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May 14, 2010

<b>DOCKET</b>	
<b>09-AFC-7</b>	
DATE	<u>MAY 14 2010</u>
RECD.	<u>MAY 14 2010</u>

California Energy Commission  
Attn: Docket No. 09AFC7  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512

Re: 09-AFC-7 Palen Solar Power Project

Dear Docket Clerk:

Enclosed are an original and one copy of CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET ONE. Please process the document and provide us with a conformed copy in the envelope enclosed.

Thank you.

Sincerely,

/s/

Jason W. Holder

JWH:bh  
Enclosures

# ADAMS BROADWELL JOSEPH & CARDOZO

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May 14, 2010

### Via Electronic Service

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Re: Palen Solar Power Project (09-AFC-7)  
CURE Data Requests, Set One (Nos. 1-195)

Dear Ms. Harron and Mr. Galati:

California Unions for Reliable Energy (CURE) submits this first set of data requests to Palen Solar I, LLC for the Palen Solar Power Project (PSPP or Project) pursuant to Title 20, section 1716(b), of the California Code of Regulations. CURE requests this information (1) to assess issues not addressed in Palen Solar I, LLP's responses to California Energy Commission staff's data requests, the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS), Applicant's initial comments regarding the SA/DEIS (and attachments thereto), or the preliminary results of the Spring 2010 surveys, and (2) to follow-up on issues raised at the April 16, 2010, April 27-28, 2010, and May 7, 2010 workshops.

2357-026a

May 14, 2010  
Page 2

The requested information is necessary to: (1) more fully understand the project; (2) assess whether the project will be constructed and operated in compliance with all laws, ordinances, regulations and standards; (3) assess whether the project will result in significant environmental impacts; (4) assess whether the project will be constructed and operated in a safe, efficient and reliable manner; and (5) assess potential mitigation measures.

CURE reserves the right to submit additional data requests and/or comments on any other topic that requires further information. Our reservation is based in part on matters beyond our control; principally, in response to the California Energy Commission staff's requests, Palen Solar I, LLP continues to file new information regarding the design of the project, potentially significant impacts in several resource areas, and the manner in which Project impacts will be mitigated.

Pursuant to section 1716(f) of the Energy Commission's regulations, written responses to these requests are due within 30 days. If you are unable to provide, or object to providing, the requested information by the due date, you must send a written notice of your objection(s) and/or inability to respond, together with a statement of reasons, to Commissioners Douglas and Weisenmiller and to CURE within 20 days.

Please contact us if you have any questions. Thank you for your cooperation with these requests.

Sincerely,

/s/

Jason W. Holder

JWH:bh  
Enclosure

cc: Docket (09-AFC-7)  
Proof of Service List (09-AFC-7)

**STATE OF CALIFORNIA  
California Energy Commission**

In the Matter of:

The Application for Certification  
for the Palen Solar Power Project

Docket No. 09-AFC-7

**CALIFORNIA UNIONS FOR RELIABLE ENERGY  
DATA REQUESTS, SET ONE**

May 14, 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 June 14, 2010, to each of the following people:

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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.

**Palen Solar Power Project**  
**CURE Data Requests Set #1**

**BIOLOGICAL RESOURCES**

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**Background: GENERAL WILDLIFE SURVEYS**

An accurate description of the environmental baseline is necessary for an adequate analysis of potentially significant impacts.<sup>1</sup> The Application for Certification (“AFC”) states that vegetation mapping was conducted within the Biological Resources Survey Area (“BRSA”) between February 11 and April 21, 2009, and that rare plant surveys were conducted between February 11 and April 21, 2009.<sup>2</sup> The Biological Resources Technical Report (“BRTR”) states that “vegetation mapping was conducted from strategic vantage points whenever direct access was not feasible.”<sup>3</sup>

The AFC further states that the applicant conducted general wildlife surveys concurrent with protocol wildlife surveys and vegetation mapping.<sup>4</sup>

Palen Solar I, Inc. (the “Applicant”) recently submitted a survey protocol document for Spring 2010 surveys.<sup>5</sup> Again, these protocol states that general wildlife surveys were conducted along with protocol wildlife surveys and vegetation mapping.<sup>6</sup>

Energy Commission Staff found that botanical survey results for the Imperial Valley Solar Project (formerly Solar Two) were not adequate to assess presence or absence of plant species within the project area because the plant surveys were conducted during wildlife surveys when the focus and methods may be different.<sup>7</sup>

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<sup>1</sup> See, e.g., *Communities for a Better Environment v. South Coast Air Quality Management District* (March 15, 2010) 48 Cal.4th 310, 316.

<sup>2</sup> AFC, p.5.3-13 – 5.13-14.

<sup>3</sup> BRTR, p. 24.

<sup>4</sup> *Id.*

<sup>5</sup> See Survey Approach and Methodologies for the Solar Millennium Parabolic Trough Palen Solar Power Project, April 2010 (“2010 Survey Protocol”).

<sup>6</sup> See *Id.* at p. 13.

<sup>7</sup> Staff Assessment and Draft Environmental Impact Statement, SES Solar Two Project, California Energy Commission Docket No. 08-AFC-5, pp. C.2-3, C.2-20.

The 2010 Survey Protocol states that burrow mapping for Western Burrowing owl (“WBO”) will be conducted “mostly” during focused surveys for the Desert tortoise (“DT”).<sup>8</sup> The proposed protocol also states that surveys for a number of sensitive species will be conducted during the surveys for DT, WBO, and during the vegetation mapping and jurisdictional waters delineation process. Biologists conducting surveys for the DT and WBO and performing other functions could be distracted by searches for other species, and vice versa.

**Data Requests:**

1. Please justify the validity of the Applicant’s approach to conducting general wildlife surveys concurrently with protocol surveys.
2. Please identify and provide the qualifications for those persons who conducted general wildlife surveys in 2009 and those who have or will conduct such surveys in 2010.
3. Please provide an update for the requested information (i.e. identify and provide qualifications for those persons) concerning the 2010 surveys when such surveys have been completed and are considered final.
4. Please indicate on the vegetation map which portions of the map were drawn from vantage points and which were drawn from actual site visits.
5. Please provide a map indicating which portions of the site were not visited based on the Applicant’s statement that there was no direct access.
6. Please explain why focused surveys are not proposed for the species listed on page 13 of the proposed 2010 Survey Protocol document.

**Background: BIOLOGICAL RESOURCE SURVEYS ALONG NEW TRANSMISSION LINE CORRIDOR AND PREVIOUSLY UNSURVEYED PORTIONS OF PROJECT DISTURBANCE AREA**

Biological resources surveys and wetland delineations were conducted along the originally proposed transmission line route extending south from the Palen Solar Power Project (“PSPP”) site to a proposed substation. However, no surveys or delineations were conducted along the transmission line route that extends to the west of the PSPP site prior to preparation of the

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<sup>8</sup> 2010 Survey Protocol, p. 4.

Staff Assessment/Draft Environmental Impact Statement (“SA/DEIS”).<sup>9</sup> The SA/DEIS states that the latter transmission line (extending west to the new Red Bluff substation) will be used to connect the PSPP to the Southern California Edison (“SCE”) transmission system.<sup>10</sup> Information regarding existing resources along the now proposed transmission line route to the west of the PSPP site must be provided to the Commission in order for Staff to conduct its analysis of potentially significant impacts as required by the Commission’s regulations.

The proposed 2010 Survey Protocol document is dated April 10, 2010. April is generally too late in the spring to begin valid rare plant surveys. The proposed protocol suggests, however, that some surveys were begun in February and March 2010.

The 2010 Survey Protocol states that biological resource surveys will be conducted along the transmission line corridor ROW and buffer areas and also in previously unsurveyed portions of the PSPP disturbance area. The 2010 Survey Protocol does not provide a list of the biologists that will participate in field surveys, nor does it provide information regarding the biologists responsible for conducting each of the various surveys, and the qualifications of those biologists. Furthermore, the 2010 Survey Protocol lacks information on the level of effort devoted to each survey task. Information on the man-hours dedicated to each survey is necessary to evaluate whether the Applicant adhered to the survey protocols, and thus if the description of existing biological resource conditions is accurate.<sup>11</sup>

### **Data Requests:**

7. Please provide the person-hours spent surveying, by date and biologist, for each of the following survey efforts:

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<sup>9</sup> See, e.g., Applicant’s Responses to CEC Data Requests Set 1, Vol. A, Biological Resources, (January 6, 2010), Figures: DR-BIO-60-2, DR-BIO-63-1, DR-BIO-64-1, DR-BIO-91, DR-BIO-98-2, DR-BIO-98-3, DR-BIO-98-4, DR-BIO-101.

<sup>10</sup> See SA/DEIS, p. B.1-11; see also *Id.* at pp. C.11-1, C.11-4; see also Updated Plan of Development, dated July 20, 2009, p. 35 [describing 12-mile gen tie line].

<sup>11</sup> 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; 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); The California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Available online at: <http://www.dfg.ca.gov/wildlife/species/docs/boconsortium.pdf>.



- a. vegetation community;
  - b. Desert tortoise (“DT”);
  - c. Western Burrowing owl (“WBO”) Phase II;
  - d. WBO Phase III;
  - e. Mojave fringe-toed lizard (“MFTL”);
  - f. Other special-status wildlife;
  - g. avian point count surveys;
  - h. cacti sampling; and
  - i. delineation of wetlands and jurisdictional waters.
8. Please confirm whether the Spring 2010 surveys along the selected Transmission Line Route and PSPP disturbance areas have been completed.<sup>12</sup>
  9. If Spring 2010 surveys have been completed, please describe the outcome of these surveys and provide the information requested in Data Requests 2, 3, and 4 above for these surveys.
  10. If not complete, please describe what steps remain to complete the surveys and provide the requested information concerning ongoing and future surveys when such surveys are completed.
  11. Please explain why surveys were begun before the proposed survey protocol was approved by agencies with jurisdiction over species and their obligate habitats. If the proposed survey protocol received prior approval, please identify the agencies and officials who provided such approvals.

**Background: SCOPE OF ORIGINAL AND SPRING 2010  
BIOLOGICAL RESOURCE SURVEYS**

The SA/DEIS indicates the California Department of Fish and Game (“CDFG”) and the U.S. Fish and Wildlife Service (“USFWS”) representatives were consulted regarding the scope and type of surveys conducted during

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<sup>12</sup> On May 11, 2010, we received a letter from the Applicant’s consultant transmitting the Preliminary Results from the Spring 2010 surveys. These preliminary results specifically pertain to the DT, rare plants, and jurisdictional waters, they do not address the other species identified in the 2010 Survey Protocol.

each of the survey years.<sup>13</sup> However, the SA/DEIS does not discuss the results of these consultations, including the individuals consulted and whether all agency recommendations were implemented.

The 2010 Survey Protocol states that “[a]ll protocols to be implemented in 2010, and described herein, are consistent with 2009 survey protocols, with the exception of a few modifications to the DT protocol, rare plant surveys, and jurisdictional waters surveys.”<sup>14</sup> The 2010 Survey Protocol also states that Spring 2010 surveys for species such as DT and Western burrowing owl (“WBO”) and for vegetation community mapping and rare plants will only be conducted in areas “for which surveys were not previously conducted in 2009.”<sup>15</sup> The maps attached to the 2010 Survey Protocol clearly indicate that 2010 surveys will bypass 2009 surveyed areas.<sup>16</sup> The preliminary results of the Spring 2010 surveys suggest that only previously unsurveyed areas were surveyed.<sup>17</sup>

By not surveying previously surveyed areas, the Applicant’s consultant may fail to observe DT or WBO now within the PSPP disturbance area. Movements on and off the project site by DT, WBO and other species can be rapid, and can occur within the 12 months between surveys (this is particularly true with respect to the WBO).

### **Data Requests**

12. Please list the individuals from the CDFG and USFWS that provided survey guidance for both the 2009 and 2010 survey protocols.
13. Please provide copies of any written correspondence between the Applicant and the agencies regarding the recommended focal species (or taxa) and survey methods.
14. Please document agency approval to forego each of the following survey efforts:
  - a. Surveys in areas that were previously surveyed in 2009, and

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<sup>13</sup> SA/DEIS, p. C.2-3.

<sup>14</sup> 2010 Survey Protocol, p. 1.

<sup>15</sup> *Id.* at p. 3.

<sup>16</sup> 2010 Survey Protocol, Figures P-1 through P-4.

<sup>17</sup> See figures attached to AECOM letter dated May 7, 2010 reporting preliminary results of Spring 2010 surveys.

- b. Standard DT survey protocol, including Zone of Influence survey requirements and the requirement to conduct surveys when DT are most active (April through May).

### **Background: SPECIAL-STATUS PLANT SURVEYS**

The AFC and the BRTR indicate botanical surveys have not yet been conducted in the areas that will be impacted by the substation and the transmission line corridor.<sup>18</sup> However, CEQA requires an accurate description of the environmental baseline in order to ensure an adequate analysis of potentially significant impacts.<sup>19</sup>

In response to DR-BIO-101, the applicant asserted that “[t]he transmission line Disturbance Area had previously been proposed and had already been surveyed along with its associated 1,000 foot buffer during the spring 2009 surveys.”<sup>20</sup> The applicant, however, was referring to the transmission line to the proposed substation to the south, not the transmission line to the proposed Red Bluff substation.<sup>21</sup>

The BRTR lists fifteen special status plant species as possibly occurring within the Project’s disturbance area.<sup>22</sup> The survey transects were “from 10 to 100 feet apart.”<sup>23</sup> The 2010 Survey Protocol suggests even wider transects of 50 to 100 feet for some plant species and 100 to 200 feet for other vegetation types, depending on topographic complexity and visibility.

The BRTR states that the spring 2009 survey adhered to the protocols established by the CDFG and USFWS. However, adherence to these protocols require:

- (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;

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<sup>18</sup> AFC, p. 5.3-12; BRTR, p. 20.

<sup>19</sup> See, e.g., *Communities for a Better Environment v. South Coast Air Quality Management District* (March 15, 2010) 48 Cal.4th 310, 316.

<sup>20</sup> See Responses to CEC Data Requests, Set 1, Vol. A, p. BIO-82.

<sup>21</sup> See Figure DR-BIO-101.

<sup>22</sup> BRTR, pp. 16, 19.

<sup>23</sup> *Id.* at p. 24.

- (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.<sup>24</sup>

The BRTR, SA/DEIS and accompanying survey reports lack these elements. The 2010 Survey Protocol also lacks these elements.

The 2010 Survey Protocol states rare plant surveys will not include the endangered Coachella Valley Milk vetch.<sup>25</sup> The decision to forego focused surveys for this plant was apparently based entirely on a taxonomic conclusion based upon findings by Applicant's consultant Andrew Sanders.

The 2010 Survey Protocol states voucher specimens of rare plants are to be collected if it is determined that such collections will not jeopardize the survival of the species.<sup>26</sup>

### **Data Requests**

- 15. Please indicate whether all habitats and impact areas, including all transmission line corridors currently under consideration and adjacent areas were surveyed for special-status plant species.
- 16. Please provide a map of the roads that were driven to conduct vegetation surveys.
- 17. Please discuss how driving and meandering transects (at inconsistent spacing) constitute systematic field techniques.
- 18. Please explain how rare plant species, many of which are less than 12 inches in height, could be located at the proposed survey

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<sup>24</sup> 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.

