Land Management. 2007 Apr 27. Harper Dry Lake Marsh, Recreation Area [Internet]. U.S. Department of the Interior; [cited 2010 Feb 19]. Available from: http://www.blm.gov/ca/st/en/fo/barstow/harper.html.

[110] Final Staff Assessment, Luz Development & Finance Corporation's Solar Electric Generating Systems (SEGS) IX & X, Harper Lake, San Bernadino County, California, 89-AFC-1, (November 1989) p. BIO-112

[111] *Id.*

[112] *Id.* at BIO-12 and Final Staff Assessment, Luz Development & Finance Corporation's Solar Electric Generating Systems VIII, Harper Lake, San Bernardino County, California, 88-AFC-1 (December 1988), p. BIO-20.

[113] AFC: Appendix F. BTR, p. 40. Emphasis added.

[114] *See id.*

[115] *Id.,* p. 39.

95. Please specify the mitigation measures that will be implemented to mitigate the Project's impacts on Harper Dry Lake.

96. Please state whether the Applicant would agree to a condition of certification requiring the Applicant to provide water discharge volumes to the ACEC comparable to those resulting from historic agricultural activity.

Background: IMPACTS TO MOHAVE RIVER VOLE

The AFC's map of historic biological resources depicts the occurrence of a Mohave River vole immediately adjacent to the proposed Project site.[116] However, the AFC does not provide a discussion of potential Project impacts on the organism. The California Natural Diversity Database ("CNDDB") indicates the record is from 5 May 1983 and describes it as "1 caught at edge of ditch lined with Typha. Much grass cover on surrounding ground. Ted Rado, BLM, has caught about a dozen *Microtus* here."[117] The species account provided in the West Mojave Plan indicates that phylogenetic analysis is required to assign the specimen to a particular subspecies.[118] [119] However, it indicates Mohave River voles are found in moist habitats including meadows, freshwater marshes and irrigated pastures in the vicinity of the Mojave River, and that alfalfa fields may also provide habitat.[120] According to these descriptions, portions of the Project site and surrounding lands may be occupied by Mohave River voles.

The CNDDB lists five records (two from 1930, one from 1967, and two from 1983) of the Mohave River vole and it categorizes it as a critically imperiled subspecies. The occurrence at Harper Lake represents the northernmost record of the subspecies in the CNDDB, with the next nearest occurrence located approximately 18.5 miles to the south.[121] Given the

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[116] AFC, Appendix F. BTR, Figure 4.
[117] California Natural Diversity Database. 2010. Rarefind [computer program]. Version 3.1.0. Jan 4, 2010. Sacramento (CA): Wildlife & Habitat Data Analysis Branch. California Department of Fish and Game.
[118] Laabs D. Mojave River Vole [Species Account]. Bureau of Land Management. Final Environmental Impact Report and Statement for the West Mojave Plan: a habitat conservation plan and California desert conservation area plan amendment. Moreno Valley (CA): U.S. Dept. of the Interior, Bureau of Land Management, California Desert District.
[119] It's unclear whether such analysis was ever conducted.
[120] Laabs D. Mojave River Vole [Species Account]. Bureau of Land Management. Final Environmental Impact Report and Statement for the West Mojave Plan: a habitat conservation plan and California desert conservation area plan amendment. Moreno Valley (CA): U.S. Dept. of the Interior, Bureau of Land Management, California Desert District.
[121] California Natural Diversity Database. 2010. Rarefind [computer program]. Version 3.1.0. Jan 4, 2010. Sacramento (CA): Wildlife & Habitat Data Analysis Branch. California Department of Fish and Game.

limited distribution and apparent rarity of the subspecies, any Project impacts on the Mohave River Vole or its habitat would be extremely significant.

Data Requests

97. Please provide any available information on the occurrence of Mohave River voles in the Project Area and surrounding habitats. If no additional information is available, please discuss the Applicant's plan for obtaining information on Mohave River vole occurrence in the direct and indirect impact areas.

98. Please discuss Project impacts on Mohave River voles.

99. Please provide mitigation for any potentially significant Project impacts on Mohave River voles.

Background: IMPACTS TO WILDLIFE CORRIDORS

The AFC concludes that the wetland northwest of the Harper Lake Watchable Wildlife Area is not a migratory bird stop-point, nor an important site for terrestrial wildlife congregation.[122] However, at the data issues and resolution workshop conducted by California Energy Commission staff on December 8, 2010, the Applicant's biologist indicated that a wildlife corridor movement study had not been conducted.

Additionally, information provided in the AFC suggests Harper Dry Lake may have unique habitats (e.g., alkali meadow, alkali playa, desert greasewood scrub) that may attract birds and terrestrial wildlife.[123] Furthermore, the AFC's conclusions do not appear consistent with the Applicant's species list, which indicates several wetland bird species were detected during Project surveys.[124] Finally, the AFC's conclusions appear to discount the BLM's ongoing restoration efforts with regard to the Harper Dry Lake wetland, which have likely resulted in its use by migratory birds and other wildlife.

According to the AFC, "there is a great expanse of relatively undisturbed desert scrub habitat exterior to the Project Area boundary, which provides ample food and shelter for wildlife. Due to these conditions, wildlife presence within the Project Area is largely limited to transient *movement across the site* to reach areas where higher quality habitat

[122] AFC, p. 5.3-24.
[123] *See* AFC: Appendix F. BTR, Figures 3a and 3b.
[124] AFC, Table 5.3-2.

exists."[125] The statement appears to be in direct opposition to the AFC's conclusion that the Project "would not result in the severing, blocking, or constriction of any natural vegetation that connects areas of native desert."[126]

Data Requests

100. Please confirm that a wildlife movement corridor study has not been conducted for the Project.

101. Please provide information that would enable an assessment of the Project's impacts on wildlife movement corridors, particularly for the area surrounding Harper Dry Lake.

