California Department of Fish & Wildlife

Crimson Solar Project

Final Environmental Impact Report

State Clearinghouse No. 2018031027



May 2021

FINAL ENVIRONMENTAL IMPACT REPORT

Crimson Solar Project
Riverside County, California

State Clearinghouse No. 2018031027

Lead Agency:

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May 28, 2021

CRIMSON SOLAR PROJECT
FINAL ENVIRONMENTAL IMPACT REPORT
SCH Number: 2018031027

To All Interested Parties:

The California Department of Fish and Wildlife (CDFW) has prepared this Final Environmental Impact Report (EIR) for consideration of the Crimson Solar Project (proposed Project). CDFW is the lead agency pursuant to its permitting authority under the California Fish and Game Code and the California Environmental Quality Act (CEQA). CDFW will determine the adequacy of this Final EIR, and, if adequate, will certify the document as compliant with CEQA. CDFW will then make a final decision regarding the applications filed for Incidental Take Permit and Lake and Streambed Agreement by Sonoran West Solar Holdings LLC, the Project Applicant. The Applicant, a wholly-owned subsidiary of Recurrent Energy LLC, is proposing to develop a 350-megawatt solar energy plant on up to 2,500 acres of public lands managed by the Bureau of Land Management (BLM), located in the eastern portion of the Chuckwalla Valley near the city of Blythe in unincorporated Riverside County, California.

CDFW and BLM prepared a Joint Draft Environmental Impact Statement (EIS)/EIR and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan (PA) for the Crimson Solar Project. As BLM is the land manager of the Project site, BLM is the lead agency under the National Environmental Policy Act (NEPA) for the EIS and PA. The Joint Draft EIS/EIR and Draft PA was published November 1, 2019, which initiated a 90-day comment period, ending January 30, 2020. BLM and CDFW held public meetings during the comment period in Palm Desert and Blythe, California.

Due to CDFW's ongoing CEQA Tribal Consultation and CDFW's Communication and Consultation, CDFW and BLM mutually agreed to complete separate Final EIR and Final EIS documents. BLM published their Final EIS and Proposed PA in January 2021 (BLM 2021). The CDFW Final EIR incorporates the entirety of the Final EIS and Proposed PA prepared by BLM by reference, with the exception of the sections that required updates related to CDFW's ongoing CEQA Tribal Consultation and Communication and Consultation Policy (sections included are listed below and also in the Table of Contents). The BLM Final EIS and Proposed PA and supporting information for the Project are available on BLM's Project website at: https://eplanning.blm.gov/eplanning-ui/project/88925/570.

Note that Section 3.5, Cultural, Tribal, and Historic Resources, of the Final EIR is not shown in track changes because the nature of the edits were difficult to read in underline/strikeout mode. Appendix V of the BLM Final EIS and Proposed PA includes all comments received during the public comment period; Appendix W contains responses to those comments. These two appendices have retained the same numbering as is used in the BLM Final EIS and Proposed PA for tracking purposes. This Final EIR includes an updated version of Appendix W with additional clarifications added to reflect the results of CDFWs Tribal Consultation process. Appendix W is shown double-underlined and deleted text ~~struck through~~ to easily see where revisions are made to the responses to comments.

The Final EIR reflects the outcome of CDFW Tribal Consultation Process and the following sections comprise CDFW's Final EIR. Note that Section 3.5 and Section 4.3, CEQA Tribal Consultation and CDFW's Communication and Consultation Policy, are updated to reflect CDFW's extensive Tribal Consultation and communications that have occurred between 2018 through 2021. The additional sections listed include relevant tribal cultural resources updates; however, the remainder of the sections reflect text from the published BLM Final EIS and Proposed PA. The updates are shown as double-underlined and deleted text ~~struck through~~ to easily see where revisions are made in the text.

Executive Summary:

The Executive Summary has been updated to reflect relevant revisions made to Final EIR Section 3.5.

Section 3.5, Cultural, Tribal, and Historic Resources

Based on CDFW's Tribal Consultation and communications conducted to date, tribal comment letters received, and ongoing staff-level discussions with the Colorado River Indian Tribes and the Quechan Indian Tribe, CDFW has identified the Mule Mountain Tribal Cultural Landscape as eligible for listing in the California Register of Historical Resources for its tribal value (Criterion 1), and as being significant pursuant to California Public Resources Code, Section 5024.1(c). This section of the Final EIR has been updated to reflect the close coordination efforts that took place between CDFW and the consulting Tribes.

Section 3.20, Other CEQA and NEPA Considerations

This section was part of the Joint Draft EIS/EIR; however, Sections 3.20.1 through 3.20.3 were removed from the BLM Final EIS and Proposed PA, indicating that these sections were intentionally left blank and would be finalized under the CEQA Final EIR (BLM 2021). These sections have been revised to include relevant cultural and tribal cultural resources updates.

Section 4.3, CEQA Tribal Consultation and CDFW's Communication and Consultation Policy

This section was titled "Consultation Process for Assembly Bill 52" in the Joint Draft EIS/EIR; however, to be inclusive of CDFW's Tribal Communication and Consultation Policy, the title of the section was revised in this Final EIR. The section has been updated to reflect the consultation efforts that have been ongoing between CDFW and the consulting Tribes since the publication of the Joint Draft EIS/EIR through 2021.

Section 4.6, Public Comment Process

This section was revised to note the receipt, and acceptance by CDFW, of a formal comment letter on the Draft EIS/EIR from the Quechan Indian Tribe that was submitted on May 7, 2020.

Section 4.7, Administrative Remedies

This section was updated to reflect the current status of the Final EIR.

Section 4.8, List of Preparers

This section was revised to include the staff who prepared the Final EIR.

Appendix A, Final EIR Cultural, Tribal, and Historic Resources Mitigation Measures

This Final EIR includes the CEQA Mitigation Measures (MM) CUL-8 thought MM CUL-10. These Final EIR mitigation measures include clarifying language that further guides the implementation of the mitigation measures. In addition, Appendix A includes the full list of mitigation measures discussed in Section 3.5, including cultural resources mitigation measures (MM CUL-1 through MM CUL-7) that were included in the BLM Final EIS and Proposed PA (BLM 2021). Furthermore, MM CUL-5 reflects additions that BLM included in their Record of Decision for the proposed Project (see pp. 10–11 of the ROD, May 2021). The BLM added clarifying language to MM CUL-5: Monitoring and Discovery Plan, which did not change the intent of the measure or BLM's decision. These additions are reflected in the measure listed in Appendix A of the Final EIR.

Appendix W, Responses to Comments

Relevant tribal letter comments that are included in Appendix W, Responses to Comments of the BLM Final EIS and Proposed PA, have been updated to reflect the outcome of CDFW's tribal cultural resources consultation conducted in accordance with state-law-specific items.

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EXECUTIVE SUMMARY

ES.1 Background and Project Overview

Sonoran West Solar Holdings, LLC (Applicant), a wholly owned subsidiary of Recurrent Energy, proposes to construct, operate, maintain, and decommission the Crimson Solar Project (Project). The Project is an approximately 350-megawatt (MW) photovoltaic (PV) solar energy generating facility and related infrastructure. If approved, the Project would be constructed on Bureau of Land Management (BLM)-administered public lands in the eastern portion of Chuckwalla Valley near the City of Blythe, within unincorporated Riverside County, California. The Project would generate solar power and deliver it to the California electrical grid through 230 kV gen-tie lines to interconnect with the Colorado River Substation (CRS), owned by Southern California Edison (SCE). ~~This~~ The BLM Final Environmental Impact Statement (EIS) and Proposed Land Use Plan Amendment to the California Desert Conservation Area Plan (PA) analyzes the Project's potential impacts under the National Environmental Policy Act (NEPA), and includes analysis of environmental impacts prepared by the California Department of Fish and Wildlife (CDFW) pursuant to the California Environmental Quality Act (CEQA). ~~This document is published by t~~ CDFW and BLM published a joint Draft EIS/Environmental Impact Report (EIR)/PA in November 2019; however, as CDFW's CEQA Tribal Consultation was ongoing, both CDFW and BLM mutually agreed to publish the final documents independently. The Bureau of Land Management (BLM) Final EIS and Proposed PA was published in January 2021 and is hereby incorporated by reference into this Final EIR. ~~and was prepared by the BLM and California Department of Fish and Wildlife (CDFW).~~

To initiate the environmental review process under NEPA, the Applicant submitted an application to the BLM requesting a right-of-way (ROW) grant (Case file number CACA-051967) on approximately 2,500 acres of public lands. Following final engineering and design, those areas that would remain undisturbed and outside of fenced Project areas would be excluded from the ROW grant. Because the initial application for this Project was filed before June 30, 2009, and because the site is located within a Solar Energy Zone as identified in the Western Solar Plan, the BLM is processing the Crimson Solar Project proposal under the California Desert Conservation Area (CDCA) land use plan decisions that were in place before the Desert Renewable Energy Conservation Plan (DRECP) land use plan amendment to the CDCA plan was adopted. If a ROW grant is approved for the Project, then a land use plan amendment (PA) also would be required to identify the site as an appropriate site for the proposed use, consistent with the CDCA plan; ~~this document presents~~ the proposed PA is presented in Chapter 2 of the BLM Final EIS and Proposed PA (BLM 2021).

~~Although this~~This Final EIR and the BLM Final EIS and Proposed PA (BLM 2021) includes analysis of environmental impacts prepared by CDFW pursuant to ~~the California Environmental Quality Act (~~CEQA~~)~~ under its authority as the lead agency for applications filed with CDFW for Incidental Take Permit (ITP)[1] and Lake and Streambed Agreement (LSAA)[2] authorizations~~, this is not the Final EIR~~. CDFW's decision regarding issuance of the ITP and the LSAA authorizations is a discretionary action requiring CEQA review and is separate from the BLM ROW process; however, the effects of CDFW's decision are evaluated as part of the Project within ~~this~~ the BLM Final EIS and Proposed PA (BLM 2021). CDFW is the lead agency under CEQA ~~intends to rely on this Final EIS and Proposed PA when it prepares a separate Final EIR in accordance with CEQA~~.

[1] An ITP allows take of a species listed under the California Endangered Species Act if such take is incidental to, and not the purpose of, carrying out an otherwise lawful activity.

[2] The Lake and Streambed Alteration (LSA) Program reviews projects that would alter any river, stream, or lake and conditions projects to conserve existing fish and wildlife resources.

ES.2 Purpose and Need

ES.2.1 BLM Purpose and Need

The BLM's purpose and need for the Project is to respond to the ROW grant application under Title V of the Federal Land Policy and Management Act FLPMA (43 USC Section 1761(a)(4)) to construct, operate, maintain, and decommission a solar PV facility on public lands in compliance with the FLPMA, BLM ROW regulations, and other applicable federal laws. In accordance with Section 103(c) of the FLPMA, 43 USC Section 1702(c), public lands are to be managed for multiple uses that take into account the long-term needs of future generations for renewable and non-renewable resources. The Secretary of the Interior is authorized to grant ROWs on public lands for systems for generation, transmission, and distribution of electric energy (43 USC Section 1761(a)(4)). Taking into account BLM's multiple-use mandate, the BLM will decide whether to approve, to approve with modifications, or to deny issuance of a ROW grant to the Applicant for the Project. The BLM may include any terms, conditions, and stipulations it determines to be in the public interest, and may include modifying the proposed use or changing the route or location of the proposed facilities (43 CFR 2805.10(a)(1)).

Concurrent with its decision on the ROW, the BLM will decide whether to amend the CDCA Plan. The CDCA Plan, while recognizing the potential compatibility of solar generation facilities on public lands, requires that all sites associated with power generation or transmission that are not identified in the CDCA Plan be added to it through the land use plan amendment process. CDCA boundaries are shown in Figure 1-1.

ES.2.2 CDFW and Applicant's Project Objectives

The Applicant's Project objectives are to:

1. Generate 350 MW of renewable electricity to assist the State of California in achieving its 50 percent renewable portfolio standard for 2030 by providing a significant new source of wholesale renewable energy.
2. Assist California utilities in meeting their obligations under the California Public Utilities Commission's (CPUC's) Energy Storage Framework and Design Program, including the procurement target of 1,325 MW by 2020, by providing up to 350 MW of storage capacity.
3. Facilitate grid interconnection of intermittent and variable PV generation and minimize line losses associated with off-site storage by collocating substantial electrical storage capacity at the PV facility site.
4. Realize economies of scale inherent in constructing a utility-scale solar facility on contiguous lands in the immediate vicinity of a high-voltage interconnection to the California Independent System Operator (CAISO)-controlled grid.
5. Bring living-wage skilled jobs to Riverside County through Project development, construction, and operation.

For purposes of CEQA, CDFW also includes the following objectives:

1. Protect and conserve wildlife resources and to minimize environmental impacts and land disturbance by, among other things, siting the facility on relatively flat lands with high solar insolation, in close proximity to established utility corridors, existing substation with available capacity to facilitate interconnection, and accessible roads.
2. Promote environmentally responsible development that minimizes incidental take by implementing species-specific minimization and avoidance measures.
3. Protect and conserve the resources of the State of California and mitigate any impacts to these resources.

ES.3 Project and Alternatives

ES.3.1 Comparison of Alternatives

The BLM ~~is~~ Final EIS and Proposed PA considers three action alternatives consisting of a Plan Amendment and Project components, and one No Plan Amendment/No Action/No Project alternative. Each of the following alternatives is described in detail in Chapter 2, Project and Alternatives:

Alternative A: Project. The Project would consist of 2,500 acres of BLM owned land, which would provide for a maximum combined solar facility capacity of 350 MW. This alternative also would include collector lines, a substation and switchyard, and an operation and maintenance building. This alternative would occupy approximately 2,500 acres on BLM-administered land. This alternative would require a CDCA Plan Amendment, a BLM-issued ROW, and CDFW approval of an ITP and a LSAA.

Alternative B. Similar to Alternative A, this alternative would also consist of 2,500 acres of BLM owned land, and would provide for a maximum combined solar facility capacity of 350 MW. Unlike Alternative A, Alternative B would include all three of the following Design Elements:

DE-1: Minimizing grading during site preparation and maintaining more on-site vegetation to facilitate post-construction residual habitat value and post-operations/site reclamation success

DE-2: Avoiding or limiting trenching by placing electrical wiring aboveground

DE-3: Placing transformer, inverter, and energy storage systems on elevated support structures in lieu of solid cement or steel foundations

This alternative would also require a CDCA Plan Amendment, a ROW, and CDFW approval of an ITP and a LSAA.

Alternative C. Alternative C, the Reduced Acreage Alternative, was developed to avoid key areas containing sensitive vegetation, sand dune habitat, and cultural resources. This alternative has been refined since publication of the Draft EIS/EIR/PA to include an alternative location and layout of the gen-tie, on-site substations, energy storage system, and O&M building and to further reduce the solar plant site footprint. Additionally, this alternative would consist of two units: Unit 1, a solar facility, and Unit 2, an Energy Storage System (ESS). The two units could operate independently of each other and may be constructed in different time periods. It is anticipated that the separate units would be issued separate ROW grants. Alternative C would be approximately 2,040 acres in size. This alternative would require a CDCA Plan Amendment, ROW, and CDFW approval of an ITP and a LSAA. The BLM Final EIS and Proposed PA analyses Alternative C without the implementation of Design Elements listed above for Alternative B; however, the BLM and CDFW could choose to combine any of these Design Elements with the Alternative C footprint in selecting an alternative to approve.

Alternative D: No Plan Amendment/No Action/No Project. Under Alternative D, the BLM would not authorize a ROW grant for the Project or amend the CDCA Plan, and CDFW would not approve the ITP and LSAA. Because the Project would not be approved, no new structures or facilities would be constructed, operated, maintained, or decommissioned on the site, and no related ground disturbance or other Project impacts would occur.

ES.3.2 Federal Lead Agency Preferred Alternative

Under NEPA, identification of the "preferred alternative" is a preliminary indication of the Lead Agency's preference of action among the Project and alternatives. A NEPA Lead Agency may select a preferred alternative for a variety of reasons, including the agency's priorities, in addition to the environmental considerations discussed in the EIS. In accordance with NEPA (40 CFR 1502.14(e)), the BLM preliminarily has identified Alternative C, as modified by the two design elements from Alternative B (Design Element (DE)-1 and DE-3), as the preferred alternative.

ES.3.3 CEQA Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires an EIR to identify an environmentally superior alternative. If the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives. In general, the environmentally superior alternative is defined as the alternative with the least adverse impacts to the environment.

As noted in Section 2.7 of the BLM Final EIS and Proposed PA, the No Plan Amendment/No Action/No Project Alternative in this analysis is reasonably likely to result in solar development of some kind and in some configuration on the proposed site consistent with the property's land use designations under the DRECP and Western Solar Plan. Because the specific environmental impacts of any future solar development proposed cannot be known with sufficient certainty at this time to provide a meaningful point of comparison, it would be speculative to identify the No Plan Amendment/No Action/No Project Alternative as the environmentally superior alternative.

CDFW has preliminarily identified the combination of DE-1 and DE-3 under Alternative B and the facility sizes, locations, and separation by unit under Alternative C ~~is preliminarily identified~~ as the environmentally superior alternative based on the comparison of the various alternatives' potential environmental impacts. Nonetheless, determining an environmentally superior alternative is difficult because of the many factors that must be balanced. Although this analysis reaches a preliminary conclusion in this regard, it is possible that, with additional information received in or developed during the public review process, CDFW could choose to balance the importance of each impact area differently or reach a different conclusion prior to completion and certification of the Final EIR and taking action on the requested ~~Lake and Streambed Alteration Agreement and take~~ITP and LSAA authorizations.

ES.4 Environmental Consequences

Table ES-1 summarizes the environmental impacts that would occur as a result of the Project and alternatives.

ES.4.1 Areas of Controversy

Comments were received during the scoping process for the Project. The scoping process is described and the public input received during scoping is provided in Appendix D, Notice of Intent, Notice of Preparation, Scoping Report of the BLM Final EIS and Proposed PA (BLM 2021) . Based on input received from agencies, members of the public and others, areas of controversy related to the Project include:

Air Resources: Concerns related to potential air quality impacts as compared to national, state and local ambient air quality standards. See Section 3.2, Air Resources of the BLM Final EIS and Proposed PA.

Biological Resources: Concerns related to the disturbance of native plant and wildlife habitats. Specific areas of controversy relating to biological resources relate to wildlife connectivity, sensitive plant communities, special-status species, and mitigation measures. See Sections 3.3, Biological Resources of the BLM Final EIS and Proposed PA.

Cultural, Tribal, and Historic Resources: Concerns related to damage to and loss of ~~cultural, and~~ historic, archaeological, and tribal cultural resources ~~artifacts and other resources; including Indian sacred sites~~. See Section 3.5, Cultural Resources in this Final EIR and Proposed PA.

Environmental Justice: Concerns related to whether low-income, minority or tribal populations that may disproportionately affected exist within the geographic scope of the Project. See Section 3.13, Socioeconomics, Environmental Justice, Population and Housing of the BLM Final EIS and Proposed PA.

Hazards and Public Safety: Concerns related to the existing presence of hazardous materials and use and disposal of hazardous materials and wastes. See Section 3.8, Hazards and Hazardous Materials of the BLM Final EIS and Proposed PA.

Lands and Realty: Concerns related to the appropriate land use of the proposed Project site and the Project's consistency with local, state, and federal plans. See Section 3.9, Lands and Realty of the BLM Final EIS and Proposed PA.

Recreation and Public Access: Concerns related to the use of the Project site for the proposed solar facility, given that the Project area has outstanding opportunities for recreation. See Section 3.12, Recreation and Public Access of the BLM Final EIS and Proposed PA.

Transportation: Concerns regarding Project consistency with applicable plans as well as impacts related to construction traffic. See Section 3.15, Transportation of the BLM Final EIS and Proposed PA.

Utilities and Public Services: Concerns regarding the quantity of construction and demolition waste the Project could generate and how this waste would be disposed. See Section 3.16, Utilities and Public Services of the BLM Final EIS and Proposed PA.

Visual Resources: Concerns related to the effects of night lighting and industrial facilities on the visual landscape surrounding the Project site and degradation of the visitor experience in the general area. See Section 3.17, Visual Resources of the BLM Final EIS and Proposed PA.

Water Resources: Concerns related generally to surface water and groundwater use and associated effects. See Section 3.18, Water Resources of the BLM Final EIS and Proposed PA.

Statement of Purpose and Need: Concerns related to how the Purpose and Need of the Project is stated. See Chapter 1, Introduction and Purpose and Need of the BLM Final EIS and Proposed PA.

ES.4.2 Issues to Be Resolved

~~The BLM will decide whether to grant the requested ROW, grant the ROW with modifications, or deny the ROW. Modifications may include modifying the proposed use or changing the route or location of the proposed facilities (43 CFR 2805.10(a)(1)). The BLM also will decide whether or not to amend the CDCA Plan to identify the application area as suitable for the proposed solar energy development.~~The CDFW, as CEQA lead agency, has ~~will~~ prepared this ~~a separate~~ Final EIR ~~and determine the adequacy of that document. If adequate, CDFW will certify the document as complying with CEQA.~~ After the Final EIR is completed and certified, the CDFW will make a final decision on the Project. CDFW will decide whether to approve, modify, or deny the requested ITP and LSAA.