<sup>25</sup> 2010 Survey Protocol, p. 8.

<sup>26</sup> *Id.* at p. 9.

distances of 50 or 100 feet, in a landscape covered with shrubs and bisected by small and large washes.

19. 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 vantage points” referenced in the BRTR (p. 24), and specify the areas within the assessment area that were surveyed more than once.
20. For each botanical survey performed (i.e., spring 2009 and any other surveys performed), 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.
21. 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.
22. Please provide a resume for Andrew Sanders including degrees earned and his peer-reviewed publications on plant taxonomy with specific reference to his formal research on the Coachella Valley Milk vetch.
23. Please explain whether genetic work will be performed to conclusively resolve the question on the taxonomy of the Coachella Valley Milk vetch and any similar species found on-site during surveys.
24. Please explain whether any Coachella Valley Milk vetch were observed on the PSPP disturbance area or buffer area during the Spring 2010 surveys.
25. Please provide the mean rainfall and temperature data obtained by the weather station(s) nearest the Project site for 2007, 2008, and 2009, and Spring 2010.
26. Please identify the expert or experts who will make the determination concerning whether collecting voucher specimens

will jeopardize the survival of the species. Please explain the criteria such expert(s) will use to make this determination.

**Background: SPECIAL-STATUS SPECIES ASSUMED TO BE ABSENT FROM THE SITE**

The Northern and Eastern Colorado Desert Coordinated Management (“NECO”) Plan includes maps that suggest the Project area provides habitat for the California leaf-nosed bat, pallid bat, and Colorado Valley woodrat.<sup>27</sup> It does not appear the Applicant conducted the specialized surveys necessary to identify the presence of any of these species, nor does the AFC or SA/DEIS sufficiently justify that their habitat is absent in the survey area.

California leaf-nosed bats occur in lowland desert habitat in California in close proximity to desert wash vegetation.<sup>28</sup> They forage primarily in desert washes, generally within one to three miles of the roost. The primary factors responsible for their population declines are roost disturbance, the closure of mines, and the destruction of foraging habitat.

Pallid bats occur in a number of habitats, including coniferous forests, non-coniferous woodlands, brushy terrain, rocky canyons, open farmland, and deserts.<sup>29</sup> They roost primarily in rock crevices, but commonly in old buildings, under bridges, in caves and old mines, and in hollow trees.

Colorado Valley woodrats are found in a variety of habitats including low desert, pinyon-juniper woodlands, and desert-transition chaparral.<sup>30</sup> They prefer a mixture of brushy cover and rocky soil, such as is found in desert canyons, washes, and mountains. Areas such as washes where organic debris gathers are particularly attractive. They are often found where cactus and mesquite occur. The most important threats are the loss of habitat and reduction in habitat quality by removal of nest material such as cactus and woodland.

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<sup>27</sup> BLM and CDFG. 2002. Final Environmental Impact Statement. Proposed Northern & Eastern Colorado Desert Coordinated Management Plan. Bureau of Land Management, California Desert, Riverside, CA.

<sup>28</sup> BLM and CDFG. 2002. Final Environmental Impact Statement. Proposed Northern & Eastern Colorado Desert Coordinated Management Plan. Bureau of Land Management, California Desert, Riverside, CA.

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

## Data Requests

27. Please provide information on the occurrence of bat roosts in the vicinity of the Project area and indicate whether the BLM was solicited for information on the occurrence of known roost sites.
28. Please provide the methods that were used to survey for bats at the Project site.
29. Please provide the methods that were used to survey for woodrats at the Project site, and indicate the number of middens that were detected, if any.
30. Please provide the criteria that were used to distinguish a desert woodrat midden from a Colorado Valley woodrat midden.

## Background: INADEQUACY OF DATA

### Issue No. 1: Biological Resource Surveys and Wetland Delineation for Transmission Line Corridor.

At the time the 2009 biological resource surveys were conducted, the Applicant had not selected its now proposed transmission corridor to the west of the PSPP site.<sup>31</sup> Therefore, no surveys for listed and sensitive species were conducted in the corridor extending west from the Project site.

The BRTR states: “The surveys of the Project transmission line route that will occur when the route is finalized will include the transmission right-of-way plus 500-foot buffers on either side of the ROW.”<sup>32</sup> Federal 1992 protocols for tortoise surveys require transects be walked at intervals of 100, 300, 600, 1200 and 2400 feet beyond the transmission corridor right-of-way.<sup>33</sup> However, USFWS and BLM officials apparently agreed that it was not necessary to follow these protocols when conducting surveys within the originally defined disturbance area.<sup>34</sup>

Prior to the preparation of the SA/DEIS, a wetland delineation was prepared for the Project site, but not for transmission line corridor to the

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<sup>31</sup> BRTR, p. 4 and Figure 2.

<sup>32</sup> BRTR, p. 20.

<sup>33</sup> Attachment DR-BIO-55-C-1: U.S. Fish and Wildlife Service. 1992. Field survey protocol for any non-federal action that may occur within the range of the desert tortoise. USFWS, Ventura, California, p. 6 and Figures 1 and 2.

<sup>34</sup> BRTR, p. 34.

proposed Red Bluff substation.<sup>35</sup> The 2010 Survey Protocol describes the wetland delineation that was performed in April 2010 for the PSPP disturbance areas, including the transmission line corridor. This delineation only surveyed a 250-foot buffer from the transmission line ROW.<sup>36</sup>

**Data Request:**

31. Please provide complete biological resource surveys and analysis reports of the transmission line corridor addressing all sensitive species.
32. Please describe the design of the road that will be built along the transmission line corridor. Please identify the associated potential impacts to drainage and habitat connectivity.
33. Please explain why desert tortoise field surveys will not be followed beyond the 500-foot buffer surrounding the transmission line corridor.
34. Please explain why the 2010 jurisdictional waters delineation included a 250-foot buffer, rather than a more extensive buffer especially for areas downstream from the disturbance area.
35. For the waters of the state that will be disturbed by the transmission line corridor, please provide the total acreage of the immediate watershed.
36. For the waters of the state that will be disturbed by the transmission line corridor, please provide the total acreage of the floodplain for the state waters.

**Issue No. 2: Impacts of Groundwater Pumping on Local Aquifer and Surface Waters.**

The power-generating facility will consume more than 300-acre feet per year of groundwater.<sup>37</sup> This drawdown will likely result in the lowering of groundwater level over time. Reduction of groundwater level can negatively impact natural springs and waterholes in the region such as the one at Corn Springs. The pumping of water out of an underground aquifer has been shown to reduce the flow of natural springs many miles from the

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<sup>35</sup> See Notification of Lake or Streambed Alteration (“Notification”), dated November 25, 2009, § 10, Description of Project [identifies originally proposed transmission line extending south from Project site]; See Attachment 5 to Notification, p. v, Figures 2, 3, 4, 6.

<sup>36</sup> 2010 Survey Protocol, p. 10.

<sup>37</sup> *Id.* at p. 10.



pumping location.<sup>38</sup> Bighorn sheep and other sensitive species depend upon springs for drinking water particularly in summer when moist food resources are unavailable.<sup>39</sup>

Reduction of groundwater level can also negatively impact water-dependant plant species that depend on a water table within reach of the root zone. The SA/DEIS identified Mesquite trees in the area north of the playa of Palen Dry Lake.<sup>40</sup> Such trees are “thought to be associated with ‘shallow’ groundwater.”<sup>41</sup>

In comments regarding the SA/DEIS analysis concerning groundwater impacts to biological resources, the Applicant asserts that reduced groundwater levels will not impact water-dependant species including the mesquite trees identified in the SA/DEIS.<sup>42</sup>

### **Data Request:**

37. Please describe how the pumping of groundwater from beneath the project site will impact the regional aquifer.
38. Please demonstrate that drawdown will not adversely impact area springs or the mesquite trees observed to the north of the PSPP site. Please provide site-specific data in support of your response.
39. Please provide such substantiation from a peer reviewed journal for the assertions concerning the impacts to mesquite trees from lowering the groundwater table, as these conclusions were solely derived through personal communications.
40. Please identify the distance of the mesquite trees from the PSPP site.
41. Please quantify the projected amount of aquifer drawdown in the vicinity of the mesquite trees observed to the north of the PSPP

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<sup>38</sup> Pavlik, B. M. 2008. *The California Deserts*. University of California Press, Berkeley, California.

<sup>39</sup> Toweill, D. E. 2003. *Desert Bighorn Sheep*. Nature Trails Press, Palm Springs, California.

<sup>40</sup> SA/DEIS, p. C.9-20.

<sup>41</sup> *Ibid.*

<sup>42</sup> See Applicant’s Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, pp. 6-7. We have had limited time to review and analyze Applicant’s comments. Our comments regarding Applicant’s comments should therefore not be interpreted as being comprehensive or final: we reserve the right to submit supplemental comments regarding Applicant’s comments following a more thorough review.

site, taking into consideration the increased water demand for construction.

42. Please address whether aquifer drawdown in the northern portion of Palen Dry Lake would impact the viability of mesquite seedlings and saplings.

Issue No. 3: Origin of Desert Tortoise (“DT”) Bone Fragments on PSPP Site.

The BRTR states that “[t]he only Desert Tortoise sign observed within this area (*the Chuckwalla Desert Tortoise Critical Habitat Unit*) were bone fragments, which were probably washed down from the adjacent mountains.”<sup>43</sup> No explanation for this conclusion was found within the BRTR. The SA/DEIS does not provide any explanation for this assertion.<sup>44</sup>

**Data Request:**

43. Please describe how it was determined that the tortoise bone fragments were washed down from the adjacent mountains.

Issue No. 4: Asserted Deficiencies in DT Critical Habitat.

The BRTR asserts that the “Desert Tortoise Chuckwalla Critical Habitat unit does not meet all seven principles required in the Desert Wildlife Management Area.”<sup>45</sup> Reference is made to “fragmentation, high edge to area ratio, limited functional connectivity, and high human disturbance in the Chuckwalla Habitat Unit north of Interstate 10” as the reasons why the CHU does not meet the criteria.

**Data Request:**

44. Please provide supporting descriptions, diagrams and/or photographs demonstrating the Applicant’s reference to fragmentation in the Chuckwalla Habitat Unit north of Interstate 10.
45. Please provide supporting descriptions, diagrams and/or photographs demonstrating the Applicant’s reference to high edge to area ratio in the Chuckwalla Habitat Unit north of Interstate 10.

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<sup>43</sup> BRTR, p. 13.

<sup>44</sup> See SA/DEIS, p. C.2-35.

<sup>45</sup> BRTR, p. 13.

46. Please provide supporting descriptions, diagrams and/or photographs demonstrating the Applicant's reference to limited functional connectivity in the Chuckwalla Habitat Unit north of Interstate 10.
47. Please provide supporting descriptions, diagrams and/or photographs demonstrating the Applicant's reference to high human disturbance in the Chuckwalla Habitat Unit north of Interstate 10.

Issue No. 5: Surveys for Golden Eagle.

The golden eagle (*Aquila chrysaetos*) is a fully protected species in California<sup>46</sup> (California Department of Fish & Game, 2010) and its habitat is protected under the federal Bald and Golden Eagle Protection Act (U.S. Fish & Wildlife Service, 2010). The SA/DEIS states that surveys for golden eagle nest sites and forage habitat value have not been conducted.<sup>47</sup>

The golden eagle is known to occur within desert regions of California.<sup>48</sup> Several golden eagle prey species were recorded in the project site disturbance area including black-tailed jackrabbit, desert cottontail and ground squirrels.<sup>49</sup> In addition, suitable golden eagle nesting sites occur in the Chuckwalla Mountains less than 10 miles to the southeast and the Palen Mountains less than 10 miles to the northeast (Leuschner, personal communication).<sup>50</sup>

The 2010 Survey Protocol states that surveys will now be conducted for the golden eagle.<sup>51</sup> In comments regarding the SA/DEIS biological resources analysis, the Applicant urges Commission staff to change its conclusion regarding impacts to Golden Eagle foraging habitat.<sup>52</sup> The Applicant urges

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<sup>46</sup> California Department of Fish & Game. 2010. Fully Protected Animals. CDFG Website: [http://www.dfg.ca.gov/wildlife/nongame/t\\_e\\_spp/fully\\_pro.html](http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/fully_pro.html).

<sup>47</sup> SA/DEIS, p. C.2-88.

<sup>48</sup> Massey, W. W. 1998. *Guide to Birds of the Anza-Borrego Desert*. Anza-Borrego Desert Natural History Association, Borrego Springs, California; *see also* Miller, A. H. and R. C. Stebbins. 1964. *The Lives of Desert Animals in Joshua Tree National Monument*. University of California Press, Berkeley, California; *see also* Peterson, R. T. 2002. *Peterson Field Guide to Birds of North America*. Houghton Mifflin Company, New York, New York.

<sup>49</sup> BRTR, pp. 76-77.

<sup>50</sup> SA/DEIS, p. C.2-39.

<sup>51</sup> 2010 Survey Protocol, p. 13.

<sup>52</sup> *See* Applicant's Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, p. 3.

staff to modify mitigation measures designed to address the loss of golden eagle foraging habitat, despite inconclusive evidence regarding these impacts.

**Data Request:**

48. Please provide the rationale for not including the golden eagle as a special-status species with the potential for occurring within the project disturbance area.
49. Please provide the name(s) and qualifications of the individual(s) conducting the golden eagle surveys identified in the 2010 Survey Protocol.
50. Please explain the basis for the Applicant's argument that the PSPP site is not suitable foraging habitat for the golden eagle, despite the presence of golden eagle prey and the availability of suitable nesting sites within 10 miles of the PSPP site.
51. Please provide evidence that acquisition of DT compensation habitat will be sufficient to mitigate potentially significant impacts to golden eagle foraging habitat.
52. Please provide evidence that the function and value of DT compensation habitat is the equivalent of the function and value of golden eagle foraging habitat.

**Background: IMPACT OF CONTAMINANTS ON PLANT AND ANIMAL RESOURCES**

Plant and animal life can be harmed by the introduction of potentially toxic chemicals into the environment (Carson, 1962).<sup>53</sup> The BRTR indicates that a "dust suppression coating" is to be applied to large areas of the project site.<sup>54</sup> The SA/DEIR does not address the potential impacts to biological resources that may be caused by the dust suppression coating.

The Applicant's comments concerning the SA/DEIS state, for the first time in these proceedings, that four 4-acre bioremediation ponds will be part of the Project.<sup>55</sup> The potentially significant impacts on biological resources that may be caused by these ponds were not analyzed in the SA/DEIS. The Applicant has expressed the opinion that the addition of these evaporation

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<sup>53</sup> Carson, R. 1962. *Silent Spring*. Houghton Mifflin Company, Boston, Massachusetts.

<sup>54</sup> BRTR, p. 4.

