



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

May 12, 2011

John Kalish  
Field Manager  
Palm Springs South Coast Field Office  
Bureau of Land Management  
1201 Bird Center Drive  
Palm Springs, California 92262

Subject: Final Environmental Impact Statement for the Desert Sunlight Solar Farm Project,  
Riverside County, California (CEQ #20110117)

Dear Mr. Kalish:

The U.S. Environmental Protection Agency (EPA) has reviewed the Final Environmental Impact Statement (FEIS) for the Desert Sunlight Solar Farm Project. Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act (CAA).

EPA reviewed the Draft Environmental Impact Statement (DEIS) and provided comments to the Bureau of Land Management (BLM) on November 23, 2010. We rated the DEIS as *Environmental Concerns—Insufficient Information* (EC-2), primarily due to potential direct and indirect impacts to desert dry wash woodlands, site hydrology, desert tortoise, air quality and groundwater, as well as cumulative impacts associated with the influx of the multitude of large-scale solar energy projects proposed in the Chuckwalla Valley. We also asked for a final determination of the geographic extent of jurisdictional waters in the project area, additional information on how climate change could affect the proposed project, and further consideration of the Reduced Acreage Alternative, Alternative 3. Previously, on January 27, 2010, EPA provided extensive formal scoping comments for the proposed project.

We appreciate the efforts of BLM, the applicant, and its consultants to discuss and respond to our DEIS comments, and we commend the applicant, State, and federal agencies for developing alternatives and additional substantial mitigations that support environmentally preferable outcomes. In particular, we were pleased to see: a reduction of the solar farm footprint by 333 acres, which would reduce impacts to desert tortoise and state jurisdictional waters; additional mitigation measures to minimize on- and off-site hydrologic impacts; requirements to protect compensatory lands into 'perpetuity'; additional mitigation measures to reduce air quality impacts; integration of groundwater quality monitoring, pumping limits, and mitigation; and further socio-economic analysis of the multiple large-scale solar projects proposed in the vicinity.

We are pleased to note additional analysis of climate change impacts to the project as relevant to mitigation habitat values, vegetation, and wildlife resources, as well as the additional analysis of induced flows from the Colorado River into the Palo Verde Mesa Groundwater Basin. We also

note that, after the DEIS comment period closed, the Army Corps of Engineers determined there are no jurisdictional Waters of the US on site.

While recognizing these improvements, EPA has continuing concerns regarding impacts to aquatic and biological resources, including desert dry wash woodlands and desert tortoise, impacts to site hydrology, cumulative air quality impacts and the availability of adequate compensatory mitigation lands. These are discussed further in the enclosed detailed comments. We recommend that BLM address these issues prior to making a final decision on the proposed Project. We also recommend that all mitigation measures, including specific criteria for successful mitigation, be adopted in the Record of Decision (ROD) and be included as conditions in construction contracts and any other approvals, as appropriate, to minimize adverse environmental impacts to the extent possible. If any mitigation measures in the FEIS are not adopted, the ROD should provide justification for the decision not to adopt them.

Finally, we reiterate our recommendation that BLM consider protecting non-developed portions of a subject Right-of-Way after final project approval. In the case of this project, some or all of the remaining 15,000 acres within the Right-of-Way that the applicant has carefully chosen to avoid may now warrant protection from future development. We encourage BLM to consider such a land use policy modification through the development of the Desert Renewable Energy Conservation Plan (DRECP).

We are available to discuss all recommendations provided. Please send one hard copy and one CD ROM copy of the ROD to us when they are filed with our Washington D.C. office. If you have any questions, please contact me at 415-972-3521, or contact Tom Plenys, the lead reviewer for this project. Tom can be reached at 415-972-3238 or plenys.thomas@epa.gov.