TABLE ES-1
SUMMARY OF IMPACTS BY ALTERNATIVE

Resource/ Environmental Factor	Alternative A (Project)	Alternative B	Alternative C	Alternative D
Air Resources	*Construction (max)*: ROG=2.3 tons/yr; NOx=20.3 tons/yr; CO=48.2 tons/yr; PM10=23.1 tons/yr; and PM2.5=3.6 tons/yr. *Operation and Maintenance*: ROG= 0.1 lbs/day; NOx=3.7 lbs/day; CO=2.4 lbs/day; PM10=34.9 lbs/day; and PM2.5=5.3 lbs/day. *Decommissioning*: Comparable in type and magnitude, but likely to be lower than, the construction emissions. Maximum daily construction-related NOx and PM10 emissions and maximum annual PM10 emissions would exceed air district thresholds.	*Construction (max)*: ROG=2.3 tons/yr; NOx=20.2 tons/yr; CO=47.6 tons/yr; PM10=22.6 tons/yr; and PM2.5=3.3 tons/yr. *Operation and Maintenance*: Same as Alternative A. *Decommissioning*: Comparable in type and magnitude, but likely to be lower than, the construction emissions. Maximum daily construction-related NOx and PM10 emissions and maximum annual PM10 emissions would exceed air district thresholds.	*Construction (max)*: Same as Alternative A. *Operation and Maintenance*: Same as Alternative A. *Decommissioning*: Comparable in type and magnitude, but likely to be lower than, the construction emissions. Maximum daily construction-related NOx and PM10 emissions and maximum annual PM10 emissions would exceed air district thresholds.	No impact.
Biological Resources	*Vegetation Communities:* Impacts to 2,504.4 acres, including: 290.6 acres of riparian community (289.4 acres of Creosote Bush – White Bursage/Big Galleta Grass Association; 1.2 acres of Blue Palo Verde – Ironwood Woodland); and 2,198.4 acres of upland community (1,943 acres of Creosote Bush – White Bursage Scrub, 51.8 acres of Creosote Bush Scrub, 121.6 acres of White Bursage Scrub, 0.7 acres of Brittlebush Scrub, 67.5 acres of Creosote Bush—White Bursage—Ocotillo Association, and 29.2 acres of Desert Dunes). Would also result in the loss or alteration of approximately 90.6 acres of unvegetated ephemeral washes and 1.2 acres of riparian microphyll woodland habitat (blue palo verde–ironwood woodland) through grading, disturbance, site development, and access roads *State and Federal Wetlands*: No impacts on state wetlands or federal wetlands or waters. *Special-Status Plants:* Four special-status plant species detected on site. Impacts on special-status plants include: 2,153 ribbed cryptantha, 420 Hardwood's eriastrum, 105 Utah vine milkweed, and 11 desert unicorn plant. *Special-Status Wildlife:* Alternative A has the potential to impact wildlife listed under both FESA and CESA, including: desert tortoise, Yuma Ridgway's rail, southwestern willow flycatcher, western yellow-billed cuckoo and least Bell's vireo; as well as, wildlife listed only under CESA,	*Vegetation Communities:* Alternative B would directly and permanently impact the same vegetation community acreages as those described under Alternative A. However, adverse effects to vegetation communities would be reduced under Alternative B as a result of the reduced severity of ground disturbance. Under Alternative B, DE-1 would reduce long-term disturbance to vegetation communities by approximately 41.09 acres, and DE-2 would reduce long-term disturbance to vegetation communities by approximately 53 acres. While Alternative B would result in a reduction in disturbance of ephemeral washes, Alternative B would not result in a reduction of impacts to microphyll woodlands. *State and Federal Wetlands:* Same as Alternative A. *Special-Status Plants:* Adverse effects to special-status plants would be reduced overall under Alternative B. If present, fewer individual plants, including Harwood's eriastrum, desert unicorn plant, ribbed cryptantha, and Utah vine milkweed, would be removed by ground disturbance. *Special-Status Wildlife:* Alternative B may reduce adverse effects associated the loss of habitat for resident and foraging migrant species by preserving residual habitat value under DE-1 and reducing the severity and	*Vegetation Communities:* Overall, Alternative C would reduce impacts by approximately 420.9 acres from 2,504.7 to 2,083.5 acres of vegetation communities, including reduction of 83.8 acres of Creosote Bush – White Bursage/Big Galleta Grass Association and 393.1 acres of other Sonoran Desert Scrub Communities. Direct and permanent impacts on ephemeral washes would be reduced to 79.3 acres, a reduction of 11.3 acres compared to Alternative A. Alternative C would not result in a reduction of impacts on microphyll woodlands. *State and Federal Wetlands:* Same as Alternative A. *Special-Status Plants:* Alternative C would impact 11 Harwood's eriastrum individuals, reducing impacts on this species by 409 individuals. *Special-Status Wildlife:* Alternative C would impact 2,083.5 acres of habitat, reducing impacts related to habitat loss and degradation by 420.9 acres for resident and foraging wildlife species. *Invasive Species:* Reduced indirect impacts to off-site habitat from invasive plants. *Wildlife Movement:* Adverse effects to wildlife movement would be reduced under	No impact.

TABLE ES-1
SUMMARY OF IMPACTS BY ALTERNATIVE

Resource/ Environmental Factor	Alternative A (Project)	Alternative B	Alternative C	Alternative D
	including: Arizona Bell's vireo, Swainson's hawk, elf owl, Gila woodpecker, willow flycatcher, and bank swallow; and additional special-status wildlife that are not listed under FESA or CESA.	duration of impacts within a portion of the site under DE-2 and DE-3.	Alternative C as the approximately 0.25-mile footprint reduction along the northwestern project boundary and within the linkage area would provide more space for wildlife movement around the Project site.	
Biological Resources (cont.)	*Invasive Species: Indirect impacts on off-site habitat from invasive plants.* *Wildlife Movement: Alternative A would reduce available habitat (up to 0.28 percent) within the 5-mile-wide desert linkage network across Interstate 10 centered on Wiley's Well Road to connect the Mule and McCoy Mountains. The remaining habitat would be approximately 2 miles wide between the Project site and Ironwood State Prison to the west of the Project site and a 1.2-mile-wide corridor would be available for wildlife to pass the Project site and access the I-10 crossing northeast of the Project site.*	*Invasive Species: Reduced indirect impacts to off-site habitat from invasive plants.* *Wildlife Movement: Same as Alternative A.*		
Greenhouse Gas Emissions	*Net reduction of over 354,209 metric tons CO2e per year.*	*Net reduction of over 354,224 metric tons CO2e per year.*	*Net reduction of over 354,384 metric tons CO2e per year.*	No impact, no net reduction of metric tons CO2e per year.
Cultural Resources	*For CEQA, potential for significant impacts on 167 archaeological sites and 183 isolated finds that are considered tribal cultural resources.* *Potential for significant impacts to 23 archaeological CRHR-eligible sites under Criterion 1 and 4, and also considered tribal cultural resources.* *Potentially significant impacts to the Mule Mountain Tribal Cultural Landscape that overlaps the Project site.* *Potential for indirect adverse impacts to the Mule Tanks Discontiguous Rock Art District through increased visitation and public access. ~~Potential for direct impacts on 167 sites and 183 isolates. Potential for adverse effects on 17 sites eligible or treated as eligible for listing in the National Register of Historic Places.~~* *~~No adverse indirect impacts on sites within the indirect effects APE.~~*	*Reduced ground disturbance and greater flexibility in Project component siting could reduce potential direct impacts on cultural resources, both known and unknown.* *Indirect impacts are the same as Alternative A.*	*For CEQA, potential for significant impacts on 95 archaeological sites and 97 isolated finds that are considered tribal cultural resources.* *Potential for significant impacts to 6 archaeological CRHR-eligible sites under Criterion 4, and also considered tribal cultural resources.* *Potentially significant impacts to the Mule Mountain Tribal Cultural Landscape that overlaps the Project site.* *Potential for indirect adverse impacts to the Mule Tanks Discontiguous Rock Art District through increased visitation and public access. ~~Potential for direct impacts on 95 sites and 97 isolates. No adverse effect on the 17 sites eligible or treated as eligible for listing in the National Register of Historic Places (sites would be avoided).~~* *~~Indirect impacts are the same as Alternative A.~~*	No impact.

TABLE ES-1
SUMMARY OF IMPACTS BY ALTERNATIVE

Resource/ Environmental Factor	Alternative A (Project)	Alternative B	Alternative C	Alternative D
Energy Conservation	*Construction: Annual average consumption of 2,223 MWh during construction. Average annual consumption of approximately 962,356 gallons of diesel and 180,827 gallons of gasoline.* *Operation and Maintenance:* *Alternative A would generate up to 1,533,000 MWh of electricity annually and completely offset the amount of electricity used on-site.* *Decommissioning: Comparable in type and magnitude, but likely to be lower than, the construction emissions.*	*Construction, Operation, and Decommissioning: Same as Alternative A. As with Alternative A, Alternative B would generate up to 1,533,000 MWh of electricity annually.*	*Construction, Operation, and Decommissioning: Slight reduction in construction energy consumption compared to Alternative A. As with Alternative A, Alternative C would generate up to 1,533,000 MWh of electricity annually.*	No impact.
Geology and Soil Resources	*Low potential for adverse soil conditions, ground subsidence due to groundwater pumping, and seismic-related ground failures.* *Low potential for soil erosion from water and wind.*	*Same as Alternative A with regard to adverse soil conditions, ground subsidence due to groundwater pumping, and seismic-related ground failures. Reduced potential for soil erosion due to less disturbance of surface soils.*	*Same as Alternative A with regard to adverse soil conditions, ground subsidence due to groundwater pumping, and seismic-related ground failures. Reduced potential for soil erosion due to less disturbance of surface soils.*	No impact.
Hazards and Hazardous Materials	*Low likelihood of accidental release of hazardous materials used on site.*	*Reduced likelihood of accidental release of hazardous materials used on site.*	*Reduced likelihood of accidental release of hazardous materials used on site.*	No impact.
Land Use, Lands, and Realty	*Restriction of use on 2,500 acres of BLM-administered public lands.* *During construction and decommissioning, access to open routes for OHV use may be restricted.*	*Restriction of use on 2,500 acres of BLM-administered public lands.* *Impacts to Lands and Realty would be similar to that of Alternative A.*	*Restriction of use on 2,040 acres of BLM-administered public lands.* *Impacts to Lands and Realty would be likely lower, than that of Alternative A.*	No impact.
Noise	*Construction and Decommissioning: Temporary construction noise levels would not increase existing ambient levels by more than 10 dBA in any construction phase.* *Operation and Maintenance: Noise levels would be imperceptible at the nearest sensitive receptor.*	*Construction, Operations, and Decommissioning: Same as Alternative A.*	*Construction, Operations, and Decommissioning: Same as Alternative A.*	No impact.
Paleontological Resources	*Construction: Project site consists of high sensitivity sediments and represents what may be the third most abundant terrestrial Pleistocene fossil assemblage in California. With the implementation of Mitigation Measures PALEO-1 through PALEO-5, there would not be any adverse effects on paleontological resources.* *Operations, Maintenance and Decommissioning: Project operations are not anticipated to involved further ground disturbance above and beyond that*	*Construction: Reduced acres affected compared to Alternative A. The depth of the ground disturbance associated with DE-1, DE-2, and DE-3 would be shallower than compared to Alternative A. Thus, Alternative B would have less potential to impact buried paleontological resources and would require less effort associated with monitoring and fossil collection prior to construction.*	*Construction: Reduced acres affected compared to Alternative A.* *Operations, Maintenance and Decommissioning: Same as Alternative A.*	No impact.

TABLE ES-1
SUMMARY OF IMPACTS BY ALTERNATIVE

Resource/ Environmental Factor	Alternative A (Project)	Alternative B	Alternative C	Alternative D
	occurring during construction, and so would not constitute adverse effects on paleontological resources.	*Operations, Maintenance and Decommissioning: Same as Alternative A.*		
Recreation and Public Access (Off-Highway Vehicles)	*On-Site* *Construction, Operation, Decommissioning: Conversion of approximately 2,500 acres of public lands to a solar project could disrupt dispersed recreational activities by making the site inaccessible for recreational use.* *Off-Site* *Construction, Operation, Decommissioning: Impacts from noise, fugitive dust, and traffic could impact off-site recreational facilities. Temporary increase in demand for accommodations during construction and the resulting potential impact on LTVAs and other nearby recreation areas.* *Recreational Use of Regional and Local Facilities* *Construction, Operation, Decommissioning: Due to the distance between the Project site and regional and local recreational facilities there would be no impact on users of these facilities.*	*Construction, Operation, and Decommissioning: Same as Alternative A.*	*Construction, Operation, and Decommissioning: Reduced acres affected compared to Alternative A*	No impact.
Recreation and Public Access (Off-Highway Vehicles) (cont.)	*OVH Use* *Construction and Decommissioning: Short-term closures of the portion of open route MM703 could be required.* *Operations and Maintenance: Long-term closure of open route MM703 or any other open OHV routes would not be required.*			
Socioeconomics, Environmental Justice, Population and Housing	*Construction: Employment of 102 to 320 workers (average) and a maximum work force of 180 to 427 workers. Most, if not all, expected to live within two hours of site.* • *No new housing or motel development induced.* • *Total direct construction employee compensation income of $175 million.* • *Total economic output of $475 million.*	*Construction, Operation, and Decommissioning: Same as Alternative A.* *Environmental Justice: Same as Alternative A.*	*Construction, Operation, and Decommissioning: Same as Alternative A.* *Environmental Justice: Reduced impacts on cultural and historic resources with tribal values; could still result in a disproportionately high and adverse impact on Native Americans but reduced compared to Alternative A.*	No impact and no economic benefit.

TABLE ES-1
SUMMARY OF IMPACTS BY ALTERNATIVE

Resource/ Environmental Factor	Alternative A (Project)	Alternative B	Alternative C	Alternative D
	• *Operation and Maintenance: Annual employment of up to 10 full-time workers, who expected to live close to the site.* • *No new housing growth induced.* • *Total annual direct employee compensation of $0.5 million.* • *Total annual indirect and induced economic benefits of $1.575 million and 10 jobs.* *Decommissioning: Employment of approximately 320 workers. Temporary spending and employment benefit from deconstruction.* *Environmental Justice: Impacts on cultural and historic resources with tribal values could result in a disproportionately high and adverse impact on Native Americans.*			
Special Designations	*No direct impacts. Potential minor indirect effects from dust, noise, traffic, and visual contrast.*	*Same as Alternative A.*	*Same as Alternative A.*	No impact.
Transportation	*Construction and Decommissioning: Increased traffic (total of 1,072 one-way daily vehicle trips) with no significant change in LOS on affected roadways.* *Operation and Maintenance: Minor traffic increase (10 daily employee trips and 10 daily delivery trips).*	*Construction, and Decommissioning: Reduction in ground disturbance would reduce the number of construction-period water delivery truck trips by 125 daily one-way trips.* *Operation and Maintenance: Same as Alternative A.*	*Construction and Decommissioning: Reduction in ground disturbance would reduce the number of construction-period water delivery truck trips by 56 daily one-way trips.* *Operation and Maintenance: Same as Alternative A.*	No impact.
Utilities and Public Services	*Construction: 1,000 AF of water would be required during the 2-year construction phase.* *Operation and Maintenance: 660 acre-feet of water consumption over 30 years.* *Decommissioning: PV panels recycled; non-recyclable waste landfilled. Landfill capacity adequate.* *No impact on public services.*	*Construction, Operation, and Maintenance: Reduced water consumption.* *Decommissioning: Same as Alternative A.* *No impact on public services.*	*Construction, Operation, and Maintenance: Reduced water consumption.* *Decommissioning: Reduced amount of non-recyclable solid waste landfilled.* *No impact on public services.*	No impact.
Visual Resources	*Construction: Mitigable short-term impacts from construction lighting and visible dust plumes; adverse effects from large-scale visual disturbance in the landscape.*	*Construction: Impacts would be reduced compared to Alternative A because less grading and overall ground and vegetation disturbance would occur.*	*Construction, Operation, and Maintenance, and Decommissioning: Same as Alternative A, but occurring on a smaller land area.*	No impact.

TABLE ES-1
SUMMARY OF IMPACTS BY ALTERNATIVE

Resource/ Environmental Factor	Alternative A (Project)	Alternative B	Alternative C	Alternative D
	Operation and Maintenance: Strong visual contrast. Would meet VRM Class IV objectives. *Decommissioning: Similar to construction. Site would be restored after decommissioning.*	*Operation, Maintenance, and Decommissioning: Same as Alternative A.*		
Water Resources	*Minor impacts related to alteration of stormwater flows and drainage, including re-routing of existing flowpaths, erosion, and surface water quality. No adverse impacts on groundwater levels and storage anticipated, but mitigation would provide for monitoring and correction.*	*Reduced intensity of impacts compared to Alternative A related to reduced ground disturbance and construction water consumption.*	*Reduced intensity of impacts compared to Alternative A related to reduced ground disturbance and construction water consumption.*	No impact.
Wildland Fire Ecology	*Construction and Decommissioning: Slight increase in threat of wildland fires in area due to construction and demolition activities.* *Operation and Maintenance: Increased risk of wildland fire due to potential for establishment of non-native plants. Implementation of Mitigation Measures BIO-15 (Wildfire Prevention), BIO-16 (Weed Management), and FIRE-1 (Fire Safety Plan), associated vegetation clearance standards, and adherence to building codes relevant to fire safety and other applicable laws and regulations, would reduce wildfire ignition potential and wildfire risk.*	*Construction, Operation, and Maintenance, and Decommissioning: Slightly increased risk of impacts from wildland fire compared with Alternative A because of the use of aboveground wiring (DE-2), which has a greater potential to ignite a wildfire than buried wiring. In addition, Alternative B would minimize vegetation removal beneath the solar panels (DE-1), which would also create a greater likelihood of wildfire ignition because the solar wiring would be installed along the underside of the solar panels and in close proximity to vegetation.*	*Construction, Operation, and Maintenance, and Decommissioning: Reduced acres affected compared to Alternative A.*	No impact.

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3.5 Cultural, Tribal, and Historic Resources

3.5.1 Introduction

This section presents the Crimson Solar Project's (Project) regional and local environmental setting; analytical methodology; and analysis of direct and indirect effects, California Environmental Quality Act (CEQA) significance thresholds and determinations, cumulative effects, and residual effects concerning historic, archaeological, and tribal cultural resources. As originally drafted for public review, the joint Environmental Impact Statement/Environmental Impact Report/Proposed Land Use Plan Amendment to the California Desert Conservation Area Plan (EIS/EIR/PA) analysis more broadly evaluated the impacts of the Project on cultural, tribal, and historic resources in accordance with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act of 1966 (NHPA), and CEQA. The Bureau of Land Management (BLM) and the California Department of Fish and Wildlife (CDFW) ultimately decided to draft separate discussions of these impacts in distinct versions of Section 3.5 for the Final EIS/EIR.

As the CEQA lead agency, the following laws and associated regulations are pertinent to CDFW's review: CEQA, California Register of Historical Resources (CRHR), California Health and Safety Code Section 7050.5, California Public Resources Code (PRC) Section 5097.98, California Government Code Sections 6254 (r) and 6254.10, Assembly Bill 52 and related PRC sections, and Riverside County General Plan – Multipurpose Open Space Element. The regulations applicable to this analysis are summarized in Appendix E of the BLM Final EIS (BLM 2021).

A cultural resource is a location of human activity, occupation, or use identifiable through field inventory, historical documentation, or oral evidence. Cultural resources include both archaeological and historic architectural resources, and may include sites, structures, buildings, objects, artifacts, works of art, architecture, landscapes, viewsheds, and natural features that were important in past human events. They may consist of physical remains or areas where significant human events occurred, even though evidence of the event no longer remains. They may include definite locations of traditional, cultural, or religious importance to specified social or cultural groups. The cultural resources that are evaluated in this section fall under one of the following resource types: prehistoric archaeological resource, ethnohistoric resources, historic-period archaeological built-environment resources, and tribal cultural resources. These categories are explained in more detail below.

Prehistoric archaeological resources are associated with human occupation and used prior to sustained European contact. These resources may include sites and deposits, structures, artifacts, rock art, trails, and other traces of Native American presence. In California, the prehistoric period began more than 12,000 years ago and extended through the eighteenth century until 1769, when the first Europeans permanently settled in California. Prehistoric archaeological resources may remain important and relevant to specified cultural groups, such as local tribes.

Ethnohistoric resources typically refer to objects or places that represent the heritage of a particular ethnic or cultural group, such as Native Americans; African, European, Latino, or Asian immigrants; or enslaved or formerly enslaved people and their descendants. They may include traditional resource-collecting areas, ceremonial sites, cemeteries, shrines, or ethnic neighborhoods and structures.

Historic-period resources are archaeological and built-environment (i.e., structures, buildings, or other built features) resources that were used or created during the historic period, for which written documentation is usually available. In the Project area, historic-period resources are typically, although not exclusively, associated with Euro-American exploration and settlement, and mark the beginning of a written historical record. Historic-period resources may include archaeological deposits, sites, structures, traveled ways, artifacts, or other evidence of human activity.

Tribal cultural resources are specifically defined under CEQA as a resource that is listed in or eligible for listing in the CRHR, or a resource that the CEQA lead agency determines to be a tribal cultural resource based on a substantial evidence. Tribal cultural resources are often aboriginal (prehistoric or ethnohistoric Native American) archaeological sites and may be a single location or a broader landscape to which Native Americans attach particular value.

Under state historic preservation law, cultural resources must be at least 50 years old to have sufficient historical significance to merit consideration of eligibility for listing in the CRHR. A resource younger than 50 years must be of exceptional historical significance to be considered for listing. Groupings of resources may also be recognized as districts.

Cultural resources are categorized as buildings, sites, structures, objects, and districts for the purposes of complying with California state law, including CEQA. Further, CEQA defines a separate category of tribal cultural resource.

Definitions of common terms used to discuss the regulatory requirements and treatment of cultural resources follow below (for definitions of other terms used in this section, please refer to Appendix C, Glossary, of the BLM Final EIS (BLM 2021).

Cultural Resource: This general term can be used to refer to all types of cultural resources, including a historical resource (CRHR eligible cultural resource), a unique archaeological resource, and a tribal cultural resource.

Historical Resource: This term is used for the purposes of CEQA and is defined in the CEQA Guidelines (Section 15064.5) as (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in California Public Resources Code (PRC) Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

Unique Archaeological Resource: This term is used for the purposes of CEQA and is defined in the CEQA Guidelines (Section 15064.5) as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it either contains information needed to answer important scientific research questions; has a special and particular quality, such as being the oldest of its type or the best available example of its type; or is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resource: This term is unique to and used for the purposes of CEQA. It is defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is (i) listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k), or (ii) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. The four criteria in PRC Section 5024.1(c) address whether the resource is (1) associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (2) associated with the lives of persons important in our past; (3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (4) has yielded, or may be likely to yield, information important in prehistory or history. In applying the criteria set forth in Section 5024.1(c), the lead agency must consider the significance of the resource to a California Native American tribe. CEQA acknowledges that California Native American tribes may have unique expertise concerning tribal cultural resources and the significance of tribal cultural resources, impacts to those resources, and appropriate measures for preservation or mitigation.

3.5.2 Regional and Local Environmental Setting

The following background sections are derived from numerous archaeological, historical, and ethnographic studies that have been conducted in the region, as cited within the text. These sections focus on the periods and types of resources represented within the Project area. A more detailed discussion of the regional and local setting is available in the Class III cultural resources survey prepared for the Project (Kidwell et al. 2018, as cited in BLM 2021).

The Project area for this CEQA analysis where potential direct impacts to tribal cultural resources, archaeological resources, and historical resources could occur is consistent with the direct effects area of potential effects (APE) under the NHPA, which is the area within which resources could be physically affected by damage, destruction, or other alteration. In addition, the area of indirect impacts for the CEQA analysis, where potential indirect impacts to tribal cultural resources could occur, is consistent with the indirect effects APE under the NHPA, which was defined to assess potential visual, auditory, or atmospheric effects and covers a broader 5-mile radius from the Project site.

3.5.2.1 Prehistoric Setting

Paleoindian Period (San Dieguito) (12,000 to 7,000 Years Before Present [BP])

The Paleoindian period experienced profound environmental changes as the cool, moist conditions of the Pleistocene (from 2.5 million to 12,000 years ago) gave way to the warmer, drier climate of the Holocene (from 12,000 years ago to present). The earliest record of habitation in eastern Riverside County occurred during the Paleoindian period. Settlement patterns of this period suggest that habitation occurred along prehistoric lakeshores and on mesas near springs and washes. Within the larger Riverside County region, Paleoindian sites may be found on stable landforms, in protected caves above floodplains and valley/riparian environments, and along ridge systems and in mountain passes that may have served as prehistoric travel routes.

The Paleoindian inhabitants were nomadic large-game hunters whose tool assemblage included choppers; percussion-flaked scrapers and knives; large, well-made, fluted, leaf-shaped, or stemmed projectile points; crescents; heavy core/cobble tools; hammerstones; bifacial cores; and scraper planes (Rogers 1939, 1966, as cited in BLM 2021; Warren 1968, as cited in BLM 2021). The subsistence strategy used during the San Dieguito period focused primarily on hunting large and small game, and on gathering plants. Near the end of this period, the climate began to warm, which caused the lakes and marshes to dry, resulting in the need for different subsistence and settlement strategies (Moratto 1984, as cited in BLM 2021).

Archaic Period (Pinto and Amargosa) (7,000 to 1,500 BP)

The climatic patterns of the late Paleoindian period continued into the early Archaic period. The beginning of the late Archaic coincides with a period of decreased moisture in the region. Research suggests that the California desert environment was unstable during these periods, forcing the hunter-gatherers toward more hospitable regions (Crabtree 1981, as cited in BLM 2021; Schaefer 1994, as cited in BLM 2021). However, late Archaic sites have been recorded in more southern portions of Riverside County's low desert near the Peninsular Ranges, where water was more available.