<sup>55</sup> See Attachment 1 to Applicant's Initial Comments on the SA/DEIS, Applicant Update to Staff Assessment Section B.1, pp. 7-8.

ponds will generally not change the results of the SA/DEIS impact analyses.<sup>56</sup> Modifications to the Raven Management Plan are proposed to address potential impacts, posed by the evaporation ponds, to avian species.<sup>57</sup>

### **Data Request**

53. Please provide the chemical composition of the dust suppression coating.
54. Please provide all third-party studies showing the dust suppression coating is harmless to native plant and animal life.
55. Please provide information and analysis concerning the impacts to biological resources that the four newly proposed evaporation ponds may cause.
56. Please provide information regarding possible damage to the newly proposed evaporation ponds caused by floods.
57. Please provide the Applicant's plans for closure of evaporation ponds upon retirement of the generation facility.
58. Please describe in detail the design features and mitigation measures that may reduce potential significant impacts to wildlife from the evaporation ponds and provide an explanation concerning the anticipated effectiveness of these measures.

### **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.<sup>58</sup> Thus, to gain Commission certification for the Project, 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 USFWS under Section 10 of the ESA, or through an incidental take permit resulting from formal consultation under Section 7 of the ESA.

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<sup>56</sup> Attachment 2 to Applicant's Initial Comments on the SA/DEIS, Environmental Evaluation of Project Updates, pp. 3-4.

<sup>57</sup> *Id.* at p. 4.

<sup>58</sup> Pub. Resources Code § 25500.

The SA/DEIS identifies impacts to the desert tortoise (“DT”), a listed species under the ESA, and proposes mitigation measures.<sup>59</sup> Mitigation includes acquisition of approximately 4,737 acres of compensation habitat.<sup>60</sup>

Although the Staff Assessment was published on March 18, 2010 and a Staff Assessment workshop was held in late 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:**

59. Please provide all correspondence between the Applicant and the USFWS regarding the Applicant’s incidental take permit application.
60. Please explain how the proposed compensation mitigation for impacts to the desert tortoise will satisfy the requirement to contribute to the species’ recovery.
61. Please identify proposed or potential private or public land that may be purchased as compensation habitat for the DT.
62. Please explain how the proposed or potential private or public land would provide habitat for the DT of an equal function and value to the existing site.

**Background: CALIFORNIA ENVIRONMENTAL QUALITY ACT ISSUES**

Issue No. 1: Loss of Critical Habitat for DT – Significant impact under CEQA.

The BRTR and the applicant’s responses to DR-BIO-53 and DR-BIO-54 imply that, because the portion of the project disturbance area that falls within the Chuckwalla Critical Habitat Unit is so small (183 acres), the PSPP’s impacts on this designated habitat is insignificant.<sup>61</sup> In contrast, the SA/DEIS recognizes the importance of the designated critical habitat area

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<sup>59</sup> SA/DEIS, pp. C.2-73 – C.2-83.

<sup>60</sup> *Id.* at p. C.2-79.

<sup>61</sup> See BRTR, p. 12; see also Responses to CEC Data Requests, Set 1, Vol. A, pp. BIO-4 – BIO-5.

within the PSPP disturbance area and requires enhanced mitigation for the loss of this habitat.<sup>62</sup>

At the workshop regarding the SA/DEIS, the Applicant presented information regarding the 24 crossings under I-10 in the 26±mile stretch between Desert City and Wiley's Well. This information was presented to demonstrate alternative crossings that may remain available to the DT for ongoing gene flow and dispersal. The Applicant further describes these crossings in comments regarding the SA/DEIS.<sup>63</sup> The Applicant, however, has not addressed the Project's contribution to the cumulative impacts of multiple large-scale projects on DT connectivity.

**Data Request:**

63. Please explain how incremental loss of critical habitat for desert tortoise is acceptable under CEQA.
64. Please explain the potentially significant cumulative impacts on DT gene flow and dispersal caused by multiple solar projects within the region, including the Project's contribution to these cumulative impacts.

Issue No. 2: Impacts to Mojave Fringe Toed Lizard Warrant Consideration of Alternative Locations for PSPP and the Reduced Acreage Alternative.

The BRTR acknowledges that the Mojave fringe-toed lizard, *Uma scoparia*, is considered a State Species of Special Concern and a "sensitive" species by the Bureau of Land Management.<sup>64</sup> The BRTR further states that 141 incidental observations were recorded for the species and 1,735 acres of habitat occurred within project site area of disturbance.<sup>65</sup> Furthermore, the BRTR states that there will be indirect impacts to the species offsite as a result of wind breaks erected to protect site facilities. Windbreaks will result in the stabilization of sand and loss of lizard habitat offsite to the east as well.

The SA/DEIS recognizes that such direct, indirect, and cumulative impacts would have a "significant" adverse impact to the Mojave fringe-toed

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<sup>62</sup> See SA/DEIS, pp. C.2-74 – C.2-75.

<sup>63</sup> See Applicant's Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, p. 9.

<sup>64</sup> BRTR, p. 82.

<sup>65</sup> *Ibid.*; see also SA/DEIS, p. C.2-83.

lizard and that this impact is unmitigable even with habitat acquisition.<sup>66</sup> In light of this significant and unmitigable impact, the SA/DEIS identifies the Reduced Acreage Alternative as the only alternative capable of reducing this impact to a less-than-significant level.<sup>67</sup> The SA/DEIS states that the electricity generation capacity of this alternative would be 375 MW, 75% of the capacity of the proposed project.<sup>68</sup> At the workshop regarding the SA/DEIS, the Applicant stated that the Reduced Acreage Alternative would not be feasible.

### **Data Request:**

65. In light of the SA/DEIS' findings that the Project will result in significant direct, indirect, and cumulative impacts would have a "significant" adverse impact to the Mojave fringe-toed lizard and that this impact is unmitigable even with habitat acquisition, explain why there are no recommendations to select an alternate site for the power plant.
66. Please explain why the PSPP site cannot be reconfigured, as proposed in the revised Reduced Acreage Alternative, to avoid impacts to the MFTL and its habitat.

### **Background: DESERT TORTOISE SURVEY EFFORTS**

As discussed above, the DT is a federally listed threatened species. The BRTR states that DT surveys were conducted in March through May 2009.<sup>69</sup> The 2010 Survey Protocol states that DT surveys will again be conducted this Spring. Although the applicant stated the 2009 and 2010 surveys were/will be conducted according to USFWS survey protocol, intensive surveys apparently were not conducted and will not be conducted. In addition, USFWS Zone of Influence survey protocol was not followed, apparently with the consent of resource agencies.<sup>70</sup>

The USFWS protocol recommends an "intensive survey" to determine the accuracy of the surveyor in locating DT sign during presence-or-absence surveys.<sup>71</sup> 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

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<sup>66</sup> See SA/DEIS, p. C.2-84.

<sup>67</sup> SA/DEIS, pp. C.2-107, C.2-145.

<sup>68</sup> *Id.* at p. B.2-1.

<sup>69</sup> BRTR, p. 34.

<sup>70</sup> *Ibid.*; see also 2010 Survey Protocol, p. 2.

<sup>71</sup> Attachment DR-BIO-55-C-1, p. 20.



area, the surveyor conducts surveys using transects 10 feet wide rather than 30 feet, then compares the results with the initial survey effort. If there is a major difference in number of sign recorded between the two survey efforts, the project survey may not be deemed adequate by the USFWS.<sup>72</sup> Neither the BRTR nor the 2010 Survey Protocol specifies whether the resource agencies made (or agreed to) the recommendation to skip intensive surveys.

USFWS protocol also recommends closer transect spacing (i.e., 10-foot) when topography obscures or reduces that surveyor's ability to see tortoise sign.<sup>73</sup> The BRTR and the 2010 Survey Protocol do not discuss whether the closer transect spacing recommended by the USFWS was or will be implemented.

### **Data Requests**

67. Please provide a map that depicts the areas where desert tortoise protocol surveys were conducted during each of the following years;
  - a. 2009
  - b. 2010.
68. Please confirm that DT surveys were conducted for all possible transmission lines and other areas impacted by infrastructure required for the PSPP project.
69. Please clarify why the *Non-Federal Action* protocol for desert tortoise was the appropriate protocol to use for the Project rather than the *Field Survey Protocol for any Federal Action* when the Project involves a right-of-way permit from the BLM.
70. Please explain why Zone of Influence surveys for desert tortoise were not conducted for the Project. Please include a summary of the rationale for waiving this requirement and provide documentation if possible.
71. Please provide the results (including map) of the intensive surveys for desert tortoise conducted for the Project. If intensive surveys were not conducted, please provide a justification for why they were not conducted and describe how surveyor accuracy was evaluated.

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<sup>72</sup> Attachment DR-BIO-55-C-1, p. 20.

<sup>73</sup> Attachment DR-BIO-55-C-1, p. 9.

72. Please clarify whether the resource agencies made (or agreed to) the recommendation to skip the intensive surveys for desert tortoise discussed in the protocol and provide documentation if possible.
73. Please clarify whether closer transect spacing for desert tortoise surveys was implemented at any location(s) within the survey area. If closer transects were implemented, please mark these locations on a map.
74. Please confirm that the 2009 and 2010 surveys for DT were conducted during the time periods when DT are considered most active. Please indicate whether the timing of the surveys may affect the number of adult DT observed within the survey area.

### **Background: DIRECT IMPACTS TO DESERT TORTOISE**

The SA/DEIS concludes the Project will destroy approximately 3,899 acres of suitable habitat for DT, including 210 acres of DT critical habitat.

In comments regarding the SA/DEIS analysis regarding these impacts, the Applicant states that the project will impact approximately 26.6 fewer acres of DT critical habitat than reported in the SA/DEIS.<sup>74</sup> The Applicant further asserts that most of the impacted DT critical habitat is of low quality and therefore does not warrant mitigation at a 5:1 ratio.<sup>75</sup> For most of the impacted areas outside of the Chuckwalla Critical Habitat Unit (“CHU”), the Applicant proposes a mitigation ratio of only 0.5:1, due to asserted low habitat quality.

The Applicant’s comments regarding the SA/DEIS analysis concerning DT impacts emphasizes that no DT were found on the Project site during the 2009 protocol surveys.<sup>76</sup> In these comments, the Applicant urges the Commission staff to consider the Project site unoccupied.

However, the preliminary results of the Spring 2010 surveys state that a single adult DT was observed on the PSPP site, 4 adult DTs were found within the buffer area, and that DT burrows, bone fragments, and scat were observed within the disturbance area and buffer area.<sup>77</sup>

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<sup>74</sup> Applicant’s Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, p. 3.

<sup>75</sup> *Id.* at pp. 5, 8.

<sup>76</sup> *Id.* at p. 7.

<sup>77</sup> Preliminary Results of Spring 2010 surveys, dated May 7, 2010, Table 1.

## Data Requests

75. Please explain how the number of acres of impacted DT critical habitat was calculated and why the Applicant's calculations differ from Commission staff calculations.
76. Please explain how the quality of impacted DT habitat was evaluated. Please provide quantitative data supporting the conclusions regarding the quality of impacted habitat, if possible.
77. Please provide an updated analysis of the quality of DT habitat, and the DT occupancy, taking into consideration the results of the Spring 2010 surveys.
78. Please address the impacts to DT connectivity, taking DT occupancy of the Project site into account.
79. The presence of adult DT and the large number of recent tortoise bone fragments discovered in the 2010 surveys suggest the project area and buffer may (or once) supported more DT than found. Please explain this discrepancy.

## Background: INDIRECT IMPACTS TO DESERT TORTOISE

Ravens are acknowledged to be a significant threat to desert tortoise populations.<sup>78</sup> The SA/DEIS states that “[d]evelopment of new raven perching sites as a result of Project construction could increase raven numbers locally. . . .” The analysis, however, does not consider the approximately 8-12-mile long transmission line<sup>79</sup> as an additional source of raven perching sites.

The SA/DEIS also acknowledges that Project access roads may indirectly impact DT by increasing vehicle traffic.<sup>80</sup> The SA/DEIS, however, did not indicate whether a road will be built along the approximately 8-10-mile transmission route to the new Red Bluff substation.<sup>81</sup> The Applicant has confirmed that a road will be built along the transmission line.<sup>82</sup>

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<sup>78</sup> SA/DEIS, p. C.2-80.

<sup>79</sup> Documents submitted to and prepared by the CEC and BLM inconsistently describe the length of the transmission line. See, e.g., *Id.* at pp. B.1-11, D. 5-5; see also Updated Plan of Development, dated July 20, 2009, p. 35 [describing 12-mile gen tie line].

<sup>80</sup> *Id.* at p. C.2-81.

<sup>81</sup> See SA/DEIS, p. B.1-11; see also *Id.* at pp. C.9-48 – C.9-49 [there will be “localized grading at the drainages which cross the transmission main alignment to allow vehicular access during construction and operation of the facility.”]; see also SA/DEIS, p. D.5-5 [“PSPP power

## Data Requests

80. Please confirm whether the 8-10-mile transmission line vaguely identified in the SA/DEIS and recently confirmed in Applicant submittals to the Commission was considered as a potential new source of raven perching sites that may impact DT.
81. Please analyze and describe how DT may be indirectly impacted by perching sites on the 8-10 mile newly proposed transmission line.
82. Please analyze and describe how DT may be indirectly impacted by vehicle traffic along the road that will be located along the 8-10-mile long transmission line.

## Background: MITIGATION FOR DESERT TORTOISE

As mitigation for direct impacts to the DT, the SA/DEIS identifies Condition of Certification BIO-10, which requires the Applicant to develop and implement a DT Relocation/Translocation Plan.<sup>83</sup> The SA/DEIS also identifies Condition of Certification BIO-12, which requires the Applicant to acquire 4,737 acres of DT habitat to mitigate the PSPP's impacts to DT.<sup>84</sup> The 2002 FEIS for the NECO identified a limited amount of DT critical habitat within private ownership.<sup>85</sup>

The Applicant proposes substantially less compensation habitat for impacts to DT, on the ground that the habitat impacted by the Project is low to moderate quality.<sup>86</sup> As discussed above, the Spring 2010 surveys confirmed that DT are present on the Project site.<sup>87</sup> Consequently, the site must be considered occupied, and the quality of impacted habitat must be re-evaluated using objective, verifiable, and conservative criteria.

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would be transmitted . . . to the proposed . . . Red Bluff substation via an 8 mile long . . . transmission line.”].

<sup>82</sup> See Attachment 2 to Applicant's Initial Comments on the SA/DEIS, Environmental Evaluation of Project Updates, p. 7.

<sup>83</sup> See SA/DEIS, p. C.2-162 – C.2-163.

<sup>84</sup> See SA/DEIS, p. C.2-165 – C.2-169.

<sup>85</sup> See FEIS for NECO (BLM, 2002), p. 3-8.

<sup>86</sup> Applicant's Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, p. 5, Table 6; *see also id.* at pp. 8-9.

<sup>87</sup> Preliminary Results of Spring 2010 surveys, dated May 7, 2010, Table 1.

## Data Requests

83. Please provide specific performance standards for the Raven Management Plan and a Weed Management Plan.
84. Please address the recommended compensation mitigation ratios for DT habitat, taking into consideration the results of the Spring 2010 surveys.
85. Please specifically identify potential property of equivalent function and value that would be available to fully mitigate the Project's impacts to DT.
86. If the potential property that would be used to fully mitigate the Project's impacts to DT is publicly owned land, please explain how acquisition of such land would mitigate the project's impacts.
87. Please identify specific performance criteria that can be adopted to ensure mitigation of DT impacts will be effective in reducing impacts to less-than-significant levels.

