COMMENTS

of the

CALIFORNIA UNIONS FOR RELIABLE ENERGY

on the

Draft Environmental Impact Statement

for the

Imperial Valley Solar Project

May 27, 2010

Loulena A. Miles
Tanya A. Gulesserian
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080
T: 650/589-1660 F: 650/589-5062
lmiles@adamsbroadwell.com

Attorneys for California Unions for Reliable Energy

I. INTRODUCTION

On behalf of California Unions for Reliable Energy ("CURE"), this letter provides comments on the Draft Environmental Impact Statement ("DEIS") for the Imperial Valley, formerly Solar Two Project ("Project"). The Bureau of Land Management ("BLM") is the lead federal agency for evaluating the environmental impacts of the proposed right-of-way grant under the National Environmental Policy Act ("NEPA"). BLM has identified several key issues and has provided preliminary analyses of these issues in the DEIS. However, as explained more fully below, the DEIS does not satisfy the basic requirements of NEPA.[1] An adequate, revised DEIS must be prepared and circulated for public review and comment.

CURE is a coalition of unions whose purpose is to help solve the State's energy problems by building, maintaining and operating conventional and renewable energy power plants. Environmental degradation jeopardizes future jobs by causing construction moratoriums, eliminating protected species and habitat, using limited fresh water, and putting added stresses on the environmental carrying capacity of the state. This reduces future employment opportunities. In contrast, well designed projects that reduce environmental impacts of electricity generation improve long-term economic prospects.

Individual members work in areas affected by environmental degradation and health and safety risks from industrial development. Individual members also live in and use areas that will suffer the impacts of projects related to power plant development, including noise and visual intrusion, water and soil pollution, and destruction of archaeological and wildlife habitat areas.

Based on these concerns, CURE and its members have a strong interest in ensuring that projects comply with NEPA and all applicable federal, state, and local laws and regulations.

These comments are supported by the attached comments of Dr. Vernon Bleich, Scott Cashen, Dr. Christopher Bowles and Christopher Campbell. These expert qualifications and comments are attached and incorporated herein.

[1] 42 U.S.C §4321 et. seq.

II. THE DEIS FAILS AS AN INFORMATIONAL DOCUMENT

The purpose of NEPA is to ensure that every federal agency prepare an EIS for major federal actions significantly affecting the quality of the human environment.[2] An EIS must provide a "full and fair discussion of significant environmental impacts and shall inform the decision-makers and the public of the reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment."[3]

The DEIS does not even begin to scratch the surface of the size and significance of the impacts that will be posed by this Project on public lands in the fragile desert environment. At 6,500 acres (10 square miles), this single power plant project is larger than many cities in California including Inglewood, Santa Monica and Daly City.[4] A map of the Project lay-out demonstrates that nearly the entire area will be disturbed by roads, power units, buildings, underground utilities and support structures. This will dramatically impact every aspect of the ecosystem on the Project site and surrounding the Project area. The vast majority of these impacts were not identified, disclosed, analyzed or mitigated in the DEIS.

For example, the Project is in the Salton Sea watershed and, as designed, will result in direct, indirect and cumulative effects on this watershed.[5] For the most part, these impacts were not even disclosed and, therefore, were not analyzed or mitigated in the DEIS. In addition, according to the DEIS, the Project may result in the mortality of potentially *thousands* of flat-tailed horned lizards, a species currently proposed for listing under the Federal Endangered Species Act. However, the mitigation strategy for reducing these impacts to less than significant has not been developed and, therefore, has not been disclosed. The BLM and USFWS continue to evaluate proposals to design a translocation plan but the details were not analyzed in the SA/DEIS and are not yet finalized.

The Project will also fence more than 6,000 acres that may provide critical movement corridors and forage resources for endangered peninsular bighorn sheep in the Carrizo Mountains/Tierra Blanca Mountains/Coyote Mountains Recovery Area. This impact was not even discussed in the DEIS.

Finally, the Project will adversely affect hundreds of cultural resources including ancient cremation zones, trails and village sites, and will directly block one of the most undisturbed sections of the Juan Bautista de Anza

---

[2] 42 U.S.C. 4332; 40 CFR 1501.
[3] 40 CFR 1502.1.
[4] http://www.demographia.com/db-uscity98.htm
[5] Salton Sea Ecosystem Restoration PEIR Figure 6-1, October 2006.

National Historic Trail, the first overland route from New Spain to San Francisco. The DEIS failed to provide ANY mitigation for impacts to cultural resources and instead explained that a future consultation process would work out the details of a mitigation proposal.

Many of these significant environmental resources on the Project site are irreplaceable. Once these resources are destroyed, they will be lost forever. In fact, the Project applicant submitted testimony and documentation to the California Energy Commission admitting that in the Applicant's opinion, this Project will pose significant environmental impacts that **cannot be mitigated**.

The DEIS fails as an informational document because it does not adequately describe many of these resources. The DEIS fails to establish the project setting, it does not fully and fairly describe the proposed action, it wholly omits discussion of a number of potentially significant environmental impacts, and it fails to provide a reasonable range of alternatives to avoid or mitigate the Project's adverse impacts. As described below, the DEIS must be revised to fully describe the project setting, the project, the impacts from the project, mitigation and alternatives; and the revised DEIS should be circulated for public review and comment, as required by NEPA.

III. THE DEIS MUST ACCURATELY DESCRIBE THE PROPOSED ACTION

A DEIS must include a complete description of the Proposed Project, including all connected actions. The DEIS fails to accurately or fully describe the water supply proposed for the Project and the environmental impacts that will flow from the development of this supply. The water supply for the Project is a connected action and therefore must be analyzed as a part of the Project.

Connected actions are those actions that are "closely related" and "should be discussed" in the same NEPA document.[6] A non-Federal action may be a connected action with a BLM proposed action.[7] Under NEPA, actions are connected if they:

(i) Automatically trigger other actions which may require environmental impact statements.
(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.

[6] 40 CFR §1508.25(a)(1).
[7] BLM NEPA handbook p. 46.

(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.[8]

Further, NEPA requires that a supplemental EIS be prepared when "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[9] A supplemental EIS is required if a new proposal "will have a significant impact on the environment in a manner not previously evaluated and considered."[10] The new water source from the Dan Boyer Water Company is one example of new information that necessitates recirculation of a supplemental EIS.

The CEQ Guidelines require agencies to "prepare supplements to either draft or final environmental impact statements if: (i) the agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[11]

Here, it is undisputed that the proposed Project cannot be constructed or operated without a reliable source of water. As with all development in the arid West, finding an assured water supply is one of the most important planning decisions that must be made before a Project can legally be approved. An identified reliable source of water for construction and operation of a project is largely determinative of the project's overall viability. Because the water supply is a critical part of the Project without which the Project cannot proceed, impacts resulting from the acquisition of water for the Project are connected actions that must be analyzed in a revised DEIS that is circulated for public review and comment.

A. SEELEY WASTE WATER TREATMENT PLANT

The water supply identified (*but not analyzed*) in the DEIS is the recycled wastewater from the Seeley Wastewater Treatment Plant ("SWWTP"). In order to serve the Project's needs, the SWWTP would require an upgrade that would result in direct potentially significant adverse effects on wetlands and waters of the U.S. The SWWTP expansion will divert water currently flowing into a two-acre wetland connected to a riparian corridor along the New River, which flows to the Salton Sea. According to the Seeley County Water District ("SCWD"), these impacts to wetlands and navigable

[8] CEQ Regulations (40 CFR §1508.25).
[9] 40 C.F.R. § 1502.9.
[10] S. Trenton Residents Against 29 v. Fed. Highway Admin. (1999) 176 F.3d 658, 663.
[11] 40 C.F.R. § 1502.9.

water bodies are federally regulated by the U.S. Army Corps of Engineers ("USACE"), pursuant to the Clean Water Act.[12] The permitting and mitigation of impacts to wetlands and navigable waters of the United States are connected federal actions that would independently trigger preparation of an EIS, unless the BLM's DEIS is revised to address the SWWTP upgrade and circulated to the public.

The BLM and the CEC have acknowledged that the proposed water diversion from waters of the U.S. to the proposed Project may result in the loss of the entire 2-acre wetland and potentially significant adverse impacts to the endangered Yuma Clapper Rail and other species in the area.[13] In fact, the elimination of this wetland is likely to deleteriously affect the habitat for a number of threatened or endangered species, including the Yuma clapper rail, the vermillion flycatcher and the California black rail. Impacts to these species would require an incidental take permit ("ITP") issued by the U.S. Fish and Wildlife Service ("USFWS"). The issuance of an ITP would also require a federal agency to prepare an EIS, pursuant to NEPA.[14]

The proposed diversion of water may also contribute to a direct and cumulative loss of inflow into the Salton Sea. The SWWTP currently discharges treated wastewater into the New River. The New River originates in Mexico and flows northward approximately 60 miles until it empties into the Salton Sea.[15] The New River carries urban runoff, agricultural runoff, treated industrial wastes, and treated, disinfected and non-disinfected domestic wastes from the Imperial Valley and supports the existence of wildlife species in the Salton Sea.[16] The New River carries approximately 6 to 11 cfs (4,350 to 7,970 AFY) of treated wastewater from point sources in

---

[12] Seeley Wastewater Reclamation Facility MND, p. 4-22.
[13] CEC/BLM Staff Assessment/Draft Environmental Impact Statement Appendix 1 "Seeley Wastewater Reclamation Facility Improvements" dated March 18, 2010. Accessed on 5/12/2010 at http://www.energy.ca.gov/sitingcases/solartwo/documents/2010-03-18_Appendix-1_Seeley_Wastewater_Reclamation_Facility_Improvements_TN-55984.pdf
[14] See 42 U.S.C. § 4332(2)(C) (mandating that federal agencies prepare an EIS for "major federal actions" "significantly affecting the quality of the human environment"); see also *Norton v. Southern Utah Wilderness Alliance*, 542 U.S. 55, 124 S.Ct. 2373, 2384, 159 L.Ed.2d 137 (2004) ("NEPA requires a federal agency to prepare an environmental impact statement (EIS) as part of any 'proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.'"); *Ramsey v. Kantor*, 96 F.3d 434, 444 (9th Cir.1996) (holding that if a federal takings permit is a prerequisite for a project with an adverse impact on the environment, the relevant federal agency may be required to prepare an EIS).
[15] Cal EPA, Regional Water Quality Control Board, Colorado River Basin website: www.waterboards.ca.gov/coloradoriver/water_issues/programs/salton_sea/index.shtml
[16] Id.

Imperial Valley, culminating in a flow of about 600 cfs (430,000 AFY) at the Salton Sea.