Sincerely,

/S/

Kathleen M. Goforth, Manager  
Environmental Review Office

Enclosures

Cc: Allison Schaffer, Bureau of Land Management, Project Manager  
James Mace, US Army Corps of Engineers  
Jody Fraser, United States Fish and Wildlife Service  
Becky Jones, California Department of Fish and Game

**U.S ENVIRONMENTAL PROTECTION AGENCY (EPA) DETAILED COMMENTS ON THE FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS) FOR THE DESERT SUNLIGHT SOLAR FARM PROJECT, RIVERSIDE COUNTY, CALIFORNIA, MAY 12, 2011**

**Aquatic and Biological Resources**

*Desert Dry Wash Woodlands*

EPA recognizes that the proposed action alternative in the FEIS would reduce the solar farm footprint by 333 acres to 3,912 acres. While this change avoids 52 acres of state jurisdictional aquatic resources, including desert dry washes (Table 4.3.9), EPA remains concerned with the permanent loss of over 100 acres of desert dry wash woodlands and their associated hydrological and biological functions, including 35 acres within the solar farm footprint (Table 4.3.8). The FEIS restates that the total project loss of 10.5 percent of desert dry wash woodland habitat in the Palen Watershed from existing and foreseeable future projects would constitute a significant cumulative impact (p. 4.3-94). Despite this impact, we note that the project design was not modified to avoid the desert dry wash woodlands within the solar farm boundary, nor along the Gen-Tie lines and Red Bluff Substation, and the impacted acreage of such woodlands remains the same as identified in the DEIS. These riparian areas provide many important ecosystem functions, including plant and animal habitat, wildlife connectivity, and flood control; and onsite impacts to these valuable resources can be expected to induce additional impacts beyond the project footprint.

*Recommendation:*

- EPA encourages BLM and the applicant to utilize the design flexibility of the proposed photovoltaic (PV) system to avoid the 35 acres of desert dry wash woodlands within the solar farm footprint and consider methods to maximize preservation of desert dry wash woodlands along the Gen-Tie lines and at Red Bluff Substation.

*Site Hydrology*

We remain concerned that the FEIS does not demonstrate that downstream flows will not be disrupted as a result of proposed changes to natural washes, excavation of sediment, or increased sedimentation due to vegetation clearing, proposed check dams, and grading of surface irregularities. According to the FEIS, erosion and sedimentation are not expected to occur off-site as a result of construction or operation (p. N-101); however, the basis for this is unclear. Our concerns remain regarding the efficacy of the proposed soil decompaction technique and use of rip-rap to minimize impacts to site hydrology (p. 4.17-23). Additionally, the storm water, flood drainage and water quality control plans, including location of key discharge points for retention basins, are deferred to a later time, and their viability and potential effectiveness are not known (p. 4.17-7, 4.17-22 and 4.17-28). EPA remains concerned about the increased erosion, migration of channels, local scour, and potential destabilization and damage that could result from installing equipment in drainages, and we strongly recommend maximum avoidance of these waters and high risk flood hazard zones.

While EPA acknowledges that BLM will commit to developing design features and control plans in the ROD, we continue to recommend that any drainage reports and plans include designs to minimize disruption of natural flows as well as minimize erosion, sedimentation, and impacts to habitat downstream as much as possible. Because mitigation development is being deferred until after the ROD is signed, the ROD should identify the specific mitigation goals, specified in terms of measurable performance standards, to the greatest extent possible (Council on Environmental Quality (CEQ) Draft Guidance on NEPA Mitigation and Monitoring, February 18, 2010).

Lastly, the FEIS indicates that the applicant is still evaluating the feasibility of maintaining natural vegetation under the solar panels. This is encouraging and we strongly urge the applicant to incorporate such design features, such as higher PV mounts, that would maximize natural vegetation on site.

*Recommendations:*

- Identify, in the ROD, measurable performance standards for mitigation to avoid disruption of downstream flows due to proposed changes to natural washes, excavation of sediment, or increased sedimentation due to increased vegetation clearing and grading of surface irregularities.
- Quantify the effectiveness of decompacting soils and the use of rip rap, check dams, retention ponds, and strip detention basins to demonstrate that these measures would reduce the magnitude of change in onsite and offsite hydrology to within one percent of pre-development hydraulic conditions (p. N-101).
- Incorporate, into Mitigation Measure-WAT-4 (p. 4.17-27), explicit fence design features that would allow natural hydrologic flow and sediment transport through the site in major drainages and washes, and include this measure in the ROD. Such design features are referenced in the FEIS (p. N-101).
- Integrate, into the ROD, mitigation measures, as appropriate, resulting from further evaluations to protect vegetation under the PV panels. Consider higher PV mounts for the project, as appropriate.
- Minimize the number of road crossings over washes in order to minimize erosion, migration of channels, and scour. Road crossings should be designed to provide adequate flow-through during large storm events. Commit to these measures in the ROD.
- Incorporate vegetation removal and re-establishment conditions for construction into the ROD that minimize vegetation removal in drainages, avoid impacts to drainage bank contours, and require restoration using low-lying native species, as appropriate, that would not require trimming nor impede the project's operation.
- Structure mitigation requirements to include adaptive management in order to minimize the possibility of mitigation failure.
- Specify, in the ROD, the response to be taken by BLM if a substantial mitigation failure is detected. This could include conditioning the right-of-way approval to require the applicant to restore any severely impacted watersheds that may result from mitigation failure.