Late Archaic site types include residential bases with large, diverse artifact assemblages, abundant faunal remains, and cultural features; temporary bases; temporary camps; and task-specific activity areas. Diagnostic projectile points of this period include more refined notched (Elko), concave base (Humboldt), and small-stemmed (Gypsum) forms (Warren 1984, as cited in BLM 2021). The mortar and pestle were used to process acorns, an important storable resource. Haliotis and Olivella shell beads and ornaments and split-twig animal figurines indicate that interior California occupants were in contact with populations on the California coast and in the southern Great Basin.

Late Prehistoric (Patayan Complex) (1,500 to 150 BP)

A period of persistent drought began approximately 1,500 years ago, and conditions became significantly warmer and drier. The dry period continued until 750 years ago (Jones et al. 1999, as cited in BLM 2021; Kennett and Kennett 2000, as cited in BLM 2021).

In the Southern California desert regions, cultural development was heavily influenced by the Patayan culture of the lower Colorado River area (Warren 1984, as cited in BLM 2021). This period includes a pre-ceramic transitional phase ranging between 1,500 and 1,200 BP. The Patayan complex is distinguished from the transitional phase by the introduction of pottery using the paddle-and-anvil technique, as well as the use of bow-and-arrow technology. Also noted is the use of floodplain agriculture (Rogers 1945, as cited in BLM 2021). These technological advancements are believed to be from what is now Mexico or the ancestral Pueblo cultures of the Southwest deserts (McGuire and Schiffer 1982, as cited in BLM 2021; Rogers 1945, as cited in BLM 2021; Schroeder 1979, as cited in BLM 2021). Diagnostic artifacts include Saratoga Springs projectile points, small triangular projectile points, mortars and pestles, steatite ornaments and containers, perforated stones, circular shell fishhooks, numerous and varied bone tools, and bone and shell ornaments (Schaefer 1994, as cited in BLM 2021). Elaborate mortuary customs and extensive trade networks are also characteristic of this period. Additionally, abundant amounts of obsidian were being imported into the region from the Obsidian Butte source that had been exposed by the desiccation of Lake Cahuilla (Warren 1984, as cited in BLM 2021).

By the late Prehistoric period, there appears to have been a transition to more mobile patterns of travel and trade between the Colorado River and Lake Cahuilla (Schaeffer and Laylander 2007, as cited in BLM 2021). Long-range travel for resource procurement and trade resulted in a system of trails through the Colorado Desert. The increased mobility along the trail system allowed the opportunity for interaction between neighboring tribes. As the Spanish began to explore the area, native trails and trade routes were used and expanded.

Trails were also used for trade routes. Trade between peoples in the Southern California area and the Southwest may have begun more than 9,000 years ago (Schaeffer and Laylander 2007, as cited in BLM 2021), but the predominant trading activity ranged between AD 900 and AD 1300. Exchange items included marine shell and Southwestern pottery. Trails are also a significant element in the Native American sacred landscape; they link the spiritual world to the natural landscape. Trails can be augmented with significant additional resources, such as rock shrines and artifacts; artifacts can include pottery drops and flaked stone scatters, particularly white quartz. Songs and stories contain named places, such as mountains, water sources, valleys, and other geographical locations along known trails (Fowler 2009, as cited in BLM 2021). These places and items connect current tribal groups to their ancestors, religious and cultural connections, and responsibilities to these locations and items of cultural patrimony. Impacts to these places, landscapes, and artifacts can impair tribes' religious integrity and their connection to their religion and cultural patrimony.

3.5.2.2 Ethnographic Setting

The Colorado Desert area of Riverside County is within the ethnographic boundaries of several different eighteenth and nineteenth century Native American groups, including the Quechan, Halchidhoma, Mohave, Chemehuevi, and Cahuilla.

A number of ethnographically documented culture groups are associated with the region surrounding the Project site through historical use and oral history. These include the Yuman-speaking Mohave, Halchidhoma, and Quechan (Bean 1972; Bean and King 1974; Bean and Vane 1978; Fowler and Fowler 1971; Laird 1976, as cited in BLM 2021; Rogers 1939, 1966, as cited in BLM 2021; Schaefer 2003; Singer 1984). All of these groups were at home in the deserts, but lived primarily near reliable water sources, including the Colorado River, inland lakes, and numerous seeps and springs.

Prior to 1700, the banks of the Colorado River west of the Project area may have been occupied by the historical Maricopa (Kroeber 1925:800, as cited in BLM 2021), although this is far from certain. At some point, the Maricopa migrated east and the related Halchidhoma (or Panya) settled the area. Almost immediately, the Halchidhoma found themselves under attack from the allied forces of the Mohave and Quechan. The traditional focus of the Mohave population was to the north in the Mojave Desert, and the Quechan peoples had their

largest villages to the south between what is now Yuma and the Gulf of California. Generations of near-constant hostility finally drove the Halchidhoma off the river and, ultimately, to their Maricopa allies on the Gila River, south of the Project area (Kroeber 1925:799, as cited in BLM 2021).

The removal of the Halchidhoma between 1825 and 1830 from the Colorado River area to the Gila River was part of a larger "international" network of alliances, conflicts, and trade that Lowell Bean has described as the "Northern Sonoran Desert Amity-Enmity System" (Bean and Vane 1978:5-3). In the Northern Sonoran Desert during the Protohistoric and Historical periods, traditional allies and trading partners formed two antagonistic groups. In one group, the Halchidhoma were allied with the Maricopa, Pima, Papago, and Cocopah to the east, and the Cahuilla, Diegueño, Serrano, and Gabrielino to the west. In the opposing group, the Mohave and Quechan were allied with the Chemehuevi (Southern Paiute) and Yavapai to the north and east, and the Kamia, Northern Serrano, Chumash, Yokuts, and Tubatulabal to the west. Southwestern Pueblo peoples, such as the Hopi, were interested trading partners in this system, but they were largely neutral (Bean and Vane 1978:5-7).

In the late 1860s, hostilities broke out again along the Colorado River, this time between the long-time but uneasy allies the Mohave and Chemehuevi. Several years of infighting resulted in the western migration of a portion of the Chemehuevi population to Cahuilla villages in the Banning and Cabazon areas, and to a Serrano village in the Twentynine Palms area (Bean and Vane 1978:5-20: Kroeber 1925:594, as cited in BLM 2021). Many of those displaced at that time did not return, but chose to stay among their new allies and kinsmen. In 1874, the Office of Indian Affairs set aside a portion of the Mohave-occupied Colorado River Reservation (now known as the Colorado River Indian Tribes Reservation) for the Chemehuevi. Understandably, most Chemehuevi "preferred to remain in their historical locations near Blythe, Needles, Beaver Lake, and Chemehuevi Valley" rather than live so close to their "estranged friends" the Mohave (Kelly and Fowler 1986:388, as cited in BLM 2021). Ultimately, in 1907, a separate reservation was established along the Colorado River north of Parker for the Chemehuevi living in Chemehuevi Valley (Kelly and Fowler 1986:388, as cited in BLM 2021).

Quechan

Primary ethnographic sources for the Quechan include Bee (1983, as cited in BLM 2021), Castetter and Bell (1951, as cited in BLM 2021), and Forde (1931). Although the Quechan traditionally lived at the confluence of the Colorado and Gila Rivers, they were not reported in that area in 1540, when the Alacon and Diaz expeditions reached the area (Forde 1931; Forbes 1965). According to Quechan oral tradition, their range extended from near what is now Blythe to Mexico. Their economy was based primarily on horticulture and gathering, and they may have numbered in the thousands at the time of contact. During the winter and spring they lived in seasonal settlements located on terraces above the river floodplain, dispersing after the spring floods receded to their plots along the river to plant crops. Fishing provided an important source of protein and occurred in non-flood times. After the harvest in the fall, the Quechan would gather in the villages on the terraces, where stored agricultural foods, fishing, and limited gathering allowed them to live together through the winter (Bee 1983, as cited in BLM 2021; Forde 1931). In all times, other than during high flooding, fishing in the Colorado River provided an important source of protein.

Numerous named villages were located along the Colorado River, with *Avi Kwotapai* located on the west side of the Colorado River between what is now Blythe and Palo Verde Valley, and *Xenu mala vax* on the east side of the river near present-day Ehrenberg (Bee 1982). Yuman-speaking groups, including the Quechan, report trails that extend along the Colorado River (see discussions in Cleland and Apple 2003).

Halchidhoma

Although no longer located in the area, the Halchidhoma (also known as the Panya) are a Yuman-speaking people who, until about 1825, lived along the Colorado River between the present-day cities of Blythe and Needles. The Halchidhoma were known to travel and trade over great distances. The Coco-Maricopa Trail, leading west from a portage point across the Colorado River adjacent to Blythe, linked the Halchidhoma with

the Pacific coast (Dobyns et al. 1963, as cited in BLM 2021). Ceramic seriation and radiocarbon dates from marine shell artifacts indicate that an extensive trade network between the Pacific coast and the lower Colorado River region was established by at least A.D. 900 (Sample 1950). The Halchidhoma traded with the Cahuilla, Hualapai, Papago, and Pima of what is now Arizona, and were closely allied with the Maricopa (Bean and Vane 1978).

By all accounts, the Halchidhoma were frequently in conflict with their Colorado River neighbors, the Quechan and Mohave (e.g., Bean and Vane 1978; Kroeber 1925, as cited in BLM 2021). During the decades, if not centuries, of open hostility, the Halchidhoma established strong alliances with the Yuman-speaking Maricopa and Cocopa peoples who lived to the east, along the Gila River. Ultimately, the Halchidhoma went to live with and intermarried with their allies the Maricopa, and are therefore poorly documented in the ethnographic literature. Spier's (1933) ethnography of the Maricopa touches only briefly on the, by then historical, Halchidhoma. Other sources include Castetter and Bell (1951, as cited in BLM 2021), Kroeber (1925, as cited in BLM 2021), and a more recent summary article by Harwell and Kelly (1983). Bean and Vane (1978) discuss the central role that the Halchidhoma, or Panya, people played in the intertribal trading network known as the Northern Sonoran Desert Amity-Enmity System, as well as their eventual migration to the east toward the current Project area.

Mohave

The Mohave were one of the most respected and feared groups in what is now California at the time of European contact. They were known equally for their military might, powerful shamans and religious ceremonies, and proclivity for long-distance travel. The Mohave are also notable for their understanding of themselves as a unified "nation" of people, known as the *Hamakhava*, rather than as a series of loosely related clans or villages (Kroeber 1925:727, as cited in BLM 2021). The whole of the Mohave acted together in defending their territory and attacking their enemies. Visiting parties of Mohave also traveled far and wide, apparently largely out of curiosity and almost entirely without fear. Thus, the Mohave became spiritually and socially influential over a vast portion of what is now the United States Southwest and Southern California. Even the notably insular Zuñi pueblo people "perform dances that they attribute to the Mohave" (Kroeber 1925:599, as cited in BLM 2021).

In 1604, the Oñate Spanish expedition encountered the Mohave as far south as the present-day Colorado River Indian Tribes Reservation (Stewart 1969), although their largest settlements were known to be farther north. Kroeber (1959) reported that the majority of the Mohave population lived along both sides of the lower Colorado River from south of present-day Davis Dam to Topock. According to Stewart (1969), the Mohave also extended their territory south into the Chemehuevi and Colorado Valleys, and intermittently controlled areas as far south as the Palo Verde Valley (cf., Kroeber 1959). After the Halchidhoma vacated the Parker-Blythe area between 1825 and 1830, the Mohave briefly settled there, but soon returned to their stronghold in the Mohave Valley (Bean and Vane 1978).

During much of the year, the Mohave lived in villages on terraces above the Colorado River, only moving down onto the floodplain in the spring to plant crops after the seasonal floods. Like other lower Colorado River peoples, the Mohave relied on floodplain horticulture, fishing, and gathering for subsistence. Planted crops included maize, black-eyed beans (cowpeas), squash, pumpkin, and several local grasses. Cultivated plants were supplemented by the collection of wild plant foods, including honey mesquite (*Prosopis glandulosa*) and mesquite screwbean (*Prosopis pubescens*), which could be stored for long periods of time and were traditional staple foods. Although the pods of both plants could be eaten green, they were usually pounded into flour using long stone or wooded pestles. Additionally, screwbean pods were often processed in large pits dug into sandy soil where the pods were placed, covered with vegetation, and then periodically watered to leach out bitter compounds (Lightfoot and Parrish 2009:355).

The Mohave are well-known for their long-distance travel. Like other Colorado River tribes, they participated in a trade network extending east to the Pueblos of present-day Arizona and west to the Pacific coast (Bean and Vane 1978). A number of important passes and routes of travel, including the well-known Mohave Trail

connecting the high deserts with the Southern California coastal valleys, were developed or frequented by the Mohave. During the Colonial era, the Spanish frequently encountered groups of traveling Mohave who continued the tradition of desert–coastal travel and trade throughout the Mission period, occasionally in conflict with the wishes of Spanish officials (Cook 1962:158–159).

Chemehuevi

The Chemehuevi Tribe is the southernmost group of the Southern Paiutes (Kelly and Fowler 1986, as cited in BLM 2021). Their territory included the western side of the Colorado River into the Palo Verde Mountains and north toward Cadiz Dry Lake. They share many cultural elements with the Mohave, including habitation structures, groundstone tool types, and spiritual beliefs. The Chemehuevi were organized in small mobile groups that traveled widely, interacting with neighboring tribes. They subsisted on small game, hunting as far west as present-day San Bernardino, and on harvesting seasonal plant resources throughout the region. They hunted with the Quechan in Arizona and the Serrano in Tehachapi, and were reported to have collected abalone in the Santa Barbara Channel and to have journeyed east to Hopi villages (Kelly and Fowler 1986, as cited in BLM 2021). They were not known to have used pottery, but rather chose basketry and other woven implements, often decorated. Those who settled along the Colorado River lived in relatively permanent structures and used agriculture to a greater extent than related groups to the west, growing a variety of crops, including vegetables, beans, winter wheat, and grasses (Laird 1976, as cited in BLM 2021).

Chemehuevi spiritual beliefs include a sacred landscape that incorporates the spirit world and the natural world. These rituals include songs and dreams that are the basis of their daily lives, linking their beliefs, material existence, and the cultural landscape. Kroeber states that knowledge is acquired by each person according to their dreams (Kroeber 1925, as cited in BLM 2021). The "Salt Song" describes a ceremonial trail that traverses through three present-day states and explains the significance of the mountains and the medicines found in them.

Cahuilla

The Cahuilla are one of several groups that migrated into present-day California from the Great Basin. Although the specific time, duration, and process is unclear, it is estimated to have taken place around 1,500 BP (Kroeber 1925, as cited in BLM 2021; Laylander 1985, as cited in BLM 2021). The Cahuilla's traditional territory encompassed diverse topography ranging from 273 feet below sea level at the Salton Sink to 11,000 feet above mean sea level in the San Bernardino Mountains. The Cahuilla's territory extended from the summit of the San Bernardino Mountains in the north to the Chocolate Mountains and present-day Borrego Springs in the south. Its eastern border included the Colorado Desert west of Orocopia Mountain, and its western border included the San Jacinto Plain near present-day Riverside and the eastern slopes of Palomar Mountain (Bean 1978, as cited in BLM 2021).

Cahuilla villages usually were in canyons or along alluvial fans near adequate sources of water and food plants. The immediate village territory was owned in common by a lineage group or band. The other lands were divided into tracts owned by clans, families, or individuals. Trails used for hunting, trading, and social interaction connected the villages. Each village was near numerous sacred sites (places of importance, such as locations of traditional ceremonies or activities) that included rock art panels (Bean and Shipek 1978, as cited in BLM 2021).

The Cahuilla belief system and oral tradition indicate that when Lake Cahuilla dried up, the desert floor was settled; 17 or more rancherias have been identified in Coachella Valley. These rancheria locations are associated with hand-dug wells, springs, and palm oases. Water collection and conveyance features and associated agricultural fields have been documented from the early 1800s (Schaeffer and Laylander 2007, as cited in BLM 2021).

3.5.2.3 Historic-Period Setting

European presence in the Colorado River region began with explorations in the sixteenth century. Permanent settlement occurred in the mid-nineteenth century as a result of the development of transportation and water conveyance. Exploration was primarily for travel routes in search of interior waterways and from Mexico north

toward Monterey for the establishment of the California missions by the Spanish. The end of the Mexican War of 1846 to 1848, the discovery of gold in California in 1849, and the establishment of California as a state on September 9, 1850, all contributed to a steady influx of non-Hispanic settlers into the area. Later, mining, agriculture, and military training brought settlement to the Riverside County area.

Transportation

Prior to the European presence in the Colorado Desert area, transportation was limited to foot trails used by the Native Americans. As the Spanish began to explore the area, these native trails and trade routes were further used and expanded. One of the more important routes, known as the Bradshaw Trail, was developed as the result of the search for gold in the region, specifically in the area of La Paz, along the eastern side of the Colorado River (Brunzell 2008, as cited in BLM 2021; Johnston 1980, as cited in BLM 2021) and north of the Project area.

The Bradshaw Trail passed through the San Gorgonio Pass through present-day Palm Springs, then turned south and ran through Martinez to the north side of the Salton Sink and between the Orocopia and Chocolate Mountains ranges. The route then skirted the southern edge of the Chuckwalla range and crossed through the Mule Mountains, located immediately southeast of the Project site, and reached the Palo Verde Valley (Brunzell 2008, as cited in BLM 2021; Johnston 1980, as cited in BLM 2021).

Also paramount to the development of the Colorado Desert was the arrival of the Southern Pacific Rail Road, a transcontinental railroad system. Numerous communities sprang up along the route and greatly accommodated the mining boom in the local area (Shumway et al. 1980, as cited in BLM 2021). The railroad was instrumental in settlement of the Colorado Desert areas by providing access and by shipping consumer goods and produce between the east and west coasts (Fickewirth 1992, as cited in BLM 2021). The Southern Pacific Rail Road reached Yuma, Arizona, in 1877, and links north on the river were provided by commercial river boats (Shumway et al. 1980, as cited in BLM 2021). Later, to facilitate mining activities in the Blythe area, a spur was constructed to the Atchison, Topeka, and Santa Fe Blythe–Ripley Line in 1916.

Mining

With the signing of the Treaty of Guadalupe-Hidalgo in 1848, the Southwest came under the control of the United States. The Colorado Desert was the scene of prolonged mining from 1850, with the beginning of the gold rush in California.

Mining and prospecting were primarily focused in the mountains and high desert north of Blythe, and small-scale mining occurred from the 1860s until after the Great Depression in the 1930s (Morton 1977, as cited in BLM 2021). Although gold was found only in small amounts, mining of gypsum and manganese were more successful ventures. To the north in the McCoy Mountains, several significant manganese mines provided ore for armaments during World Wars I and II. Other minerals that were mined from the areas in the Project vicinity include fluorite, copper, and uranium (Warren et al. 1981, as cited in BLM 2021).

Homesteading and Agriculture

The passage of the Homestead Act in 1862 and the Desert Land Act in 1877 were instrumental in the settlement of the Lower Colorado River area. The Homestead Act offered the opportunity for United States citizens to file a claim on up to160 acres of land for $1.25 per acre (Homestead Act of 1862). The Desert Land Act amended the Homestead Act and was enacted to encourage and promote economic development of the desert lands of the western states. The Desert Land Act offered up to 640 acres of land at $1.25 an acre, and required a promise to irrigate the land within 3 years (Desert Land Act of 1877).

Agriculture in the Palo Verde Valley was made possible by the construction of canals and pipelines, as well as the securing of water appropriations. Thomas Blythe came to the lower Colorado River area and established water rights along the Colorado River. His efforts in irrigation and cultivation of the land were successful. The first irrigation project was not completed until 1883, after his death (Warren et al. 1981, as cited in BLM 2021), but eventually 40,000 acres were irrigated as a result of his diverting water from the Colorado River (Blythe Chamber of Commerce 2011, as cited in BLM 2021). The valley was still subject to flooding, however, until after completion of Boulder Dam in the 1930s.

World War II Desert Training Center/California-Arizona Maneuver Area

Soon after the United States entered World War II, General George S. Patton Jr., was assigned the task of developing a training center to prepare U.S. Army troops for combat against German forces in North Africa. General Patton identified an area in the California desert that offered realistic terrain and combat conditions to train the troops. The lack of water, extreme heat, difficult terrain, and remote location would assist preparing troops for mobilization and combat tactics. Training missions were both on the ground and in the air, and all manner of equipment and battle strategies were tested there (Bischoff 2000, as cited in BLM 2021).

General Patton established base operations headquarters at Camp Young, near Indio, and began training troops in April 1942. The Desert Training Center facility extended from Desert Center in California to the Colorado River, as far north as Searchlight, Nevada, and as far south as Yuma, Arizona. To accommodate the massive number of troops brought to the region, the Army took over several desert airfields in 1942, including the one that was to become Blythe Army Air Base, located 7 miles northeast of the Project site.

The Desert Training Center and the California-Arizona Maneuver Area (DTC/C-AMA) consisted of 11 major camps, 7 in California and 4 in Arizona. The larger camps included Camp Iron Mountain, Camp Granite, and Camp Coxcomb, north of Desert Center. All of the facilities were connected by railroads and major roads (Shumway et al. 1980, as cited in BLM 2021). In April 1944, the facilities began evacuations and closing, eventually being turned back to the U.S. Department of the Interior and private landowners (Bischoff 2000, as cited in BLM 2021).

Several of the camps, training sites, and maneuver areas associated with the DTC/C-AMA are relatively near to the Project's APE. Blythe Army Air Field is northeast of the Project site. Camp Coxcomb is to the northwest, and Camp Young is to the west near Chiriaco Summit and the George S. Patton Museum. In addition, the Desert Center Army Airfield is located northwest of the APE at Camp Desert Center, and Camp Granite and Camp Iron Mountain are farther north. The Government Pass training site is in the Chuckwalla Mountains to the west, and the Palen Pass Maneuver Area is north of the Project APE. However, training maneuvers occurred throughout the DTC/C-AMA and not just in association with these established facilities. Traces of the activities that took place within the DTC/C-AMA are present within the Project site, and include tank tracks, fox holes and emplacements, and rock barricades, as well as a variety of artifacts like c-rations, communication wire, spent ammunition, and other refuse.

3.5.2.4 Identified Cultural Resources

This subsection provides the results of cultural resource studies conducted by Applied Earthworks and is based on a Class I literature and records search (Mirro and Clark 2016); Class III inventory (Kidwell et al. 2018, as cited in BLM 2021); Addendum 2 to the Class III inventory (Price 2018, as cited in BLM 2021), which covered a 15-acre APE modification and an extended Phase 1 and Phase 2 archaeological test excavation and evaluation study (McDougall et al. 2019, as cited in BLM 2021); an assessment of potential visual, auditory, and atmospheric effects on sensitive resources within the indirect effects APE (Hanes 2020, as cited in BLM 2021); and a reassessment of potential effects following Project design modifications and an augmented indirect effects analysis (Hanes 2020, as cited in BLM 2021) (note that Class I and Class III are BLM definitions that simply refer to "records search" and "intensive pedestrian survey," respectively). These reports are included as Appendices K.1 through K.5 (Hanes 2020, as cited in BLM 2021). The cultural resources inventory included a records search conducted at the California Historical Resources Information System Eastern Information Center, Native American consultation, and field investigations.