The Salton Sea is California's largest lake, it supports a multitude of recreational uses and a National Wildlife Refuge and is a critical stop on the Pacific Flyway for migrating birds, including several state- and federal-listed endangered and threatened species. Approximately 75 percent of the freshwater inflow to the Sea is agricultural drain water from Imperial Valley. Since the Sea has no outlets, salts concentrate in it and thus the sea is dependent on the continued inflow of freshwater to support it. Currently, the Sea is 25 percent saltier than the ocean, with salinity increasing at approximately 1 percent per year.[17]

Using SWWTP water would discontinue the flow of approximately 0.15 cfs to the New River. This flow represents approximately 1.5% to 2.8% of the treated wastewater currently flowing into the Salton Sea. Since the Salton Sea watershed is impaired and the Salton Sea ecosystem is imperiled, any reduction in water as a result of the SWWTP upgrade would result in a potentially significant impact to the sea and its biological resources. According to the Salton Sea Authority, reduction in freshwater to the sea may result in significant impacts from rising salinity.[18]

The issue of salinity has become a major focus because it is reaching a level where it is likely to interfere with fish reproduction and, ultimately, survival.[19] Loss of fish would greatly impact the Sea's productive sport fishery, and the food source of fish-eating birds that flock to the Sea.[20]

Current inflows to the Sea are equal to the amount of water lost in evaporation and Sea levels are stable. But each year roughly 5 million tons of new salt are added to the Sea in those inflows.[21] To stabilize salinity levels in the Sea, at least an amount equal to the new salt must be removed so that salinity levels don't go higher. If relatively freshwater now being used on farm fields and flowing to the Sea is conserved and transferred elsewhere, significantly more salt will have to be removed to lower the concentration of salt in the remaining water in the Sea.[22]

Similarly, if treated wastewater is conserved and transferred elsewhere, significant impacts from increased salinity may occur. Thus, the

---

[17] Id.
[18] Salton Sea Website: Environmental Issues Around the Sea; Accessed at http://www.saltonsea.ca.gov/environ.htm
[19] Id.
[20] Id.
[21] Id.
[22] Id.

elimination of the SWWTP outflow of freshwater into the New River which discharges into the Salton Sea is a potentially significant impact.

Reduction in flows to the Sea may also result in potentially significant impacts on air quality. According to the Salton Sea Authority, as inflows are reduced, the Sea's elevation drops and sediments become exposed.[23] Because the Sea is shallow (comparable to a forty foot puddle 1/8 of an inch deep), it doesn't take much drop in elevation to expose a large amount of sediments. Thus, the proposal to eliminate the SWWTP freshwater flow into the New River which discharges into the Salton Sea may result in potentially significant air quality impacts that must be analyzed in a revised DEIS.

The Salton Sea National Wildlife Refuge was established in 1930 to preserve wintering habitat for waterfowl and other migratory birds. The SWWTP's proposed reduction in the flow of water to the Salton Sea may potentially increase the salinity in the sea, resulting in significant impacts to beneficial uses of the sea, potentially significant impacts to wildlife and/or take of state- and federally-protected species. These potentially significant impacts must also be analyzed in a revised DEIS.

In sum, eliminating the outflow from the SWWTF in order to provide water to the Project will reduce the freshwater flow into the New River. This may result in potentially significant impacts to the river, wetlands, the Salton Sea, biological resources, and air quality.

A hydrologic study and surveys for special-status species are planned or underway. Upgrades to the SWWTP are part of the Project and should have been studied in the DEIS. The DEIS fails to analyze these significant environmental impacts because it relies upon and incorporates a Mitigated Negative Declaration ("MND") that was drafted and circulated by the Seeley County Water District ("SCWD"). After the DEIS was released for public review, the SCWD abandoned the proposed MND, realizing belatedly that the MND failed to analyze many potentially significant environmental impacts. Two weeks after the DEIS was published, the BLM and Energy Commission prepared an appendix to the DEIS that was published on the Energy Commission website but was not published in the Federal Register or on the BLM website. The Appendix disclosed that the MND was not approved by the SCWD and that additional studies must be prepared, including surveys for a number of endangered and special status species and a study of the impacts of the facility on adjacent wetlands and the New River.

The BLM NEPA handbook instructs BLM to evaluate whether studying connected actions in a single NEPA document would improve the

[23] Id.

quality of analysis and efficiency of the NEPA process, and provide a stronger basis for decision-making.[24] The inclusion of the modification to the SWWTP in the Project's DEIS will undoubtedly result in a more integrated, logical and efficient analysis of the direct, indirect and cumulative impacts of the Project. Moreover, the BLM is legally required under NEPA to study the potentially significant environmental impacts of the SWWTP modifications as a connected action to the Project in the DEIS. As such, the SWWTP modifications must be studied as direct, indirect and cumulative impacts of the Project in the DEIS.

B. GROUNDWATER – DAN BOYER WATER COMPANY

The DEIS unequivocally and repeatedly states that the Project **will not rely upon groundwater**[25] and will rely upon recycled wastewater from the SWWTP. This is simply false. On May 6, 2010, the Applicant docketed information with the Energy Commission and BLM that outlines the Applicant's plan to use groundwater as its primary water supply for the first three years and potentially for the life of the Project. This new water supply, the Dan Boyer Water Company, requires a whole new analysis by the reviewing agencies and the public. The Dan Boyer well that would be used for the Project is in the Coyote Wells Aquifer, an aquifer designated by the US Environmental Protection Agency ("EPA") as a "sole source" aquifer.[26] This means that the EPA has determined that the Coyote Wells Aquifer is the sole or principal source of drinking water for the communities of Ocotillo, Nomirage, Yuha Estates, and Coyote Wells and that if contaminated, this aquifer would create a significant hazard to public health.[27] As a result, all Federal financially assisted projects that could impact the Ocotillo-Coyote Wells aquifer will be subject to EPA review to ensure that these projects are designed and constructed such that they do not create a significant hazard to public health.[28] Personal communications with the EPA reveal that this review has not even begun.[29] In fact, the BLM had not even contacted the EPA's groundwater office as of May 13, 2010.[30]

---

[24] BLM NEPA handbook p. 45.
[25] E.g. ES-30, C.7-22, C.7-38, C.7-41.
[26] US EPA Region IX, Groundwater Program, Accessed at: www.epa.gov/region9/water/groundwater/ssa.html.
[27] Revised Hydrology and Water Quality Component for the Coyote Wells Specific Plan EIR, Ocotillo/Nomirage Community Area, Imperial County, CA (January, 2010). Accessed at ftp://ftp.co.imperial.ca.us/icpds/eir/coyote-wells/36appg-hydrology-water-quality.pdf
[28] Coyote Wells Specific Plan County of Imperial Draft Environmental Impact Report January 2010, p. 4.7-9.
[29] Call with US EPA Groundwater Staff John Ungvarsky on May 13, 2010.
[30] Id.

The Coyote Wells aquifer is currently in overdraft condition, and additional drawdown could potentially result in degradation of the quality of the water for the residents of the surrounding communities that rely upon this aquifer for their drinking water supply.[31] The public should be given adequate notice that this water supply is proposed to be used for the life of the Project.[32] The Project's water supply is a core aspect of the proposed action under NEPA. Because the DEIS does not include any information about this water supply, the DEIS must be revised with a complete analysis of the potentially significant impacts from the use of groundwater in a revised DEIS and must recirculate the revised DEIS for public review and comment.

C. CONCLUSION

Both the Dan Boyer groundwater supply and the SWWTP are connected actions under NEPA and, as such, must be studied by the BLM in the same environmental document as the proposed action. Since this was not done in the DEIS, a revised DEIS must be prepared and circulated for public review.

IV. THE DEIS FAILED TO ADEQUATELY DESCRIBE THE AREA AFFECTED BY THE PROPOSED ACTION

An EIS must "succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration."[33] The DEIS fails to adequately describe the affected environment because it omits any discussion of traditional cultural properties on and adjacent to the Project site, and fails to accurately characterize the Project's soil and water conditions in the regional watershed that includes the Salton Sea, the New River and the Salton Sea National Wildlife Refuge.

A. NATIVE AMERICAN TRADITIONAL CULTURAL PROPERTIES

The DEIS did not disclose the significance of the area on and around the Project site to contemporary tribal members. The DEIS focused almost solely on archeological resources and failed to analyze traditional cultural properties, which are areas on and around the Project site that have

---

[31] Revised Hydrology and Water Quality Component for the Coyote Wells Specific Plan EIR, Ocotillo/Nomirage Community Area, Imperial County, CA (January, 2010). Accessed at ftp://ftp.co.imperial.ca.us/icpds/eir/coyote-wells/36appg-hydrology-water-quality.pdf

[32] Prepared Supplemental and Rebuttal Testimony of Matt Moore, URS Corporation, May 10, 2010.

[33] 40 CFR Sec.1502.15.

importance to tribes and Native Americans today. The purpose of an EIS is to address any major federal action significantly affecting the quality of the human environment.[34] The definition of "human environment," as defined in the NEPA regulations, "shall be interpreted comprehensively to include the natural and physical environments and the relationship of people with that environment."[35]

Section 101 of NEPA declares it is a matter of national policy to preserve important historic, cultural, and natural aspects of our national heritage. Policy direction in BLM Manual 8100, section 8110.05D, further provides that BLM should "[i]ncorporate cultural resource considerations into all aspects of planning and decision making."

The cultural resources section of the DEIS fails to acknowledge the traditional cultural properties in and around the proposed action. A "traditional cultural property" is a property, a place, that is eligible for inclusion on the National Register of Historic Places because of its association with cultural practices and beliefs that are (1) rooted in the history of a community, and (2) are important to maintaining the continuity of that community's traditional beliefs and practices.[36]

The project area is within the ancestral use area of the Quechan Tribe and other Native Americans.[37] Tribal members and other Native Americans have described significant non-archeological cultural resources within the Project boundaries and surrounding the Project. These cultural resources include biological resources on the Project site that are sacred to local tribes and the impacts of the Project on sacred areas on or near the Coyote Mountains. The project may result in visual, audible, and atmospheric impacts to these sites.

These resources were not analyzed in the DEIS; in fact, the DEIS included no information about the direct, indirect or cumulative effects on potential traditional cultural properties. The BLM should conduct an ethnographic study and interviews with local Native Americans and tribal representatives to further refine the BLM's understanding of the importance of these potential traditional cultural properties. At a minimum, the scope of analysis in the DEIS must include areas where the Project would have direct, indirect and cumulative impacts on areas which could be directly impacted by views and sounds from the property. The BLM must study and disclose the

[34] 40 CFR § 1502.1.
[35] 40 CFR § 1508.14.
[36] National Register Bulletin 38.
[37] Letter to Jim Stobaugh, BLM Project Manager, May 17, 2010.

types of cultural properties that are located within the area that the Project will impact.

B. SOIL AND WATER CONDITIONS IN THE REGIONAL WATERSHED

The Project is within the Salton Sea Watershed and soil and water conditions on the Project site directly affect this watershed. Soil and water impacts were identified and analyzed by independent expert hydrologists Dr. Chris Bowles and Chris Campbell. Their testimony is attached to this comment and their opinions are incorporated in the soil and water sections of this comment letter.

As California's largest lake, the Salton Sea supports a multitude of recreational uses and a National Wildlife Refuge and is a critical stop on the Pacific Flyway for migrating birds, including several state- and federal-listed endangered and threatened species. Since the Sea has no outlets, salts concentrate in it and thus the sea is dependent on the continued inflow of freshwater to support it. Currently, the Sea is 25 percent saltier than the ocean, with salinity increasing at approximately 1 percent per year.