## Background: IMPACTS TO MOHAVE FRINGE-TOED LIZARDS

The Mohave fringe-toed lizard (MFTL) is a California Species of Special Concern and is considered sensitive by the BLM. Although the resource agencies have not issued survey guidelines for the MFTL, Jones and Lovich (2009) indicate that MFTLs are most commonly detected from late spring (May) through early fall (into October).<sup>88</sup> Because MFTLs are generally difficult to detect, they are more easily detected by teams of at least two people.<sup>89</sup>

The Applicant notes that the MFTL can be found in both large and small dunes, margins of dry lakebeds and washes, and isolated dune pockets against hillsides (Stebbins 1944, 1985; Smith 1946; Norris 1958) and generally within creosote scrub desert habitat (Norris 1958; Stebbins 1985).<sup>90</sup> Sand transported in and from washes traversing the Project site provides MFTL habitat.<sup>91</sup>

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<sup>88</sup> Jones LC, RE Lovich, eds. 2009. Lizards of the American Southwest: A Photographic Field Guide. Rio Nuevo Publishers, Tucson (AZ). p. 567.

<sup>89</sup> *Id.*

<sup>90</sup> BRTR, p. 82.

<sup>91</sup> See SA/DEIS, Exhibit A to the Soil and Water Resources chapter, p. 5.

In the past, CDFG and FWS has required both pitfall trapping and intensive area searches to effectively survey Colorado Desert fringe-toed lizards.<sup>92</sup> These surveys were to be conducted monthly between March and November.<sup>93</sup>

Surveys detected the MFTL on the BRSA<sup>94</sup> (prior to substation and transmission line surveys). In response to Staff's data request DR-BIO-62, the Applicant stated that dune studies had not been completed and referred to a Sand Dune Ecosystem Mitigation Plan.<sup>95</sup> This plan identifies potential occupied habitat and Project impacts to the MFTL, and proposes mitigation and avoidance measures to reduce impacts to the MFTL.<sup>96</sup> However, it appears that the Applicant has not actually conducted focused surveys for the MFTL, nor does the applicant provide information regarding MFTL occurrence and suitable habitat for the MFTL in the northern extent of the BRSA footprint. The response admits that "[m]itigation measures will depend on information to be elaborated by further dune study."<sup>97</sup>

Just prior to the SA/DEIS workshop in April, 2010, the Applicant submitted new survey protocol for biological resource surveys to be conducted in areas that would be impacted by the Project, but that had not yet been surveyed.<sup>98</sup> These as yet unsurveyed areas include the transmission line corridor for the Project. The new survey protocols indicate that focused surveys will not be conducted for the MFTL.<sup>99</sup> The preliminary results from the Spring 2010 surveys do not mention the MFTL.

In comments regarding the analysis of impacts to MFTL, the Applicant expresses the opinion that the Project's direct obliteration of 1.1 percent of all MFTL habitat in the NECO is not a significant impact.<sup>100</sup> These comments also challenge the SA's determination that the MFTL present at the Project

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<sup>92</sup> CH2MHILL. 2002. Final Environmental Impact Report /Environmental Impact Statement. Imperial Irrigation District: Water Conservation and Transfer Project. Appendix F. Available at: <http://iid.com/Media/Appendix-F-General.pdf>.

<sup>93</sup> *Id.*

<sup>94</sup> *Ibid.*

<sup>95</sup> Applicant's Responses to CEC Data Requests Set 1, Vol. A, Biological Resources, (January 6, 2010), Response to DR-BIO-62, BIO-11.

<sup>96</sup> *See Ibid.*; *see also* Attachment DR-BIO-62.

<sup>97</sup> *See Ibid.*

<sup>98</sup> *See* 2010 Survey Protocol, pp. 2-3.

<sup>99</sup> *See Id.* at p. 13.

<sup>100</sup> *See* Applicant's Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, p. 10.

site may represent an important gene pool, on the basis that this determination relied in part on personal communications with an expert.<sup>101</sup>

The Sand Dune Ecosystem Mitigation Plan acknowledges indirect impacts to MFTL habitat that may be caused by “vehicle activity and possible effects of grading and construction on channels that provide sources of sand and wind that moves sand onto dunes.”<sup>102</sup> The plan, however, also concludes that the acreage and location of these indirect impacts is not yet known.<sup>103</sup> The SA/DEIS analysis reflects this conclusion.<sup>104</sup> The SA/DEIS calls for 3,011 acres of compensation habitat to mitigate the direct, indirect and cumulative impacts to MFTL, but does not consistently identify the amount of replacement acreage such mitigation will require.<sup>105</sup>

Biological Resources Figure 9 illustrates the Project’s close proximity to Crescentic and Longitudinal Dunes. Depending on the prevailing direction of the wind, the Project, together with the proposed transmission line to the Red Bluff substation, and the substation itself, may adversely impact sand transport to these dunes. Exhibit A to the Soil and Water Resources chapter provides evidence supporting this conclusion.<sup>106</sup>

The workshop on April 16, 2010, focused on the issue of Project impacts to the MFTL and on the sand transport corridor. In comments regarding the SA/DEIS analysis regarding these impacts, the Applicant reports that a consultant has conducted additional field investigations and has accumulated data demonstrating that winds from the north, rather than the west, transport a greater percentage of the sand through the corridor.<sup>107</sup> According to the Applicant, this evidence demonstrates that Project impacts to the MFTL’s habitat are less than what staff concluded in the SA/DEIS.

The preliminary results for the Spring 2010 surveys did not mention observations of the MFTL.

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<sup>101</sup> *Ibid.*

<sup>102</sup> Attachment DR-BIO-62, p. 14.

<sup>103</sup> *Id.* at pp. 14-16.

<sup>104</sup> SA/DEIS, p. C.2-4.

<sup>105</sup> SA/DEIS, p. C.2-84; *see also* SA/DEIS, p. C.2-176 – C.2-178.

<sup>106</sup> *See* Exhibit A Soil and Water Report, dated February 18, 2010, p. 3.

<sup>107</sup> *See* Applicant’s Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, pp. 1-3.

## Data Requests:

88. Please identify all surveys during which MFTL was detected within the BRSA.
89. Please explain why focused surveys have not and apparently will not be conducted for the MFTL. In addition, please clarify why the Applicant did not conduct pitfall trapping for the MFTL.
90. Please explain whether surveys for MFTL will be conducted in late May through early October 2010.
91. Please explain whether any MFTL were observed within the survey area during the Spring 2010 surveys.
92. Please describe potential habitat for MFTL for the facility footprint and buffer area north of I-10.
93. Please indicate how many acres of suitable MFTL habitat are present in the facility footprint and buffer area north of I-10.
94. Please describe the basis by which the Applicant determined that the elimination of an estimated 1.1 percent of MFTL habitat is not a significant impact.
95. Please identify a) the amount and b) the function and value of MFTL habitat that may be indirectly impacted by the following:
  - a. PSPP footprint area, and
  - b. PSPP associated transmission line and roads.
96. Please provide quantified evidence of the amount of sand moving through the sand transport corridor (in Zones 1, 2, and 3).
97. Please provide the predominant and varied direction of winds through the sand transport corridor.
98. Please provide information supporting the conclusion that washes traversing the Project site contribute only a “small amount of source sand” to the corridor.
99. Please indicate whether any MFTL were observed within the PSPP disturbance area or buffer areas during the Spring 2010 surveys. If MFTL were observed, please describe these observations in detail.



## **Background: MITIGATION FOR MOHAVE FRINGE-TOED LIZARDS**

As mitigation for direct impacts to the MFTL, the SA/DEIS identifies Condition of Certification BIO-20, which requires the Applicant to acquire 3,011 acres of MFTL habitat to mitigate the PSPP's direct, indirect, and cumulative impacts to MFTL.<sup>108</sup> Even with mitigation, the SA/DEIS concludes that Project impacts to the sand transport corridor will be significant and unmitigable.<sup>109</sup>

In comments regarding the SA/DEIS biological resources analysis, the Applicant proposes a sand replenishment program ("SRP") as mitigation for the Project's impacts to the sand transport corridor (MFTL habitat).<sup>110</sup> The Applicant disagrees with SA/DEIS conclusions regarding the amount of acres of MFTL habitat that would be indirectly impacted by the Project. The Applicant also disagrees with the Commission staff's conclusion that impacts to the sand transport system will be unmitigable.<sup>111</sup> At the same time, the Applicant proposes eliminating the requirement for acquiring *any* compensation habitat for these indirect impacts.<sup>112</sup>

### **Data Requests**

100. Please specifically identify potential property of equivalent function and value that would be available to fully mitigate the Project's impacts to MFTL.
101. If the potential property to mitigate the Project's impacts to MFTL is publicly owned land, please explain how acquisition of such land would mitigate the Project's impacts.
102. Please explain the Applicant's proposed mitigation measures for impacts to MFTL, including the proposals to maintain habitat through the sand replenishment program and provide replacement habitat within the Chuckwalla Valley.
103. Please provide evidence supporting the Applicant's proposed mitigation ratios for acknowledged direct, indirect, and cumulative impacts to the MFTL and its habitat.

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<sup>108</sup> See SA/DEIS, pp. C.2-62, C.2-176 – C.2-178.

<sup>109</sup> *Id.* at p. 2-69.

<sup>110</sup> See Applicant's Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, pp. 1-3.

<sup>111</sup> See *Id.* at p. 6.

<sup>112</sup> See *Id.* at p. 5, Table 6.

104. Please provide evidence demonstrating that mitigation at the the Applicant's proposed ratios will be effective in reducing all impacts to MFTL to less-than-significant levels.
105. Please provide detailed information regarding the sand replenishment program, including the following:
  - a. anticipated number of truck trips per year,
  - b. the equipment that will be used to collect, transport and deposit sand,
  - c. the manner in which sand will be deposited, and
  - d. the precautions that will be taken to minimize impacts to plants and animals within the areas where sand will be taken and deposited.
106. In order to verify the effectiveness of the Applicant's proposed mitigation, please provide copies of mitigation monitoring reports prepared by the Applicant's consultant that document the results of other sand replenishment programs.
107. Please specifically identify successful sand replenishment programs that would be similar to the program suggested as mitigation for indirect impacts to the MFTL and its habitat.
108. Please provide specific performance standards for the sand replenishment program.
109. Please identify alternative measures that will be employed if the proposed sand replenishment programs is not successful.
110. Please identify the potential impacts to biological resources that may result from transporting sand at various frequencies throughout the year, depending on wind speeds and directions.

**Background: WESTERN BURROWING OWL SURVEYS**

The Western burrowing owl ("WBO") is a Species of Special Concern under the California Endangered Species Act. The WBO Technical Report indicates the Applicant conducted burrowing owl surveys in 2009 according to California Burrowing Owl Consortium ("CBOC") Guidelines.<sup>113</sup> CBOC protocol provides that burrowing owls exhibit high site fidelity, reusing burrows year after year and that a site should be assumed occupied if at least

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<sup>113</sup> Attachment J to BRTR, WBO Technical Report, p. 5.

one burrowing owl has been observed occupying a burrow there within the last three years.<sup>114</sup>

Survey protocols require that tracks, feathers, pellets, or other items (prey remains, animal scat) at burrows should be reported. The Applicant determined several burrows to be “inactive.”<sup>115</sup> However, the Applicant does not describe the analysis used to determine inactivity, including the estimated age and condition of sign.

The technical report identifies two nesting burrowed pairs within the PSPP disturbance area.<sup>116</sup> The technical report acknowledges that no surveys were conducted for the PSPP’s transmission route.<sup>117</sup>

The 2010 Survey Protocol states that surveys for WBO will focus on areas that were not surveyed in 2009.<sup>118</sup>

### **Data Request**

111. Please describe in greater detail the WBO sign observed during surveys.
112. Please provide information on whether other burrows within the Disturbance Area may be active.
113. Please confirm whether WBO surveys have been performed for the PSPP’s transmission route currently under consideration and for the Red Bluff substation. Please also provide the results of such surveys, if any.
114. Please provide justification for the Applicant’s reliance on one survey year to estimate burrowing owl abundance

### **Background: WESTERN BURROWING OWL MITIGATION**

The Applicant’s proposed mitigation for impacts to burrowing owls includes passive translocation of owls, installation of artificial burrows, and post-translocation monitoring. CEC staff have expressed support for an

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<sup>114</sup> Rich 1984 & Feeny 1992, as cited in Burrowing Owl Survey Protocol And Mitigation Guidelines, prepared by The California Burrowing Owl Consortium. April 1993.

<sup>115</sup> Attachment J to BRTR, WBO Technical Report, pp. 7-8.

<sup>116</sup> *Id.* at pp. 7-8.

<sup>117</sup> *Id.* at p. 6.

<sup>118</sup> *See* 2010 Survey Protocol, p. 3.

active translocation program, subject to agreement by CDFG and USFWS, and sufficient research supporting the efficacy of such a program.<sup>119</sup>

The SA/DEIS identifies passive relocation and compensation mitigation for impacts to WBO.<sup>120</sup> BIO-18 requires the Applicant to acquire at least 78 acres of WBO habitat to replace the habitat that would be impacted by the PSPP.<sup>121</sup> In contrast, the Draft WBO Relocation/Translocation Plan states that “due to the large size of the Project, passive relocation may not be the most effective relocation strategy.”<sup>122</sup> This document advocates active relocation instead.<sup>123</sup> This document also asserts that only 6.5 acres of habitat is sufficient for each WBO pair or occupied burrow.<sup>124</sup> The applicant’s comments regarding the SA/DEIS analysis of this issue repeats this same mitigation ratio.<sup>125</sup>

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.<sup>126</sup> 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).<sup>127</sup>

## Data Requests

115. Please provide the rationale for the conclusion in the AFC that a 6.5-acre conservation area would likely provide enough habitat for two (2) pairs of western burrowing owls and their fledglings, including citations to scientific literature if possible.

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<sup>119</sup> SA/DEIS, p. C.2-86.

<sup>120</sup> *Id.* at p. C.2-86 – C.2-87.

<sup>121</sup> *Ibid.*

<sup>122</sup> Attachment DR-BIO-51, Introduction.

<sup>123</sup> *Id.* at § V.B.-C.

<sup>124</sup> *Id.* at § V.C.

<sup>125</sup> See Applicant’s Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, p. 5, Table 6.

<sup>126</sup> 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](http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html#Birds).

<sup>127</sup> Attachment DR-BIO-51, § V.C.

116. Please indicate whether the Applicant agrees with the 78-acre compensation requirement for WBO proposed in the SA/DEIS.
117. Please state how the Applicant determined the amount of compensation habitat for burrowing owls.
118. Please discuss the current habitat conditions within the proposed conservation area with respect to the habitat needs of the WBO.
119. Please explain whether the proposed conservation area will be at least 100 meters from Project features after Project construction.
120. Please discuss the actions that will be taken for the long-term management and monitoring of the proposed conservation area, including:
  - a. whether the Applicant plans to provide funding for the management and monitoring of the proposed conservation area and
  - b. whether a conservation easement will be established for private lands acquired for compensation purposes.
121. If a conservation easement will be established, please state whether such lands will be preserved in perpetuity.
122. If a conservation easement will be established, please identify the proposed fee title holder.
123. Please provide copies of mitigation monitoring reports prepared by the applicant's consultant that document the results of other WBO active translocation projects.