Eastern Information Center Records Search

The Eastern Information Center records search initially covered the APE plus a 1-mile radius. At the request of the BLM, the records search area was expanded by an additional 1 mile to the southeast from the base of the Mule Mountains to encompass the Mule Mountains Area of Critical Environmental Concern. This records search area thus included 30 square miles and extended beyond the physical boundary and viewshed of the Project site in some areas. The records search included a review of previously recorded cultural resources within

the search area, as well as a review of numerous previous studies conducted within the APE. The records search indicated that nine previous studies have occurred within the direct APE, concentrated in the northern portion of the APE, and approximately 14% (407 acres) of the area has been surveyed. The records search also indicated that 67 cultural resources have been previously documented within the APE consisting of 45 archaeological sites and 22 isolates. Of the 45 archaeological sites, 17 are prehistoric archaeological sites, 16 are historic-period archaeological sites, and 6 are multicomponent archaeological sites with materials associated with both periods. The 22 isolated finds consist of 16 prehistoric, 5 historic-period, and 1 prehistoric and historic-period.

Field Inventory Investigations

Between July 24 and November 21, 2017, Applied Earthworks and Aspen Environmental conducted a Class III field survey covering 3,485 acres and encompassing the 3,090-acre direct effects APE (Kidwell et al. 2018, as cited in BLM 2021). Tribal participants from the Colorado River Indian Tribes (CRIT) and the Agua Caliente Band of Cahuilla Indians were also present during the surveys. On December 14, 2018, a supplemental survey of 15 acres of an APE modification for a new generation tie-line alignment was also surveyed, as reported in Addendum 2 to the Class III inventory report (Price 2018, as cited in BLM 2021). Tribal participants from the CRIT were present during the supplemental survey.

The Class III Inventory consisted of a systematic pedestrian survey designed to identify cultural resources to the extent possible on the basis of surface observations. Survey transects were spaced at no more than 20 meters (approximately 66 feet) apart. As part of the survey, cultural resources identified as part of the Eastern Information Center records search were revisited to assess their current condition and update documentation, as necessary. All newly identified cultural resources were recorded on California Department of Parks and Recreation (DPR) 523 site forms. Resource locations were mapped using a handheld GPS unit capable of sub-meter accuracy. Selected attributes of prehistoric archaeological sites, including artifact classes, raw material types, artifact morphology, and count, were documented. For historic-period archaeological sites, information pertaining to artifact class, functional group, diagnostic information (product names, manufacturer, or maker's marks), and count data were collected. Isolated finds were defined as a cultural resource with fewer than three artifacts within a 5-meter by 5-meter square (25 square meters) area. Ceramic concentrations consisting of sherds from the same apparent object were also recorded as isolates. No cultural materials were collected during the survey, and no subsurface testing was conducted. Three previously recorded archaeological sites (CA-RIV-343, -504, and -673) outside of the direct APE were also revisited to verify site boundaries and update DPR records.

As a result of the survey, 122 newly discovered archaeological sites and 161 newly discovered isolates were identified within the direct effects APE. The archaeological sites consisted of 62 prehistoric archaeological sites, 40 historic-period archaeological sites, and 20 multicomponent archaeological sites. All of the isolated finds are from the prehistoric period. In addition to newly discovered resources, the survey relocated all but one of the 45 previously documented archaeological sites, and 11 of the 22 previously documented isolated finds. As a result of the records search and field survey, a total of 167 archaeological sites (82 prehistoric, 58 historic-period, and 27 multicomponent) and 183 isolated finds (178 prehistoric and 5 historic period) were documented within the direct effects APE.

Resources Within the Project Area

For purposes of CEQA, CDFW is following the preliminary recommendations of resource eligibility prepared by Applied Earthworks as presented in Addendum 1 (Price 2019)[1] of the Class III inventory report (Kidwell et al. 2018, as cited in BLM 2021), and is using those recommendations to make discretionary determinations of resource eligibility for listing in the CRHR. Addendum 1 (Price 2019) categorizes the resource types (i.e., prehistoric, historic-period, and multicomponent archaeological sites) within the direct effects APE. Preliminary eligibility recommendations were prepared individually for prehistoric and historic-period archaeological

[1] CDFW's use of the recommendations in Addendum 1 to make discretionary determinations of resource eligibility for the CRHR does not affect the BLM's process of making formal determinations of eligibility for the National Register of Historic Places. The BLM has not accepted these recommendations, and this discussion of Addendum 1 is relevant to CDFW's CEQA analysis only.

components, meaning that the prehistoric components of multicomponent sites were evaluated separately from the historic-period components. The data presented here reflect these component-based evaluations. Isolated finds, which lack archaeological association and research value, generally are not recommended eligible for listing in the CRHR. The following discussion pertains to archaeological sites only, and does not consider further the 183 isolated artifacts, which CDFW has determined to be ineligible. As described below in the discussion for the direct effects APE, CDFW acknowledges that all 178 prehistoric isolated artifacts documented in the APE hold tribal value as important components of the Mule Mountain Tribal Cultural Landscape.

Within the Project area where direct impacts could occur there are 82 prehistoric archaeological sites and 27 prehistoric components of multicomponent sites. Each of these prehistoric sites or components of sites is considered to be part of the Mule Mountain Tribal Cultural Landscape and to convey tribal value that may not be conveyed by their archaeological importance. Addendum 1 classified 81 of the 109 prehistoric sites or components of sites as sparse prehistoric artifact scatters. These 81 components lack artifact diversity and chronological indicators, and do not appear to contain buried components, and so were recommended ineligible for listing in the CRHR under archaeological values. Three sites are classified as lithic scatters with a diverse assemblage of flaked stone but no other artifact classes. These sites contain no temporally diagnostic artifacts or other datable materials. Although they contain a more diverse assemblage than the sparse artifact scatters, they do not appear to contain subsurface deposits and generally lack the associative or scientific research values that would make them significant. For these reasons, the three lithic scatters were recommended ineligible for listing in the CRHR for their archaeological values. Four of the sites were classified as ceramic scatters. Because of the stylistic attributes of the ceramics and their ability to be dated, these resources were considered to have scientific research value and "importance to the tribes" (Price 2019:7). As such, they were recommended eligible for the CRHR under Criteria 1 and 4. Ten resources were classified as complex artifact scatters, and because of the diversity of artifact types and associated features, they appear to have scientific value and were recommended eligible for the CRHR under Criterion 4. Two resources consist of cleared circles and rock rings. Because of their scientific values and "possible association with trans-regional travel, vision questing, and other ceremonial functions, and because of their importance to the tribes" (Price 2019:7), they also were recommended eligible for the CRHR under Criteria 1 and 4. Seven sites were classified as thermal features consisting of fire-affected rock. Given the potential to date the resources, these also were recommended eligible for listing in the CRHR under Criterion 4. The two remaining resources comprise individual prehistoric artifacts within larger historical sites; these prehistoric components were judged ineligible for listing in the CRHR.

Within the Project site where direct impacts could occur there are 58 historic-period archaeological sites and 27 historic-period components of multicomponent sites. One of these resources is classified as a temporary historical camp. The resource lacks association with a particular event and lacks diversity in artifact types. As such, it was recommended ineligible for listing in the CRHR. Fifty-nine resources were classified as refuse scatters and dumps. Similarly, given their lack of association with known events and their lack of distinctive features, these also were recommended ineligible for listing in the CRHR. Twenty-one resources were characterized as military emplacements, likely associated with the DTC/C-AMA. However, these features in themselves are not prominent enough to convey the significance of DTC/C-AMA operations, nor are they associated with a specific person. As such, they were determined to be ineligible for listing in the CRHR. One resource was classified as a vehicle track. Although the resource may relate to the DTC/C-AMA, it is not possible to associate it with a particular activity, and it too was determined to be ineligible for listing in the CRHR. One resource consists of a historical-period rock stack, termed a cairn. Lacking in association, it was determined to be ineligible for listing in the CRHR. Ten resources consist of land surveying objects, including survey markers, monuments, benchmarks, and cairns. None have unique qualities and none were determined to be eligible for listing in the CRHR.

In total, 23 resources are considered eligible for listing in the CRHR due to archaeological value (Criterion 4) under CEQA's significance criteria. However, CDFW's consultation with the tribes under CEQA also resulted in CDFW's determination that these 23 resources also constitute individual tribal cultural resources that convey tribal values over a broad landscape (see Table 3.5-1). The 23 CRHR-eligible resources listed in Table 3.5-1 include archaeological sites that were determined ineligible for the National Register of Historic Places (NRHP) by the BLM (CA-RIV-10023, CA-RIV-10027/H, CA-RIV-10963, CA-RIV-12744, CA-RIV-12765; see McDougal et al. 2019). The BLM's determinations on these archaeological sites did not mitigate their tribal values conveyed as designated tribal cultural resources.

Tribal Cultural Landscape

CDFW, through discussions with consulting tribes, determined that the Mule Mountain Tribal Cultural Landscape intersects the Project area. This Tribal Cultural Landscape is anchored by the Mule Tanks Discontiguous Rock Art District; the primary contributing sites to the Mule Tanks District (see indirect effects APE discussion, below) are located outside of the direct effects APE. However, the Mule Mountain Tribal Cultural Landscape is represented within the direct effects APE by all identified aboriginal archaeological sites and isolated artifacts, and encompasses the entirety of the direct effects APE. Whether or not individual archaeological sites or isolates are considered eligible for CRHR listing, all sites and isolates convey tribal value and represent possessions of ancestors who lived on the landscape.

CDFW's acknowledgement of the Mule Mountain Tribal Cultural Landscape affirms positions taken by consulting tribes. In their comment letter on the Draft EIS/EIR (see BLM Final EIS Appendix V, Letter 11), CRIT summarizes archaeological evidence presented in the Draft EIS/EIR that illustrates the Mule Mountain Tribal Cultural Landscape. This evidence includes a system of prehistoric trails that link various Native American populations across the Southern California landscape from the desert to the coast, and myriad archaeological sites associated with that travel and local habitation. CRIT cites the Draft EIS/EIR that states that trails link the spiritual world to the natural landscape. Furthermore, the California Energy Commission has been studying prehistoric trails and related sites in the broader region of the Crimson Solar Project in a study titled Prehistoric Trails Network Cultural Landscape, which acknowledges the interconnectedness of aboriginal populations in the Southern California region. Quechan provided similar input in a letter to CDFW and BLM dated May 20, 2020. In that letter, Quechan notes that Mule Mountains, McCoy Mountains, Palen Mountains, Eagle Mountains, Big Maria Mountains, and the Palo Verde and Chuckwalla Valleys represent a connected landscape intersected by trails that ancestral peoples used for trade, subsistence, medicine, and religious purposes. In Quechan's view, the Mule Mountain Tribal Cultural Landscape is important for local tribes because it provides evidence of local tribes' ancient connection to the land, and removal of such evidence (i.e., archaeological evidence), whether through singular archaeological sites and isolates, or with the construction of multiple large-scale energy projects, erases their connection to the landscape and inhibits their self-stated responsibility to care for that evidence.

Overall, CDFW views the Mule Mountain Tribal Cultural Landscape as integral to the overall tribal cultural landscape that includes adjacent regions. Locally, the Mule Mountain Tribal Cultural Landscape includes the 23 CRHR-eligible prehistoric archaeological sites within the direct effects APE that CDFW individually considers tribal cultural resources under CEQA (see Table 3.5-1). As such, CDFW's analysis of impacts in the direct effects APE considers impacts to individual tribal cultural resources and to the broader Mule Mountain Tribal Cultural Landscape.

Indirect Effects APE

In addition to resources within the direct effects APE, several resources of concern were identified within the indirect effects APE, which extends south of the Project site (Hanes 2020, as cited in BLM 2021; Price 2020). These include three historic properties with heightened cultural sensitivity and values that could be indirectly affected by the proposed undertaking: the Mule Tank Petroglyph Site (CA-RIV-504), the Mule Canyon Intaglio Site (CA-RIV-773), and archaeological site CA-RIV-1821/H. The first two (CA-RIV-504 and -773) are currently listed on the NRHP under Criteria C and D individually and as contributors to the Mule Tank Discontiguous Rock Art District, and therefore are automatically listed in the CRHR (Criteria 3 and 4). CDFW considers CA-RIV-1821/H eligible for listing in the CRHR under Criteria 3 and 4.

As discussed above for the direct effects APE, and in Section 3.5.5, under Impact 3.5.5d, CDFW has determined that the Mule Mountains are a tribal cultural resource (the Mule Mountain Tribal Cultural Landscape), as defined in PRC Section 21074. This resource encompasses the direct effects APE and is located within the indirect effects APE. CDFW conducted additional assessments in response to comments from tribes to determine the potential impacts of the proposed Project on components of this resource.

The visual assessments found that only a small portion of the Mule Tank Petroglyph Site (CA-RIV-504) would have a view of the proposed Project, and that the remainder of the site would be fully screened by the immediate surrounding topography, since the site is situated in a deep, narrow arroyo (Hanes 2020, as cited in BLM 2021). Because of this, and because historical significance under Criterion 3 is typically tied to factors of location,

materials, design, and workmanship, which are not susceptible to visual effects, CDFW has determined that site CA-RIV-504 would continue to convey its historical significance and that the Project would not result in a significant impact. Regarding the other two resources, the Mule Canyon Intaglio Site (CA-RIV-773) and CA-RIV-1821/H, the visual analysis found that the Project falls outside the viewsheds of the two resources because the resources are located just below the brow of a low rise that shields them from an open view of the proposed development. Therefore, CDFW determined that the resources would not be visually impacted by the Project, regardless of the alternative selected. The assessment also concluded that potential auditory and atmospheric (i.e., dust) effects from the Project would be transitory and, thus, would not pose significant impacts in this respect on any of these three resources.

The visual assessment further considered the potential for visual impacts on two historic-era transmission lines (33-011110 and 33-012532) and eight prehistoric sites containing trail segments (CA-RIV-53, -343, -504, -650, -673, -772, -3803, and-12028) within the indirect effects APE (Hanes 2020, as cited in BLM 2021). The two transmission lines have been previously determined by the BLM as eligible under Criterion A. These structures do not have direct views of the proposed Project, so would not be adversely affected. As noted above, CA-RIV-504 (the Mule Tank Petroglyph Site) is automatically listed in the CRHR. The remaining seven sites are considered eligible by CDFW for listing in the CRHR under Criteria 3 and 4. These eight sites contain trail segments that are generally oriented in an east-to-west direction through the Project vicinity. Three of the sites (CA-RIV-650, -772, and -12028) do not have direct views of the Project site, and so would not be visually impacted. For the remaining five sites (CA-RIV-53, -343, -504, -673, and -3803), at least a portion of the Project would be visible from the sites. CDFW has determined that because historical significance under Criterion 3 is typically tied to factors of location, materials, design, and workmanship, the sites would continue to convey their historical significance, and the Project would not result in significant visual, auditory, or atmospheric impacts, regardless of the alternative selected. As part of the NHPA Section 106 process, the BLM received California State Historic Preservation Office concurrence on this assessment.

TABLE 3.5-1
RESOURCES WITHIN THE PROJECT AREA ELIGIBLE FOR THE CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Primary	Trinomial	Temporary No.	Description	CRHR Eligibility[2]
33-001819[1]	CA-RIV-1819/H	AE-3372-464/H	Ceramic and lithic scatter; military training local, historical refuse scatter	Prehistoric component eligible under Criterion 4 and a TCR; historical component not eligible
33-010023	CA-RIV-10023[3]	AE-DEV-35	Thermal feature; lithic scatter	Eligible; Criterion 4 and a TCR
33-019713[1]	CA-RIV-10027/H[3]	AE-DEV-40/H	Thermal feature; lithic scatter; historical refuse scatter	Prehistoric component eligible under Criterion 4 and a TCR; historical component not eligible
33-019719[1]	CA-RIV-10033/H	AE-DEV-46	Thermal feature; lithic scatter; historical refuse scatter	Prehistoric component eligible under Criterion 4 and a TCR; historical component not eligible
33-021131	CA-RIV-10963[3]	—	Ceramic and lithic scatter	Eligible; Criterion 4 and a TCR
33-023732	CA-RIV-11650	—	Ceramic scatter	Eligible; Criterion 4 and a TCR
33-028260	CA-RIV-012731	AE-3372-039	Ceramic and lithic scatter	Eligible; Criterion 4 and a TCR
33-028279	CA-RIV-012744[3]	AE-3372-132	Ceramic and lithic scatter	Eligible; Criterion 4 and a TCR
33-028285	CA-RIV-012750	AE-3372-141	Ceramic and lithic scatter with fossilized bone; prehistoric trail segment	Eligible; Criterion 4 and a TCR
33-028293[1]	CA-RIV-12758/H	AE-3372-154/H	Ceramic scatter; historical refuse scatter	Prehistoric component eligible under Criterion 4 and a TCR; historical component not eligible
33-028294	CA-RIV-012759	AE-3372-155	Ceramic scatter with sparse flaked and groundstone; fire-affected rock	Eligible; Criterion 4 and a TCR
33-028347	CA-RIV-012765[3]	AE-3372-165	Ceramic scatter	Eligible; Criterion 4 and a TCR
33-028366	CA-RIV-012784	AE-3372-199	Flaked and groundstone lithic scatter	Eligible; Criterion 4 and a TCR
33-028368	CA-RIV-012786	AE-3372-230	Ceramic and lithic scatter	Eligible; Criterion 4 and a TCR

TABLE 3.5-1
RESOURCES WITHIN THE PROJECT AREA ELIGIBLE FOR THE CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Primary	Trinomial	Temporary No.	Description	CRHR Eligibility[2]
33-028369	CA-RIV-012787	AE-3372-231	Thermal features; lithic scatter	Eligible; Criterion 4 and a TCR
33-028375	CA-RIV-012793	AE-3372-240	Thermal features	Eligible; Criterion 4 and a TCR
33-028376	CA-RIV-012794[3]	AE-3372-245	Thermal features	Eligible; Criterion 4 and a TCR
33-028378	CA-RIV-012796	AE-3372-248	Thermal features	Eligible; Criterion 4 and a TCR
33-028385	CA-RIV-012803	AE-3372-256	Thermal features; ceramic scatter	Eligible; Criterion 4 and a TCR
33-028390	CA-RIV-012807	AE-3372-263	Thermal features; ceramic and groundstone scatter	Eligible; Criterion 4 and a TCR
33-028391	CA-RIV-012808	AE-3372-266	Ceramic scatter with effigy vessel sherds	Eligible; Criterion 4 and a TCR
33-028478	CA-RIV-012822	AE-3372-292	Cleared circles; lithic scatter	Eligible; Criterion 4 and a TCR
33-028487	CA-RIV-012831	AE-3372-324	Cleared circle; lithic scatter	Eligible; Criterion 4 and a TCR

NOTES: CRHR = California Register of Historical Resources; TCR = tribal cultural resource

1 Sites with both prehistoric and historical components, and several historical sites, are composed of two site classes. Each class was evaluated for eligibility.
2 CRHR eligibility determinations in this table do not reflect BLM determinations of National Register of Historic Places (NRHP) eligibility.
3 Select sites were found ineligible for listing in the NRHP by the BLM during testing, along with three others not listed here (McDougall et al. 2019, as cited in BLM 2021), although CDFW does not concur, retaining CEQA significance for archaeological sites evaluated by the BLM as not significant (CA-RIV-10023, CA-RIV-10027/H, CA-RIV-10963, CA-RIV-12744, CA-RIV-12765).

Sensitivity for Buried Archaeological Resources

The Class III inventory (Kidwell et al. 2018, as cited in BLM 2021) provides a review of relevant geo-archaeological investigations. Additional analysis is provided by Jill Onken (2019, as cited in BLM 2021). According to her work, the sensitivity of the Project area for buried prehistoric archaeological resources is difficult to predict in the absence of more intensive study for several reasons, as discussed below. The Project area is located on the lower portion of the piedmont flanking the northern front of the Mule Mountains and overlooking the Chuckwalla Valley. Inspection of U.S. Geological Survey topographic maps and satellite imagery of the area indicates that the Project is situated on distal alluvial fan deposits that are locally mantled by eolian dunes or sheets.

As is often the case for the desert areas of southeastern California, neither soil maps nor detailed geological surficial mapping is available for the Project area. The best available geological map (Stone 2006, as cited in BLM 2021) is small-scale (1:100000) and does not include detailed mapping of surficial alluvium. This map depicts most of the Project site as Holocene alluvium, suggesting that much of the area may have moderate or high sensitivity.

Although soils in the Project area have not been mapped, Natural Resources Conservation Service mapping is available for the area to the immediate east, including most of the footprint of the Desert Quartzite Solar project. Windingstad (2016, as cited in BLM 2021) interpreted the predominant soil series there (Aco, Orita, and Rositas series) as indicative of possible moderate to high sensitivity for buried sites. Because no soils data are available for the Project site, preliminary evaluation of buried site sensitivity is dependent almost wholly on interpretation of satellite imagery.

In the upper and middle portions of Colorado Desert piedmonts, Holocene and Pleistocene alluvial fan surfaces are relatively easy to differentiate on satellite imagery, based on the degree of pavement formation and erosion evident (Bull 1991, as cited in BLM 2021). The Project, however, is situated on the lower piedmont, where distinguishing early Holocene from late Pleistocene alluvial surfaces is more ambiguous.

Geomorphological field investigations of the Project APE were conducted concurrently with archaeological testing excavations in August 2019 and included detailed geomorphic mapping and field inspection of a representative sample of the geomorphic surfaces tentatively identified on satellite imagery. Preliminary results indicate that roughly 10% of the Project APE appears to consist of relict Pleistocene landforms with well-

developed desert pavements. These landforms are composed of alluvium likely deposited prior to human occupation of the area and therefore probably have very low sensitivity for buried archaeological resources. Approximately 20% of the Project APE is covered by latest Pleistocene to late Holocene gravel-rich fan alluvium that was probably deposited between 12,000 and 2,000 years ago. Although these deposits are likely young enough to contain prehistoric archaeological material, they represent high-energy depositional environments where site preservation is improbable. As a result, these areas probably have low sensitivity for intact, buried prehistoric sites. Surficial deposits in the remainder of the Project area are dominated by lower-energy fan deposits and eolian deposits of probable latest Holocene age (younger than 2,000 years). This suggests that approximately 70% of the Project APE could have moderate or high potential to contain intact buried sites. That said, future subsurface exploration and consideration of the natural and cultural context of these areas could justify a lower sensitivity classification if the Holocene deposits are found to be thin or if areas lack proximity to resources, such as water and toolstone.

3.5.2.5 CEQA Tribal Consultation and CDFW's Communication and Consultation Policy

Per CEQA requirements, tribal cultural resources are primarily identified through outreach to the Native American Heritage Commission (NAHC) and government-to-government consultation between a lead agency and the appropriate California Native American tribes. On July 25, 2017, CDFW sent a request to the NAHC for a search of its Sacred Lands File and a list of tribes that may be affiliated with the Project area. The NAHC performed a records search of the Sacred Lands File, which was negative, and provided a list of Native American tribes that may have knowledge of cultural resources in the Project area. On August 25, 2017, CDFW provided notification of the Project under CEQA Section 21080.3.1 and CDFW's Tribal Communication and Consultation Policy to the 22 tribes identified by the NAHC. The notification letters included a description of the Project and potential impacts on tribal interests, and invited consultation pursuant to CEQA and CDFW's Tribal Communication and Consultation Policy. Two tribes timely responded: the CRIT and the Twenty-Nine Palms Band of Mission Indians.

The CRIT requested formal consultation in a letter dated September 25, 2017, and outlined their government-to-government consultation process. CDFW's tribal liaison attempted to arrange an informal conference call for October 4, 2017, by email on September 27, 2017, and offered to help facilitate a formal government-to-government in-person meeting in compliance with the CRIT's consultation policy. CDFW received a letter from the CRIT on April 16, 2018, through another state agency, that reiterated their consultation policy. CDFW and CRIT exchanged correspondence related to the Project from 2018 and into 2021. CRIT submitted a formal comment letter on the Project on January 29, 2020, detailing CRIT's concerns with the Draft EIR and the Project's potential to transform a significant cultural landscape. CDFW and CRIT held an initial staff-to-staff meeting on February 25, 2020, and have held a series of staff-level conversations since that time.