The desert washes impacted by the Project provide critical ecological functions such as sediment transport and deposition, energy dissipation and groundwater recharge for the Salton Sea Transboundary Watershed. As explained by the EPA, these important services will be lost or degraded by the Project development.[38] The DEIR failed to adequately describe the soil and water conditions on the Project in order to provide a baseline to evaluate the Project's impacts.

a. Cryptobiotic Crusts

Notably, the DEIS failed to include any analysis of surface soils, including identification of the presence of cryptobiotic crusts on the Project site. It is highly likely that cryptobiotic crust is widespread across the site.[39] Cryptobiotic crust is a highly specialized community of cyanobacteria, mosses, and lichen and are prevalent in the project area.[40] The living organisms present in the desert soils create a surface crust of soil particles bound together by organic material. The thickness of these crusts can reach up to 10 cm. The crusts are important members of the desert ecosystem and

---

[38] EPA 3(a) letter to USACE regarding Imperial Valley Project, May 12, 2010.
[39] Testimony of Dr. Chris Bowles and Chris Campbell, Attached.
[40] Biological Soil Crusts, Ecology and Management, Technical Reference 1730-2 2001, U.S. Department of the Interior, accessed on May 12, 2010 at: http://www.soilcrust.org/crust.pdf

contribute to the well-being of other plants by stabilizing sand and dirt, promoting moisture retention, and fixing atmospheric nitrogen.[41] Because of their thin, fiberous nature, cryptobiotic soils are extremely fragile systems. Some species in the soil can recover within a few years of disturbance, but slow growing species may require more than a century to recover.[42]

Disruption of the crust will result in decreased organism diversity, soil nutrients, stability, and organic matter.[43] The crusts significantly aid infiltration of precipitation, and anthropogenic disturbance can dramatically increase surface runoff and increase the rate of soil loss by an order of magnitude.[44] Wind erosion is substantially more prevalent with disruption of the crust. Crusts that may remain intact downstream of the project site will inevitably be buried through windblown and water transported erosion.[45]

The BLM must establish the extent of cryptobiotic crust in the affected environment in order to analyze the effect that elimination of this crust will have on the hydrology of the Project site. This information and analysis must also be disclosed to the public, and the Project's impacts on the regional watershed must be analyzed as required by NEPA.

b. Desert Pavement

The DEIS failed to analyze or account for the physical properties of the desert pavement on the Project site. The extent and type of desert pavement and distinct geomorphic surfaces across the site should be mapped since they control infiltration, runoff, and transmission losses under existing conditions.[46] Resilience and self healing of the desert pavement to minor anthropogenic disturbance is possible over centuries if the mature Av horizon (clay-rich eolian epipedon) remains intact.[47] However, in the context of project construction and subsequent maintenance activities (i.e., servicing the Power Conversion Unit, monthly mirror washing, etc.), this is unlikely to occur. This is described in more detail in an attached comment letter submitted by Dr. Christopher Bowles and Christopher Campbell.[48]

The BLM must evaluate the extent and type of desert pavement on the Project site in order to analyze the effects of destruction of that pavement on the hydrology of the site from Project activities.

---

[41] Id.
[42] Id.
[43] Id.
[44] Testimony of Dr. Chris Bowles and Chris Campbell, Attached.
[45] Id.
[46] Wood et al., 2005; Miller et al., 2008; Young & Chen, 2009.
[47] Pelletier et al., 2007.
[48] Testimony of Dr. Chris Bowles and Chris Campbell, Attached.

c. Soluable Salts

Deep grading, a potential aspect of the proposed project, will likely destroy the Av horizon and directly influence infiltration, runoff, transmission losses, and movement of soluble salts.[49] The DEIS provides no consideration of the content of the soil on the Project site and the extent of soluble salts that could be released into the environment from development activities. Soluble salts may travel laterally in the short term with soil erosion and surface runoff and leach down into the groundwater in the long term. This could also have an indirect impact on neighboring established vegetation since vegetation is influenced by proximity to leached soluble salts.[50]

d. Indirect Effects on Washes

The DEIS identified 183 acres of direct impacts to waters of the United States. However, indirect impacts must also be identified and mitigated. The DEIS failed to properly analyze indirect impacts to Waters of the United States.

e. Conclusion

The description of the affected environment in the DEIS must be substantially revised to describe the cryptobiotic crusts, desert pavement and soluble salts that are on the Project site because these resources play a significant role and must be considered in the analysis of the Project's impacts on the hydrology of the region.

C. RECOVERY AREA FOR BIGHORN SHEEP

The Project site is located within a recovery area for federally endangered peninsular bighorn sheep ("PBHS"). PBHS were photographed on the Project site in March of 2009. However, the DEIS fails to describe how the Project site may be important to the recovery of PBHS.

According to Dr. Vern Bleich, federally endangered peninsular bighorn sheep occupy a number of areas surrounding the Project site including (a) the area known as the Coyote Mountains immediately west of the Project site and north of Interstate Highway 8, which supports a population of between 45 and 60 individuals; (b) the Fish Creek Mountains immediately north of the Project site that are occupied by PBHS on at least a seasonal basis; (c) the

[49] Testimony of Dr. Chris Bowles and Chris Campbell, Attached.
[50] Wood et al., 2005.

Sierra Juarez located immediately south of the Jacumba Mountains near the project site; (d) the Sierra Cucapa, located immediately southeast of the Project site; and (e) a portion of the Jacumba Mountains immediately south of Interstate 8.[51] These mountainous areas have been designated as the Carrizo Mountains/Tierra Blanca Mountains/Coyote Mountains Recovery Area (henceforth referred to as the CTCRA) in the Recovery Plan for PBHS in the Peninsular Ranges. The Project site may be part of an important movement corridor in this Recovery Area. This should be described as part of the affected environment in the DEIS.

D. MOVEMENT CORRIDOR FOR FLAT TAILED HORNED LIZARD

The Project's biological impacts were identified and analyzed by independent biologist Scott Cashen. His testimony is attached to this comment and his opinions herein. According to biologist Scott Cashen,[52] maintenance of corridors is essential to the long-term conservation of the FTHL. The DEIS fails to adequately describe the FTHL movement corridor that is part of the affected environment.

The flat-tailed horned lizard ("FTHL") is proposed for listing under the Endangered Species Act because of population declines associated with widespread habitat loss, fragmentation, and degradation. The Project will be a significant contributor to the continued decline of the species. Mitigation for impacts to the FTHL is governed by the FTHL Rangewide Management Strategy ("RMS").[53] According to the RMS, "[s]ignatory agencies incorporate RMS measures into their land management plans."[54]

The RMS implements a conservation strategy based on establishment of five, relatively large, reserves (i.e., Management Areas ("MA")). The RMS identifies lands between the Yuha Desert and West Mesa MAs as potential habitat corridors that should be maintained. This is the area proposed for the Project site.

According to the RMS:

1. *Planned actions provide guidance for managers to maintain sufficient habitat to provide for interchange of FTHLs between MAs, where habitat corridors persist. In this way, those naturally*

[51] See attached Testimony of Vern Bleich.
[52] See attached Testimony of Scott Cashen.
[53] Flat-tailed Horned Lizard Interagency Coordinating Committee. 2003. Flat-tailed horned lizard rangewide management strategy, 2003 revision. 80 pp. plus appendices. p. 23.
[54] Id.

adjoining populations of FTHLs will be able to interbreed, helping to maintain genetic vigor, and natural recolonization could occur in the case of extirpation from local populations.

2. *Activities in potential habitat corridors between MAs and the RA shall be regulated or mitigated so that at least occasional interchange of FTHLs occurs among adjacent populations. Potential habitat corridors include lands between West Mesa and Yuha Desert MAs.*

Activities inherent in Project construction and operation would function as a barrier to FTHL movement that is unmitigated in the DEIS. The Project will almost completely isolate the Yuha Desert MA from the other MAs. The DEIS failed to identify this important movement corridor as a critical part of the Project's affected environment.

E. RARE PLANTS ON PROJECT SITE

The DEIS acknowledges that the types and quantities of rare plants had not been determined at the time that the DEIS was published due to the inadequacy of the Applicant's botanical survey efforts. The DEIS proposed that surveys be conducted for special status plants in the spring and fall of 2010. As a result, DEIS correctly concludes the applicant's botanical surveys have not provided an adequate basis for analyzing potential Project impacts.

Although the SA/DEIS attempts to analyze the impacts and formulate mitigation measures before adequate survey data are obtained, the analysis and mitigation may change after the additional survey efforts are better able to identify impacts to rare plants. The baseline data that makes up the affected environment should be shared with the public and the public should have the opportunity to comment. Without this information, the affected environment is inadequately defined in the DEIS.

F. BURROWING OWLS ON PROJECT SITE

The burrowing owl is listed as a Bureau of Land Management Sensitive species. Burrowing owl nesting habitat consists of open areas with burrows. Habitats include dry open rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub with gullies, washes, arroyos, and edges of human disturbed lands.[55] The Imperial Valley is regarded as a population stronghold for the burrowing owl, and it currently has one of the largest and most dense populations throughout the species' range.[56]

[55] Testimony of Scott Cashen, Attached.
[56] Id.

The DEIS fails to provide reliable information on the presence and abundance of owls within the Project area. According to the DEIS, information on owl presence and abundance in the Project area was achieved through incidental observations. Protocol surveys (or any focused surveys) for burrowing owls were never conducted. By not requiring any surveys for burrowing owl, the public is denied any opportunity to understand the extent of important biological resources on the Project site.

V. THE DEIS MUST DISCLOSE AND ANALYZE ALL POTENTIALLY SIGNIFICANT IMPACTS OF THE PROPOSED ACTION

The environmental consequences of a proposed action must be described in the DEIS. This section forms the scientific and analytic basis for the comparisons of the proposed action and alternatives. NEPA regulations require that this section of an EIS describe any direct, indirect and cumulative adverse environmental effects which cannot be avoided should the proposal be implemented; the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented.[57] The DEIS must also describe possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.[58]

The DEIS fails to analyze a number of potentially significant biological, cultural, visual, and hydrological impacts from the proposed action. The DEIS also fails to examine the conflicts between the proposed action and the Clean Water Act.

A. THE DEIS FAILED TO ANALYZE SIGNIFICANT IMPACTS TO ENDANGERED PENINSULAR BIGHORN SHEEP

The DEIS concludes that there is no significant adverse impact to PBHS. The DEIS erroneously quotes the USFWS as having concluded that peninsular bighorn sheep are unlikely to reoccur on the Project site and that all the resource agencies agree that the project is not likely to affect PBHS. In an email communication on May 11, 2010, USFWS biologist Felicia Sirchia confirmed that USFWS has not yet made a determination as to whether the Project is likely to adversely affect PBHS and that neither she, nor Guy

[57] 40 CFR Sec. 1502.16.
[58] Id.