### **Background: IMPACTS TO SWAINSON'S HAWKS**

The Swainson's hawk is listed as threatened under the California Endangered Species Act. Suitable foraging habitat for Swainson's hawks occurs within the Project area, and a Swainson's hawk was detected within the Project area.<sup>128</sup> Telemetry studies have shown that Swainson's hawks may travel up to 18 miles from their nests in search of prey.<sup>129</sup> CDFG

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<sup>128</sup> BRTR, p. 77; *see also* AFC, p. 5.3-32.

<sup>129</sup> 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](http://www.madera-county.com/rma/archives/uploads/1188143775_Document_upload_23w.pdf)>.

recommends mitigation for impacts to foraging habitat within 10 miles of an active Swainson's hawk nest.<sup>130</sup>

### **Data Requests**

124. Please provide justification for the conclusion that Project impacts to Swainson's hawks would not be significant.
125. Please confirm whether Swainson's hawk nest surveys will be conducted within one or more survey periods.
126. Please confirm whether Swainson's hawk nests were observed during the surveys recently conducted for the Golden Eagle.
127. Please indicate whether there are any potential nesting substrates for Swainson's hawks within the Project survey area.
128. If potential nesting substrates are present in the Project survey area, please indicate if nesting surveys will be conducted and the protocol that will be used to conduct the surveys.

### **Background: MITIGATION FOR IMPACTS TO SWAINSON'S HAWKS, OTHER SPECIAL-STATUS BIRDS AND MIGRATORY BIRDS**

In comments regarding the SA/DEIS analysis, the Applicant urges modifications to the mitigation measure designed to address impacts to special-status birds and migratory birds.<sup>131</sup> Specifically, the Applicant proposes to delete the words "and enhancement" from the BIO-12 measure so that simply acquiring compensation habitat for the DT will fully mitigate the impacts to these bird species. The Applicant does not provide any evidence supporting this proposed change.

### **Data Requests**

129. Please provide evidence that demonstrates that compensation habitat for DT impacts would also provide suitable habitat of equivalent function and value for special-status birds and migratory birds.

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<sup>130</sup> For the Central Valley; mitigation guidelines for other regions of California, including the Mohave Desert, are not available.

<sup>131</sup> See Applicant's Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, pp. 1-3.

130. Please explain why enhancement of the acquired DT habitat would not be necessary to provide suitable habitat for the bird species that would be impacted by the Project.

**Background: MITIGATION FOR IMPACTS TO DESERT KIT FOX AND AMERICAN BADGER**

In comments regarding the SA/DEIS analysis, the Applicant urges modifications to the mitigation measure designed to address impacts to the desert kit fox and the American badger.<sup>132</sup> Specifically, the Applicant proposes to delete the words “and enhancement” from the BIO-12 measure so that simply acquiring compensation habitat for the DT will fully mitigate the impacts to these two species. The Applicant does not provide any evidence supporting this proposed change.

**Data Requests**

131. Please provide evidence that demonstrates that compensation habitat for DT impacts would also provide suitable habitat of equivalent function and value for the desert kit fox and the American badger.
132. Please explain why enhancement of the acquired DT habitat would not be necessary to provide suitable habitat for the desert kit fox and the American badger.

**Background: IMPACTS TO SPECIAL-STATUS PLANTS AND MITIGATION**

In comments regarding the SA/DEIS analysis, the Applicant asserts that the Project would not impact Harwood’s Milk vetch dune habitat.<sup>133</sup> This assertion does not reflect the results of the Spring 2010 surveys, which identify this species as present both on the PSPP site and within the buffer area.<sup>134</sup>

**Data Requests**

133. Please provide updated information concerning the Project’s impacts to Harwood’s Milk-vetch and any other special-status plants, based on the results of the Spring 2010 survey.

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<sup>132</sup> See Applicant’s Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, pp. 1-3.

<sup>133</sup> See Applicant’s Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, p. 12.

<sup>134</sup> Preliminary Results of Spring 2010 surveys, dated May 7, 2010, Table 2.

134. Please describe appropriate and feasible mitigation measures that would reduce or eliminate the impacts to Harwood's Milk-vetch and any other special-status plants.

**Background: IMPACTS TO WILDLIFE MOVEMENT/GENETIC EXCHANGE CORRIDORS**

In desert environments such as the Chuckwalla Valley, wildlife movement corridors allow long-term genetic exchange between animal and plant populations.

CEC siting guidelines require information on the distribution of wildlife corridors at the proposed project area and related facilities. Furthermore, the CEC's Best Management Practices and Guidance Manual for Desert Renewable Energy Projects states solar energy facilities should be located and/or designed to minimize or mitigate for disruptions to wildlife movement. The SA/DEIS acknowledges the importance of desert washes as wildlife movement corridors and the impacts that past projects have had on the Palen watershed.<sup>135</sup>

The Applicant states that the project will likely cause significant permanent impacts to wildlife corridors despite reduced impact through mitigation. In response to Staff's requests for information about potential wildlife use of desert washes within the Project site as movement corridors, the Applicant provided information and a qualitative analysis, based on reconnaissance level surveys which were confounded by rainstorms.<sup>136</sup> The Applicant concludes that a movement study conducted throughout the course of an entire year would be necessary to determine the extent of wildlife movement within the washes versus the uplands.<sup>137</sup> However, the Applicant does not provide any information about the methodology of such a survey, and commits only to make note of wildlife sign in washes during subsequent visits.<sup>138</sup>

The Applicant notes that the Project would impact movement by large mammals such as coyote, desert kit fox, mule deer, bobcat, American badger, mountain lion, and Nelson's bighorn sheep.<sup>139</sup> However, the Applicant fails

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<sup>135</sup> See SA/DEIS, p. C.2-120 ["Standing dead ironwood trees, stunted, drought-stressed creosote bushes and other shrubs, sparse cover and very low diversity seen north of I-10 in the Palen watershed are a testament to the downstream effects that channel diversions can have on both upland and riparian plant communities"].

<sup>136</sup> See Applicant's Response to DR-BIO-70, DR-BIO-71, and DR-BIO-76.

<sup>137</sup> See Applicant's Response to DR-BIO-76, p. BIO-49.

<sup>138</sup> *Ibid.*

<sup>139</sup> See Applicant's Response to DR-BIO-80, p. BIO-52.



to provide information about impacts to the Couch's spadefoot toad, invertebrates, small mammals, and the impacts to species at both individual and intergenerational movement levels.

There are a variety of techniques that can be used to estimate movement patterns in addition to a long-term study. These include use of remote cameras, modeling, and review of genetic differences among populations.

The Applicant plans to construct drainage channels to divert desert wash flows through and around the Project site. The Applicant further states that the design of the proposed channels may impede wildlife movement due to minimal vegetative cover, the visibility of man-made structures which would deter wildlife, and the lack of habitat in the channels. The Applicant also states that the channels cannot be widened any further.<sup>140</sup>

The SA/DEIS concludes that “[n]o mitigation measures are currently available that can adequately minimize the Project’s contribution to cumulative impacts to wildlife connectivity.”<sup>141</sup> This document also asserts, without substantiation, that adoption of the Reconfigured Alternative or the Reduced Acreage Alternative would be required to minimize these impacts to less than significant levels. The Alternatives chapter of the SA/DEIS concludes the Reconfigured Alternative “would eliminate the proposed project’s significant unmitigable impacts to a wildlife movement corridor.”<sup>142</sup>

The 2010 Survey Protocol does not indicate the washes will be surveyed to determine their potential use as a movement corridor.

**Data Requests:**

135. Please state whether the Applicant intends to conduct any additional surveys to identify what wildlife species may be using the washes and the Project area as a movement corridor.
136. Please determine the extent to which the Project will impede wildlife movement.
137. Please define what survey methodology would be used to assess wash areas and/or the Project site as dispersal and movement corridors.

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<sup>140</sup> See Applicant’s Response to DR-BIO-77, p. BIO-49.

<sup>141</sup> SA/DEIS, p. C.2-134.

<sup>142</sup> SA/DEIS, p. B.2-1.

138. Please confirm whether construction and operation of the transmission line to the proposed Red Bluff substation will have any impacts on wildlife movement corridors.
139. Please indicate how the Project, and the redesigned drainage channels will impact the Couch's spadefoot toad, and whether those impacts are potentially significant.
140. Please indicate how the Project and the redesigned drainage channels have been located and/or designed to minimize or mitigate impacts to the Couch's spadefoot toad.
141. Please indicate how the Project and the redesigned drainage channels have been located and/or designed to minimize or mitigate impacts to wildlife movement.
142. Please identify potentially feasible mitigation measures that can reduce the Project's contribution to cumulative impacts to wildlife connectivity.
143. Please explain how both the Reconfigured Alternative and the Reduced Acreage Alternative would, if either is adopted, avoid the Project's contribution to cumulative impacts to wildlife connectivity.

### **Background: NIGHTTIME CONSTRUCTION IMPACTS**

The Applicant recently submitted modifications to the Project construction schedule which indicated that more construction activities would be conducted at night than was considered in the SA/DEIS.<sup>143</sup> The SA/DEIS acknowledges that nighttime lighting would impact nocturnal animals in the Project vicinity.<sup>144</sup>

### **Data Requests**

144. Please evaluate the potentially significant impacts to biological resources that may result from increased nighttime construction activities, including impacts caused by nighttime noise and lighting.

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<sup>143</sup> Attachment 2 to Applicant's Initial Comments on the SA/DEIS, Environmental Evaluation of Project Updates, section entitled "Refinement of the Daily Construction Schedule.

<sup>144</sup> SA/DEIS, pp. C.2-95 – C.2-96.

## 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. Because the SA/DEIS lacks a map of the future projects considered in the cumulative impact analysis, it is difficult to evaluate their contribution to cumulative impacts.

The SA/DEIS, acknowledges that “[t]he Red Bluff substation is a reasonably foreseeable project if the PSPP is approved and constructed as proposed.”<sup>145</sup> While the Red Bluff substation is listed as a foreseeable future project in Biological Resources Table 9, the transmission line for this substation and transmission lines for other power plants listed in this table do not appear to have been considered in the cumulative impact analysis for biological resources.<sup>146</sup>

The SA/DEIS acknowledges cumulative impacts to several species and their habitat. The SA/DEIR, for example, admits the Project’s contribution to cumulative impacts to DT habitat “fragmentation, impaired connectivity, and degradation of the function and values of remaining habitat from predators, invasive plants, fire, and disease.”<sup>147</sup> In addition, the SA/DEIR acknowledges cumulative impacts to the MFTL and its habitat.<sup>148</sup> There is no attempt, however, to address the Project’s contribution to these cumulative effects through mitigation. Instead, in the case of the DT, the SA/DEIS asserts that “[t]hese residual effects can only be addressed through a regional and coordinated planning effort. . . .” CEQA requires enforceable mitigation for the Project’s contribution to these and all other cumulative impacts.

The cumulative impact analysis did not include a quantitative analysis of habitat loss and diminished function and value of surrounding habitat.<sup>149</sup> The analysis also fails to explain how acquiring compensation habitat for impacts to DT (BIO-12) and to state waters (BIO-21) would reduce the Project’s contribution to impacts to natural communities to less-than-significant levels.

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<sup>145</sup> SA/DEIS, p. D.5-11.

<sup>146</sup> See SA/DEIS, pp. C.2-118 – C.2-119.

<sup>147</sup> *Id.* at p. C.2-124.

<sup>148</sup> *Id.* at p. C.2-126.

<sup>149</sup> *Id.* at p. C.2-126.

## Data Requests

145. Please state whether the Applicant relied on data available through the BLM database of right of way of applications for renewable energy projects.<sup>150</sup>
146. 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.
147. Please confirm whether transmission line corridors for the various projects identified in Biological Resources Table 9 were considered in the cumulative impact analysis.
148. Please explain how the purchase of compensation land located adjacent to the Palen watershed will mitigate impacts to wildlife movement corridors within the Palen watershed.
149. Please provide a quantitative analysis of the contribution of the PSPP to habitat loss and associated diminished habitat functions and values.
150. Please specifically identify potential property of equivalent function and value that would be available to mitigate the Project's impacts to wildlife movement corridors.
151. Please describe feasible mitigation measures that can reduce or eliminate the Project's admitted contribution to cumulative impacts to habitat function and value for DT, MFTL, and Golden Eagle.
152. Please explain how proposed Conditions of Certification BIO-12 and BIO-21 will be effective in reducing the Project's contribution to cumulative impacts to natural communities to less-than-significant levels.

## **Background: IMPACTS TO CONSERVED NATURAL COMMUNITIES AND WHMA**

The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan is a landscape-scale, multi-agency planning effort that protects and conserves natural resources while simultaneously balancing human uses of the California portion of the Sonoran Desert ecosystem. The NECO Plan

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<sup>150</sup> Available at <http://www.blm.gov/lr2000/>; see also <http://www.geocommunicator.gov/GeoComm/index.shtm>.

established two types of Wildlife Habitat Management Areas (WHMA): one for bighorn sheep, and one for all other special status species and habitats.<sup>151</sup>

In establishing WHMAs, the NECO Plan provides protection to sensitive natural communities. These include (a) Desert Dry Wash Woodland; (b) Sonoran Creosote Bush Scrub; and, (c) sand dune and playa communities.<sup>152</sup>

The SA/DEIR concludes that the Project would impact 1,735 acres of MFTL habitat in the northeast portion of the Project Disturbance Area.<sup>153</sup> The proposed transmission line for the Project has been changed, and the impacts associated with the new transmission line route were not analyzed in the SA/DEIS.

The SA/DEIS concludes that the Project will contribute to cumulative impacts to Sonoran Creosote Bush Scrub and Desert Dry Wash Woodland communities.<sup>154</sup> The conclusions of the SA/DEIS do not appear to be consistent with information provided in the NECO Plan.<sup>155</sup>

A portion of the Project site and portions of the linear facility routes are situated within a Multi-species WHMA.<sup>156</sup> The NECO Plan provides mitigation for specific species and habitats within WHMAs.<sup>157</sup> Specifically, the NECO Plan states

[I]n the Multi-species WHMA, compensation for disturbance of Desert Dry Wash Woodland and Desert Chenopod Scrub communities as shown on Map 3-3 Appendix A would be required at 3 acres for each acre disturbed ... In sand dune and playa communities (Map 3-3

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<sup>151</sup> BLM and CDFG. 2002. Final Environmental Impact Statement. Proposed Northern & Eastern Colorado Desert Coordinated Management Plan. Bureau of Land Management, California Desert, Riverside, CA. p. 2-2.

<sup>152</sup> *Id.*, p. 2-56.

<sup>153</sup> SA/DEIS, p. C.2-83.

<sup>154</sup> *Id.* at p. C.2-136.

<sup>155</sup> BLM and CDFG. 2002. Final Environmental Impact Statement. Proposed Northern & Eastern Colorado Desert Coordinated Management Plan. Bureau of Land Management, California Desert, Riverside, CA. Appendix A, Map 3-3.

<sup>156</sup> *See Id.*; *see also* SA/DEIS, pp. C.2-133 – C.2-134.