The Twenty-Nine Palms Band of Mission Indians sent a letter dated September 21, 2017, indicating that they have been in correspondence with the BLM regarding the Project, and that they would like approved Native American monitors from the Twenty-Nine Palms Band of Mission Indians to be included in the Project. They also requested to review the BLM Class III Cultural Report when completed. On September 27, 2017, CDFW's tribal liaison sent an email to Ms. Bliss from the Twenty-Nine Palms Band of Mission Indians informing the tribe of CDFW's willingness to schedule a formal government-to-government consultation meeting. Following the BLM's decision to conduct testing in July 2019, CDFW sent a letter via overnight delivery (delivered on August 2, 2019), and via email on August 1, 2019, to the Twenty-Nine Palms Band of Mission Indians reaching out to request if Twenty-Nine Palms Band of Mission Indians would like to have a government-to-government consultation meeting regarding the Project. As of the time of publication of this Final EIR, CDFW has not had further discussions with the Twenty-Nine Palms Band of Mission Indians.

In addition to consultation through the CEQA process, on April 12, 2018, at the public scoping meeting in Blythe, California, Linda Otero from the Fort Mojave Indian Tribe had a one-on-one conversation with the CDFW representative in attendance. At this meeting, Ms. Otero made CDFW aware that the tribe had concerns regarding the Project, and requested an opportunity to discuss their concerns with CDFW. On April 13, 2018,

CDFW sent Ms. Otero a copy of the Project's Notice of Preparation via email and asked Ms. Otero to share the tribe's concerns with CDFW. Ms. Otero responded on April 18, 2018, thanking CDFW and indicating she was eager to meet in the future. On April 18, 2018, CDFW emailed Ms. Otero requesting that the tribe send a formal letter to CDFW indicating its interest in government-to-government consultation. CDFW also requested that Ms. Otero indicate her role in the consultation process in the letter. As of the time of publication of this Final EIR, CDFW has not had further discussions with the Fort Mojave Indian Tribe.

Pursuant to requests from the CRIT and Twenty-Nine Palms Band of Mission Indians, on May 23, 2019, CDFW confirmed with the CRIT that the BLM provided them with copies of the cultural resources report and addenda on March 13, 2019. Also on May 23, 2019, CDFW confirmed with Twenty-Nine Palms Band of Mission Indians that the BLM provided the cultural resources report and addenda on March 12, 2019.

The Quechan Indian Tribe sent an email on January 1, 2020, requesting information and discussion regarding the Project. CDFW and the Quechan Indian Tribe had an initial staff-to-staff call on February 25, 2020, to discuss the Project, during which the Quechan Indian Tribe requested formal consultation with CDFW. CDFW and the Quechan Indian Tribe engaged in formal consultation and held a series of staff-level discussions through 2020 and into 2021. The Quechan Indian Tribe submitted a formal comment letter on the Draft EIS/EIR on May 7, 2020, describing the cultural landscape of the Project area.

CDFW has incorporated information and mitigation measures as a result of the consultations and discussions with the CRIT and the Quechan Indian Tribe in the Final EIR. The potentially feasible mitigation measures agreed upon in the consultation process with the CRIT and Quechan Indian Tribe would avoid or lessen Project impacts on tribal cultural resources.

Based on outreach to the tribes conducted to date by CDFW, tribal comment letters, and ongoing staff-level discussions with the CRIT and the Quechan Indian Tribe, CDFW has identified the Mule Mountain Tribal Cultural Landscape as eligible for listing in the CRHR for its tribal value (Criterion 1), and as being significant pursuant to PRC Section 5024.1(c) based on the following criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history or cultural heritage.
2) Is associated with the lives of persons important in our past.
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4) Has yielded, or may be likely to yield, information important in prehistory or history.

The Mule Mountains are a place of critical cultural importance to members of CRIT and the Quechan Indian Tribe, particularly to the Mohave and Quechan people. Although the Mohave people were forcibly removed from this area to create opportunity for private and federal ownership, the Mohave and Quechan people remain culturally tied to the Mule Mountains.

The general Project area contains a wealth of archaeological and cultural sites and other features, including trails and ceremonial sites, and forms the center of a regional trail network. Travelers, traders, and ritualists stopped off in the Mule Mountains regularly. The Mule Tank Discontiguous Rock Art District, containing archaeological sites CA-RIV-504 and CA-RIV-773, is located in the northern Mule Mountains. This is an archaeological district that is listed in the NRHP and is culturally significant for the Native American tribes associated with the area along the Colorado River, including the CRIT and the Quechan Indian Tribe. The district includes a natural water catchment and was—and is—an important junction of indigenous travel routes and a focus point of human activity. Numerous trails extend away from this district throughout the Mule Mountains, and are related to the intaglios and petroglyphs. CRIT and the Quechan Indian Tribe consider the Mule Mountains and surrounding area to be an irreplaceable landscape that provides a sense of place and identity, and to be vital to the tribes' continuing cultural heritage.

Within the direct effects APE, 23 archaeological sites are considered significant for their tribal values and are therefore considered by CDFW to be tribal cultural resources. For the reasons previously discussed, however, the Project will not substantially and adversely change the significance of this resource.

3.5.3 Analytical Methodology

For purposes of CEQA, this EIR uses information gathered as part of the NHPA Section 106 process about significant cultural resources (historical resources or tribal cultural resources under CEQA) and the potential effects to such resources from the proposed Project. The cultural resource studies included a records search and literature review, field survey, outreach to the NAHC, consultation with Native American tribes, preliminary evaluation of resources, and assessment of potential indirect impacts on cultural resources. Consultation efforts included outreach by CDFW to 22 tribes identified by the NAHC as having an interest in the Project area, and subsequent outreach with the CRIT, Twenty-Nine Palms Band of Mission Indians, and the Quechan Indian Tribe. The impact analysis takes into account direct, indirect, and cumulative effects.

3.5.4 Direct and Indirect Effects

The following analyses address construction, operation, and decommissioning.

3.5.4.1 Alternative A: Proposed Action

Project-related ground-disturbing construction activities could directly impact known tribal cultural, archaeological, and historical resources and those inadvertently discovered during construction by damaging and displacing artifacts. Such construction activities could diminish the integrity and alter the significance-conveying characteristics of historic properties under the NRHP, and historical resources and tribal cultural resources under the CRHR. Increased awareness of the cultural resources and increased public access could result in direct damage through vandalism or inadvertent damage. Mitigation Measure CUL-2 requires preparation of a Long-Term Management Plan that requires periodically assessing unanticipated effects to historic properties in the direct effects APE and indirect effects APE that have been avoided (specifically, the Mule Tank Discontiguous Rock Art District). The Long-Term Management Plan will specify actions to be taken if unanticipated effects, such as vandalism, are identified. Furthermore, indirect effects to archaeological resources and places of traditional cultural importance could occur. Flash floods, the effects of which would likely be magnified due to soil erosion caused by the proposed Project, could cause disturbance of surface or subsurface cultural resources located downslope of the APE. But due to views and distances from the Project area, no indirect impacts, including visual, auditory, or atmospheric, are anticipated to any of the resources identified within the indirect impact area.

Based on outreach to tribes conducted to date, CDFW has identified 23 historical resources as eligible for the CRHR under Criterion 4 for their archaeological values and are also considered tribal cultural resources. The Mule Mountain Tribal Cultural Landscape is intersected by the Project's direct effects APE and indirect effects APE. In addition, the potential exists for archaeological resources possessing tribal values that may qualify as tribal cultural resources to be encountered during Project ground-disturbing activities.

Avoidance of direct impacts is the preferred measure for resolving adverse effects on CRHR-eligible or -listed resources, and can be accomplished by preventing any direct ground disturbance of the resource through Project design, establishment of protective fencing, worker training, monitoring, and other measures. If avoidance is not feasible, mitigation has been developed that would minimize significant impacts. Mitigation Measure CUL-1 requires the preparation and execution of an NHPA Section 106 Memorandum of Agreement (MOA) and a Historic Properties Treatment Plan developed as part of the MOA process to resolve adverse effects to historic properties, should adverse effects be identified. Mitigation Measure CUL-2 requires preparation of a Long-Term Management Plan that would require periodic visitation to protected cultural resources to determine if intentional or inadvertent damage due to operation and maintenance or increased public access is occurring. Mitigation Measure CUL-3 provides a plan for addressing the discovery of human remains during Project implementation. Mitigation Measures CUL-4, CUL-5, and CUL-6 provide procedures for unanticipated effects

to identified historic properties, as well as procedures for post-review discoveries, including significance evaluation and determining whether avoidance is feasible or whether mitigation through data recovery or other method is necessary. Mitigation Measure CUL-7 pertains to worker training.

Most impacts are expected to occur during construction, since operation and decommissioning activities would generally be confined to the same areas impacted by construction. However, operation and decommissioning impacts, and impacts resulting from public visitation and vandalism, are possible, particularly to unknown resources or through inadvertent and unanticipated damage to known resources. Mitigation Measures CUL-1 through CUL-7 apply to construction, operation, and decommissioning, ensuring that adverse effects to historic properties are avoided, minimized, and mitigated during all Project phases.

Implementation of potentially feasible Mitigation Measures CUL-8 through CUL-10 would further avoid or minimize potential impacts on tribal cultural resources. Mitigation Measure CUL-8 requires CEQA-specific data recovery excavation and development of a treatment plan for the 23 resources determined to be historical resources by CDFW under Criterion 4 for their scientific value, as well as those eligible under Criterion 1 for tribal values. Mitigation Measure CUL-9 requires procedures for post-review discovery of tribal cultural resources. Mitigation Measure CUL-10 pertains to the retention of Native American tribal monitors. Collectively, these measures will amplify the identification and handling procedures addressed in Mitigation Measures CUL-1 through CUL-7.

3.5.4.2 Alternative B: Alternative Design

Alternative B is defined by implementation of three Design Elements (presented as DE-1, DE-2, and DE-3 in Table 3.5-2) that differ from Alternative A. Alternative B would not result in changes to effects associated with linear features of the Project. Table 3.5-2 summarizes the change in adverse effects on cultural and historic resources under Alternative B, by Design Element.

TABLE 3.5-2
CHANGE IN ADVERSE EFFECTS UNDER ALTERNATIVE B BY DESIGN ELEMENT RELATIVE TO EFFECTS UNDER ALTERNATIVE A

Resource/Environmental Factor	DE-1	DE-2	DE-3
Cultural, Tribal, and Historic Resources	Reduction	Reduction	Reduction

DE = Design Element
DE-1: Minimize grading during site preparation and maintain more on-site vegetation to facilitate post-construction residual habitat value and post-operations/site reclamation success.
DE-2: Avoid or limit trenching by placing electrical wiring aboveground.
DE-3: Place transformer/inverter groups on elevated support structures in lieu of cement foundations.

Alternative B would occur within the same footprint as Alternative A, meaning the same 167 sites (82 prehistoric, 58 historic-period, and 27 multicomponent) and 183 isolates (178 prehistoric and 5 historic-period) would occur within the APE. Alternative B would minimize grading, avoid or limit trenching, and use elevated support structures in lieu of solid cement or steel foundations. This would reduce ground disturbance and also allow more flexibility in Project development, both of which could reduce potential direct impacts on cultural resources, both known and unknown. However, the specific reduction in impacts on cultural resources is unknown and, as with Alternative A, there is a potential for direct adverse effects on historic properties. Consequently, Alternative B would require implementation of Mitigation Measures CUL-1 through CUL-10 to avoid or minimize Project-related impacts on cultural resources.

Overall, the impacts of operation and decommissioning of Alternative B would be similar but reduced relative to Alternative A because of the reduced ground-disturbance impacts.

3.5.4.3 Alternative C: Reduced Acreage Alternative

Construction of Alternative C would result in similar types of impacts on cultural resources as described for the proposed Project. However, because of the reduced size of Alternative C, the number of cultural resources that could be directly affected would be reduced. In total, Alternative C could impact 95 sites (37 prehistoric, 48 historic-period, and 10 multicomponent) and 97 isolates (all prehistoric). In comparison with Alternative A, there would be potential impacts on 72 fewer archaeological sites and 86 fewer isolates. The potential to encounter undiscovered resources also would be reduced. Consequently, Alternative C construction impacts would be reduced relative to Alternative A. Regardless, and as with Alternative A, there is a potential to directly and adversely affect known and unknown historic properties, and Alternative C would require implementation of Mitigation Measures CUL-1 through CUL-10 to avoid or minimize Project-related impacts on cultural resources.

Overall, impacts associated with operation and decommissioning of Alternative C would be reduced relative to Alternative A because of the reduced Project area and avoidance of potentially significant resources.

3.5.4.4 Alternative D: No Plan Amendment/No Action/No Project Alternative

Under this alternative, none of the components of the Project would be built. If Alternative D were implemented, there would be no changes to on-site conditions or the existing environmental setting as described above, and the existing environmental setting would be maintained. Under this alternative, there would be no potential for adverse effects to tribal or cultural resources.

3.5.5 CEQA Significance Thresholds and Determinations

Cultural and Historical Resources

Based on the CEQA Guidelines Appendix G, a project would have a significant impact on cultural and historic resources if it would:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA Guidelines Section 15064.5.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5.

c) Disturb any human remains, including those interred outside of dedicated cemeteries.

Tribal Cultural Resources

Based on Appendix G of the CEQA Guidelines, a project would have a significant impact on a tribal cultural resource if it would:

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

   (i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

   (ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.5.5.1 Alternative A: Proposed Action

Cultural and Historical Resources

Impact 3.5.5a: Would the Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? (*Significant and unavoidable*)

Initially, there were 23 resources within the direct effects APE that CDFW determined were eligible for listing in the CRHR and could be directly impacted by the Project. Six of these (plus three others not previously identified) were recommended ineligible after testing. The remaining 23 resources are historical resources as defined in CEQA Guidelines Section 15064.5. Seventeen of the resources (or prehistoric components of multi-component sites) are eligible solely for their data potential under CRHR Criterion 4. Six of the resources are eligible under Criterion 4 for their data potential, but also convey tribal values. The Project also has the potential to impact previously unknown, buried archaeological resources. Without mitigation, the destruction or degradation of these historical resources could constitute a significant adverse change, and a significant impact under CEQA. To reduce potential impacts, Mitigation Measures CUL-1 through CUL-10 would be implemented. Mitigation Measure CUL-1 requires the preparation and execution of an NHPA Section 106 MOA, to which CDFW may be a concurring party, and preparation of a Historic Properties Treatment Plan to avoid, minimize, or mitigate adverse effects on historic properties, should those effects be identified. Mitigation Measure CUL-2 requires the preparation of a Long-Term Management Plan as part of the MOA process to resolve adverse effects to historic properties, should adverse effects be identified. Mitigation Measure CUL-3 requires preparation of a plan for addressing human remains discovered during Project implementation. Mitigation Measures CUL-4, CUL-5, and CUL-6 require procedures for unanticipated effects to historic properties and post-review discoveries of archaeological resources, including significance evaluation and determination of whether avoidance is feasible or whether mitigation through data recovery or other method is necessary. Mitigation Measure CUL-7 requires worker training. Mitigation Measures CUL-8, CUL-9, and CUL-10 are specific to CEQA, focusing on tribal cultural resources. Mitigation Measure CUL-8 requires CEQA-specific data recovery excavation and development of a treatment plan for the 23 resources determined to be historical resources by CDFW under Criterion 4 for their scientific value, as well as those eligible under Criterion 1 for tribal values. Mitigation Measure CUL-9 requires procedures for post-review discovery of tribal cultural resources. Mitigation Measure CUL-10 pertains to the retention of Native American tribal monitors who will be present for any and all ground-disturbing activities.

Mitigation Measures CUL-1 through CUL-10 are designed to reduce impacts to the archaeological values under Criterion 4 on historical resources. However, these measures may not fully resolve impacts to the tribal values conveyed by the archaeological materials. Data recovery as mitigation for historical resources that are eligible under Criterion 4, or that derive their significance from their scientific value or data potential, effectively mitigate scientific or data-related impacts to a less-than-significant level, but may also result in adverse tribal cultural impacts through the removal of prehistoric cultural material, to which consulting tribes have objected. Moreover, consulting tribes also object to removal of cultural material from all prehistoric archaeological resources (including significant and non-significant archaeological sites, and isolated cultural materials) from the Mule Mountain Tribal Cultural Landscape. Therefore, under CEQA, impacts of the Project on historical resources would be significant and unavoidable.

The indirect effects analysis considered potential visual, atmospheric, and auditory effects on the sites within the indirect effects APE, with the primary focus on visual line-of-sight effects. As a result of the analysis (Hanes 2020, as cited in BLM 2021), visual effects were judged to be non-adverse for all three sites. Indirect atmospheric and auditory effects on all three sites would only occur during the construction phase, and therefore would be transitory in nature. As a result of the analysis, they also were considered to be non-adverse. CDFW agrees with these findings for purposes of CEQA and finds these impacts to be less than significant.

Mitigation Measures

Implement Mitigation Measures CUL-1 through CUL-10.

Significance after Mitigation

Impacts on historical resources would remain significant and unavoidable following implementation of Mitigation Measures CUL-1 through CUL-10.

Impact 3.5.5b: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? (*Significant and unavoidable*)

Aside from the 23 resources determined eligible for listing in the CRHR under Criterion 4 (information potential), none of the remaining resources evaluated in the Class III inventory or Addendum 1 were identified as unique archaeological resources. Indeed, those resources with significant characteristics are considered historical resources, as discussed above. Furthermore, for the same reasons that the remaining resources were found not eligible for listing in the CRHR, as discussed in Section 3.5.2.4, Identified Cultural Resources, they also are not considered to be unique archaeological resources. The Project also has the potential to impact previously unknown, buried archaeological resources, and such resources could qualify as significant archaeological resources. Project-related ground-disturbing activities could lead to destruction or degradation of the resources, which could constitute a significant adverse change. Implementation of Mitigation Measures CUL-1 through CUL-8 would reduce this impact to archaeological values conveying significance under Criterion 4 for their scientific information potential. However, for archaeological resources that are significant for reasons other than scientific data potential, such as tribal values conveyed by archaeological materials, data recovery is not likely to adequately mitigate impacts on those resources, and even with implementation of Mitigation Measure CUL-8, impacts on such resources are not likely to be mitigated to less than significant. Therefore, under CEQA, impacts of the proposed Project to the tribal values of unique archaeological resources would be significant and unavoidable.

Mitigation Measures

Implement Mitigation Measures CUL-1 through CUL-10.

Significance after Mitigation

Impacts to unique archaeological resources would remain significant and unavoidable following implementation of Mitigation Measures CUL-1 through CUL-10.

Impact 3.5.5c: Would the Project disturb any human remains, including those interred outside of dedicated cemeteries? (*Less than significant with mitigation incorporated*)

Although the Class III inventory did not identify any known human remains within the direct effects APE, ground-disturbing activities do have the potential to encounter previously unknown human remains. Disturbance of human remains could constitute a significant impact under CEQA. However, Mitigation Measure CUL-3 provides protocols for the treatment of human remains encountered during Project construction, operation, and decommissioning. Included are requirements, based on state law, for discovery of human remains on non-federal land. With implementation of this measure, impacts on human remains would be less than significant.

Mitigation Measures

Implement Mitigation Measure CUL-3.

Significance after Mitigation

Impacts on human remains would be less than significant with implementation of Mitigation Measure CUL-3.

Tribal Cultural Resources

Impact 3.5.5d: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? (*Significant and unavoidable*)

Twenty-three archaeological sites and the Mule Mountain Tribal Cultural Landscape have been determined by CDFW to be tribal cultural resources. In addition, the potential for unknown tribal cultural resources to be encountered during Project ground-disturbing activities exists. Implementation of Mitigation Measure CUL-9 (Tribal Cultural Resources) and Mitigation Measure CUL-10 (Tribal Monitoring) would reduce potential impacts on known and unknown tribal cultural resources identified during excavation activities. Furthermore, implementation of Mitigation Measures CUL-1 through CUL-7 would help to reduce Project-related impacts on tribal cultural resources. However, even with implementation of mitigation measures, it is not likely to reduce impacts to tribal values conveyed under Criterion 1 to a less-than-significant level. Therefore, under CEQA, impacts of the Project on tribal cultural resources would be significant and unavoidable, consistent with the earlier determination regarding historical and archaeological resources.

Mitigation Measures

Implement Mitigation Measures CUL-1 through CUL-10.

Significance after Mitigation

Impacts on tribal cultural resources would remain significant and unavoidable following implementation of Mitigation Measures CUL-1 through CUL-10.

3.5.5.2 Alternative B: Alternative Design

Alternative B would occur within the same footprint as the proposed Project, although the reduction in ground disturbance resulting from the Design Elements likely would reduce the number of known historical resources potentially impacted. However, it is not currently known how many resources would be avoided by Alternative B, and impacted resources could include those eligible under CRHR Criteria 1 and 4. Alternative B would minimize grading, avoid or limit trenching, and use elevated support structures in lieu of solid cement or steel foundations. This would reduce ground disturbance and also allow more flexibility in Project design, both of which could reduce potential direct impacts on historical, archaeological, and tribal cultural resources, both known and those that might be discovered during construction. Regardless, as with the proposed Project, there is a potential to adversely affect historical, archaeological, and tribal cultural resources, both directly and indirectly, and Alternative B would require implementation of Mitigation Measures CUL-1 through CUL-10 to avoid or minimize Project-related impacts on historical, archaeological, and tribal cultural resources. However, as with the proposed Project, implementation of mitigation is not likely to reduce impacts on historical, unique archaeological, or tribal cultural resources to a less-than-significant level. Therefore, under CEQA, impacts of Alternative B on historical resources, unique archaeological resources, and tribal cultural resources would be significant and unavoidable.

As with the proposed Project, with implementation of Mitigation Measure CUL-3, which ensures compliance with appropriate state and federal law for impacts related to human remains, impacts on human remains would be less than significant.

3.5.5.3 Alternative C: Reduced Acreage Alternative

Construction of Alternative C would result in similar types of impacts on cultural resources as described for the proposed Project, but because of the reduced size of Alternative C, the number of historical resources directly impacted would be reduced from 23 to 6. These include resources eligible for the CRHR under Criterion 4, and those that are considered tribal cultural resources. Consequently, impacts associated with construction of Alternative C would be reduced relative to the proposed Project. Regardless, as with the proposed Project, there is a potential to adversely affect historical, archaeological, and tribal cultural resources, both directly and indirectly, and Alternative C would require implementation of Mitigation Measures CUL-1 through CUL-10 to avoid or minimize Project-related impacts. However, as with the proposed Project, implementation of mitigation is not likely to reduce impacts on historical, unique archaeological, or tribal cultural resources to a less-than-significant level. Therefore, under CEQA, impacts of Alternative C to historical resources, unique archaeological resources, and tribal cultural resources would be significant and unavoidable.

As with the proposed Project, with implementation of Mitigation Measure CUL-3, which ensures compliance with appropriate state and federal law related to impacts on human remains, impacts on human remains would be less than significant.

3.5.5.4 Alternative D: No Plan Amendment/No Action/No Project Alternative

Under this alternative, none of the components of the Project would be built. If Alternative D were implemented, there would be no changes to on-site conditions or the existing environmental setting as described above, and the existing environmental setting would be maintained. Under this alternative there would be no potential for adverse effects to cultural resources.