Wagner, the USFWS bighorn specialist in the Project area, ever told the Applicant that PBHS are unlikely to reoccur on the Project site.[59]

Peninsular bighorn sheep ("PBHS") were photographed on the proposed Project site in March 2009. The DEIS fails to adequately analyze the potential reasons(s) that PBHS were witnessed on the property in March, 2009, and as a result the DEIS fails to adequately identify the significant impacts of the project on the local population of PBHS occupying the southeastern portion of the peninsular ranges. In particular, the DEIS failed to address four specific impacts: (a) impacts to sheep movement corridors among areas occupied (or habitat that may be suitable, but otherwise unoccupied) by PBHS; (b) impacts to PBHS through the loss of valuable forage in low-lying areas; (c) the significance of the permanent loss of 6,063 acres of habitat used at least occasionally by PBHS; and (d) cumulative impacts and their overall potential to influence the recovery or persistence of PBHS.

a. The DEIS failed to analyze impacts to PBHS movement corridors

Without any support, the DEIS concludes that the site "… does not provide any corridor to other habitat that would support Peninsular bighorn sheep."[60] As a result, the DEIS does not analyze the likely potential that PBHS observed on the project site were moving from permanently occupied areas to other permanently or seasonally occupied areas. Instead, the DEIS dismisses the presence of PBHS on the project site as "…a transient occurrence."[61]

The project will be completely surrounded by a perimeter fence, effectively eliminating the potential for PBHS movement through the project site. This will translate to nearly 7 miles of fence immediately adjacent to Interstate Highway 8 along just one side of the project.[62] The DEIS fails to acknowledge that the fence will eliminate present and future movement of PBHS through the project site and between areas of known habitat.[63] The project's elimination of this movement corridor may impact the recovery of PBHS in the CTCRA. Therefore, development of the project may result in direct impacts to PBHS and habitat linkage(s) in this recovery area.[64]

---

[59] Email from Felicia Sirchia, USFWS. May 11, 2010.
[60] DEIS, SES Solar Two Project, Page ES-21.
[61] DEIS, SES Solar Two Project, Page ES-21.
[62] Memo from Guy Wagner to Toni Parr dated 17 June 2009, with a subject line of Solar Two Map PBHS Map.ppt.
[63] Testimony of Vern Bleich, Attached.
[64] Id.

The conclusion in the DEIS that "[t]he site is several miles from designated critical habitat and does not provide any corridor to other habitat that would support Peninsular bighorn sheep" is not supported by the literature on this topic.[65] It is well known that bighorn sheep moving between occupied areas, or even from occupied areas into unoccupied areas, are capable of moving long distances, and that such movements may occur more frequently than previously recognized.[66,67]

Moreover, the statement that "[m]ovement by bighorn sheep of this distance [6 miles] from *known habitat* to the west of the project site has not been previously documented"[68] implies that such movements are not likely to occur. In fact, movements by bighorn sheep of distances far greater than 6 miles from stereotypical bighorn sheep habitat are being increasingly recognized,[69,70] and the value of intermountain areas like the project site to metapopulation function and, in turn, population persistence, has been repeatedly emphasized in the literature.[71,72,73,74] Further, the PBHS photographed on the project site were female, and female bighorn sheep are inherently conservative in their behavior and are slow to colonize vacant areas,[75] so the presence of female PBHS on the project site suggests those sheep were moving from one area to another within the CTCRA.

---

[65] DEIS, SES Solar Two Project, Page ES-21.
[66] Bleich, V. C., J. D. Wehausen, and S. A. Holl. 1990. Desert-dwelling mountain sheep: conservation implications of a naturally fragmented distribution. Conservation Biology 4:383-390.
[67] Epps, C. W., J. D. Wehausen, V. C. Bleich, S. G. Torres, and J. S. Brashares. 2007. Optimizing dispersal and corridor models using landscape genetics. Journal of Applied Ecology 44:714-724.
[68] Staff Assessment, SES Solar Two Project, Page C.2-24. (*Emphasis added*).
[69] Bleich, V. C., J. D. Wehausen, and S. A. Holl. 1990. Desert-dwelling mountain sheep: conservation implications of a naturally fragmented distribution. Conservation Biology 4:383-390.
[70] Epps, C. W., J. D. Wehausen, V. C. Bleich, S. G. Torres, and J. S. Brashares. 2007. Optimizing dispersal and corridor models using landscape genetics. Journal of Applied Ecology 44:714-724.
[71] Schwartz, O. A., V. C. Bleich, and S. A. Holl. 1986. Genetics and the conservation of mountain sheep *Ovis canadensis nelsoni*. Biological Conservation 37:179-190.
[72] Bleich, V. C., J. D. Wehausen, and S. A. Holl. 1990. Desert-dwelling mountain sheep: conservation implications of a naturally fragmented distribution. Conservation Biology 4:383-390.
[73] Bleich, V. C., J. D. Wehausen, R. R. Ramey II, and J. L. Rechel. 1996. Metapopulation theory and mountain sheep: implications for conservation. Pages 353-373 in D. R. McCullough (editor). Metapopulations and wildlife conservation. Island Press, Covelo, California.
[74] Bleich, V. C. 2005. Politics, promises, and illogical legislation confound wildlife conservation. Wildlife Society Bulletin 33:66-73.
[75] Bleich, V. C., J. D. Wehausen, R. R. Ramey II, and J. L. Rechel. 1996. Metapopulation theory and mountain sheep: implications for conservation. Pages 353-373 in D. R.

The statement that, "…sheep entering the area are far from escape habitat and would be in a highly stressed state which could put them at great risk as the site is already surrounded by busy highways and the railroad"[76] is not consistent with known sheep behavior. Bighorn sheep occupy areas adjacent to busy highways elsewhere, as well as other areas that receive high human use such as state parks, golf courses, areas on and adjacent to mines, and urbanized areas. PBHS are also known to cross Interstate Highway 8 and other heavily traveled routes. Telemetry data indicate that Interstate Highway 8 does not preclude movement of bighorn sheep[77] and the observation of bighorn sheep "[a]pproximately six miles east of the closest Peninsular bighorn sheep critical habitat"[78] is consistent with an expanding population of bighorn sheep in the CTCRA.[79] The photographs of the PBHS on the site demonstrate the animals were alerted to the photographer's presence and then moved away, but the DEIS provides no evidence to support the conclusion that the sheep were in a "highly stressed state which could put them at great risk."

Additionally, the DEIS's statement that, "[b]iologists for the BLM and consultants for the applicant have speculated that the bighorn sheep sited [*sic*] at the project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site"[80] is based on pure speculation and is contradicted by the evidence regarding known bighorn sheep behavior. According to Dr. Bleich, when bighorn sheep are harassed, the sheep retreat to steep and rugged areas that provide the greatest opportunity to detect and evade threats to their well being, not an area "less safe" than the steep, rocky terrain often described as "escape terrain" by bighorn sheep biologists.

The recent observation of PBHS on the project site, as noted in the DEIS, is encouraging in the context of increased utilization of such areas by bighorn sheep.[81] In fact, the "transient" use of the project site by PBHS, which was dismissed in the DEIS as insignificant, can be essential to the

---

McCullough (editor). Metapopulations and wildlife conservation. Island Press, Covelo, California.

[76] DEIS, SES Solar Two Project, Page C.2-40.

[77] R. Botta, California Department of Fish and Game, personal communication on 24 March 2010.

[78] DEIS, SES Solar Two Project, Page C.2-56.

[79] S. G. Torres, California Department of Fish and Game, personal communication on 22 March 2010.

[80] Staff Assessment, SES Solar Two Project, Page C.2-24.

[81] S. G. Torres, California Department of Fish and Game, personal communication on 22 March 2010.

recovery of the sheep in the region.[82] "Transient" movements by bighorn sheep among populations support metapopulation function, population viability and, ultimately, recovery of that endangered distinct population segment ("DPS").[83] Such movements facilitate gene flow and opportunities for colonization of vacant patches of habitat.[84] The potentially significant impacts from eliminating the opportunity for bighorn sheep to use the site on a transient basis must be addressed in the DEIS.

Additionally, because the project is so close to an unfenced part of the United States/Mexico border, it may impact movement corridors between Mexico and the United States. Connectivity among populations of large mammals along the international border is important to the persistence of bighorn sheep and other large mammals in both the United States and Mexico,[85] and habitat connectivity on both sides of the border is important to the conservation or restoration of bighorn sheep.[86] Resource agencies must promote habitat expansion and protect linkage corridors within the CTCRA because new habitat and movement corridors are critical to the recovery of the DPS.[87]

Failure of the DEIS to address the potential for the project site to function as a movement corridor, compounded by the DEIS's unsupported conclusion that use of the site by bighorn sheep was "transitory at best"[88] is baseless, and a cause for concern. Minimally, the DEIS must acknowledge that the site may be important in providing opportunities for PBHS to travel between areas of known occupied bighorn sheep habitat. In the absence of data to the contrary, the unsupported conclusion in the DEIS that any importance of the project area being used for movement between such areas is "highly unlikely"[89] is indefensible.

---

[82] Testimony of Dr. Vern Bleich, Attached.
[83] Id.
[84] Id.
[85] Flesch, A. D., C. W. Epps, J. W. Cain III, M. Clark, P. R. Krausman, and J. R. Morgart. 2010. Potential effects of the United States-Mexico border fence on wildlife. Conservation Biology 24:171-181.
[86] Andrew, N. G., V. C. Bleich, and P. V. August. 1999. Habitat selection by mountain sheep in the Sonoran Desert: implications for conservation in the United States and Mexico. California Wildlife Conservation Bulletin 12:1-30.
[87] Testimony of Dr. Vern Bleich, Attached.
[88] DEIS, SES Solar Two Project, Page C.2-40.
[89] DEIS, SES Solar Two Project, Page C.2-40.

b. The DEIS failed to analyze the potential for the Project site to provide key forage opportunity to peninsular bighorn sheep

The PBHS photographed on the site in March 2009 were most likely there due to the presence of high quality forage.[90] The DEIS failed to analyze the significance of the potential nutritional benefits incurred by PBHS on the project site. The DEIS concludes that the project site provides marginal foraging habitat, but then fails to provide any basis whatsoever for its conclusion. This is inexplicable because the project site is in a low-lying area with a number of significant desert washes, a habitat known to provide rich forage for bighorn sheep, particularly during springtime.[91] The DEIS provided no citation to evidence that the forage consumed by the animals on the site was of poor quality, low in availability, or otherwise unimportant to bighorn sheep. Low-lying areas, and particularly washes, are used by bighorn sheep for foraging. Such use may occur only for short periods of time, but can play critically important roles in the life history of bighorn sheep, particularly during years when forage production is poor.[92] Indeed, patterns and amounts of precipitation, and resultant productivity of vegetation, affect the distribution of bighorn sheep and, ultimately, the probability of persistence of populations of that species.[93]

Of the vegetation found on the project site, many species are utilized as forage by bighorn sheep, including:

Aristida spp. (three-awn grass)
Bouteloua spp. (grama grass)
Ephedra nevadensis (Mormon tea)
Prosopis glandulosa (mesquite)
Krameria grayi (white rattany)
Cercidium floridum (palo verde)
Sphaeralcea ambigua (desert mallow)
Encelia farinosa (brittlebush)
Vigueria spp. (vigueria)
Opuntia acanthocarpa (buckhorn cholla)
Larrea tridenta (creosote bush)
Astragalus spp. (milkvetch)
Ditaxis spp. (silverbush)
Hymenoclea salsola (cheeseweed)
Bebbia juncea (sweetbush)

[90] Testimony of Dr. Vern Bleich, Attached.
[91] Testimony of Dr. Vern Bleich, Attached.
[92] Id.
[93] Id.