<sup>157</sup> *Id.*

Appendix A) that are closed to vehicle use, compensation for surface disturbance would be required at 3 acres for each acre disturbed.<sup>158</sup>

Appendix H of the NECO Plan discusses the methods that were used to establish Multi-species WHMAs. In short, a system of WHMAs was selected that, in conjunction with already protected areas and Desert Wildlife Management Areas (DWMA), would provide protection for 80 percent (generally) of a covered species or habitat distribution.<sup>159</sup> Thus, by design, each Multi-species WHMA serves to protect one or more biological resource element of conservation concern.

The SA/DEIS concludes the Project will contribute to the cumulative loss of natural communities protected by the NECO Plan.<sup>160</sup>

### **Data Requests**

153. Please provide a map that shows the currently proposed Project boundaries (including linear facilities) in relation to the Multi-species WHMA and Conserved Natural Communities established by the NECO Plan.
154. Please identify the Project boundaries (including linear facilities) in relation to the vegetation communities depicted on Map 3-3 of the NECO Plan.
155. Please identify the criteria that the BLM used to delineate Desert Dry Wash Woodland, Desert Chenopod Scrub, and sand dune and playa communities.
156. Please identify the criteria that the Applicant used to delineate Desert Dry Wash Woodland, Desert Chenopod Scrub, and sand dune and playa communities.
157. Please identify the features being managed and conserved by the Multi-species WHMA at the Project site.
158. Please clarify the number of acres within the WHMA that would be impacted by the Project.

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<sup>158</sup> BLM and CDFG. 2002. Final Environmental Impact Statement. Proposed Northern & Eastern Colorado Desert Coordinated Management Plan. Bureau of Land Management, California Desert, Riverside, CA. p. 2-57.

<sup>159</sup> BLM and CDFG. 2002. Final Environmental Impact Statement. Proposed Northern & Eastern Colorado Desert Coordinated Management Plan. Bureau of Land Management, California Desert, Riverside, CA. Appendix H.

<sup>160</sup> SA/DEIS, p. C.2-136 – C.2-137.

## **Background: COMPLIANCE WITH THE NECO PLAN**

The NECO Plan clearly states that projects that impact BLM lands outside of DWMA are required to provide compensation (lands or equivalent fee) at a 1:1 ratio.<sup>161</sup> In addition, bridges and culverts for animal passage are required for new linear projects (e.g., roads).<sup>162</sup>

In addition, although the Project will require construction of a paved access road and a permanent road along the transmission line route, the SA/DEIS does not discuss installation of bridges or culverts for animal passage.<sup>163</sup>

### **Data Requests**

159. Please indicate the Project's compliance with the NECO Plan's requirement for 1:1 compensation for impacts to BLM lands outside of DWMA.
160. Please indicate the Project's compliance with the NECO Plan's requirement for bridges and culverts enabling animal passage across new linear projects including the road required for the transmission line to the planned Red Bluff substation.

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<sup>161</sup> BLM and CDFG. 2002. Final Environmental Impact Statement. Proposed Northern & Eastern Colorado Desert Coordinated Management Plan. Bureau of Land Management, California Desert, Riverside, CA. Appendix D, p. D-2.

<sup>162</sup> BLM and CDFG. 2002. Final Environmental Impact Statement. Proposed Northern & Eastern Colorado Desert Coordinated Management Plan. Bureau of Land Management, California Desert, Riverside, CA. p. 2-30.

<sup>163</sup> The road for the transmission line was not disclosed or analyzed in the SA/DEIS. This aspect of the Project was revealed at the workshop regarding the SA/DEIS. Detailed plans for this road have not been disclosed.

## SOILS, DRAINAGE AND WATER SUPPLY

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### **Background: PROJECT DISTURBANCE AREA**

The California Environmental Quality Act requires an accurate, stable, and finite project description.<sup>164</sup> “A project description that omits integral components of the project may result in an EIR that fails to disclose all of the impacts of the project.”<sup>165</sup>

The Staff Assessment/Draft Environmental Impact Statement (“SA/DEIS”) inconsistently describes the amount of acres that will be disturbed by the proposed Palen Solar Power Project (“PSPP” or “Project”): the figures range from 2,740 to 3,899 disturbed acres.<sup>166</sup> These inconsistent figures appear to reflect the varying ways in which the total “Project disturbance” area was considered (i.e., Project footprint, solar fields, transmission line, etc.), but this is not clear from the various SA/DEIS references. Significantly, none of the inconsistently reported amounts of disturbed acreage took into account the proposed transmission line to the planned Red Bluff substation and the associated road.<sup>167</sup>

The Application for Certification (“AFC”) for the Project similarly provided inconsistent figures for the Project disturbance area and facility footprint.<sup>168</sup>

The introduction to Applicant’s responses to Commission staff’s Data Requests (“DR” or “DRs”) regarding biological resources attempts to clarify the Project disturbance area.<sup>169</sup> This explanation only induces further confusion however. The introduction recites the AFC Disturbance Area as 3,874 acres and the revised Project Disturbance Area as 3,945.8 acres. These figures suggest that at least some of the SA/DEIS analyses failed to consider the impacts of the Project as a whole. Moreover, the revised Project Disturbance Area reported in the introduction to DR responses took into

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<sup>164</sup> *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192.

<sup>165</sup> Kostka and Zischke, Practice Under the California Environmental Quality Act (“Practice Under CEQA”), § 12.2, p. 577, citing *Santiago County Water Dist. V. County of Orange* (1981) 118 Cal.App.3d 818, 829.

<sup>166</sup> See, e.g., SA/DEIS, Proposed Project, pp. B.1-1 [2,970 acres disturbed], B.2-16 [2,740 occupied by Units 1 and 2], Biological Resources, C.2-1 [3,899 acres disturbed], Health and Safety, C.5-21 [2,740 acres disturbed], C.9-3 [2,970 acres disturbed], C.12-14 [4.5 square miles].

<sup>167</sup> See *Id.* at p. C.6-1.

<sup>168</sup> See AFC, § 2.0, Fact Sheet [2,970 acres disturbed]; see also *id.* at pp. 5.3-9 [3,871 acres disturbed and 2,970-acre facility footprint], 5.4-1 [3,871 acres disturbed].

<sup>169</sup> See BIO-1.



account the Transmission Line Disturbance Area for the formerly proposed transmission line to the south of the Project site, not the current transmission line to the west of the Project site.<sup>170</sup>

The estimated amount of cut and fill for the Project is also inconsistent. In the Streambed Alteration Notification submitted to the California Department of Fish and Game (“CDFG”) and in the SA/DEIS, only 4.5 million cubic yards of earth movement is reported.<sup>171</sup> In contrast, the response to DR-S&W-181 states that 16.3 million cubic yards will be moved.

**Data Requests:**

161. Please provide the total amount of acreage that will be disturbed by the Project footprint (i.e., solar units, power blocks, fence line, evaporation ponds, land treatment units, project laydown area, administrative buildings, maintenance buildings, access road, etc.), as currently proposed.
162. Please provide the total amount of acreage within the Transmission Line Disturbance Area, including the associated road, as currently proposed.
163. Please provide the total amount of acreage that will otherwise be disturbed by the Project (i.e., downstream drainage impacts and downwind impacts to the sand transport corridor).
164. Please ensure that the revised drainage plan currently being developed accurately reflects the total amount of disturbed acreage provided in the Applicant’s responses to Data Requests 161, 162 and 163, above.
165. Please provide an accurate estimate of the total amount of cut and fill that will be required for the Project.
166. Please evaluate the soil erosion that will potentially occur during Project grading activities, taking into consideration the accurate estimate of cut and fill volumes.

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<sup>170</sup> *Ibid.*

<sup>171</sup> See Streambed Alteration Notification, § 10, Project Description [describing preliminary site grading plan]; see also SA/DEIS, p. C.9-35.

## **Background: SOIL EROSION/DEPOSITION ISSUES**

The Applicant's response to DR-S&W-186 states that the "gravel roads along the perimeter of the solar fields will be watered *on a regular basis* to control erosion by using excess water from the water treatment plant."<sup>172</sup> At the continued SA workshop on May 7, 2010, the parties discussed a new Project design feature: evaporation ponds that will be used to treat water from Project equipment. The evaporation ponds will treat water contaminated with as yet undisclosed chemicals. Presumably the water treated at this evaporation pond would be used to water the gravel roads along the perimeter of the site.

The Applicant's response cited above also states that "[a] 30-foot high wind fence will be constructed on the east and west sides of the solar fields." The Staff Assessment/Draft Environmental Impact Statement ("SA/DEIS") does not describe the wind fence in the discussion regarding wind erosion.<sup>173</sup>

The SA/DEIS includes a report addressing the Project's interference with the sand transport corridor: this interference is considered an indirect Project impact that "could only be minimized by the revised Reduced Acreage Alternative."<sup>174</sup> On April 16, 2010, Commission staff held a workshop to discuss the impacts that would result from the Project's interference with the sand transport corridor and the alternatives and mitigation measures that may feasibly reduce this impact. Staff maintains that the revised Reduced Acreage Alternative identified in the SA/DEIS would be the best option to avoid interference with the sand transport corridor. In comments concerning the SA/DEIS, the Applicant states that the impact could be fully mitigated through a sand replenishment program.<sup>175</sup>

### **Data Requests:**

167. Please explain what is meant by the phrase "watered on a regular basis" in the quoted excerpt from the DR response above by providing a) the amount of water that will be used and b) the frequency of such use.

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<sup>172</sup> See S&W-3, italics added.

<sup>173</sup> See SA/DEIS, pp. C.9-35 – C.9-36.

<sup>174</sup> See SA/DEIS, Appendix A to Soil and Water Section; *see also Id.* at pp. C.2-26, C.2-83, C.2-145.

<sup>175</sup> See Applicant's Initial Comments on the Biological Resources Section of the SA/DEIS, dated May 12, 2010, pp. 1-3; *see also Id.* at Table 6 [recommending 0 mitigation acres for indirect impacts to MFTL habitat].

168. Please provide an estimate of the quantity of water required for regular watering of the gravel road surrounding the Project site by providing a) the total amount of water for each watering event and b) the number of watering events per year.
169. In light of anticipated chemical contamination of water treated in the newly proposed evaporation ponds, please explain whether this water will be used to water the gravel road along the perimeter of the facility.
170. If water from the evaporation ponds will not be used to water the gravel road along the perimeter of the facility, please provide the Applicant's proposed water source for this activity.
171. Please explain why wind fences will not also be constructed along the north and south sides of the solar fields. If the quoted excerpt from response to DR-S&W-186 is incorrect, please provide the correct information.
172. Please provide the details of the Applicant's proposed sand replenishment program. Please explain how Applicant's proposed sand replenishment program will effectively transport sand deposited by the wind along the northern fenceline to areas downwind of the Project site.
173. Please explain how the Applicant's proposed sand replenishment program will effectively reduce the Project's impact to the sand transport corridor to a less-than-significant level.
174. Please evaluate any potentially significant impacts that may result from the Applicant's proposed sand replenishment program.
175. Please describe feasible mitigation measures that may reduce or eliminate potential impacts from the Applicant's proposed sand replenishment program.

## **Background: DRAINAGE/JURISDICTIONAL WETLAND ISSUES**

### Issue No. 1: Impact of Project on Local Hydrology.

Roadways, and drainage modifications often associated with their construction, can alter natural drainage patterns resulting in impacts to plant and animal populations.<sup>176</sup> A 1,350-foot-long roadway will be created to

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<sup>176</sup> Johnson, H. B., F. Vasek and T. Yonkers. 1975. Productivity, Diversity and Stability Relationships in Mojave Desert Roadside Vegetation, Bulletin Torrey Botanical Club.

provide access to the generating facility.<sup>177</sup> A “Possible Transmission Line Route” would extend from a minimum of 8 miles to a maximum of approximately 12 miles west of the power-generating facility disturbance area.<sup>178</sup>

The BRTR indicates that the originally proposed transmission line route and substation that would extend south of the I-10 is “no longer a part” of the PSPP.<sup>179</sup> The SA/DEIS does not adequately analyze the PSPP project’s impacts on existing surface flow patterns.<sup>180</sup> For example the SA/DEIS does not consider the drainage impacts that will be caused by the construction of the transmission line and the associated 15-foot road for the transmission line.<sup>181</sup>

The SA/DEIS addresses, to some degree, the PSPP project’s impacts on existing surface flow patterns.<sup>182</sup> The technical details of the components of Project drainage facilities were discussed at the continued SA/DEIS workshop on May 7, 2010. At this workshop, the Applicant’s consultant team presented draft revised drainage plans. Apparently, these facilities are being redesigned in response to the concerns expressed by Commission staff.

In comments regarding the SA/DEIS Condition of Certification Soil&Water-10, the Applicant states that drainage channels will be constructed at 3:1 rather than 4:1 slopes.<sup>183</sup> At the recent workshop, Commission staff expressed the concern that it may not be possible to sufficiently compact soils in the area to maintain this steeper slope.

The road for the transmission line was recently identified at the April 2010 workshop for the SA/DEIS. This road will be approximately 15 feet wide and will extend the length of the transmission line to the planned Red Bluff substation. The SA did not mention this road or analyze the environmental impacts associated with this road. The 2010 Survey Protocol acknowledges that the ROW for the transmission line corridor will be

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<sup>177</sup> BRTR, p. 4; SA/DEIS, p. C.9-4.

<sup>178</sup> BRTR, Figure 2; Compare Updated Plan of Development, dated July 20, 2009, p. 35 with SA/DEIS, pp. B.1-11, p. D.5-5 [inconsistently describing transmission line as approximately 12, 10, and 8 miles long, respectively].

<sup>179</sup> *Ibid.*

<sup>180</sup> SA/DEIS, p. C.9-49.

<sup>181</sup> The road associated with the selected transmission line was not described in the SA/DEIS. This road was first identified by the Applicant’s consultant during the workshop concerning the SA/DEIS in April 2010.

<sup>182</sup> SA/DEIR, p. C.9-49.

<sup>183</sup> See Applicant’s Initial Comments on the SA/DEIS, dated May 4, 2010, pp. 31-32.

surveyed for jurisdictional waters. The preliminary results of the Spring 2010 surveys reveal the presence of washes and riparian vegetation along the transmission line right of way (“ROW”).<sup>184</sup> The SA/DEIS will presumably be revised to reflect the survey results.

The response to DR-S&W-193 states that there are two surface water sites “approximately eight and 13 miles west of the proposed PSPP site.”<sup>185</sup> It is not clear from this description whether these surface water facilities are in close proximity to the transmission line ROW.

**Data Requests:**

176. Please provide a detailed description of the following Project components:
  - a. drainage facilities for the Project site,
  - b. the Project site access road, and
  - c. the transmission line road.
177. Please include maps depicting the redesigned drainage facilities and detailed plans for all facility components.
178. Please explain how the desired 3:1 slope for drainage will be accomplished.
179. Please explain whether the transmission line road will affect either of the surface water sites to the west of the Project site.
180. Please provide information regarding the drainage facilities that will be used to protect the road along the transmission line from wash out.
181. Please analyze the Project’s impacts on existing surface flow patterns on-site and off-site.