3.5.6 Cumulative Effects

3.5.6.1 Alternative A: Proposed Action

The regulations implementing Section 106 of the NHPA contemplate close coordination between the NEPA and NHPA processes (36 CFR 800.8), and expressly integrate consideration of cumulative concerns within the analysis of a proposed action's potential direct and indirect effects by defining "adverse effect" to include "reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative" (36 CFR 800.5[a][1]). Central to this method is the understanding that cultural resources are a non-renewable resource, and damage or destruction to significant resources is non-reversible.

The geographic area for the cumulative analysis is defined by the area within which the historical, archaeological, and tribal cultural resources are expected to be similar to those that occur on the Project site because of their proximity, and because similar environments, landforms, and hydrology would result in similar land use and, thus, site types. The geographic area includes the eastern portion of the Chuckwalla Valley and Mule Mountains to the south, and portions of the Palo Verde Mesa close to the Project site. In addition, those resource characteristics to which Native American groups generally ascribe important traditional and cultural value are similar across the region. Numerous significant archaeological resources, including those with tribal value, have been previously discovered within this broader geographical area, although many are not thoroughly documented. Others have been destroyed through previous development. Relevant cumulative projects within this geographic scope include existing facilities (Interstate 10, Chuckawalla Valley and Ironwood State Prisons, Blythe Energy Project transmission line, and Colorado River Substation), recently constructed solar projects (NRG Blythe PV, Genesis, and Blythe Solar Power Generation Station), and proposed or approved projects (Desert Quartzite Solar, Palen Solar, Palo Verde Mesa Solar, Blythe Mesa Solar, Blythe Energy Project II, Arica Solar, Victory Pass I, and Ten West Transmission Line). All of these are listed and described in Table 3.1-1. These projects all involved or will involve grading or other excavation that has the potential to impact cultural

resources. This is particularly true of the large-scale renewable energy projects, which cover large expanses of land that are known to contain dense resources that may be considered culturally sensitive to Native American tribal representatives and could constitute tribal cultural resources.

An analysis of cumulative impacts takes into consideration the entirety of impacts that the Project could have on tribal cultural resources in conjunction with any effects that could occur as a result of past, present, and reasonably foreseeable projects considered in the cumulative scenario. This includes consideration of historical resources, archaeological resources, human remains, and tribal cultural resources. Cumulative impacts on historical resources, archaeological resources, human remains, and tribal cultural resources could occur if other projects, in conjunction with the proposed Project, have or would have impacts on historical resources, archaeological resources, human remains, and/or tribal resources that, when considered together, would be significant. Given the number of completed solar projects in the study area (that have been mitigated at the project level), completed projects have already had a significant impact on cultural and historic resources. This analysis considers whether the incremental contribution of impacts caused by the proposed Project would be cumulatively considerable and significant for purposes of CEQA.

For the proposed Project, impacts to archaeological values of significant archaeological sites would be mitigated through data recovery. Therefore, the Project would not have a cumulatively significant impact to archaeological values in the region. However, these impacted significant archaeological sites are also considered tribal cultural resources, and data recovery would not adequately mitigate tribal values attached to these impacted sites . Moreover, the loss of archaeological data from construction of projects considered in Table 3.1-1 represents permanent loss since archaeological sites are non-renewable. Considering all projects in light of comments from consulting tribes, the destruction and/or removal of archaeological materials harms cultural, religious, and spiritual values conveyed by the materials that span the Southern California desert region. Additional loss of archaeological materials that convey tribal values from the proposed Project (including from eligible and ineligible archaeological sites and isolated artifacts) would result in cumulatively considerable impacts to the overall Mule Mountain Tribal Cultural Landscape. Cumulative impacts to the Mule Mountain Tribal Cultural Landscape would be significant due to residual impacts to tribal values of individually impacted archaeological sites and isolates, but the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

Under CEQA, the analysis considers the 23 historical resources determined significant under CRHR Criterion 4 by CDFW to the Mule Mountain Tribal Cultural Landscape, as well as to historical resources, unique archaeological resources, human remains, and tribal cultural resources that could be encountered during construction. Mitigation measures have been developed to reduce impacts on these resources (Mitigation Measures CUL-1 through CUL-10). Mitigation Measure CUL-1 requires the preparation and execution of an NHPA Section 106 MOA and Historic Properties Treatment Plan to resolve adverse effects to historic properties, should those effects be identified. Mitigation Measure CUL-2 requires inclusion of a Long-Term Management Plan as part of the MOA process to ensure the effectiveness of protection measures for cultural resources, including visitation and vandalism. Mitigation Measure CUL-3 requires the preparation of a plan for addressing the discovery of human remains discovered during Project implementation. Mitigation Measures CUL-4, CUL-5, and CUL-6 provide procedures for unanticipated effects on identified historic properties, as well as procedures for post-review discoveries, including significance evaluation and determining whether avoidance is feasible or whether mitigation through data recovery or other method is necessary. Mitigation Measure CUL-7 pertains to worker training. Mitigation Measure CUL-8 requires the development of a Tribal Cultural Resources Treatment Plan for mitigating impacts to the 23 known historical resources and individual tribal cultural resources, as well as impacts to the Mule Mountain Tribal Cultural Landscape. Mitigation Measure CUL-8 also provides for the Tribal Cultural Resources Treatment Plan to describe methods and other factors that allow for reburial of prehistoric archaeological materials that convey tribal values. Mitigation Measure CUL-9 outlines the protocols for the treatment of unanticipated discoveries of tribal cultural resources, and Mitigation Measure CUL-10 requires tribal participation in monitoring.

Although mitigation may reduce significant impacts on the archaeological values of resources eligible under Criterion 4 for their data potential, mitigation developed for tribal cultural resources and unique archaeological sites may not reduce impacts to less than significant. The CEQA impacts analysis concludes that the Project may have a significant and unavoidable impact on tribal cultural resources. All projects in the geographic area are subject to applicable laws and regulations (listed in Appendix E of the BLM Final EIS) that provide for the identification and mitigation of adverse effects under NEPA and significant impacts under CEQA. These regulations minimize impacts to historical resources, archaeological resources, and tribal cultural resources by preservation of significant resources through avoidance where feasible, or mitigation of significant impacts specific to each resource that cannot otherwise be avoided by project redesign. However, given this potential for significant impacts under Alternative A, particularly when viewed in combination with other past, present, and future projects, the overall cumulative impact on historical, unique archaeological, and tribal cultural resources would be significant. However, and the Project's incremental contribution to these significant cumulative impacts would not be considerable with, among other things, implementation of mitigation measures.

No human remains have been identified within the Project site. Furthermore, Mitigation Measure CUL-3 would require compliance with appropriate state and federal law, ensuring impacts on human remains would be less than significant.

CDFW has determined that the Mule Tank Discontiguous Rock Art District (an indirect effect), although considered culturally significant, would not be visually impacted by the proposed Project; therefore, no cumulatively considerable impact would occur to this tribal cultural resource.

3.5.6.2 Alternative B: Alternative Design

Alternative B would involve less ground disturbance than the proposed Project, and thus would generally have a lower potential to create adverse impacts. Although the types of impacts would be the same as for Alternative A, under Alternative B, the number of potentially impacted historical resources would be reduced, but the degree of reduction is unknown. Because of the potential for impacts on cultural resources, Mitigation Measures CUL-1 through CUL-10 would be required. However, as with Alternative A, mitigation may not fully reduce to less than significant those impacts on historical resources eligible under Criterion 1, archaeological resources, and tribal cultural resources. Consequently, the CEQA impacts analysis concludes that Alternative B may have a significant and unavoidable impact on cultural resources. All projects in the geographic area are subject to applicable laws and regulations (listed in Appendix E of the BLM Final EIS) that provide for the identification and mitigation of adverse effects under NEPA and significant impacts under CEQA. These regulations would minimize impacts to historical resources, archaeological resources, and tribal cultural resources by preservation of significant resources through avoidance where feasible, or mitigation of significant impacts specific to each resource that cannot otherwise be avoided by project redesign. However, given this potential for significant impacts under Alternative B, particularly when viewed in combination with other past, present, and future projects, the overall cumulative impact on historical, unique archaeological, and tribal cultural resources would be significant. However, Alternative B's incremental contribution to cumulative impacts would not be considerable with, among other things, implementation of mitigation measures.

3.5.6.3 Alternative C: Reduced Acreage Alternative

Even though Alternative C would be reduced in size compared to Alternative A, the number of potentially impacted individual historical resources and tribal cultural resources would remain at 23 and still include the Mule Mountain Tribal Cultural Landscape that encompasses all eligible and ineligible archaeological sites and isolates. Because of the potential for impacts on these remaining resources, Mitigation Measures CUL-1 through CUL-10 are still required, but as with Alternative A, mitigation may not fully reduce to less than significant those impacts on tribal cultural resources. Consequently, the CEQA impacts analysis concludes that Alternative C may have a significant and unavoidable impact on cultural resources. All projects in the geographic area are subject to applicable laws and regulations (listed in Appendix E of the BLM Final EIS) that provide for the identification and mitigation of adverse effects under NEPA and significant impacts under CEQA. These regulations minimize impacts to historical resources, archaeological resources, and tribal cultural resources by

preservation of significant resources through avoidance where feasible, or mitigation of significant impacts specific to each resource that cannot otherwise be avoided by project redesign. However, given this potential for significant impacts under Alternative C, particularly when viewed in combination with other past, present, and future projects, the overall cumulative impact on historical, unique archaeological, and tribal cultural resources would be significant. However, Alternative C's contribution to these significant cumulative impacts would not be considerable with, among other things, implementation of mitigation measures.

3.5.6.4 Alternative D: No Plan Amendment/No Action/No Project Alternative

Under Alternative D, the Project would not be constructed and public lands in the Project area would continue to be managed by BLM in accordance with existing land use practices. If Alternative D were implemented, no changes would occur, and the existing environmental setting would be maintained. Therefore, Alternative D would not contribute to cumulative impacts on cultural resources.

3.5.7 Residual Effects

Implementation of Mitigation Measures CUL-1 through CUL-10 would reduce Project-related impacts on tribal cultural, archaeological, and historic resources under CEQA. This is true for all alternatives. Additionally, impacts from Alternative B would be reduced compared to Alternative A because less ground disturbance would occur under Alternative B. Impacts from Alternative C would be further reduced due to the reduced footprint of the propose Project; therefore, Alternative C is considered the Environmentally Superior Alternative under CEQA. Cultural resources damaged or destroyed by construction activities, even if subjected to mitigation measures, would be permanently lost from the archaeological record and, importantly, to the tribes that are connected to these locations as places and items of their cultural patrimony. In addition, Native American consultations may raise issues that cannot be fully resolved through implementation of mitigation measures.

Under CEQA, CDFW has determined that 6 of 23 individually significant archaeological resources that are also considered tribal cultural resources cannot be avoided and will be significantly impacted. These six impacted archaeological sites are also considered tribal cultural resources; therefore, residual impacts to tribal values would remain. Moreover, the overall Mule Mountain Tribal Cultural Landscape that includes all eligible and ineligible prehistoric archaeological sites and isolated artifacts would be significantly impacted; therefore, residual impacts to tribal values of the Mule Mountain Tribal Cultural Landscape would remain.

Implementation of Mitigation Measures CUL-1 through CUL-7 would reduce Project-related impacts on cultural resources under NEPA. This is true for all alternatives. Additionally, impacts from Alternative B would be reduced compared to Alternative A because less ground disturbance would occur under Alternative B. Impacts from Alternative C would be substantially reduced such that known historic properties would be avoided and Mitigation Measures CUL-1 and CUL-2 would not be required. Cultural resources damaged or destroyed by construction activities, even if subjected to mitigation measures such as data recovery, would be permanently lost from the archaeological record. In addition, Native American consultations may raise issues that cannot be fully resolved through implementation of mitigation measures. Because the Alternative C site footprint is incorporated into the BLM Preferred Alternative and would avoid effects on known historic properties, the BLM has proposed that there would be no adverse effects from the Preferred Alternative under NHPA Section 106. BLM is continuing consultation with all consulting parties to reach final agency determinations of eligibility and findings of effect. Should an alternative be selected that would adversely affect historic properties, the BLM, in consultation with the consulting parties, will develop an MOA to resolve those adverse effects identified prior to issuing a Record of Decision for this Project.

3.20 Other CEQA and NEPA Considerations

3.20.1 Mandatory Findings of Significance

~~This section is intentionally left blank. CDFW continues to address issues related to cultural resources and tribal cultural resources under CEQA and will finalize these analyses and make any applicable mandatory findings of significance under separate cover in a Final EIR.~~ Based on the California Environmental Quality Act (CEQA) Guidelines Section 15065, a project would have a significant impact if it:

a) Has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.

b) Has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.

c) Has possible environmental effects that are individually limited but cumulatively considerable.

d) Has environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The following paragraphs describe the ~~Project's~~ potential of the Crimson Solar Project (Project) to have a significant impact in each of these categories.

a) The Project's potential to substantially degrade the quality of the environment is analyzed throughout Chapter 3 of the Bureau of Land Management (BLM) Final Environmental Impact Statement (EIS) and Proposed Plan Amendment (PA) (BLM 2021). As described below in Section 3.~~21~~20.2, the Project would result in four significant and unavoidable impacts: exceedances of daily oxides of nitrogen (NO_x) and particulate matter with a diameter less than or equal to 10 microns (PM_{10}) significance thresholds (Impact 3.2.5b) and potential impacts on historical, archaeological, and tribal cultural resources (Impacts 3.5.5a, 3.5.5b, and 3.5.5d). All other impacts of the Project could be reduced to a less-than-significant level with the implementation of mitigation measures described in Chapter 3 of the BLM Final EIS and Proposed PA (BLM 2021), and Section 3.5, Cultural, Tribal, and Historic Resources, of this Final Environmental Impact Report (EIR). Only Alternative D, the No Plan Amendment/No Action/No Project Alternative, would avoid these significant unavoidable impacts.

   As described in Section 3.3, Biological Resources, of the BLM Final EIS and Proposed PA (BLM 2021), the Project and alternatives would not have the potential to~~:~~ threaten to eliminate a plant community or substantially reduce the number or restrict the range of a special-status plant, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate an animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species. As described in Section 3.11, Paleontological Resources, of the BLM Final EIS and Proposed PA (BLM 2021), the Project and alternatives would not have the potential to eliminate important examples of the major periods of California prehistory. However, as described in Section 3.5 ~~, Cultural, Tribal, and Historic Resources,~~ of this Final EIR, the Project and alternatives may have the potential to eliminate important examples of the major periods of California history, even with mitigation, because for historical resources that are eligible under California Register criteria 1~~, 2,~~ or ~~3~~4, data recovery may not adequately mitigate impacts on those aspects of the resources that convey their significance and make them eligible for listing in the California Register. Therefore, as described in Section 3.2~~0~~1.2, the Project and alternatives may result in a significant and unavoidable impact. Moreover, the overall Mule Mountain Tribal Cultural Landscape that includes all eligible and ineligible prehistoric archaeological sites and isolated artifacts would be significantly impacted, as well as significant indirect impacts may occur to the Mule Tanks

Discontiguous Rock Art District through increased visitation and public access; therefore, residual impacts to tribal values of the Mule Mountain Tribal Cultural Landscape would remain.

Alternative C would impact 460 acres less than the 2,500-acre proposed Project; therefore, the direct permanent impacts on vegetation communities and special-status plant and wildlife species habitats would be r———educed. The reduced acreage would provide more habitat for foraging, breeding, movement, and hunting, as well as reduced vehicle traffic at wash crossings. Additionally, the number of historical resources directly affected by the proposed Project would be reduced from 23 to 6, and the potential to encounter undiscovered resources would also be reduced.

b) The Project and Alternatives B and C would produce electricity from a renewable resource and would contribute to the short-term goals of meeting California's Renewable Portfolio Standard targets and federal targets for renewable energy on federally managed lands. As described in Section 3.4, Greenhouse Gas Emissions, of the BLM Final EIS and Proposed PA (BLM 2021), the production of renewable energy also would contribute to long-term environmental goals by reducing the amount of greenhouse gases that would be emitted compared to a comparably sized fossil fuel-fired power plant. This benefit would extend beyond the life of the Project due to the persistence of greenhouse gases in the atmosphere.

The potential long-term impacts on the environment resulting from the Project or alternatives are described throughout Chapter 3, Environmental Analysis, of the BLM Final EIS and Proposed PA (BLM 2021) and Section 3.5 of this Final EIR. Long-term impacts could include the disturbance of desert vegetation, which can take years to reestablish. Mitigation measures are proposed to avoid, minimize, or mitigate activities that would have long-term adverse environmental impacts. Alternative B, specifically, would result in reduced loss of desert vegetation compared to the Project because it would not involve grading the entire Project site, and Alternative C also would reduce long-term impacts by reducing the total size of the developed site.

c) The Project could result in environmental effects that individually are limited, but could combine with the effects of other projects to result in significant cumulative effects. Cumulative impacts are considered in each resource section. The Project's contributions to cumulative effects would be cumulatively considerable for air quality and cultural resources. As described in Section 3.2, Air Resources, of the BLM Final EIS and Proposed PA (BLM 2021), the Project could have a cumulatively considerable construction-related contribution to a significant cumulative air quality impact with respect to exceedances of the maximum daily NO_x and PM_{10} emissions significance thresholds and the annual PM_{10} emissions significance threshold. As described in Section 3.5~~, Cultural, Tribal, and Historic Resources,~~ of this Final EIR, the Project may have a significant and unavoidable impact on historical resources, archaeological resources, and tribal cultural resources, including the tribal values associated with the Mule Mountain Tribal Cultural Landscape. Given this potential for significant impacts, particularly when viewed in combination with other past, present, and future projects, and in considering all projects in light of comments from consulting tribes, the destruction and/or removal of archaeological materials harms cultural, religious, and spiritual values conveyed by the materials that span the Southern California desert region. Therefore, the overall cumulative impact on cultural and tribal cultural resources would be significant, however, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA~~and the Project's contribution to cumulative impacts would be considerable, even with implementation of mitigation measures~~.

d) The Project's potential changes to the environment that could indirectly affect human beings are analyzed in all of the CEQA issue areas throughout Chapter 3 (e.g., Section 3.12, Recreation) of the BLM Final EIS and Proposed PA (BLM 2021). Those that could directly affect human beings include air quality, geology and soils, hazards and hazardous materials, noise, transportation/traffic, utilities and public services, and water resources, which are addressed in Sections 3.2, 3.7, 3.8, 3.10, 3.15, 3.16, and 3.18, respectively, of the BLM Final EIS and Proposed PA (BLM 2021)~~is Final Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) and Proposed Plan Amendment (PA)~~. Only the Project's NO_x and PM_{10} impacts have the potential to cause substantial adverse effects on human beings; this is based on

exceedances of air basin-wide significance thresholds ~~which~~ that reflect the Project's contribution to cumulative air quality impacts, and not on direct impacts on sensitive receptors, since none are located near the Project site.

~~3.21~~3.20.2 Significant Unavoidable Environmental Impacts

~~This section is intentionally left blank. CDFW will finalize its CEQA analyses and summarize any significant unavoidable~~ Section 15126.2(b) of the CEQA Guidelines requires that an EIR identify significant environmental effects of the proposed Project that cannot be avoided. The analysis contained in Sections 3.2 through 3.19 of the BLM Final EIS and Proposed PA (BLM 2021) indicates that the potential environmental effects from implementation of the Project would cause significant impacts, although with the implementation of mitigation measures identified in these sections (refer to Appendix B of the BLM Final EIS and Proposed PA [BLM 2021]), most of those significant impacts can be reduced to a level that is below significant. However, potential Project impacts on two resource areas cannot be reduced to a less-than-significant level, and so may remain significant and unavoidable:

1. **Air Resources:** Cumulative impacts of construction- and decommissioning-related annual mitigated emissions of PM_{10} and daily mitigated emissions of NO_x and PM_{10}. See Impact 3.2.5b in Section 3.2.5.1 and further discussion in Section 3.2.6.1 of the BLM Final EIS and Proposed PA (BLM 2021).
2. **Cultural, Tribal, and Historic Resources:** Project-level and cumulative impacts of construction, operation, and decommissioning-related ground disturbance on the 23 historical resources determined significant under CRHR Criteria 1 and 4 for tribal cultural values by CDFW to the Mule Mountain Tribal Cultural Landscape. These tribal cultural values are conveyed by~~, as well as~~ historical resources, unique archaeological resources, human remains, and tribal cultural resources that could be encountered. See Impacts 3.5.5a, 3.5.5b, and 3.5.5d in Section 3.5.5.1 and further discussion in Section 3.5.6.1 of this Final EIR.

Only Alternative D would avoid these impacts. For air quality impacts, all other alternatives to the Project would result in significant and unavoidable impacts related to emissions of NO_x and PM_{10}. This is because even though Alternatives B and C would reduce the amount of earthwork by changing the construction and site preparation methods or reducing the overall footprint, they would not affect the maximum daily or annual rate of emissions. Therefore, further reductions in the Project footprint that would still meet the Project objectives would not avoid these impacts. Mitigation Measures AQ-1 through AQ-4 represent the available and feasible mitigation measures, and as shown in Tables 3.2-2 and 3.2-3 of the BLM Final EIS and Proposed PA (BLM 2021), do substantially reduce emissions of NO_x and PM_{10} (i.e., by 60% to 78% ~~percent~~). For cultural, tribal, and historic resources, Alternative C was developed for the purpose of substantially reducing the number of resources within the development footprint. Implementation of Mitigation Measures CUL-1 through CUL-7 apply to construction, operation, and decommissioning of the proposed project and would reduce impacts to historic properties through avoidance, minimization, and mitigation during all Project phases. Furthermore, implementation of Mitigation Measures CUL-8 through CUL-10 would further avoid or minimize potential impacts on tribal cultural resources (see Appendix A, Cultural, Tribal, and Historic Resources Mitigation Measures, of this Final EIR).

~~3.21~~3.20.3 Significant Irreversible Changes

~~This section is intentionally left blank. CDFW will finalize its CEQA analyses and summarize any significant irreversible changes, if any would result from the Project or an alternative, under separate cover in a Final EIR~~Section 15126.2(c) of the CEQA Guidelines requires that an EIR identify significant irreversible environmental changes that would be caused by a proposed project. These changes may include, for example, uses of nonrenewable resources, or provision of access to previously inaccessible areas, as well as Project accidents that could change the environment in the long term. Development of the Project would require a permanent commitment of natural resources resulting from the direct consumption of fossil fuels, construction materials, the manufacture of new equipment, some of which would not be recyclable at the end of the Project's useful lifetime, and energy required for the production of materials.

Accidents, such as the release of hazardous materials, could trigger irreversible environmental damage. As discussed in Section 3.8, Hazards and Hazards Materials of the BLM Final EIS and Proposed PA (BLM 2021), Project construction would involve limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, solvents, paints, etc. An accidental spill of any of these substances could affect water and/or groundwater quality and, if a spill were to occur of significant quantity, the release could pose a hazard to construction workers, the public, and the environment. Limited quantities of similar hazardous materials also would be used to operate and maintain the equipment and infrastructure at the Project site and along the access road route. Improper storage, use, handling, or accidental spilling of such materials could result in a hazard to the public or the environment. Due to the types and minimal quantities of hazardous materials that would be used for the Project, and the emergency response plans and other procedures that would be required by the independent obligations and recommended mitigation measures described in that section, accidental release is unlikely. State and federal regulations and safety requirements would ensure that public health and safety risks are maintained at acceptable levels.