Phoradendron californicum (desert mistletoe).[94]

Indeed, bighorn sheep inhabiting the peninsular ranges are known to forage on more than 50 species of vegetation.[95] Thus, the analysis of the project's impacts to bighorn sheep habitat, particularly wash habitat, is inadequate.

c. The DEIS failed to consider the loss of more than 6,000 acres of habitat for PBHS

The DEIS simply dismisses the loss of 6,063 acres of bighorn sheep habitat within the CTCRA. All of the area that will be enclosed by the perimeter fence will preclude access to the project site by PBHS.[96] Thus, an area of more than 6,000 acres that currently is available to bighorn sheep, and appears to support substantial areas of desert wash habitat, will suddenly become unavailable for use by those animals either as foraging habitat or for movement between areas of more stereotypical bighorn sheep habitat. The significant impact of the loss of habitat must be analyzed in the context of what is known about bighorn sheep life histories, nutritional needs, and population structure. At a minimum, the DEIS needs to address the impact of this loss of habitat, and propose appropriate mitigation for that loss.

d. The DEIS failed to adequately analyze cumulative impacts of this Project and others on PBHS movement

A number of alternative energy projects are being, or have been, proposed in the vicinity of the project site. Due to the DEIS' dismissal of the potential importance of the project site to PBHS, the cumulative impacts of such projects (e.g., Ocotillo Express) in combination with the Project have not been fully assessed. Thus, a discussion of the cumulative impacts of Imperial Valley, in combination with other developments anticipated to occur in the vicinity of the southeastern peninsular ranges, is necessary to more fully assess the overall impact(s) on PBHS.

B. THE DEIS FAILED TO ANALYZE SIGNIFICANT INDIRECT IMPACTS TO FLAT TAILED HORNED LIZARD

The proposed Project site is within an area that is relatively undisturbed, and that provides generally continuous connectivity of natural community types from the southern extent of the Yuha Desert MA to the

[94] Id.
[95] Id.
[96] DEIS, SES Solar Two Project, Page C.2-54.

northern extent of the West Mesa MA. The applicant has proposed locating the Project in the middle of this undisturbed landscape. Placing the Project in the proposed location would cause considerable fragmentation to the remaining FTHL habitat outside of the MAs. The fragmentation that would be caused by the proposed Project would have numerous biological consequences that were not mitigated in the DEIS. Two of these consequences, "edge effects" and loss of connectivity, are likely to be particularly severe on the FTHL population.

a. Edge Effects

The DEIS failed to analyze the offsite impacts on FTHL near the project site. FTHL are particularly vulnerable to boundary processes between natural and anthropogenic desert landscapes.[97] Given the configuration of the Project, and assuming an edge effect to 450 meters, biologist Scott Cashen estimates that the Project will have an indirect, adverse effect on 2,800 acres outside of the Project boundaries. Not only are these impacts substantial, but they would extend into the Yuha Desert MA, thus reducing its value as a reserve. Incredibly, although the literature is unequivocal about adverse edge effects on FTHL, the DEIS fails to adequately analyze or mitigate this impact.

b. Loss of Connectivity Between Reserves

The applicant identified interference with the movement of FTHL between the West Mesa and Yuha Desert MAs as a significant impact. However, the DEIS failed to identify this significant impact. Presently, FTHL will cross roads and culverts to get to the Project site and move between MAs. The DEIS does not propose any mitigation or avoidance to maintain connectivity through the Project site.

C. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO GOLDEN EAGLE AND MAY NOT COMPLY WITH THE BALD AND GOLDEN EAGLE PROTECTION ACT

The USFWS requires a take permit to be issued for "take" of bald or golden eagles where the taking is associated with, but not the purpose of, the activity, and cannot be practicably avoided.[98] Take includes causing a decrease in golden eagle productivity by substantially interfering with

[97] Testimony of Scott Cashen, Attached.
[98] US Fish and Wildlife Service, Division of Migratory Bird Management. 2009. Final Environmental Assessment, Proposal to Permit Take. Provided Under the Bald and Golden Eagle Protection Act. Washington: Dept. of Interior.

normal breeding, feeding, or sheltering behavior.[99] The DEIS concludes the Imperial Valley Solar Project site provides suitable foraging habitat for golden eagles. According to the applicant's survey data, jackrabbits and ground squirrels (i.e., the preferred prey) are present on the Project site and appear to be relatively abundant. The DEIS further concludes the loss of foraging habitat for golden eagles may require a permit for take under the Bald and Golden Eagle Protection Act. Despite these conclusions, the DEIS lacks any discussion on the actions that will be taken to determine whether the Project will require mitigation and issuance of a take permit for impacts to golden eagle foraging habitat. The DEIS lacks any information, or a determination, on the significance of Project impacts on golden eagles.

D. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO COLORADO DESERT FRINGE-TOED LIZARD

The Applicant has indicated the Project site has suitable habitat for the FTHL, which is described as sparsely vegetated desert scrub areas with fine, wind-blown sand deposits and shifting sand substrate. Habitat for the Colorado Desert fringe-toed lizard (listed as BLM Sensitive and a California Species of Special Concern) is similar to that of the FTHL. It is described as "fine, loose, wind-blown sand dunes, dry lakebeds, sandy beaches or riverbanks, desert washes, and sparse desert scrub."[100] According to the California Natural Diversity Database, there are several documented occurrences of Colorado Desert fringe-toed lizards within 10 miles of the Project site. Therefore, the DEIS must adequately disclose and analyze the Project's potentially significant impacts on the Colorado Desert fringe-toed lizard.

E. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO CULTURAL RESOURCES

The surveys for cultural resources have identified over 300 known prehistoric and historic surface archeological resources and an unknown number of buried archeological deposits. Known surface resources include human cremation sites, habitation sites, lithic scatters, trails, ceramic scatters, ground stone and ground features.

Tribal members and local Native Americans have described other non-archeological cultural resources within the project boundaries including

---

[99] Id.

[100] California Wildlife Habitat Relationships System. 2005. California Department of Fish and Game. California Interagency Wildlife Task Group. CWHR version 8.1 personal computer program. Sacramento (CA).

biological resources on the Project site that are sacred to local tribes and the impacts of the Project on the viewshed of sacred areas on or near the Coyote Mountains.[101] The DEIS failed to analyze impacts to these cultural resources or to consult with Tribes early enough to ensure that these impacts could be considered in the DEIS.[102]

Under Section 106 of the National Historic Preservation Act, the BLM has responsibility to consult with tribes and other parties to ensure that these impacts are identified as early as possible. Consultation must provide Indian tribes a reasonable opportunity to identify concerns about historic properties, advise on the identification of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of such effects.[103] CURE has submitted a comment letter to BLM on the Draft Programmatic Agreement explaining why the BLM's proposed process for identifying and mitigating impacts to cultural resources on the Project site violates the NHPA and NEPA, among other statutes. This letter and other letters with similar conclusions are attached.

The DEIS identified cultural resources and historic properties affected by the proposed undertaking in a improperly narrow area of potential effect ("APE") that failed to consider many potentially significant effects of the undertaking. The APE in the DEIS failed to include areas where the project may have visual, audible, or atmospheric effects on traditional, religious and cultural resources. The DEIS failed to identify an accurate area of potential area of Project effects on cultural resources and the BLM failed to consult with the Tribes early enough to gather information about cultural resources outside of the Project boundaries that may be impacted. The DEIS fails to provide an adequate or accurate analysis of potentially significant impacts to cultural resources on and adjacent to the site. The DEIS should be revised to take into account the non-archeological effects of the undertaking on irreplaceable cultural resources that were not analyzed in the DEIS.

F. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO SOIL AND WATER RESOURCES

As mentioned, Dr. Christopher Bowles and Christopher Campbell independently reviewed the DEIS and concluded that the DEIS failed to analyze a number of potentially significant adverse environmental impacts to the soil and water resources onsite and in the watershed. Specifically, these experts identified significant unanalyzed impacts from sedimentation and

[101] Testimony of Bridget Nash, Attached.
[102] Id. and CURE comment letter to BLM on the draft Programmatic Agreement, Attached.
[103] 36 CFR § 800.2.

hydromodification; unanalyzed impacts to water quality; unidentified impacts from climate change relevant to project function; impacts from the extensive application of soil binders and potentially significant impacts to the Salton Sea National Wildlife Refuge. The soil and water resources section of the DEIS must be revised to reflect these significant changes.

a. Sedimentation and Hydromodification

The DEIS failed to analyze the potential for significant gully erosion to be initiated by interception of runoff in access road cuts (and trenches) and/or concentrated runoff directly beneath the bottom lip of the solar dishes during intense summer storms.[104] The DEIS also failed to analyze the potential for significant degradation (i.e., incision) of the washes as a result of installing sediment basins. Gully erosion has the ability to deliver significant quantities of sediment to the dendritic network of washes, which, in turn, can significantly impact the morphology of the washes and deliver excess sediments offsite to the further impairment of the New River and Imperial Valley Drains.[105]

The DEIS failed to analyze significant project impacts resulting in increased runoff. The DEIS severely underestimated the amount of impervious surface that the Project will create and likely dramatic changes in the hydrologic functions on the site (i.e., runoff duration, frequency, volume), which, in turn, can significantly degrade the washes.[106] The DEIS did not analyze the impervious surfaces created by site infrastructure (i.e., paved roads, building pads, solar disc footings), hundreds of miles of access road compaction, destruction of desert pavement and cryptobiotic crust, and the widespread application of soil binders. These aggregate changes in impervious surfaces were not considered and can have a significant impact on the morphology of the washes and downstream water bodies.[107] Although small increases in impervious surfaces were perceived to be negligible in the DEIS, these small changes will result in significant impacts to onsite and offsite resources.[108]

b. Impacts to Water Quality

The DEIS did not consider the water quality impacts of runoff laden with sediment and soluble salts that could be carried with surface runoff from the extensively graded project site. Considering intense rainfall and

[104] Testimony of Dr. Christopher Bowles and Chris Campbell, Attached.
[105] Id.
[106] Id.
[107] Id.
[108] Id.

subsequent runoff occurs in the summer, these soluble salts could enter the Westside Main Canal, be applied to agricultural fields, only to ultimately enter the Salton Sea through discharge from Imperial Valley drains.[109] Without a detailed analysis of offsite impacts, fine sediments could also reach the New River.[110] This potentially significant impact was not addressed in the DEIS.

c. Offsite Hydromodification

Potential offsite impacts due to onsite hydromodification were not considered in the DEIS since the DEIS improperly concluded that onsite impacts were negligible. Significant offsite impacts stem from the ability of increased runoff, in terms of higher peaks and larger volumes, to cause more erosion in the washes, thereby degrading the condition of the washes and conveying the eroded sediments downstream.[111] In addition to significant degradation of the morphology of the washes, these impacts include further impairment of the already degraded receiving waters (e.g., New River and Salton Sea).[112]

d. Climate Change

The DEIS failed to consider the role that climate change may have in shaping the significance of the Project impacts on the hydrologic conditions on the Project site. Climate change can have an influential role in shaping the project's impacts on the environment in terms of hydrologic response and soil erosion.[113] Provided that intense summer storms are responsible for a majority of the runoff that occurs at the project site, the Nature Conservancy would suggest that summer rainfall in southeastern California may increase by as much as 50% by 2080 in the summer, which could be accompanied by significant increases in rainfall intensity and erosivity (Angel et al., 2005).[114]

These significant increases in rainfall quantity, intensity, and erosivity would have a profound impact on the landscape, especially on the morphology of the washes where solar dishes are proposed.[115] The impacts to the landscape would, in turn, significantly impact the structural stability and flood preparedness of the solar dishes placed in the washes, and coupled with increased sedimentation from the solar arrays, subsequent and significant water quality impacts to downstream impaired water bodies would ensue.