## *Compensatory Mitigation*

According to the FEIS, the Biological Opinion (BO) has not been completed (p. N-102). The final Biological Opinion will play an important role in informing the decision on which alternative to approve and what commitments, terms, and conditions must accompany that approval. We recommend that the BO be included in the ROD and that any additional mitigation measures needed to protect species from potential adverse effects of the proposed activities be listed within the ROD, accordingly. In light of the recent findings of significantly higher numbers of desert tortoises than initially surveyed at the Ivanpah Solar Electric Generating System site, as well as the recent release of draft Eagle Conservation Plan Guidelines<sup>1</sup>, we also recommend BLM ensure that current and consistent surveying, monitoring, and reporting protocols are applied to all translocation and protection efforts.

Additionally, while we note that mitigation measure BIO-2 provides substantial additional details on compensatory mitigation, the FEIS states that it is “anticipated” that sufficient lands are available for compensation (p. N-102). EPA is concerned that, at this stage in the environmental review process, sufficient compensatory lands have not been identified for the project. If the applicant is to acquire compensation lands, the location(s) and management plans for these lands should be fully disclosed in the ROD. In light of the numerous renewable energy projects in the Riverside East Solar Energy Study Zone area, available land to adequately compensate for environmental impacts to resources such as state jurisdictional waters, desert dry wash woodlands, and desert tortoise, may serve as a limiting factor for development.

### *Recommendations:*

- Incorporate, into the ROD, final information on the compensatory mitigation proposals (including quantification of acreages, estimates of species protected, costs to acquire compensatory lands, etc.) for unavoidable impacts to waters of the State and biological resources such as desert tortoise and golden eagles.
- Identify compensatory mitigation lands or quantify, in the ROD, available lands for compensatory habitat mitigation for this project, as well as reasonably foreseeable projects in the Riverside East Solar Energy Study Zone.
- Incorporate, into the ROD, mitigation, monitoring, and reporting measures that result from consultation with the US Fish and Wildlife Service and California Department of Fish and Game, and that incorporate lessons learned from other solar projects and recently released guidances to avoid and minimize adverse effects to sensitive biological resources, including habitat for desert tortoise and golden eagles.
- Clarify the rationale for the 1:1, 2:1 and 5:1 mitigation ratios for tortoise habitat and how these relate to the mitigation ratios recommended by other agencies, as well as how they relate to mitigation ratios used for other renewable energy projects in California and Nevada.
- Specify, in the ROD, provisions that will ensure habitat selected for compensatory mitigation will be protected in perpetuity.

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<sup>1</sup> See Draft Eagle Conservation Plan Guidelines, February 2011: See internet address: [http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)

## **Air Resources – Cumulative Impacts**

We recognize that Section 4.2.9 of the FEIS includes additional discussion of the cumulative impacts of projects in the vicinity that may have overlapping construction periods; however, the FEIS does not analyze the combined emissions from the proposed project, combined with the reasonably foreseeable projects within the area. Furthermore, the FEIS indicates that the project would result in significant adverse cumulative air quality impacts from fugitive dust emissions, as well as precursor emissions from ozone and secondary particulate matter. These impacts would be considered a cumulatively considerable contribution to air quality impacts under the California Environmental Quality Act (CEQA) within the South Coast Air Quality Management District (SCAQMD).

### *Recommendations:*

- In consultation with the local air quality management agency, use cumulative emissions data to develop an incremental construction schedule that will not result in any violations of local, state or Federal air quality regulations. EPA recommends coordinated construction with the nearby solar projects, including Genesis, Palen and Blythe (as well as potential future projects such as Chuckwalla Solar I and the Eagle Mountain Soleil Projects), to ensure air quality impacts due to construction are limited and sufficiently staggered.
- If the project would affect the ability of other foreseeable projects to be permitted, the ROD should discuss this and provide for a course of action.