The Project is anticipated to operate for a 30-year service life. Decommissioning is discussed in Section 2.4.5 of the Project Description of the BLM Final EIS and Proposed PA (BLM 2021). At the end of the Project life, the Project would cease operation or, alternatively, be renewed pursuant to the terms of the ROW Grant for continued use as a solar/energy facility of another use consistent with the applicable statutes and regulations at the time. In the event the Project ceases operation, the facilities would be decommissioned and dismantled and the site restored. The Project site could be converted to other uses in accordance with applicable land use regulations in effect at that time. Therefore, although the Project would result in a long-term commitment of the Project site, and the consumption of non-renewable resources, the proposed land use is not irreversible.

For the reasons described above, the Project would not result in significant irreversible changes.

3.20.4 Short-Term Uses and Long-Term Productivity (Other NEPA Considerations)

This section is intentionally left blank. This section was included in BLM's Final EIS and Proposed PA (BLM 2021). ~~The Bureau of Land Management's National Environmental Policy Act (NEPA) Handbook (H-1790-1 Section 9.2.9) and the NEPA Guidelines (40 CFR 1502.16) require a discussion of the relationship between short-term uses of the environment resulting from the Project or alternatives and the maintenance and enhancement of long-term productivity of the environment. The environmental impacts described for the Project or alternatives in Chapter 3, Environmental Analysis, include short-term uses of the land area and resources during construction and throughout the 30-year life of the Project, and permanent, adverse impacts that would affect long-term productivity of the Project area following Project decommissioning. Temporary adverse impacts to resources such as air quality would cease following construction, and would not impact the long-term productivity of the environment. Other short-term uses, such as the loss of sensitive desert habitats, could adversely affect the long-term productivity of the area, even following decommissioning. Mitigation measures are proposed to avoid, minimize, or mitigate activities that impact long-term productivity (see Appendix B). The Project and other action alternatives would also provide an environmental benefit by generating electric power with a minimal increase in the use of non-renewable resources such as fossil fuels. Such a benefit could influence the long-term productivity of the environment.~~

CHAPTER 4
Consultation, Coordination, and Public Involvement

4.1 Interrelationships

The Bureau of Land Management's (BLM's) decision-making authority for the Crimson Solar Project (Project) derives from the Federal Land Policy Management Act (FLPMA) (43 USC Section 1701 et. seq.). The FLPMA authorizes the BLM to issue right-of-way (ROW) grants for systems of electrical generation, transmission, and distribution. In processing a land use plan amendment, BLM also must comply with its Planning Regulations (43 CFR Part 1600) and the BLM Land Use Planning Handbook (H-1601-1; March 2005).

4.1.1 Department of Defense

BLM coordinates with Department of Defense prior to approval of ~~rights-of-way (~~ROWs~~)~~ for renewable energy, utility, and communication facilities to ensure that these facilities would not interfere with military training routes and operations. The Department of Defense reviewed Project development documents provided by the Applicant and expressed an interest in ensuring that the Project would not interfere with a Marine Corps training facility, the Chocolate Mountains Aerial Gunnery Range. A Marine Corps representative contacted the BLM by phone to discuss the Project and its interconnection to the SCE transmission line (BLM 2018, as cited in BLM 2021).

4.1.2 U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (USACE) has jurisdiction to protect the aquatic ecosystem, including water quality and wetland resources under Section 404 of the federal Clean Water Act. Under that authority, USACE regulates the discharge of dredged or fill material into waters of the United States, including wetlands, by reviewing proposed projects to determine whether they may impact such resources and, thereby, are subject to the Section 404 permit requirement. USACE issued a Jurisdictional Determination on October 29, 2018, stating that waters of the United States do not occur on the Project site (USACE 2018, as cited in BLM 2021).

4.1.3 U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (USEPA) is a Cooperating Agency[1] under NEPA for the Project (USEPA 2018, as cited in BLM 2021). USEPA is charged under Section 309 of the Clean Air Act to review the Environmental Impact Statements (EISs) of other federal agencies and to comment on the adequacy and the acceptability of the environmental impacts of the Project. USEPA also serves as the repository (EIS database) for EISs prepared by federal agencies and provides notice of its availability in the Federal Register.

4.1.4 National Park Service

The National Park Service (NPS) is an agency of the United States Federal Government that manages all national parks, many national monuments, and other conservation and historical properties with various title designations. NPS participated in pre-application meetings and monthly coordination calls for the proposed

[1] Upon request of the Lead Agency, any other federal agency which has jurisdiction by law shall be a cooperating agency. In addition, any other federal agency which has special expertise with respect to any environmental issue, which should be addressed in the statement may be a cooperating agency upon request of the Lead Agency. An agency may request the Lead Agency to designate it a cooperating agency (40 CFR Section 1501.6).

Project. NPS also participated in the development of the DRECP and now takes a landscape approach to planning. The Project is a part of the DRECP landscape. Joshua Tree National Park (Joshua Tree) received an International Dark Skies designation. Therefore, NPS is concerned about project light management that could affect Joshua Tree. NPS is also concerned about fugitive dust, water supply, and impacts on cultural and historic resources.

4.1.5 California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW), as Lead Agency under the California Environmental Quality Act (CEQA), is central to the consultation and public review process. CDFW also has regulatory authority to protect resources. Under Fish and Game Code Section 1602, CDFW regulates alterations~~modifications~~ to streambeds as a means to protect fish and ~~aquatic~~ wildlife resources~~habitats~~ within California. The Applicant has notified~~is consulting with the~~ CDFW to assess whether a Lake and Streambed Alteration Agreement (LSAA) would be needed for the Project's potential impacts to fish and wildlife resources associated with a river, stream, or lake~~state jurisdictional waters~~. Compliance with the requirements of an~~the~~ LSAA, if issued, would be required to implement the Project. Additionally, CDFW has the authority to regulate potential impacts to species protected under the California Endangered Species Act (CESA), per Fish and Game Code Section 2050 et seq. ~~If warranted,~~T~~ t~~he Applicant ~~would be required~~has submitted ~~to file~~ an Incidental Take Permit (ITP) application. Compliance with the requirements of an ITP issued under CESA would be required to implement the Project.

4.2 Consultation Processes for Federal Endangered Species Act Section 7, NHPA Section 106, and Indian Tribes

4.2.1 Endangered Species Act Section 7

The U.S. Fish and Wildlife Service (USFWS) is also a Cooperating Agency under NEPA for the Project (USFWS 2017, as cited in BLM 2021). The USFWS has jurisdiction over threatened and endangered species listed under the federal Endangered Species Act (FESA) (16 USC Section 1531 et seq.). Formal consultation with the USFWS under FESA Section 7 is required for any federal action that may adversely affect a federally listed species. The BLM initiated consultation through the preparation and submittal of a Biological Assessment (BA) that described the Project to the USFWS. Following review of the BA, the USFWS issued a Biological Opinion (BO) that specifies conservation measures that must be implemented for protection of the desert tortoise. Compliance with those measures would be required to implement the Project. The Biological Opinion is included as Appendix I.13.

4.2.2 NHPA Section 106 Compliance and Tribal Consultation

Section 106 of the NHPA, as amended, requires federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The BLM, as lead federal agency for the proposed Project, has a statutory responsibility to comply with Section 106 and is doing this through the Section 106 implementing regulations (36 CFR Part 800).

The BLM also has responsibilities to carry out government-to-government consultation with Indian tribes for the proposed Project in accordance with the Section 106 regulations and other applicable legal authorities such as the National Environmental Policy Act (NEPA), American Indian Religious Freedom Act (AIRFA), Executive Order 13007, Executive Order 13175, and BLM policy (BLM Manual 1780 Tribal Relations and BLM Handbook 1780-1 Improving and Sustaining BLM-Tribal Relations).

4.2.2.1 NHPA §106 Compliance

On February 19, 2016, the BLM notified tribal consulting parties regarding the proposed Project and invited them to participate in a pre-application meeting and a site visit. The notification letter also invited tribal

representatives to participate in formal government-to-government consultation. The BLM identified the following tribes as consulting parties in the Section 106 process:

- Agua Caliente Band of Cahuilla Indians
- Augustine Band of Cahuilla Indians
- Cabazon Band of Mission Indians
- Cahuilla Band of Mission Indians
- Chemehuevi Indian Tribe
- Cocopah Indian Tribe
- Colorado River Indian Tribes
- Fort Mojave Indian Tribe
- Fort Yuma Quechan Tribe
- Morongo Band of Mission Indians
- Ramona Band of Cahuilla Indians
- San Manual Band of Mission Indians
- Soboba Band of Luiseno Indians
- Torres-Martinez Desert Cahuilla Indians
- Twenty-Nine Palms Band of Mission Indians

On February 19, 2016, the BLM notified and invited the participation of other agencies and organizations including the USEPA, NPS, Riverside County, and the General Patton Memorial Museum.

On February 22, 2016, the BLM sent the California State Historic Preservation Officer (SHPO) a letter to initiate formal consultation under Section 106 of the NHPA and also sent a letter to the ACHP inviting their early participation in the consultation process. In a letter to the BLM dated March 9, 2016, the ACHP declined participation, but requested further notification should an adverse effect be identified.

In a letter dated July 28, 2016, the BLM presented the Area of Potential Effects (APE) and scope of historic properties identification efforts for the proposed Project to the SHPO, pursuant to the Section 106 regulations at 36 CFR 800.4(a). Tribal consulting parties were concurrently notified. The BLM later, in October 2016, provided a review of existing information on known and potential historic properties within the APE and sought information from consulting parties regarding historic properties in the area. The BLM provided all consulting parties with its work plan for identification and evaluation efforts for the proposed Project. The BLM addressed all comments received from consulting parties on the work plan and finalized it in June 2017.

By letter of September 14, 2016, the SHPO commented that the BLM's APE delineation and proposed scope of identification efforts for the undertaking were sufficient and appropriate. At that time, the BLM defined the APE for direct effects to include the entire solar facility footprint, staging areas, access roads, and a 3,980-foot-long generation tie-in transmission line (gen-tie), for a total area of 3,256 acres. BLM defined the APE for indirect effects to extend as much as 5 miles to the west, north, and northeast from the Project footprint with mountainous terrain limiting the extent to the south.

By letter of February 6, 2017, the BLM provided updates to the SHPO regarding its historic property identification efforts. In that letter the BLM told the SHPO that the results of the records search indicated a number of resources are present or possibly present within the APE. Also, the BLM proposed to revise the APE to consider direct effects to a reduced 2,881-acre area including the reduced solar facility footprint, staging areas, access roads, and a 3,980-foot-long gen tie. The APE to consider indirect effects remained unchanged.

By letter of July 19, 2017, the SHPO commented that the updated identification efforts were sufficient. However, the SHPO objected to the BLM's proposed revision of the direct APE. The SHPO recommended expanding the direct APE to include the entirety of the areas immediately adjacent to the south and south-west border of the project area rather than the fragmentary and disjointed area proposed. The SHPO recommended intensive Class III surveys be completed in these areas despite there being no proposed ground-disturbing activities.

On November 22, 2019, the BLM provided a letter to the SHPO (with concurrent notification to all consulting parties), transmitting the revised the direct APE to include areas recommended in the SHPO's July 19, 2017 letter. Subsequently, the BLM completed Class III survey of these areas. Additionally, in 2018 the Applicant redesigned the proposed alignment of the gen-tie where it would connect to the Colorado River Substation. A portion of the new alignment had not been included in the original APE or surveyed previously. This 15-acre portion of the new alignment was surveyed at the BLM Class III level and was included in the direct APE (for a total direct APE size of approximately 3,498 acres).

The BLM's historic properties identification efforts (summarized in Section 3.5.2.4 of the BLM Final EIS and Proposed PA [BLM 2021]) included a BLM Class I inventory (literature review and records search); a BLM Class III intensive pedestrian survey of the entire direct APE; an ethnographic and ethnohistoric literature overview; an evaluation of nine archaeological sites within the direct APE through subsurface archaeological testing; a geoarchaeological assessment of the direct APE; an assessment of potential indirect effects to known historic properties within the indirect effects APE; and ongoing tribal consultation.

The results of the BLM's identification efforts are summarized in Section 3.5.2.4 including Table 3.5-1 of the BLM Final EIS and Proposed PA (BLM 2021). In a letter dated November 22, 2019, the BLM submitted its proposed determinations of National Register of Historic Places (National Register) eligibility and findings of effect to the SHPO, with concurrent notification to the tribal consulting parties, pursuant to the Section 106 regulations. The BLM found that Alternative C would not adversely affect historic properties, pursuant to 36 CFR 800.5(b). The BLM also found that Alternatives A and B would result in a direct adverse effect to historic properties including CA-RIV-1819/H and 16 sites that remain unevaluated but are being treated as eligible under Criterion D and avoided under Alternative C. Should the BLM select Alternative A or B, further investigations would be conducted to evaluate the 16 sites for their National Register eligibility. The BLM would then consult to resolve the adverse effect and complete the Section 106 process through development of a Memorandum of Agreement (MOA) prior to the Record of Decision (ROD) for the proposed Project. The BLM held a meeting for the consulting parties on December 4, 2019 in Blythe, CA (including a field visit to the Project area) to further explain the determinations and findings and address any questions.

In a letter dated February 6, 2020, the BLM re-notified all consulting parties regarding the BLM's National Register determinations and findings of effect for the proposed Project. This was necessary because the BLM was unable to verify that five of the tribal consulting parties received the notification letter of November 22, 2019. In re-notifying the tribes, the BLM provided an additional 30 days (March 6, 2020) for tribal consulting parties to submit comments. The SHPO was informed of the additional 30 days by letter dated February 11, 2020. The BLM extended this date another eight days (March 13, 2020) with notice to the tribes and the SHPO.

During the comment period, the BLM received written comments from five tribes, including the Agua Caliente Band of Cahuilla Indians, Chemehuevi Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, and Fort Yuma Quechan Tribe. The BLM has also held face-to-face meetings with the Agua Caliente Band of Cahuilla Indians, Fort Yuma Quechan Tribe, and Soboba Band of Luiseno Indians. A meeting with Fort Mojave Indian Tribe was requested by the BLM and was delayed until September 2020 due to the COVID-19 pandemic. The meeting was held via teleconference. Tribal comments are discussed below under Section 4.2.2.2.

Taking these comments into account, and in response to minor changes to the design of the proposed Project made by the Applicant in February 2020, the BLM updated its determinations of National Register eligibility and findings of effect pursuant to the Section 106 regulations. The updated determinations and findings were submitted to the SHPO by letter dated July 22, 2020, with concurrent notification to tribal consulting parties. The tribes were provided 45 days to comment. The BLM identified additional historic properties within the indirect effects APE, but after further review found that there would be no adverse effect to these resources. Therefore, the BLM maintained its finding of no adverse effect for Alternative C as originally presented to consulting parties in November 2019, pursuant to 36 CFR 800.5(b). No written comments were received from the tribal consulting parties.

The SHPO responded by letter dated October 27, 2020 concurring with all of the BLM's determinations of National Register eligibility, but objecting to the BLM's finding of no adverse effect for Alternative C. The SHPO recommended that the BLM "utilize an Ethnographer or Cultural Anthropologist that meets the Professional Qualifications to conduct additional studies and seek additional information from consulting parties. . ." The SHPO and her staff met with BLM staff via teleconference on November 16, 2020 to discuss her comments. The BLM sent a letter dated December 7, 2020 to the SHPO attempting to resolve the objection by showing that the BLM's findings of effects are based on efforts that meet the reasonable and good faith standard under the Section 106 regulations (36 CFR 800.4(b)(1)) and are in accordance with ACHP guidance. In its response, the BLM described a number of previous ethnographic and ethnohistoric studies that were used to

support its identification efforts and findings of effect. Many of these studies involved tribal interviews and consultations for nearby major projects and BLM land-use plans since the late 1970s that focused on lands now encompassed, or partially encompassed, by the APE for the Crimson Solar Project. The SHPO responded by letter of January 6, 2021 "not objecting" to the BLM's finding of no adverse effect for the Preferred Alternative.

4.2.2.2 Tribal Consultation

The BLM formally notified and invited 15 Indian tribes (see list in Section 4.2.2.1) to participate in government-to-government consultation by letter dated February 19, 2016, at the earliest stages of planning for the proposed Project. San Manuel Band of Mission Indians notified the BLM that they did not wish to participate in consultation for the proposed Project.

The BLM further notified tribes and invited them to engage in government-to-government consultation regarding the proposed Project by letter in July 2016 (regarding the proposed APE and scope of identification efforts); October 2016 (transmittal of the draft cultural resources work plan, research design, and Class I inventory); July 2018 (regarding notice to issue an Archaeological Resources Protection Act permit for site evaluations involving subsurface testing); August 2018 (regarding further notice to issue an ARPA permit); July 2019 (regarding further notice to issue an ARPA permit); early November 2019 (regarding notice of release of the Draft EIS); late November 2019 (regarding the proposed APE and proposed determinations of National Register eligibility and findings of effect); February 2020 (regarding re-notice of proposed determinations and findings); and July 2020 (regarding updated proposed determinations and findings as well as response to tribes' earlier written comments if any were provided).

After the BLM presented its proposed Section 106 determinations and findings for the proposed Project in late November 2019, the BLM held an informational meeting for consulting parties in Blythe, CA on December 4, 2019. The meeting also included a field visit to the proposed Project area, also on December 4, 2019. The goals of both the meeting and field visit were to explain the BLM's proposed determinations and findings and to address questions. Following the November 2019 letters and December 4, 2019 meeting, the BLM received written comments from five tribes, including the Agua Caliente Band of Cahuilla Indians, Chemehuevi Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, and Fort Yuma Quechan Tribe. The BLM held face-to-face meetings with the Agua Caliente Band of Cahuilla Indians, Fort Yuma Quechan Tribe, and Soboba Band of Luiseno Indians. A meeting with Fort Mojave Indian Tribe was requested by the BLM and was delayed until September 2020 due to the COVID-19 pandemic. The meeting was held via teleconference.

After the BLM sent its updated proposed determinations of National Register eligibility and findings of effect to tribal consulting parties in July 2020 (as well as a response to each tribe's earlier written comments, if any were provided), BLM professional staff followed up with telephone call(s) to each tribe in late August 2020 to verify receipt of the letter by the appropriate tribal staff and to answer any questions. The BLM did not receive any written comments from tribal consulting parties regarding its July 2020 letter.

Major comments from the tribes raised issues related to data sharing, artifact treatment, and cultural landscapes. Some of the tribes indicated that they could not fully comment until they had additional information, including in some cases confidential cultural resources data, regarding the proposed Project. Some of the tribes have also commented that they would like to see prehistoric artifacts subject to grading and other disturbance during Project construction relocated to other nearby BLM-administered lands for long-term protection. The BLM provided tribes with non-confidential versions of cultural resource study reports for the proposed Project. The BLM requested that the tribes enter into a formal data sharing agreement for the proposed Project prior to the BLM releasing the confidential data. Data sharing agreements have so far been executed with three tribes. The BLM has taken tribal concerns about prehistoric artifact treatment into consideration and has notified the tribes it will require an archaeological monitoring and discovery plan, should the proposed Project be approved and move to the construction phase. The BLM will develop this plan in consultation with all parties including the tribes.

Generally, the tribes have commented that the proposed Project area and surroundings are part of a much larger landscape of great importance to tribal culture and identity. Also, the tribes have questioned the consistency of the BLM's National Register eligibility determinations for prehistoric resources within the direct APE. They expressed concern that some prehistoric resources are proposed as eligible while others proposed as not eligible seemingly have the same or similar types of artifacts. The BLM respectfully stands by its identification of cultural resources within the APE and its National Register eligibility determinations.

One tribe commented that the Mule Mountains are important to their religious beliefs and practices, and that the proposed Project, if constructed, would interfere with these beliefs and practices. The BLM had a consultation meeting with the tribe to discuss their comments. During the meeting, the tribe told the BLM that while they are not against renewable energy, they are opposed to the location of the proposed Project (and other solar projects on BLM-administered lands in the Chuckwalla Valley/Palo Verde Mesa area) because they believe that the entirety of undeveloped desert lands within their ancestral territory, including the cultural and natural resources found here, are of great importance to tribal culture and identity.

The BLM acknowledges the importance of BLM-administered lands within the APE (and larger landscape of the lower Colorado River) to the tribes' history and contemporary culture and identity. The BLM did not receive information from the tribes that changed its assessment of Project effects to identified historic properties within the APE, or that led to the identification of previously unknown historic properties in this area, pursuant to the Section 106 regulations. The BLM continues to consult with the tribes to understand the impacts of the proposed Project under NEPA and potentially other authorities such as the American Indian Religious Freedom Act (AIRFA) and Executive Order 13007. The BLM has told the tribes that the current public (including tribal) access to BLM-administered lands in the Mule Mountains would not be affected by the proposed Project. Further, there would be no direct construction-related impacts within the Mule Mountains Area of Critical Environmental Concern (ACEC) which the BLM designated, in part, to highlight and protect Native American values. The BLM's responses to these comments can be found in Appendix W as well as in government-to-government response letters to the tribes.

4.3 CEQA Tribal Consultation and CDFW's Communication and Consultation Policy~~Consultation Process for Assembly Bill 52~~

~~CDFW continues to consult with tribes under AB 52 and will finalize the description of this consultation process under separate cover in a Final EIR.~~

Per CEQA requirements, tribal cultural resources are primarily identified through outreach to the Native American Heritage Commission (NAHC) and government-to-government consultation between the Lead Agency and appropriate California Native American tribes. On July 25, 2017, CDFW sent a request to the NAHC for a search of the Sacred Lands File and a list of tribes that may be affiliated with the Project area. The NAHC performed a records search of the Sacred Lands File, which was negative, and provided a list of Native American tribes who may have knowledge of cultural resources in the Project area. On August 25, 2017, CDFW provided notification of the Project under CEQA section 21080.3.1 and CDFW's Tribal Communication and Consultation Policy to the 22 tribes identified by the ~~Native American Heritage Commission (~~NAHC~~)~~. The notification letters included a description of the Project and potential impacts to tribal interests, and invited consultation pursuant to CEQA and CDFW's Tribal Communication and Consultation Policy. Two tribes responded: The Colorado River Indians Tribes (CRIT) and Twenty-Nine Palms Band of Mission Indians.

The CRIT requested formal consultation in a letter dated September 25, 2017. ~~. In addition, CRIT~~and outlined their government-to-government consultation process. ~~and indicated they needed additional project information to provide informed input into the process.~~ CDFW's Tribal Liaison attempted to arrange an informal conference call for October 4, 2017, by email on September 27, 2017, and offered to help facilitate a formal government-to-government in-person meeting in compliance with CRIT's consultation policy. CDFW received a letter from the CRIT on April 16, 2018, through another state agency, that reiterated their consultation policy. ~~On April 25, 2018, CDFW sent a follow-up letter via certified mail (delivered on April 26, 2019) that outlined CDFW's~~

~~attempts to conduct consultation with CRIT and willingness to conduct a government-to-government consultation meeting with CRIT regarding the Project. After receiving no response, CDFW sent an email to the CRIT (Mr. Etsitty and Ms. Loudbear) on June 21, 2018, as a follow-up from the April 25, 2018 letter, reiterating their availability to conduct government-to-government consultation. Following the BLM's decision to conduct testing in July 2019, CDFW sent a letter via overnight delivery (delivered on August 2, 2019), and via email on August 1, 2019 to the CRIT reaching out to request if the CRIT would like to have a government-to-government consultation meeting regarding the Project. As of the time of publication of this Final EIS and Proposed PA, CDFW has not received a response to the April 25, 2018, letter; the June 21, 2018, email; or the August 1, 2019, letter and email.~~ CDFW and CRIT exchanged correspondence related to the Project from 2018 and into 2021. CRIT submitted a formal comment letter on the Project on January 29, 2020, detailing CRIT's concerns with the Draft EIR and the Project's potential to transform a significant cultural landscape. CDFW and CRIT held an initial staff-to-staff meeting on February 25, 2020, and have held a series of staff-level conversations since that time.