---

[109] Id.
[110] Id.
[111] Id.
[112] Id.
[113] Id.
[114] The Nature Conservancy, Climate Wizard (http://www.climatewizard.org/).
[115] Testimony of Dr. Christopher Bowles and Chris Campbell, Attached.

Project design and best management practices must be analyzed in the DEIS to deal with these future changes in the climate.

e. Soil Binders

The DEIS indicates that the Project will employ widespread use of soil binders to avoid erosion and reduce dust. The potential impacts of the soil binders on the natural characteristics of the desert pavement (specifically soil infiltration, runoff generation, and soil erosion), in addition to specifics on binder deterioration and reapplication rates and downslope flow convergence leading to gully erosion, was not investigated nor stated. As such, the DEIS fails to adequately address the potentially significant impacts posed by the widespread use of soil binders.

f. Salton Sea National Wildlife Refuge

The DEIS does not address the Project's potentially significant impacts to the Salton Sea National Wildlife Refuge. Moreover, the Project and its associated pipelines may not be compatible with the purposes of the National Wildlife Refuge System Administration Act of 1966 ("Refuge Act"), 16 U.S.C. §§ 668dd-668ee.

The Refuge Act was enacted for the conservation of fish and wildlife, including species that are threatened with extinction, all lands, waters, and interests therein administered by the Secretary as wildlife refuges, wildlife ranges, game ranges, wildlife management areas, or waterfowl production areas. (16 U.S.C. § 668dd(a)(1).) The mission of the Refuge System is to "administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats…" (*Id.* § 668dd(a)(2).) The system must be administered not only to "provide for the conservation of fish," but also to "ensure that the biological integrity, diversity, and environmental health of the System are maintained." (*Id.* § 668dd(a)(4).)

The Refuge Act allows the U.S. Fish and Wildlife Service to permit only those uses within the Refuge that "are compatible with the major purposes" for which the area was established. (16 U.S.C. § 668dd(d)(1)(A).) The definition of "compatible use" is a wildlife-dependent recreational use or any other use of a refuge that "will not materially interfere with or detract from the… purposes of the refuge." (16 U.S.C. § 668ee(1).) In order to be "compatible," a use must not materially interfere with stated Refuge purposes.

The Salton Sea National Wildlife Refuge was established in 1930 for the purpose of providing wintering and spring migration habitat for birds. The Project is incompatible with the purposes of the Refuge. The purposes of the Refuge include:

> 1) A refuge and breeding ground for birds and wild animals. (Executive Order 5498, dated November 25, 1930)
> 2) Use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. § 715d, Migratory Bird Conservation Act)
> 3) Management and control of migratory waterfowl and other wildlife. (16 U.S. C. § 695, Lea Act)

The Project may irrevocably violate the purpose of the Refuge as breeding ground for birds and other wildlife by reducing the amount of available water for the refuge and releasing salts and other sediment into the already overburdened watershed.[116] The BLM must evaluate this potentially significant impact.

G. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO GROUNDWATER RESOURCES

As mentioned above, the DEIS failed to analyze the use of groundwater (Dan Boyer Well) as the primary source of water for the Project. Given that the aquifer was designated as a sole source aquifer by the EPA in 1996 and is currently in an overdraft deficient status with static water levels declining on average of 1 foot every five years, it is difficult to fathom how this project would not further contribute to the groundwater deficit and lowering of the water table, which is not even acknowledged as an impact. The DEIS must analyze the Project's potentially significant direct, indirect and cumulative impacts to groundwater resources.

VI. THE DEIS MUST DESCRIBE EFFECTIVE MEASURES TO MITIGATE EACH ADVERSE ENVIONMENTAL EFFECT

The DEIS must include a discussion of the means to mitigate adverse environmental impacts.[117] Mitigation measures must be discussed for all adverse impacts, even those that by themselves would not be considered significant.[118] All relevant, reasonable mitigation measures that could

---

[116] Salton Sea Website: Environmental Issues Around the Sea; Accessed at http://www.saltonsea.ca.gov/environ.htm
[117] 40 CFR 1502.16(h).
[118] NEPA Forty Questions, #19(a).

alleviate the environmental effects of a proposed action must be identified, even if they are outside the lead or cooperating agencies' jurisdiction.[119]

A. THE DEIS FAILS TO CONSIDER EFFECTIVE MITIGATION FOR IMPACTS TO FTHL

The DEIS proposes removal surveys as mitigation to move FTHL "out of harm's way."[120] However, the DEIS fails to provide enough detail about this mitigation effort to show that it would be effective or feasible.

FTHLs are notoriously difficult to detect. Any FTHL that remain on the site after the clearance surveys will likely die during Project construction and operation. The DEIS lacks any information on translocation sites, the habitat suitability of those sites, and the monitoring that will accompany translocation. Although the comment period is about to close on the DEIS, the Applicant has just provided a draft plan to the BLM, which has not been disclosed to the public.[121] This draft translocation plan for FTHL is a critical part of the mitigation strategy that must be included in a revised DEIS and circulated to the public for review and comment.

A translocation plan must contain an assessment of potential release sites, with special attention dedicated to evaluating the factors that limit the distribution and abundance of FTHLs. The translocation plan must also include an appraisal of probable dispersal patterns, a detailed description of how FTHLs will be detected, and a means of documenting the effectiveness of the detection techniques.[122]

The DEIS indicates:

> "[r]emoval surveys would be conducted by experience [sic] biological monitors only during appropriate survey conditions. The surveys shall be conducted from April 1 through September 30 when air temperatures are between 25 and 37°C (75 and 100°F). Surveys would not be conducted during inclement weather conditions (e.g., rain, high winds) that could affect the movement of FTHLs. FTHL removal from the area could continue outside of protocol survey periods since the intent is to move animals from harm's way."

[119] NEPA Forty Questions, #19(b).
[120] Testimony of Scott Cashen, Attached.
[121] Discussed at Energy Commission Status conference by Chris Otahol, BLM Biologist.
[122] Testimony of Scott Cashen, Attached.

The DEIS should define what constitutes an experienced biological monitor and specify how the measure will be verified. Given the difficulty of detecting FTHL and the typically low FTHL detection rates, the monitor(s) should have prior experience conducting FTHL clearance surveys. Further, the surveys must not be allowed outside of protocol survey periods. There is no scientific basis for allowing clearance surveys outside of the protocol survey period, and it should not be allowed. The RMS dictates all surveys should be conducted from April through September.

Additionally, the mitigation proposed by the DEIS improperly allows a net loss of FTHL habitat. To mitigate for habitat loss and potential take of FTHL, the DEIS requires the project owner to pay the BLM a monetary equivalent for 6,619.9 acres of "land suitable for these species." However, Condition of Certification BIO-10 negates the ability of the proposed compensation to fully mitigate habitat loss by allowing (a) compensation lands to be "poor quality habitat"; and (b) compensation funds to be applied to educational purposes or management actions "deemed necessary by the FTHL ICC." By authorizing these uses, the DEIS conflicts with the RMS's stated goal of preventing a net loss of FTHL habitat.

The DEIS fails to require compensation for impacts along the proposed reclaimed water pipeline route. The DEIS justifies this omission by stating "the construction activities would occur mainly in the developed/disturbed portions in and along the Evan Hewes Highway." This justification is inappropriate because approximately 45 percent (13 acres) of the pipeline route will be within native habitat. Therefore, the DEIS has failed to address the indirect impacts posed by the water pipeline.

The DEIS must be revised to address indirect impacts to FTHL caused by the proposed water pipeline. The RMS states:

> *A project's indirect effects on FTHLs should be considered when determining compensation. For example, ROW grants for aboveground structures such as roads, pipelines, towers, or similar facilities can have adverse impacts to FTHLs beyond the areas that are proposed to be disturbed. First, such disturbances have been shown to attract FTHL predators. For example, roads may attract round-tailed ground squirrels (Garland and Bradley 1984), and towers can provide perching areas for loggerhead shrikes and American kestrels. Second, construction vehicles can introduce invasive weeds that degrade FTHL habitat. Last, vehicles from increased authorized and unauthorized traffic on maintenance roads can cause FTHL mortality. If these and other adverse indirect effects (e.g., habitat fragmentation, decreased*

FTHL density near roads) cannot be mitigated (with FTHL barriers or corridors, for e.g.), compensation for indirect effects will be required.

The DEIS fails to mitigate potentially significant impacts to FTHL from pipeline development, loss of connectivity between MAs and edge effects. The DEIS should be revised to include mitigation for these impacts and to clarify the details of the mitigation proposal for FTHL translocation and compensation.

B. THE DEIS FAILS TO CONSIDER EFFECTIVE MITIGATION FOR IMPACTS TO LISTED RARE PLANTS

The strategy for mitigating impacts to any State or federally listed rare plant species found on the Project site focuses on establishing a buffer zone around the population(s). The size of the buffer would depend on the proposed use of the immediately adjacent lands, and it would include consideration of the plant's ecological requirements (e.g., sunlight; moisture; shade tolerance; edaphic, physical, and chemical characteristics) that are identified by the Designated Biologist (there is no requirement for the Designated Biologist to examine the plant's ecological requirements).

Although the project technology is exactly the same as the Calico Solar Project, the BLM concluded a 250-foot buffer would be needed for on-site plant protection on Calico, whereas BLM concluded that a buffer of 50-feet [and perhaps smaller] would be adequate for the Imperial Valley Project.[123] According to biologist Scott Cashen, this discrepancy highlights the fact that the DEIS's approach to establishing adequate buffers is largely guesswork.[124] Inherently, this may be the case because: (1) the ecological requirements of most plant species are poorly understood; and (2) there have not been any studies on the effects of SunCatchers installation (including changes to hydrology) on the surrounding microclimate.[125] Thus, there is no scientific basis to conclude establishing the prescribed 50-foot buffer will mitigate Project impacts to a less than significant level.