Background: CUMULATIVE IMPACTS

CEQA requires a "reasonable effort to discover, disclose, and discuss" related past, present and future projects. With regard to future projects, the analysis must include all reasonably foreseeable future projects. The Project would lie immediately southeast of the existing Harper Lake Solar Electric Generating Stations (SEGS) VIII and IX.[127] In addition, the AFC discusses other potential projects that may contribute to cumulative impacts.[128] However, because the AFC lacks a map of these projects, it is difficult to evaluate their contribution to cumulative impacts. The AFC also states the Applicant identified several potential renewable energy project sites within the County of San Bernardino, but did not include them in the cumulative impacts analysis because the majority of the projects are not likely to be considered viable.[129] However, under CEQA, the Applicant must consider these projects if they are reasonably foreseeable. For example, the Bureau of Land Management held scoping meetings in July 2009 and recently published a Draft Environmental Impact Statement for the Lucerne Valley Solar Project, a 45-MW facility proposed by Chevron Energy Solutions in San Bernardino County.

[125] AFC, p. 5.3-8. [emphasis added]
[126] AFC, p. 5.3-24.
[127] AFC, p. 5.3-7.
[128] AFC, Sections 5.3.7 and 5.1.
[129] AFC, p. 5.3-40.

Data Requests

102. The BLM maintains a database of right of way of applications for renewable energy projects.[130] Please state whether the Applicant relied on data available through the BLM database.

103. Please provide a map that identifies the projects considered in the Applicant's cumulative impact analysis, and that shows their location with respect to the Project.

Background: AVOIDANCE AND MINIMIZATION MEASURES FOR IMPACTS TO AMERICAN BADGERS, KIT FOXES, AND OTHER MAMMALS

The Applicant's proposed avoidance and minimization measure for impacts to badgers and kit foxes is to passively exclude them from their dens if any dens are discovered during the desert tortoise or burrowing owl pre-construction clearance surveys.[131] After the animals have abandoned their dens, the Applicant proposes to collapse them prior to construction of the desert tortoise fence, thus allowing the animals to move off-site.[132] However, the Applicant's desert tortoise mitigation measures suggest clearance surveys would occur after installation of the fence, thus trapping badgers and foxes within the Project site, or substantially restricting them from leaving the site.

Data Requests

104. Please clarify the timing of fence installation in relation to badger and kit fox avoidance and minimization measures.

105. If the fence will be installed before the measures are implemented, please clarify how badgers, foxes, and other mammals will be able to exit the site.

[130] Available at http://www.blm.gov/lr2000/; *see also* http://www.geocommunicator.gov/GeoComm/index.shtm.
[131] *Id.*, p. 5.3-51.
[132] *Id.*

Background: IMPACTS TO OTHER SPECIAL-STATUS BIRD SPECIES

The AFC provides a list of wildlife species that were detected during Project surveys.[133] The list includes several special-status bird species that were not discussed in the AFC, and that may be adversely affected by the Project impacts.

Data Request

106. For each of the following species, please provide (a) the date(s) the species was detected; (b) information on the distribution and abundance of the species within the survey area; and (c) a discussion of the potential significance of the Project on the species:

    a. great egret (rookery sites protected)
    b. great blue heron (rookery sites protected)
    c. snowy egret (rookery sites protected)
    d. Caspian tern (Nesting colonies protected; USFWS Bird of Conservation Concern)
    e. white-faced ibis (rookery sites protected; CDFG Watch List species)
    f. Osprey (CDFG Watch List species)
    g. Abert's towhee (American Bird Conservatory Watch List species)
    h. yellow-headed blackbird (CDFG Species of Special Concern)
    i. olive-sided flycatcher (CDFG Species of Special Concern; USFWS Bird of Conservation Concern)

Background: COLLISION AND ELECTROCUTION HAZARDS

Avian collision with structures and power lines is a significant and ongoing problem in the United States. Collision with structures kills an estimated 550 million birds a year and power lines kill another estimated 130 million per year.[134] Electrocution from power lines is known to be a mortality hazard to birds, especially birds of prey. The AFC lacks a discussion of these impacts and any proposed mitigation to avoid or minimize them.

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[133] AFC, Table 5.3-2.

[134] Erickson WP, GD Johnson, and DP Young. 2005. A Summary and Comparison of Bird Mortality from Anthropogenic Causes with an Emphasis on Collisions. USDA Forest Service Gen. Tech. Rep. PSW-GTR-191.

Data Requests

107. Please discuss the avian collision risk that will result from the Project.

108. Please discuss any Project-specific design measures that will be implemented to mitigate potential avian collision hazards with Project structures and the proposed transmission line.

109. Please indicate whether the applicant will implement the latest Avian Protection Plan (APP) Guidelines.[135]

[135] The Edison Electric Institute's Avian Power Line Interaction Committee and U.S. Fish and Wildlife Service. 2005. Avian Protection Plan (APP) Guidelines.

DECLARATION OF SERVICE

I, Bonnie Heeley, declare that on March 17, 2010, I served and filed copies of the attached **CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET ONE** dated March 17, 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: http://www.energy.ca.gov/sitingcases/abengoa/ABENGOA_POS.PDF. The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit electronically and by depositing in the United States mail at South San Francisco, California, with first-class postage fully prepaid and addressed as provided on the Proof of Service list above to those addresses NOT marked "email preferred," and for filing with the Energy Commission by sending an original paper copy and one electronic copy, mailed and emailed respectively, to the Commission as shown on the Proof of Service list attached.

I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, California, this 17th day of March. 2010.

_____/s/_____
Bonnie Heeley

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