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<sup>184</sup> See figures attached to AECOM letter dated May 7, 2010 reporting preliminary results of Spring 2010 surveys.

<sup>185</sup> S&W-10.

Issue No. 2: Qualifications of Biologists and Biological Consulting Firms Collecting and Analyzing Palen Site Data Regarding Jurisdictional Waters Delineation.

Delineation of a dry streambed has two components: (1) delineation by biological components and (2) delineation by physical components (Environmental Laboratory, 1987).<sup>186</sup> The BRTR refers to those individuals who conducted the delineation of jurisdictional waters as “ecologists,” a sub-specialty of biology.<sup>187</sup>

The 2010 Survey Protocol does not describe the qualifications of the personnel who have conducted or will be conducting the jurisdictional waters delineation.

**Data Request:**

182. Please demonstrate the ecologists responsible for the 2009 and 2010 delineations have degrees, course work and training in such physical sciences as geomorphology and hydrology which would allow them to analyze the physical characteristics of dry streambeds for the delineation process.
183. Please provide the name(s) and qualifications of any geomorphologist(s) who may assist the Applicant in the jurisdictional waters delineations.

Issue No. 3: Streambed Alteration Notification and Agreement.

The SA/DEIS states that the Project would comply with state law with respect to streambed alteration through compliance with BIO-21.<sup>188</sup> The Streambed Alteration Notification, however, does not provide accurate information regarding the transmission line for the Project.<sup>189</sup> This error is significant, because the current proposed transmission line is much longer than the former proposed line, and a 15-foot wide access road is associated with the current line.

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<sup>186</sup> Environmental Laboratory, Department of The Army, Waterways Experimental Station Corps of Engineers. 1987. *Corps of Engineers Wetlands Delineation Manual*. Vicksburg, MS.

<sup>187</sup> Appendix F to Application for Certification (“AFC”): BRTR, p. 25.

<sup>188</sup> SA/DEIS, pp. C.2-147, C.2-148 – C.2-149.

<sup>189</sup> See Streambed Alteration Notification, § 10, Project Description [describing formerly proposed transmission line to south of Project site, rather than current transmission line to the west of Project site].

**Data Request:**

184. Please indicate whether a revised Streambed Alteration Notification, which takes into account all recent Project modifications, has been submitted to the CDFG.
185. Please provide revised calculations of impacted waters of the state, taking into account all recent Project modifications.
186. Please provide revised mitigation calculations that reflect the Project's impacts to waters of the state taking into account all recent Project modifications.

**Background: DIRECT IMPACTS TO STABILIZED AND PARTIALLY STABILIZED SAND DUNES**

The Biological Resources section of the SA/DEIS provides a provisional estimate of 285 acres of directly impacted stabilized and partially stabilized sand dunes.<sup>190</sup> The report regarding impacts to the sand transport corridor, however, includes a much higher estimate of dunes present on the Project site.<sup>191</sup> Specifically, this report states that 890 acres of shallow vegetated sand dune and 560 acres of deeper vegetated sand dune will be directly impacted by the Project.<sup>192</sup>

**Data Request:**

187. Please explain the apparent discrepancy in the amount of sand dunes that will be directly impacted by the Project.
188. Please describe the distinction made between sand dunes and "sand fields vegetated with sparse creosote bush scrub."

**Background: WATER REQUIREMENTS FOR PROJECT CONSTRUCTION**

CEQA requires an evaluation of the Project's direct and indirect impacts on groundwater resources.<sup>193</sup>

The Applicant's recently submitted comments on the SA/DEIS indicate that substantially more water will be required for Project construction than

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<sup>190</sup> SA/DEIS, pp. C.2-62, C.2-65.

<sup>191</sup> See SA/DEIS, Appendix A to Soil and Water Report, p. 2; *see also id.* at pp. 10 [figure depicting "Qsa" soil type traversing substantial portion of Project site].

<sup>192</sup> *Ibid.*

<sup>193</sup> Pub. Resources Code §§ 21100(B)(1), 21083.

was disclosed and analyzed in the SA/DEIS.<sup>194</sup> The original estimate of the total amount of groundwater required for Project construction was approximately 1,500 acre-feet.<sup>195</sup> The revised project description information recently submitted by the Applicant reveals construction-related water use will, instead, total approximately 5,750 acre-feet.<sup>196</sup>

Despite this five-fold increase in Project water demands, the Applicant urges the Commission Staff to conclude that there will be no Project impacts to water supply.<sup>197</sup> The Applicant relies on an explanation of prior modeling efforts that were performed on the Applicant's proposal to use 1,500 acre-feet of groundwater to support the conclusion that the increase in Project construction water demand to 5,750 acre-feet of groundwater will not have any impact on groundwater supplies.

### **Data Requests**

189. Please confirm that no additional modeling has been conducted to determine potentially significant impacts from the Applicant's proposed increased construction water demand of 5,750 acre-feet.

### **Background: PROJECT'S IMPACT ON GROUNDWATER BASIN WATER SUPPLY**

The Applicant advocates the conclusion that the Project's long-term impact on basin storage is "insignificant."<sup>198</sup> This conclusion relies on the assumption that the groundwater basin has a recoverable storage of 15,000,000 acre-feet, and thus the Project water demand, even when combined with the water demands of all other users in the basin, is negligible.<sup>199</sup>

In contrast, the SA/DEIS compared the Project's construction and operation water demands, combined with other sources of outflow, to

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<sup>194</sup> See Attachment 1 to Applicant's Initial SA Comments, Staff Assessment Section B.1 Description of Proposed Project, Applicant Update, p. 12; see also Attachment 2 to Applicant's Initial Comments on the SA/DEIS, Environmental Evaluation of Project Updates, pp. 2-3.

<sup>195</sup> SA/DEIS, p. C.9-38.

<sup>196</sup> Applicant's Initial Comments on the SA/DEIS, dated May 4, 2010, p. 1; see also Attachment 1 to Applicant's Initial Comments on the SA/DEIS, Applicant Update to Staff Assessment Section B.1, pp. 11-12.

<sup>197</sup> See Attachment 2 to Applicant's Initial Comments on the SA/DEIS, Environmental Evaluation of Project Updates, pp. 5-7.

<sup>198</sup> See *Id.* at p. 7.

<sup>199</sup> See *Ibid.*



determine the water balance (or net inflow) of the groundwater basin.<sup>200</sup> The SA/DEIS also considered the groundwater basin's estimated perennial yield of 12,200 afy.<sup>201</sup>

### **Data Requests**

190. Please provide any evaluation that the Applicant has conducted on the impacts of the Project's construction and operation water requirements on the groundwater basin's water balance and perennial yield.
191. Please confirm that the recoverable storage within the Chuckwalla Groundwater Basin remains 15,000,000 acre-feet.

### **Background: OUTFLOW FROM THE EASTERN CHUCKWALLA GROUNDWATER BASIN TO THE PALO VERDE MESA GROUNDWATER BASIN**

An adequate understanding of the hydraulic continuity between the Chuckwalla Groundwater Basin and the Palo Verde Mesa Groundwater Basin is necessary for the Energy Commission to adequately analyze whether the Project has a reliable water supply and to determine the Project's impacts on local groundwater supplies.

The SA/DEIS acknowledges a hydrologic interconnection between the two basins.<sup>202</sup> This interconnection between the two basins results in a potential impact from Project pumping on groundwater inflow to the adjudicated Colorado River, and a decline in the accounting surface in local aquifers.

### **Data Requests**

192. Please provide any evaluation that the Applicant has conducted regarding the potential for outflow of groundwater from the Chuckwalla Groundwater Basin to the Palo Verde Mesa Groundwater Basin and the hydraulic connection between the two basins.
193. Please provide any evaluation that the Applicant has conducted on impacts from increased construction water requirements on the

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<sup>200</sup> SA/DEIS, pp. C.2-22, C.9-38.

<sup>201</sup> *See Id.* at p. 9-21.

<sup>202</sup> *See SA/DEIS*, pp. C.9-18, C.9-22, C.9-39.

outflow from the Chuckwalla Groundwater Basin to the Palo Verde Mesa Groundwater Basin.

### **Background: CUMULATIVE IMPACTS TO WATER SUPPLY**

CEQA requires an evaluation of significant cumulative impacts on groundwater resources.<sup>203</sup> The SA/DEIS presents a positive water budget balance of 2,608 afy for the Chuckwalla Groundwater Basin.<sup>204</sup> The increased estimate of Project construction demand of approximately 1,916.67 afy leaves only a small margin of error of 691.33 afy relative to the available basin operational yield.

Table 5.17-12 (rev1) attached to Applicant's Responses to CEC Workshop, January 14, 2010, Soil and Water Resources (Groundwater), dated March 11, 2010, includes estimated groundwater demand amounts that differ from the estimated demand amounts presented in the Genesis Solar Power Project proceedings (Docket 09-AFC-8) (*See* Table 1 – Groundwater Demand from Cumulative Projects, attached here as Exhibit A)<sup>205</sup>

The increased Project construction water requirements pose serious concerns that the proposed Project groundwater pumping may result in a significant Project contribution to the forecasted overdraft situation in the Chuckwalla Groundwater Basin.

### **Data Requests**

194. Please evaluate the potential for Project near-term and long-term groundwater pumping to result in a cumulatively considerable contribution to the forecasted overdraft situation in the Chuckwalla Groundwater Basin during future Project pumping.
195. Please provide an updated table listing the construction and operation water demands for all pending projects that will rely on groundwater from the Chuckwalla Groundwater Basin.

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<sup>203</sup> CEQA Guidelines. § 15355(b); *see also* Pub. Resources Code § 21083(b)(2).

<sup>204</sup> SA/DEIS, p. C. 9-39.

<sup>205</sup> Table 1 and the attached figure depicting cumulative drawdown at end of project operation are attachments to Technical Memorandum – Groundwater Resources Cumulative Impact Analysis for Genesis Solar Power Project, Riverside County, CA.

# **EXHIBIT 1**

**Table 1 - Groundwater Demand from Cumulative Projects**

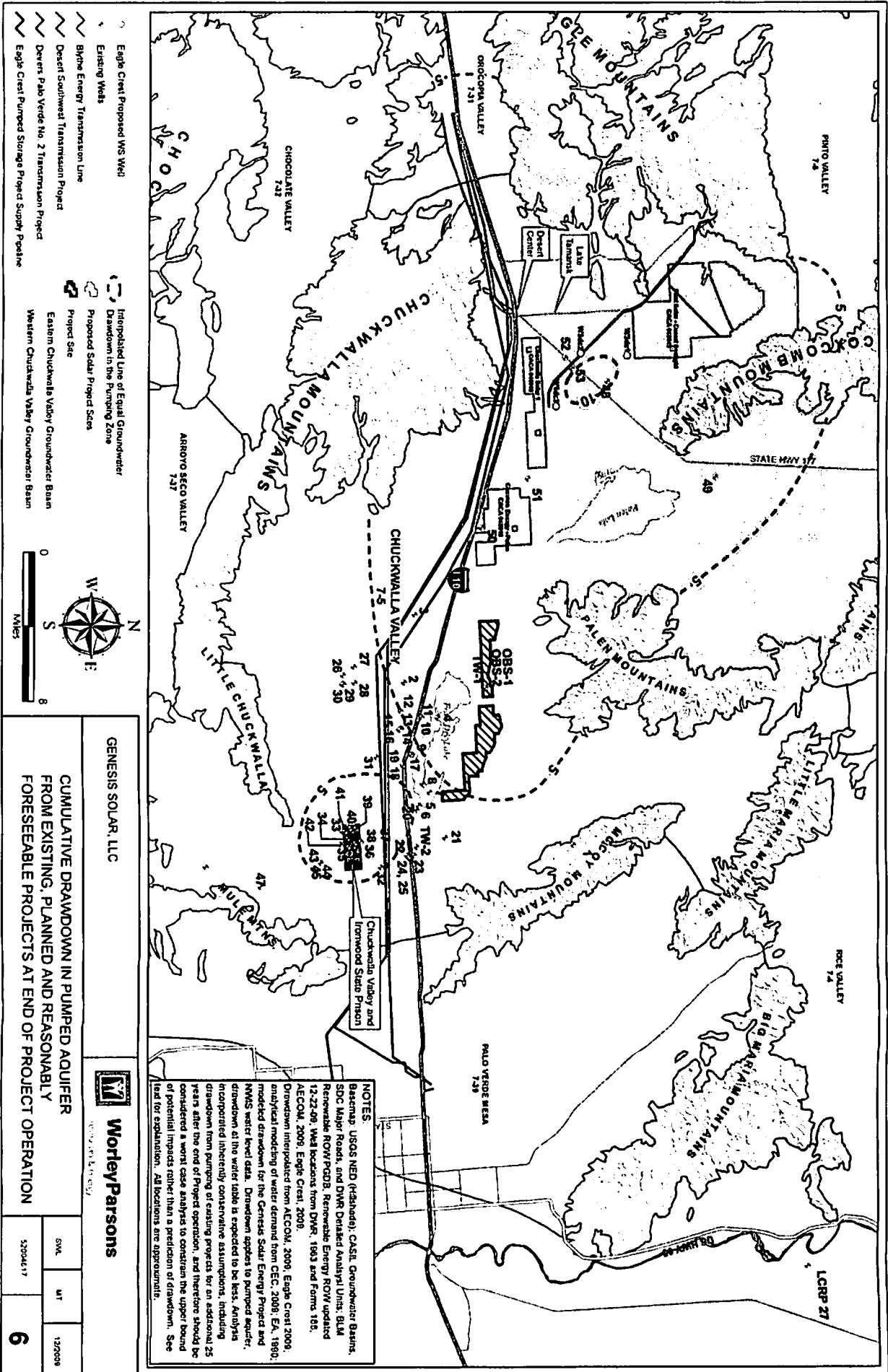
Project	Annual Water Demand (AFY)		Cumulative Future Water Demand for Planned and Reasonably Foreseeable Projects										Source	Remarks	
	Construction	Operation	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 to 2043			
<b>Projects in Western Chuckwalla Valley Groundwater Basin</b>															
Chuckwalla Solar I (CACAD48808)	20	40	0	20	20	20	40	40	40	40	40	40	40	BLM, 2009a; CEC, 2009	SF-299 Filed. NOI issued. Construction 2011 to 2013
Paton Solar Power Project (CACAD48810)	436	300	0	426	426	436	300	300	300	300	300	300	300	AECOM, 2009	SF-299 Filed. NOI issued. AFC Filed. Construction 2011 to 2013
enXco Eagle Mountain Sotel (CACAD49491)	--	--	--	--	--	--	--	--	--	--	--	--	--	BLM, 2009a; CEC, 2009	SF-299 Filed, but neither CEQA or NEPA process has been initiated.
enXco Desert Lái (CACAD49492)	--	--	--	--	--	--	--	--	--	--	--	--	--	BLM, 2009a; CEC, 2009	SF-299 Filed, but neither CEQA or NEPA process has been initiated. Not on BLM's list of active projects as of Sep-09.
Sotel Desert Lái (CACAD49494)	--	--	--	--	--	--	--	--	--	--	--	--	--	BLM, 2009a and 2009b	Project has been withdrawn
First Solar Desert Sunlight (CACAD48849)	27	3.8		27	27	27	3.8	3.8	3.8	3.8	3.8	3.8	3.8	CEC, 2009; BLM, 2009b	SF-299 Filed. NOI imminent. 3 year construction period. Assume 2011 construction start.
enXco (CACAD49489)	--	--	--	--	--	--	--	--	--	--	--	--	--	BLM, 2009a	SF-299 Filed, but neither CEQA or NEPA process has been initiated.
Sotel (CACAD49493)	--	--	--	--	--	--	--	--	--	--	--	--	--	BLM, 2009a and 2009b	Project has been withdrawn
Devers-Palo Verde II Transmission	2	--	0	2	2	2	0	0	0	0	0	0	0	CEC, 2009	Assumed 2 AFY in western basin from 2011 to 2013
Blythe Energy Transmission Line	2	--	2	2	0	0	0	0	0	0	0	0	0	CEC, 2009	Under construction. Assume 2 AFY in western basin from 2010 to 2011
Desert SW Transmission	0.3	--	0	0	0	0.3	0.3	0	0	0	0	0	0	CEC, 2009	Assume 0.3 AFY in western basin from 2013 to 2014
Eagle Crest Pumped Storage Startup	2,380 to 8,066	1,628	0	0	0	0	8,066	8,066	8,066	8,066	2,380	1,628		Eagle Crest, 2009	Groundwater demand during reservoir filling 8,066 AFY 2014 to 2017, 2,380 AFY 2018
<b>Total Sub-Basin Groundwater Demand</b>			<b>2.0</b>	<b>477.0</b>	<b>475.0</b>	<b>485.3</b>	<b>8,410.1</b>	<b>8,409.8</b>	<b>8,409.8</b>	<b>8,409.8</b>	<b>2,723.8</b>	<b>1,871.8</b>			
<b>Projects in Eastern Chuckwalla Valley Groundwater Basin</b>															
Genesis Solar Energy Project	616 to 1,358	1,644		1,368	616	616	1,644	1,644	1,644	1,644	1,644	1,644	1,644		
enXco Mule Mountain Sotel (CACAD49488)	--	--	--	--	--	--	--	--	--	--	--	--	--	CEC, 2009; BLM, 2009b	SF-299 Filed, but neither CEQA or NEPA process has been initiated.
Bullfrog Mule Mountain (CACAD49097)	--	--	--	--	--	--	--	--	--	--	--	--	--	CEC, 2009; BLM, 2009b	Formerly Altera. SF-299 Filed, but neither CEQA or NEPA process has been initiated.
Devers-Palo Verde II Transmission	2	--	0	2	2	2	0	0	0	0	0	0	0	CEC, 2009	Assumed 2 AFY in western basin from 2011 to 2013
Blythe Energy Transmission Line	2	--	2	2	0	0	0	0	0	0	0	0	0	CEC, 2009	Under construction. Assume 2 AFY in western basin from 2010 to 2011
Desert SW Transmission	0.3	--	0	0	0	0.3	0.3	0	0	0	0	0	0	CEC, 2009	Assume 0.3 AFY in western basin from 2013 to 2014
<b>Total Sub-Basin Groundwater Demand</b>			<b>2.0</b>	<b>1,372.0</b>	<b>618.0</b>	<b>618.3</b>	<b>1,644.3</b>	<b>1,644.0</b>	<b>1,644.0</b>	<b>1,644.0</b>	<b>1,644.0</b>	<b>1,644.0</b>	<b>1,644.0</b>		