C. THE DEIS FAILS TO DESCRIBE ENFORCEABLE MITIGATION FOR IMPACTS TO NON-LISTED RARE PLANTS

The strategy for mitigating impacts to any non-listed special-status species (e.g., CNPS listed species) found on the site is comprised of two parts. First, the Condition of Certification directs the applicant to avoid impacts

[123] Testimony of Scott Cashen, Attached.
[124] Id.
[125] Id.

"where feasible." However, the DEIS does not define what is considered "feasible." Consequently, the condition is at the sole discretion of the applicant, and it is unenforceable.

Second, for impacts that are not "feasible" and that would result in loss of more than 10% of the known individuals within an existing population, the DEIS requires the project owner to preserve existing off-site occupied habitat (that is not already part of public lands) in perpetuity at a 2:1 mitigation ratio. Thus, if avoidance is not feasible, the ability to mitigate impacts is entirely dependent on the assumptions that the applicant will first be able to identify sufficient quantities of occupied habitat on private lands, and then be able to acquire those lands from willing sellers. There is a high likelihood that due to the rarity of the plants, the applicant will be unable to locate any suitable private parcels that could serve as compensation habitat for proposed project impacts to special-status plant species.

Therefore, the DEIS fails to describe enforceable mitigation for impacts to non-listed rare plants. The DEIS must be revised to include an enforceable mitigation strategy.

D. THE DEIS FAILS TO DESCRIBE ENFORCEABLE MITIGATION FOR IMPACTS TO WESTERN BURROWING OWL

The project would result in permanent loss of 6,185 acres that is currently used by burrowing owls for nesting and foraging. Although habitat loss has been identified as one of the primary threats to California's burrowing owl population, and although the Project would contribute incrementally to this significant loss, the DEIS provides no mitigation for the Project's impacts to burrowing owl habitat, such as land acquisition. Further, the compensatory mitigation required for impacts to flat-tailed horned lizard habitat will not necessarily compensate for impacts to burrowing owls, because (a) compensatory mitigation for the FTHL may simply entail FTHL management actions (e.g., fencing, signage, habitat restoration) that would do very little to offset impacts to burrowing owls; and (b) the DEIS provides no mechanism for assuring compensatory mitigation will provide suitable habitat for burrowing owls.[126]

Condition of Certification BIO-16 provides mitigation measures for Project impacts to burrowing owls. BIO-16 measure #1 requires the applicant to "[c]omplete a pre-construction survey for burrowing owls for any areas subject to disturbance from construction no less than 30 days prior to the start of initial ground disturbance activities. If burrowing owls are

[126] Id.

present within 500 feet of the project site or linear facilities, then the CDFG burrowing owl guidelines (CDFG 1995) shall be implemented."

BIO-16 lacks certainty due to the failure to define "disturbance." Besides earth moving activities, burrowing owls may be disturbed by Project factors such as noise, night lighting, and altered hydrology.[127] The mitigation measure also needs to specify the areas where burrowing owl surveys are required. The mitigation measure lacks any performance standards, including the methods for conducting the pre-construction survey, the minimum level of effort required, the qualifications of the surveyor(s), and whether it will be permissible for the applicant to conduct burrowing owl surveys concurrent with other pre-construction survey activities.

Condition BIO-16's requirement to have the applicant implement CDFG burrowing owl guidelines if burrowing owls are present within 500 feet of the project site or linear facilities is unnecessarily vague and thus lacks feasibility. First, according to CDFG burrowing owl guidelines, a site should be assumed occupied if at least one burrowing owl has been observed occupying a burrow within the last three years. Because a burrowing owl was detected along the proposed transmission line within the last three years, the DEIS—by definition—requires the applicant to implement CDFG mitigation guidelines regardless of future survey results. As a result, the proposed condition permits an uncertain outcome for what CDFG defines as a certain impact. Second, if surveys are limited to areas exposed to ground disturbance, there will be no mechanism for obtaining information on owl presence within 500 feet of the project site or linear facilities.

E. THE DEIS FAILS TO DESCRIBE ADEQUATE MITIGATION FOR IMPACTS TO NESTING BIRDS

According to the DEIS, if an active nest is discovered during the preconstruction surveys, a buffer zone would be established around the nest. Scientific literature does not support the ability of a pre-construction nesting bird survey to serve as an *effective* technique in protecting all (or even most) nesting birds from take.[128] Rather, research indicates nest finding is labor intensive and can be extremely difficult due to the tendency of many species to construct well-concealed or camouflaged nests.[129] As a result, most studies that involve locating bird nests employ a variety of search techniques.[130] These include flushing an adult from the nest, watching parental behavior

[127] Id.
[128] Testimony of Scott Cashen, Attached.
[129] Id.
[130] Id.

(e.g., carrying nest material or food), and systematically searching nesting substrates.[131]

Moreover, there have not been any studies that have attempted to quantify the effort required to locate all bird nests within an area. This lack of information, in conjunction with imperfect nest detection rates, makes it impossible to evaluate how effective pre-construction nest surveys are in preventing direct impacts to nesting birds.[132] However, knowledge that nest detection is difficult and labor intensive suggests two pre-construction surveys are inadequate for large project areas.[133] As a result of data gaps, the DEIS has no basis to conclude the proposed pre-construction nest surveys will protect desert nesting birds from direct project impacts.

F. THE DEIS FAILS TO MITIGATE IMPACTS TO WILDLIFE MOVEMENT

The project as proposed in the DIES will result in a potentially significant unanalyzed impact to bighorn sheep and to other species that may move through the area regularly or occasionally.[134] Movement is critical to the long term viability of many species. The DEIS identifies the ephemeral washes in the Project site as wildlife movement corridors. However, it provides no discussion of the significance of eliminating these corridors, or the ability to maintain functional wildlife movement corridors after the fence is erected around the 6,063-acre Project site.

The DEIS fails to provide any mitigation for impacts that will result from erecting a fence around the Project site even though this is likely to have a significant impact on the metapopulation dynamics essential to the recovery of peninsular bighorn sheep.[135] In addition to this species, the Project would undoubtedly serve as a significant barrier to numerous other terrestrial wildlife species.[136] The DEIS lacks any analyses of the impacts of the Project on wildlife movement or mitigation to reduce these impacts to a level considered less than significant.

---

[131] Id.
[132] Id.
[133] Id.
[134] Testimony of Dr. Vern Bleich and Scott Cashen, Attached.
[135] Testimony of Dr. Vern Bleich, Attached.
[136] Testimony of Scott Cashen, Attached.

G. THE DEIS FAILS TO MITIGATE IMPACTS TO SIGNIFICANT CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act directs federal agencies to take into account the effects of their actions on historic properties PRIOR TO the issuance of any license. The DEIS informs the public that ALL mitigation will be included in a Programmatic Agreement ("PA") that is to developed in consultation with the Advisory Council, the State Historic Preservation Officer and other consulting parties. The Draft PA that was circulated to the consulting parties rather explicitly provides for the mitigation of effects of the Project on cultural resources to be taken into account -- to the extent they will be -- AFTER issuance of a license for the Imperial Valley Solar Project.

While the Advisory Council's regulations for carrying out consultation pursuant to Section 106 allow for "conducting or authorizing nondestructive project planning activities before completing compliance with section 106,"[137] this may only occur if no decisions are made that would "restrict the subsequent consideration of alternatives to avoid, minimize, or mitigate the undertaking's adverse effects on historic properties."[138] This PA would permit BLM to authorize far more than "nondestructive project planning activities;" the PA would allow the BLM to adopt an alternative and authorize Project development, thus restricting the consideration of all other alternatives.

The BLM may not move forward with the project prior to taking into account the adverse effects of the project on the cultural resources through the consultation process. To date, the consulting parties have not had any chance at all to develop mitigation for cultural resource impacts, the DEIS fails to propose any mitigation that is reasonably likely to mitigate the project's impacts.

VII. THE DEIS ALTERNATIVES ANALYSIS IS INADEQUATE

The alternatives analysis is the heart of the environmental impact statement.[139] A DEIS should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options.[140] Agencies shall rigorously explore and objectively evaluate all reasonable alternatives.

---

[137] 36 CFR 800.1(c).
[138] Id.
[139] 40 CFR Sec. 1502.14.
[140] Id.

Alternatives should include reasonable alternatives not within the jurisdiction of the lead agency.

The DEIS failed to consider two reasonable alternatives that should have been analyzed to provide a basis for the public to meaningfully evaluate the impacts of the Project: 1) an alternative that restricts all Project components from the Juan Bautista de Anza trail corridor, as established by Congress; and 2) an offsite alternative that would not impact any waters of the United States on the Project site.

Rather than studying these two reasonable alternatives that are necessary in order to reduce two of the Project's significant adverse impacts, the DEIS only analyzed three alternatives other than the proposed project: a 300 MW alternative and two alternatives that would reduce but not eliminate adverse effects to waters of the United States. These alternatives are insufficient because "the existence of a viable but unexamined alternative renders an environmental impact statement inadequate." *Morongo Band of Mission Indians v. FAA* (1998) 161 F.3d 569, 575. The DEIS must examine the following alternatives.

A. JUAN BAUTISTA DE ANZA TRAIL CORRIDOR

The proposed Project wholly obstructs one of the most undisturbed portions of the Juan Bautista de Anza National Trail administered by the National Park Service. The National Park Service bluntly declared that they would prefer that the Project not be approved due to the severity of the Project's impacts on cultural resources, and in particular this National Trail. The DEIS recognizes that the Anza party most likely camped on the Project site during the first overland route between "New Spain" and San Francisco. There will be significant impacts to the National Trail and viewshed from the proposed Project. Furthermore, the access to this section of the trail will be completely eliminated and the camping and exploration along the section of the National Trail on the Project site will not be possible once the Project is constructed. This is a significant adverse impact that is completely unmitigated. The DEIS must study an alternative that eliminates SunCatcher units and Project infrastructure from the National Trail corridor designated by Congress.

B. THERE HAS BEEN NO OFFSITE ALTERNATIVES ANALYSIS AS REQUIRED BY THE CLEAN WATER ACT

The DEIS disclosed that BLM eliminated all offsite alternatives from further study because they would be inconsistent with BLM's purpose and need for the action under consideration and, because the offsite alternatives

are not under BLM jurisdiction, BLM would have no discretionary approval authorities for those alternatives.[141]

BLM's interpretation of its responsibility to study alternatives is not only inconsistent with the plain language of the regulations implementing NEPA, but it violates the requirements of the Clean Water Act.

NEPA regulations require that all reasonable alternatives should be evaluated, including reasonable alternatives not within the jurisdiction of the lead agency.[142] An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable.[143]

More importantly, the BLM has a separate mandate to analyze a reasonable off-site alternative: the Clean Water Act. For non-water dependent projects such as the proposed action, the Clean Water Act presumes that a practicable alternative exists and the burden to clearly demonstrate otherwise is on the applicant.[144] Practicable is defined as "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."[145] The presumption that a practicable alternative exists is very strong.[146] Moreover, all such practicable alternatives that do not involve a discharge into a special aquatic site are presumed to have less adverse impacts, unless clearly demonstrated otherwise.[147] Because this Project is clearly not water-dependent, the BLM has a legal obligation to study one or more offsite alternatives that do not involve a discharge of dredge or fill into waters of the United States.

VIII. THE PROPOSED PROJECT DOES NOT COMPLY WITH SECTION 404 (b) OF THE CLEAN WATER ACT

The Project, as described in the DEIS, violates Section 404(b) of the Clean Water Act which prohibits avoidable discharges of dredge or fill into waters of the United States. The Project will result in the placement of SunCatcher units and related infrastructure directly into the desert streams

---

[141] DEIS B.2-19.
[142] 40 CFR 1502.14.
[143] Id.
[144] *Utahns for Better Transportation v. United States Department of Transportation*, 305 F.3d 1152, 1163 (2002) (citing 40 C.F.R. § 230.10(a)(3)).
[145] 40 C.F.R. § 230.10(a)(2).
[146] Mark A. Ryan, The Clean Water Act Handbook (2nd ed. 2003) (citing Buttrey v. United States, 690 F.2d 1170, 1180 (5th Cir.1982).
[147] Mark A. Ryan, The Clean Water Act Handbook (2nd ed. 2003) (citing Buttrey v. United States, 690 F.2d 1170, 1180 (5th Cir.1982).

on the Project site. As the EPA stated in its May 12 letter to the USACE regarding the Imperial Valley Project,

> *[T]he 878 acres of jurisdictional desert streams on the project site are a critical part of the Salton Sea Transboundary Watershed…the streams at this project site perform critical hydrologic, biogeochemical and habitat functions directly affecting the integrity and functional condition of the New River and Salton Sea, both listed as impaired water bodies under the Clean Water Act. As proposed, the Project's discharges may result in substantial and unacceptable impacts to aquatic resources of national importance.*

Therefore the DEIS must be revised to include an analysis of this reasonable alternative.

A. THE BLM MAY ONLY APPROVE THE LEAST ENVIRONMENTALLY DAMAGING PRACTICABLE ALTERNATIVE

The Project as described in the DEIS would place SunCatcher units and road crossings directly into ephemeral washes that have been determined to be waters of the U.S. and waters of the state. Approximately 840 acres of the Project site are waters of the U.S. subject to USACE jurisdiction under Section 404 of the Clean Water Act. According to USACE's notice, SunCatcher units, support buildings and road crossings directly impact 165 acres the washes.

The Clean Water Act implementing regulations are clear: "No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."[148]

As discussed above, there is a presumption of a less damaging alternative that does not involve the release of dredge and fill into waters of the United States if the Project is not water dependent, such as this Project. The burden to clearly demonstrate otherwise is on the applicant. Under the Corps' Clean Water Act Guidelines, a Section 404 permit cannot be issued "unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge [of fill material] on the aquatic ecosystem."[149]

---

[148] 40 CFR § 230.10.
[149] 40 CFR 230.10.

Because there is a presumption that a less damaging practicable alternative than the Project as proposed exists and should be implemented, the Corps must identify the least environmentally damaging practicable alternative ("LEDPA").[150] In recent testimony at the Energy Commission, the Applicant concluded that there is a less environmentally damaging alternative that is practicable and distinct from the proposed project. The Applicant submitted a revised Project design for a 706 Mw project. The Applicant's proposal does not even come close to reducing Project impacts to ensure no overall net loss of wetland functions and values to comply with the unambiguous mandate to only permit the LEDPA. Regardless, this alternative was not analyzed in the DEIS.

B. THE LEAST ENVIRONMENTALLY DAMAGING ALTERNATIVE IS A HYBRID OF DRAINAGE AVOIDANCE ALTERNATIVE 1 AND 2

Even if the BLM and the other agencies could mitigate the Project's significant impacts and ensure consistency with applicable laws, **which they cannot**, the Project Applicant has failed to set forth the LEDPA to date. The DEIS has been developed in the absence of the LEDPA determination and the DEIS does not provide sufficient data to derive the LEDPA because the DEIS largely dismisses the Project's impacts on the hydrological values in the Project area. For example, as mentioned above, the technical analysis failed to account for key components of the landscape (i.e., desert pavement, cryptobiotic crusts) as they influence soil and water processes. Moreover, the DEIS did not address offsite impacts (i.e., impacts to water quality in the Westside Main Canal, New River and Salton Sea), and did not address the long-term impacts of the project under a changing climate.

However, even without a complete analysis, it is clear that the proposed Project would result in significant impacts by changing the hydrologic processes on and off the site. The Project will increase soil erosion, causing adverse changes to the morphology of the washes, and create hazards by placing the solar dishes directly in the washes, resulting in additional downstream hazards from chemicals that would be released when solar dishes are damaged in flood events. The Project also will significantly impact the biological resources in the Project area including the plants and animals that rely upon the New River and Salton Sea. These species include federally endangered peninsular bighorn sheep, federally-proposed threatened flat-tailed horned lizard, a variety of sensitive rare plant species, burrowing owl, federally endangered Yuma clapper rail and many others.

---

[150] Id.

Drainage Avoidance Alternative 1 and 2, while reducing some environmental impacts, do not go far enough to establish the LEDPA because another alternative would be practicable and economically feasible and would further reduce environmental impacts, as described below. When the effects of the Project on the hydrology and biological values are taken into account, a hybrid alternative that combines elements of Drainage Avoidance Alternative #1 and Drainage Avoidance Alternative #2 is warranted. Therefore, the LEDPA is a hybrid alternative that limits the Project output to 300 Mw and is configured to avoid the major washes with a reduced project footprint.

Practicable is defined in the EPA's Clean Water Act regulations as "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." The presumption of a practicable alternative is very strong. The presumption for a non-water dependent project that a practicable alternative exists requires that an applicant make a persuasive showing concerning the lack of alternatives.

A 300 Mw alternative is practicable when cost, existing technology and logistics are taken into account. The clearest and most convincing evidence of this is the agreement the Applicant has entered into with San Diego Gas and Electric ("SDG&E") regarding the sale of power generated by the Project. SDG&E has a contract to purchase 300 Mw, an option to purchase an additional 300 Mw and a right of first refusal on the final 150 Mw. Therefore, the Applicant has contractually committed itself to license and operate the Project with no reasonable expectation that it would sell anything more than 300 Mw of power. If the Applicant believed that the Project would not be viable at 300 Mw alone, then it would not go to all the trouble of licensing the Project when it only has a Power Purchase Agreement ("PPA") for 300 Mw. Therefore, the Applicant has demonstrated that this Project is warranted even if only 300 Mw is developed.

It is commonplace for Applicants to argue that mitigation and alternatives are infeasible and that the approval of scaled-down alternatives would result in the Project not being economically or logistically viable. However, the Applicant's commitment to develop the Project even if it only has a guarantee of 300 Mw is clear evidence that a 300 Mw Project is capable of being accomplished even if cost, existing technology and logistics are taken into account.

A recent solar power plant licensing case, the Beacon Solar Energy Project ("Beacon"), sheds light on one methodology that the USACE could employ in evaluating the feasibility of different Project alternatives. In Beacon, the Energy Commission established a framework for analyzing the

feasibility of a Project alternative to use a different cooling technology. The Applicant claimed that the cooling technology was not financially viable.

Energy Commission staff approached the feasibility analysis by establishing reasonable benchmarks for the expected rate of return on investment, or "internal rate of return (IRR)." Staff determined that for solar plants around 250 Mw the "upper end of profitability" is 14% and that "a fair representative of the marketplace" is an 8% IRR. Staff concluded that "economic feasibility for solar energy power plants appears to be achieving an internal rate of return (annualized net profit margin) of 11% or more."

Because the Energy Commission is the entity that most often is called upon to conduct feasibility assessments for power plant permitting in California, the BLM should carefully evaluate the Commission's methodology and 11% rule of thumb and require the Applicant to provide the expected IRR for both the project as proposed, for a 300 Mw project (using the SDG&E power purchase agreement price), or a 706 Mw project (the maximum size described by the Applicant as the LEDPA).

A 300 Mw alternative that blends the benefits of reducing impacts to the washes (Drainage Avoidance Alternative #1) with the benefits of reducing impacts to cultural and biological resources (Drainage Avoidance Alternative #2) should be developed because it would be practicable for the Applicant and would be least environmentally damaging to the environment compared to the Proposed action.

IX. A SUPPLEMENTAL DEIS SHOULD BE RECIRCULATED FOR PUBLIC COMMENT

NEPA requires that federal agencies analyze the environmental effects of proposed actions, publish the results of their study and receive and respond to public comments. These "action-forcing" requirements are intended to serve two broad goals. First, Congress intended that an agency, "in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts."[151] Second, the publication of the EIS informs the public of potential environmental impacts and "provides a springboard for public comment."[152]

The DEIS falls short of satisfying either of NEPA's two broad goals. First, the DEIS fails to include ANY information about some of the Project's significant environmental impacts. Second, without a complete and detailed statement, the DEIS fails to provide the public with an adequate basis to

[151] *Robertson v. Methow Valley Citizens Council* (1989) 490 U.S. 332, 349.
[152] *Id.*

understand the Project's impacts or to evaluate and compare the proposed alternatives.

The DEIS could not have satisfied these purposes because the Applicant failed to provide BLM with the information necessary for a complete and accurate DEIS and the Applicant made significant changes to the Project in May, 2010. Because the Applicant neglected to provide BLM with sufficient information, BLM issued a DEIS that is incomplete with respect to potentially significant impacts and mitigation measures for several resource areas.[153]

a. Water Supply

The Applicant changed the water source for the Project, rendering many sections of analysis in the DEIS incomplete and/or incorrect. At the 11th hour, the Applicant determined that a wholly new water source would be used for the Project: the Dan Boyer well. This new water source will pump water from a depleted sole source aquifer. This is a wholly unanalyzed significant impact on the environment.

Supplemental EISs are required when "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[154] An SEIS is required if a new proposal "will have a significant impact on the environment in a manner not previously evaluated and considered."[155]

The CEQ Guidelines require agencies to "prepare supplements to either draft or final environmental impact statements if:

> (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
> (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[156]

X. CONCLUSION

The DEIS must be revised to inform the public and decision makers of the Project's significant impacts, and to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures. As

[153] DEIS, p. 1-7.
[154] 40 C.F.R. § 1502.9(c)(1)(ii).
[155] S. Trenton Residents Against 29 v. Fed. Highway Admin. (1999) 176 F.3d 658, 663.
[156] CEQ Guidelines § 1502.9 Draft, final, and supplemental statements.

the DEIS is currently written, it fails as an informational document and it violates the Clean Water Act, the Endangered Species Act, and the National Historic Preservation Act. Thus, the BLM, after receiving the necessary information from the Applicant to draft a complete DEIS, must correct the shortcomings outlined above, and circulate a revised DEIS for public review and comment.

Sincerely,

/s/

Loulena A. Miles

LAM:bh

Attachments