Notes  
 -- No data: Project does not meet criteria for consideration in cumulative impact analysis for groundwater resources  
 BLM, 2009a: First in Line Solar Applications [http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/energy/solar/Par\\_45875\\_Fee.dal/Renewable\\_Solar\\_12-09.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/energy/solar/Par_45875_Fee.dal/Renewable_Solar_12-09.pdf) December 21  
 BLM, 2009b: Personal communication between Tncia Bernhardt of Tetratech EC and Holly Roberts of BLM on December 20  
 CEC, 2009: Cumulative Projects, I-10 Corridor. Electronic file received via email December 15, 2009  
 Eagle Crest, 2009: Eagle Mountain Pumped Storage Project No. 13123 Final License Application Technical Appendices for Exhibit E. Applicant Prepared Environmental Impact Statement, Volume 3 of 6 appendix C - Technical Memoranda, Groundwater Pumping Technical Memorandum, June 22.

Table 2: Cumulative Water Budget Forecast

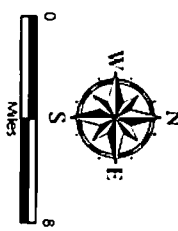
Year	Western Chuckwalla Valley Groundwater Basin <sup>1</sup>										Eastern Chuckwalla Groundwater Basin <sup>2</sup>								Chuckwalla Valley Groundwater Basin <sup>3</sup>					
	Inflow (AFY)				Outflow (AFY)						Sub-Basin Water Budget (AFY)		Inflow				Outflow				Sub-Basin Water Budget		Basin Annual Water Budget	
	Subsurface Inflow <sup>4</sup>	Recharge from Precipitation <sup>4</sup>	Irrigation Return Flow <sup>4</sup>	Wastewater Return Flow <sup>4</sup>	Total Current Pumping <sup>4</sup>	Total Future Construction Pumping	Total Future Operations Pumping	Patrol Lake Evapo-transpiration	Increased Outflow to Eastern Basins <sup>4</sup>	Annual Water Budget	Cumulative Water Budget	Recharge from Precipitation <sup>4</sup>	Irrigation Return Flow <sup>4</sup>	Wastewater Return Flow <sup>4</sup>	Increased Inflow from Western Basins	Outflow to PWB	Total Current Pumping <sup>4</sup>	Total Future Construction Pumping	Total Future Operations Pumping	Annual Water Budget	Cumulative Water Budget	Basin Annual Water Budget	Basin Cumulative Water Budget	
	2009	3,500	4,600	750	36	7,666	0	0	350	0	748	748	4,760	50	795	0	400	2,607	-	-	2,593	2,593	3,348	3,348
2010	3,500	4,440	750	36	7,666	2	0	350	0	748	1,496	4,760	50	795	0	400	2,005 <sup>4</sup>	2	0	5,203	7,801	5,951	9,297	
2011	3,500	4,660	750	36	7,666	477	0	350	0	273	1,769	4,760	50	795	0	400	2,005	1,372	0	1,828	9,629	2,101	11,398	
2012	3,500	4,660	750	36	7,666	475	0	350	0	275	2,044	4,760	50	795	0	399	2,005	0	0	2,563	12,212	2,658	14,266	
2013	3,500	4,660	750	36	7,666	485.3	0	350	0.5	264	2,308	4,760	50	795	0.5	388	2,005	0	0	2,594	14,806	2,658	17,114	
2014	3,500	4,660	750	36	7,666	6,060.30	344	350	2.5	-7,643	-3,354	4,760	50	795	2.5	373	2,005	0	1,644	1,585	18,391	-4,077	11,037	
2015	3,500	4,660	750	36	7,666	8,066	344	350	5	-7,645	-13,019	4,760	50	795	5	360	2,005	0	1,644	1,601	17,992	-4,064	4,973	
2016	3,500	4,660	750	36	7,666	8,066	344	350	7.5	-7,647	-20,687	4,760	50	795	7.5	347	2,005	0	1,644	1,617	19,609	-4,051	-1,078	
2017	3,500	4,660	750	36	7,666	8,066	344	350	10	-7,670	-28,356	4,760	50	795	10	334.5	2,005	0	1,644	1,632	21,240	-4,038	-7,116	
2018	3,500	4,660	750	36	7,666	2,330	344	350	12.5	-1,986	-30,343	4,760	50	799	12.5	322	2,005	0	1,644	1,647	22,887	-340	-7,656	
2019	3,500	4,660	750	36	7,666	0	1,972	350	15.5	-1,217	-31,560	4,760	50	795	15.5	308	2,005	0	1,644	1,664	24,530	426	-7,029	
2020	3,500	4,660	750	36	7,666	0	1,972	350	19	-1,241	-32,821	4,760	50	795	19	295	2,005	0	1,644	1,680	26,230	439	-6,590	
2021	3,500	4,660	750	36	7,666	0	1,972	350	24	-1,246	-34,067	4,760	50	795	24	261.5	2,005	0	1,644	1,699	27,929	453	-6,138	
2022	3,500	4,660	750	36	7,666	0	1,972	350	28	-1,250	-35,316	4,760	50	795	28	259	2,005	0	1,644	1,715	29,644	465	-5,672	
2023	3,500	4,660	750	36	7,666	0	1,972	350	33.5	-1,255	-36,572	4,760	50	795	33.5	256.5	2,005	0	1,644	1,733	31,377	478	-5,195	
2024	3,500	4,660	750	36	7,666	0	1,972	350	39	-1,261	-37,822	4,760	50	795	39	245	2,005	0	1,644	1,750	33,127	489	-4,706	
2025	3,500	4,660	750	36	7,666	0	1,972	350	44.5	-1,266	-39,099	4,760	50	795	44.5	233	2,005	0	1,644	1,768	34,894	501	-4,204	
2026	3,500	4,660	750	36	7,666	0	1,972	350	50	-1,272	-40,371	4,760	50	795	50	221	2,005	0	1,644	1,785	36,679	513	-3,691	
2027	3,500	4,660	750	36	7,666	0	1,972	350	56	-1,278	-41,648	4,760	50	795	56	210	2,005	0	1,644	1,802	38,481	524	-3,167	
2028	3,500	4,660	750	36	7,666	0	1,972	350	63	-1,286	-42,933	4,760	50	795	63	199.5	2,005	0	1,644	1,820	40,301	538	-2,632	
2029	3,500	4,660	750	36	7,666	0	1,972	350	70	-1,292	-44,225	4,760	50	795	70	190	2,005	0	1,644	1,836	42,137	544	-2,088	
2030	3,500	4,660	750	36	7,666	0	1,972	350	77.5	-1,299	-45,524	4,760	50	795	77.5	180	2,005	0	1,644	1,854	43,990	554	-1,534	
2031	3,500	4,660	750	36	7,666	0	1,972	350	85	-1,307	-46,831	4,760	50	795	85	169	2,005	0	1,644	1,871	45,861	564	-970	
2032	3,500	4,660	750	36	7,666	0	1,972	350	93.5	-1,316	-48,148	4,760	50	795	93.5	160	2,005	0	1,644	1,889	47,761	574	-395	
2033	3,500	4,660	750	36	7,666	0	1,972	350	102	-1,324	-49,470	4,760	50	795	102	150	2,005	0	1,644	1,903	49,689	584	189	
2034	3,500	4,660	750	36	7,666	0	1,972	350	110.5	-1,332	-50,802	4,760	50	799	110.5	140	2,005	0	1,644	1,927	51,585	594	783	
2035	3,500	4,660	750	36	7,666	0	1,972	350	121.5	-1,343	-52,148	4,760	50	795	121.5	131	2,005	0	1,644	1,947	53,532	603	1,306	
2036	3,500	4,660	750	36	7,666	0	1,972	350	131.5	-1,353	-53,499	4,760	50	795	131.5	122	2,005	0	1,644	1,966	55,497	612	1,998	
2037	3,500	4,660	750	36	7,666	0	1,972	350	141.5	-1,363	-54,862	4,760	50	795	141.5	113	2,005	0	1,644	1,985	57,482	621	2,620	
2038	3,500	4,660	750	36	7,666	0	1,972	350	151.5	-1,373	-56,235	4,760	50	795	151.5	106	2,005	0	1,644	2,002	59,483	629	3,248	
2039	3,500	4,660	750	36	7,666	0	1,972	350	162	-1,384	-57,619	4,760	50	799	162	98	2,005	0	1,644	2,020	61,503	638	3,884	
2040	3,500	4,660	750	36	7,666	0	1,972	350	172.5	-1,394	-59,014	4,760	50	795	172.5	90	2,005	0	1,644	2,039	63,542	644	4,528	
2041	3,500	4,660	750	36	7,666	0	1,972	350	184.5	-1,406	-60,420	4,760	50	795	184.5	83	2,005	0	1,644	2,058	65,599	651	5,179	
2042	3,500	4,660	750	36	7,666	0	1,972	350	196	-1,418	-61,838	4,760	50	795	196	77	2,005	0	1,644	2,075	67,674	657	5,837	
2043	3,500	4,660	750	36	7,666	0	1,972	350	209	-1,431	-63,269	4,760	50	795	209	71	2,005	0	1,644	2,094	69,768	663	6,500	

Notes  
 1 Western Chuckwalla Valley Groundwater Basin boundaries assumed to coincide with DWR's Palen Detailed Analysis Unit  
 2 Eastern Chuckwalla Valley Groundwater Basin boundaries assumed to coincide with DWR's Ford Detailed Analysis Unit  
 3 For details, see Response to Data Request Item 151, submitted to CEC December 15, 2009  
 4 Reflects decreased prison water demand starting in 2010 due to water conservation and population reduction (Eagle Crest, 2009; Lanahan, 2009).



- Eagle Crest Proposed WMS Well
- Existing Wells
- ~ Blythe Energy Transmission Line
- ~ Desert Southwest Transmission Project
- ~ Devers Palo Verde No. 2 Transmission Project
- ~ Eagle Crest Pumped Storage Project Supply Pipeline

- Interprohibited Line of Equal Groundwater Drawdown in the Pumping Zone
- Proposed Solar Project Sites
- Project Site
- Eastern Chuckwalla Valley Groundwater Basin
- Western Chuckwalla Valley Groundwater Basin



GENESIS SOLAR, LLC

**CUMULATIVE DRAWDOWN IN PUMPED AQUIFER FROM EXISTING, PLANNED AND REASONABLY FORESEEABLE PROJECTS AT END OF PROJECT OPERATION**

SWM	WT
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<b>6</b>	

**NOTES:**

Basemap: USGS NED (Hydro); CASI; Groundwater Basins, SDC Major Road, and DWR Detailed Analysis Units; BLM Renewable ROY PGDB; Renewable Energy ROY updated 12-22-09; Well locations from DWR, 1983 and Farms 105; AECOM, 2008; Eagle Crest, 2008.

Drawdown interpolated from AECOM, 2000; Eagle Crest 2000; analytical modeling of water demand from CEC, 2008; EA, 1980; modified drawdown for the Genesis Solar Energy Project and NMMS water level data. Drawdown applied to pumped aquifer; drawdown at the water table is expected to be less. Analysis incorporated inherently conservative assumptions, including drawdown from pumping of existing projects for an additional 25 years after the end of Project operation, and therefore should be considered a worst case analysis to constrain the upper bound of potential impacts rather than a prediction of drawdown. See legend for explanation. All locations are approximate.

**DECLARATION OF SERVICE  
Palen Solar Power Plant Project**

**Docket No. 09-AFC-7**

I, Bonnie Heeley, declare that on May 14, 2010, I served and filed copies of the attached CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET ONE dated May 14, 2010. The original document, filed with the Docket Office, 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/solar\\_millennium\\_palen/index.html](http://www.energy.ca.gov/sitingcases/solar_millennium_palen/index.html)

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 Office via email and U.S. mail as addressed below.

I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, California on May 14, 2010.

/s/

\_\_\_\_\_  
Bonnie Heeley

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