The Twenty-Nine Palms Band of Mission Indians sent a letter dated September 21, 2017, indicating that they have been in correspondence with the BLM regarding the Project and that they would like approved Native American Monitor(s) from the Twenty-Nine Palms Band of Mission Indians to be included in ~~designating tribal monitors~~the Project. They also requested to review the Class III Cultural Report when completed. On September 27, 2017, CDFW's Tribal Liaison sent an email to Ms. Bliss from the Twenty-Nine Palms Band of Mission Indians~~Tribe~~ informing the~~m~~ tribe of ~~their~~ CDFW's willingness to schedule a formal government-to-government consultation meeting. Following the BLM's decision to conduct testing in July 2019, CDFW sent a letter via overnight delivery (delivered on August 2, 2019), and via email on August 1, 2019 to the Twenty-Nine Palms Band of Mission Indians reaching out to request if Twenty-Nine Palms Band of Mission Indians would like to have a government-to-government consultation meeting regarding the Project. As of the time of publication of this Final ~~EIS and Proposed PA~~EIR, CDFW has not had further discussions with the Twenty-Nine Palms Band of Mission Indians~~received a response to the September 27, 2017, email or the August 1, 2019, letter and email~~.

In addition to consultation through the ~~Assembly Bill 52~~CEQA process, on April 12, 2018, at the public scoping meeting in Blythe, California, Linda Otero from the Fort Mojave Indian Tribe had a one-on-one conversation with the CDFW representative in attendance. At this meeting, Ms. Otero made CDFW aware that the tribe had concerns regarding the Project, and requested an opportunity to discuss their concerns with CDFW. On April 13, 2018, CDFW sent Ms. Otero a copy of the Project's Notice of Preparation via email and asked Ms. Otero to share the tribe's concerns with CDFW. Ms. Otero responded on April 18, 2018, thanking CDFW and indicating she was eager to meet in the future. On April 18, 2018, CDFW emailed Ms. Otero requesting that the tribe send a formal letter to CDFW indicating its interest in government-to-government consultation. CDFW also requested that Ms. Otero indicate her role in the consultation process in the letter. As of the time of publication of this Final ~~EIS and Proposed PA~~EIR, CDFW has not had further discussions with the Fort Mojave Indian Tribe~~received a response to the April 18, 2018, email~~.

Pursuant to requests from the CRIT and Twenty-Nine Palms Band of Mission Indians, on May 23, 2019, CDFW confirmed with the CRIT that the BLM provided them with copies of the cultural resources report and addenda on March 13, 2019. Also on May 23, 2019, CDFW confirmed with Twenty-Nine Palms Band of Mission Indians that the BLM provided the cultural resources report and addenda on March 12, 2019.

The Quechan Indian Tribe sent an email on January 1, 2020, requesting information and discussion regarding the Project. CDFW and the Quechan Indian Tribe had an initial staff-to-staff call on February 25, 2020, to discuss the Project, during which the Quechan Indian Tribe requested formal consultation with CDFW. CDFW and the Quechan Indian Tribe engaged in formal consultation and held a series of staff-level discussions through 2020 and into 2021. The Quechan Indian Tribe submitted a formal comment letter on the Draft EIS/EIR on May 7, 2020, describing the cultural landscape of the Project area.

CDFW has incorporated information and mitigation measures as a result of the consultations and discussions with the CRIT and the Quechan Indian Tribe in the Final EIR. The potentially feasible mitigation measures agreed upon in the consultation process with the CRIT and Quechan Indian Tribe would avoid or lessen Project impacts on tribal cultural resources.

Based on outreach to the tribes conducted to date by CDFW, tribal comment letters, and ongoing staff-level discussions with the CRIT and the Quechan Indian Tribe, CDFW has identified the Mule Mountain Tribal Cultural Landscape as eligible for listing in the California Register of Historical Resources for its tribal value (Criterion 1), and as being significant pursuant to California Public Resources Code, Section 5024.1(c), based on the following criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history or cultural heritage.
2) Is associated with the lives of persons important in our past.
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4) Has yielded, or may be likely to yield, information important in prehistory or history.

The Mule Mountains are a place of critical cultural importance to members of CRIT and the Quechan Indian Tribe, particularly to the Mohave and Quechan people. Although the Mohave people were forcibly removed from this area to create opportunity for private and federal ownership, the Mohave and Quechan people remain culturally tied to the Mule Mountains.

The general Project area contains a wealth of archaeological and cultural sites and other features, including trails and ceremonial sites, and forms the center of a regional trail network. Travelers, traders, and ritualists stopped off in the Mule Mountains regularly. The Mule Tank Discontiguous Rock Art District, containing archaeological sites CA-RIV-504 and CA-RIV-773, is located in the northern Mule Mountains. This is an archaeological district that is listed in the National Register of Historic Places and is culturally significant for the Native American tribes associated with the area along the Colorado River, including the CRIT and the Quechan Indian Tribe. The district includes a natural water catchment and was—and is—an important junction of indigenous travel routes and a focus point of human activity. Numerous trails extend away from this district throughout the Mule Mountains, and are related to the intaglios and petroglyphs. CRIT and the Quechan Indian Tribe consider the Mule Mountains and surrounding area to be an irreplaceable landscape that provides a sense of place and identity, and to be vital to the tribes' continuing cultural heritage.

Within the direct effects APE, 23 archaeological sites are considered significant for their tribal values and are therefore considered by CDFW to be tribal cultural resources. However, for the reasons discussed in Section 3.5 of this Final EIR, the Project will not substantially and adversely change the significance of this resource.

~~CDFW sent follow-up emails to the CRIT and Twenty-Nine Palms Band of Mission Indians requesting if the tribes would like to consult via phone or meet in-person for further government-to-government consultation following receipt of the cultural resources report and addendums. Consultation with the tribes is ongoing.~~

4.4 Implementation, Monitoring, and Enforcement

4.4.1 Implementation

The Lead Agencies will continue to involve and collaborate with the public during the implementation of the Project or an alternative, if approved. Opportunities to become involved during implementation and monitoring could include development of partnerships and community-based citizen working groups. Citizens and user groups within the vicinity of the Project are invited to become actively involved in implementation, monitoring, and enforcement of decisions. The Lead Agencies and citizens could collaboratively develop site-specific goals and objectives that mutually benefit public land resources, local communities, and the people who live, work, or play on the public lands.

4.4.2 Monitoring

The BLM would monitor activities throughout the life of the Project to ensure that decisions are implemented in accordance with the approved ROD and ROW grant, including the approved POD. Monitoring would be conducted to determine whether decisions, BMPs, and approved mitigation measures are achieving the desired effects. Effectiveness monitoring would provide an empirical data base containing impacts of decisions and effectiveness of mitigation. Effectiveness monitoring would serve to advance analytical procedures for future impact analyses and for designing or improving mitigation and enhancement measures.

4.4.3 Enforcement and Adaptive Management

Adaptive management has been incorporated into the mitigation measures recommended for the Project. Adaptive management is based on clearly identified outcomes and monitoring to determine if management actions are meeting identified outcomes. If outcomes are not being met, adaptive management facilitates management changes to ensure that outcomes are met or to re-evaluate the outcomes. Procedures include:

1. Determining environmental effects of a project and identifying mitigation needs along with other permitting and regulatory requirements. Analysis should indicate where data are lacking and uncertainty exists with respect to the intended outcomes and the significance of this lack (see 40 CFR 1502.22);
2. Monitoring designed for adaptive management must be able to result in appropriate adjustments in project activities as the Project is constructed and planned mitigation is installed;
3. Striving to ensure public input into and understanding of the principles of adaptive management;
4. Maintaining open channels of information to the public and affected regulatory and permitting agencies during the application of adaptive management, including transparency of the monitoring process that precedes adaptive management and the decision-making process that implements it. This involves: (a) identifying indicators of change, (b) assessing monitoring activities for accuracy and usefulness, and (c) making changes in tactics, activities and/or strategies; and
5. Providing post-activity opportunity for public and affected outside agency review of adaptive management practices, including practices that were exceptions to any resource management plans or that had permitting and other regulatory requirements not satisfied by prior coordination.

Adaptive management allows agencies, in their environmental reviews, to establish and analyze mitigation measures that are projected to result in the desired environmental outcomes, and identify those mitigation principles or measures that it would apply in the event the initial mitigation commitments are not implemented or effective.

4.5 Scoping

In compliance with NEPA (40 CFR 1501.7), USEPA published a Notice of Intent (NOI) in the Federal Register (Volume 83, No. 47) on March 9, 2018, providing notice of the BLM's intent to prepare an EIS for the Project (77 FR 64824). The NOI initiated the public scoping period for the EIS, provided information about the Project, and served as an invitation to provide comments on the scope and content of the EIS.

As required by Section 15082 of the CEQA Guidelines (14 CCR 15000 et seq.), CDFW issued an NOP on March 8, 2018, that summarized the Project, stated CDFW's intention to prepare a joint EIS/EIR, and requested comments from interested parties. The NOP is included as Appendix D. Twenty public notices were sent to property owners; 15 copies of the NOP were sent to the California State Clearinghouse; 46 public notices were sent to federal, state, and local agencies and organizations; and public notices were sent to 5 local libraries. Public notices also were sent to 30 Native American tribal groups.

During the NOI/NOP comment period, the BLM and CDFW held a total of three public scoping meetings. The first scoping meeting took place from 5 p.m. to 8 p.m. on April 3, 2018, in Palm Springs at the BLM's South Coast Field Office (1201 Bird Center Drive). The second meeting took place on April

11, 2018, from 5 p.m. to 8 p.m., at the University of California Riverside campus in Palm Desert, California (75080 Frank Sinatra Dr. B117, Palm Desert, CA 92211). The final public scoping meeting took place on April 12, 2018, at the City of Blythe's City Hall Multipurpose Room from 12 p.m. to 3 p.m. (235 North Broadway, Blythe, CA 92225).

Newspaper notices were published in the Palo Verde Valley Times, and the Desert Sun announcing the public scoping meetings. The BLM also issued a press release regarding the NOI on March 9, 2018. The NOI and press release were made available to agencies and the public on BLM's eplanning website: https://eplanning.blm.gov.

The comment period ended on April 27, 2018, for purposes of NEPA and on April 23, 2018, for purposes of CEQA. In total, 31 letters were received: 8 from federal, state, and local agencies; 5 from tribes; and 18 from individuals and organizations. The Final Scoping Report describes the comments received and is included as Appendix D.

4.6 Public Comment Process

The Draft EIS/EIR/PA was circulated for a 90-day public comment period beginning on November 1, 2019. The BLM and CDFW sent notices of availability and/or electronic copies of the document to cooperating and responsible agencies, nearby landowners, and other interested parties.

Two public meetings were held during the public comment period during the first week of December 2019; one took place in Palm Desert and the second took place in Blythe.

The BLM and CDFW received 21 comment letters during the public comment period. Copies of these are provided in Appendix V, and responses to comments are provided in Appendix W. In addition, CDFW accepted a formal comment letter on the Draft EIS/EIR from the Quechan Indian Tribe that was submitted on May 7, 2020. The Quechan Indian Tribe comment letter is identified as comment letter 22 in Appendix W to this Final EIR.

4.7 Administrative Remedies

BLM and USEPA's Office of Federal Activities will publish separate Notices of Availability (NOAs) for the Final EIS and Proposed PA in the Federal Register. The NOA to be published by the USEPA in the Federal Register will initiate a 30-day protest period on the Proposed Plan Amendment to the Director of the BLM in accordance with 43 CFR Section 1610.5-2. Following resolution of any protests, BLM will publish a Record of Decision which may be accompanied by an Approved Plan Amendment.

After the Final EIR is completed, CDFW, as Lead Agency under CEQA, ~~will later issue a Final EIR which it~~ will use the Final EIR, in conjunction with other information developed in the CDFW's formal record, to act on approval of a Lake and Streambed Alteration Agreement and issuance of an Incidental Take Permit. Under CEQA requirements, CDFW will determine the adequacy of the Final EIR and, if adequate, will certify the document as complying with CEQA. After certification of the Final EIR, the CDFW will make a final decision on the Project. ~~CDFW will publish an NOA in a newspaper of general circulation in the Project area announcing its intention to consider the Final EIR for approval.~~

4.8 List of Preparers

A list of persons responsible for the preparation of various sections of the BLM Final EIS and Proposed PA, or who participated to a significant degree in preparing the BLM ~~is~~ Final EIS and Proposed PA, is presented in Table 4-1 below. In addition, the following individuals were responsible for preparation of this Final EIR: Nathan Voegeli, John Mattox, and Scott Wilson of CDFW and Micah Hale, Phd, RPA, Sarah Lozano, AICP, and Rica Nitka of Dudek (CDFW Environmental Contractor).

TABLE 4-1
LIST OF PREPARERS

Name	Position	Primary Responsibility
BLM California Desert District Office		
Miriam Liberatore	Project Manager	Managed the BLM NEPA process
Kim Marsden	Natural Resources Specialist	Biological Resources
BLM Palm Springs Field Office		
Dani Ortiz	Wildlife Biologist	Biological Resources
George Kline	Archaeologist	Cultural Resources and Tribal Consultation
BLM California State Office		
James Barnes	Archaeologist	Cultural Resources and Tribal Consultation
CDFW		
Magdalena Rodriguez	Project Manager	Managed the CDFW CEQA process
USFWS Palm Springs Fish & Wildlife Office		
Peter Sanzenbacher	Wildlife Biologist	Biological Resources
Environmental Science Associates and Consultant Team		
Alexandra Thompson	Project Manager and Technical Analyst	Managed the preparation of the Final EIS and Proposed PA, Visual Resources, Lands and Realty, Recreational Resources, Special Designations, Socioeconomics and Environmental Justice, and Wildland Fire Ecology, QA/QC
Janna Scott	Project Director	Project oversight and QA/QC
Cristina Gispert	Deputy Project Manager	Project management and QA/QC
Alexandra Sung-Jereczek	Project Coordinator and Technical Analyst	Project coordination, comment response, and meeting materials
Julie Stout	Biologist	Biological Resources
Brian Pittman	Biologist	Biological Resources
Matt Fagundes	Air Quality and Noise Specialist	Air Resources, Climate Change, and Noise
Eric Schniewind	Technical Analyst	Geology, Hazards and Hazardous Materials, and Water Resources
Michael Bever	Archaeologist	Cultural, Tribal, and Historic Resources, and Paleontological Resources
Shadde Rosenblum	Traffic and Transportation Specialist	Traffic and Transportation
Alyssa Bell	Paleontologist	Paleontological Resources
Tim Witwer	Technical Analyst	Energy
Jessica O'Dell	Technical Analyst	Public Services and Utilities
Maria Hensel	Technical Analyst	Lands and Realty, Special Designations
Dave Davis	Technical Analyst	Visual Resources

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CHAPTER 5
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Appendix A

Final EIR Cultural, Tribal, and Historic Resources Mitigation Measures

Cultural Resources – BLM/NEPA Mitigation

CUL-1: **NHPA Section 106 Memorandum of Agreement and Historic Properties Treatment Plan.** If Alternative A or B is selected and the BLM finds that there could be a direct adverse affect on the 17 sites that BLM is treating as eligible for listing on the National Register of Historic Places (National Register), a Memorandum of Agreement (MOA) for the Project shall be prepared in accordance with Section 106 of the NHPA. The MOA shall be executed by the BLM and prepared in consultation with the ACHP, SHPO, the Applicant, tribes, and other identified consulting parties. The MOA will be binding on the BLM and Applicant. The MOA shall be executed prior to the ROD. The MOA will contain measures to avoid, minimize, and mitigate adverse effects to historic properties; procedures for unanticipated effects and post-review discoveries; a plan to comply with NAGPRA and other laws governing the discovery of human remains; and a program of monitoring and protecting historic properties during construction as well as during operations and decommissioning. Resolution of adverse effects to historic properties will be developed in consultation with consulting parties.

Where National Register- and California Register of Historical Resources (California Register)-eligible or listed cultural resources cannot be protected from adverse direct and/or indirect effects, the Applicant shall comply with appropriate treatment(s) to mitigate adverse effects that will be detailed in a Historic Properties Treatment Plan (HPTP) developed as part of the MOA process described above (and appended to the MOA) and prepared for the Project prior to issuance of the NTP.

CUL-2: **Long-Term Management Plan.** The Applicant shall prepare a Long-Term Management Plan (LTMP) for protection and management of National Register- and California Register-eligible cultural resources during Project operations and decommissioning. The LTMP shall be developed in consultation with consulting parties and include requirements for conducting the post-construction monitoring/condition assessments and regular reporting to the BLM, as well as procedures for addressing unanticipated effects to cultural resources covered under the LTMP.

CUL-3: **Identification of Human Remains.** For human remains discovered on BLM-administered land, the plan for securing the discovery site and subsequent actions shall be included in the Monitoring and Discovery Plan required under Mitigation Measure CUL-5. In the event of a discovery, the BLM must be contacted immediately and State Health and Safety Code §7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin. If the discovery is determined to be subject to NAGPRA (25 USC § 3001 and 43 CFR 10), the plan will describe the necessary process for notification of tribes and subsequent steps as required by law and regulations (i.e., development and implementation of a NAGPRA Plan of Action, which would be separate from the Monitoring and Discovery Plan required under Mitigation Measure CUL-5 and its contents and consultation process directed by NAGPRA).

For human remains discovered on state or private lands, State Health and Safety Code §7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin. Further, pursuant to PRC §5097.98(b), remains shall be left in place and free from disturbance until a final decision as to treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the NAHC shall be contacted within the period specified by law. The NAHC shall identify the "Most Likely Descendant," who shall then make recommendations to and engage in consultation with CDFW and property owner concerning the treatment of the remains as provided in PRC §5097.98. The landowner may reach an agreement with the Most Likely Descendant for treating and disposing of human remains pursuant to state CEQA Guidelines §15064.5(d). Human remains from other ethnic/cultural groups with recognized historical associations to the Project area shall also be subject to consultation between appropriate representatives from that group and the CDFW.

CUL-4: **Cultural Resources Personnel and Project Documentation for Cultural Resources Personnel.** Prior to the issuance of a Notice to Proceed (NTP) by BLM for the Project, the Project Owner shall obtain the services of a Project Archaeologist and one or more alternates, if alternates are needed. The Project Archaeologist shall manage all monitoring, mitigation, curation, and reporting activities for the Project. The Project Archaeologist shall have a primarily administrative and coordination role for the Project. The Project Archaeologist may obtain the services of additional cultural resources specialists, if needed, to assist in monitoring, mitigation, and curation activities. The Project Archaeologist shall have a BLM California cultural resource use permit (CRUP) and all supervisory cultural resource field staff (Principal Investigators and Field Directors or Crew Chiefs) shall be listed on that permit and otherwise meet the requirements outlined in BLM Manual 8150. The Project Owner shall ensure that the Project Archaeologist makes recommendations regarding the eligibility for listing in the NRHP and CRHR of any cultural resources that are newly discovered or that may be affected in an unanticipated manner.

Prior to the issuance of the NTP by BLM for the Project, the Project Owner shall provide the Project Archaeologist with copies of the Final EIS and Proposed PA and maps and drawings showing the footprints of the power plant, all linear facility routes, all access roads, and all laydown areas, and other project facilities. Maps shall include the appropriate USGS quadrangles and maps at an appropriate scale (e.g., 1:2400 or 1" = 200') for plotting cultural features or materials. If the Project Archaeologist requests enlargements or strip maps for linear facility routes, the Project Owner shall provide copies to the Project Archaeologist and BLM project manager. The BLM project manager shall review map submittals and, in consultation with the Project Archaeologist, approve those that are appropriate for use in cultural resources planning activities. No ground disturbance shall occur prior to BLM project manager approval of maps and drawings, unless such activities are specifically approved by the BLM project manager. Ground disturbance is defined as any of the following activities: mowing, grading, disk and roll, pile or stake driving, mechanical excavation, drilling, digging, trenching, blasting, and using high pressure water to cut into the ground. If construction of the Project would proceed in phases, maps and drawings not previously provided shall be provided to the Project Archaeologist and BLM project manager prior to the start of each phase. Written notice identifying the proposed schedule of each project phase shall be provided to the Project Archaeologist and BLM project manager. Weekly, until ground disturbance is completed, the project construction manager shall provide to the Project Archaeologist and BLM project manager a schedule of project activities for the following week, including the identification of area(s) where ground disturbance will occur during that week. The Project Owner shall notify the Project Archaeologist and BLM project manager of any changes to the scheduling of the construction phases.

CUL-5: **Monitoring and Discovery Plan.** Prior to issuance of the NTP, the Applicant (or Project Owner) shall prepare and submit for approval to the BLM a Plan for Archaeological Monitoring, Post-Review Discoveries, and Unanticipated Effects (also referred to as a Monitoring and Discovery Plan or MDP). The MDP shall be submitted to the BLM for review and consultation with consulting parties. The MDP shall either be appended to the MOA, if an MOA is required, or be a standalone document if no MOA is required. The required content of the MDP is discussed below, but could change as a result of the BLM's consultation with consulting parties.

In the event that the BLM approves the Alternative C footprint, the following applies: The 17 unevaluated archaeological resources treated as eligible for the National Register (CA-RIV-01819/H, CA-RIV-10033/H, CA-RIV-11650, CA-RIV-12731, CA-RIV-12750, CA-RIV-12758/H, CA-RIV-12759, CA-RIV-12784, CA-RIV-12786, CA-RIV-12787, CA-RIV-12793, CA-RIV-12796, CA-RIV-12803, CA-RIV-12807, CA-RIV-12808, CA-RIV-12822, and CA-RIV-12831) shall be avoided by Project-related disturbance. To ensure this, the MDP for the Alternative C footprint, if approved, shall include the following protocols:

- Any of these 17 resources that are within 50 feet, including buffer areas, of proposed construction activities will be identified and labeled as Environmentally Sensitive Areas (ESAs).

- The ESAs will be designated by marking the boundaries of sites with appropriate buffer zones (generally a buffer of 20 feet beyond the outer limits of the site extent, as demonstrated by surface and/or subsurface indications) using temporary fencing or other easily recognizable boundary defining materials. These areas will be shown on the engineering plans for the project as off-limits to construction activities.
- ESAs will be identified and established by the Project Archaeologist or other supervisory-level archaeologist listed on the BLM cultural resources use permit prior to initiation of ground-disturbing activities and will be maintained for the duration of the work effort in the ESA vicinity. Once established, an ESA will define areas where construction can occur while preventing construction activities and damage to archaeological sites within the designated ESA.
- The Project Archaeologist or other supervisory-level archaeologist listed on the BLM cultural resources use permit will be on site during construction to observe grading, trenching or other excavation for any facilities, roads or other project components related to the undertaking near ESAs and in other areas determined appropriate for full-time monitoring.

For any Project footprint approved (whether Alternative A, B, or C), where National Register- or California Register-eligible cultural resources cannot be protected from direct and/or indirect effects by Project design, as in the case of post-review discoveries, the Applicant shall comply with appropriate resolution measure(s) in the MOA, if one is required, and HPTP.

The MDP shall describe a program for avoiding and monitoring those National Register- or California Register-eligible resources that can be avoided during Project construction, as noted above. (Management of these resources during operations and decommissioning shall be addressed in a Long-Term Management Plan described in CUL-2.) The MDP shall also include maps and narrative discussion of areas considered to be of high sensitivity for discovery of buried archaeological resources. Monitoring strategies will be guided by the buried site sensitivity model developed from geoarchaeological analysis. The MDP shall detail provisions for monitoring construction activities in these high-sensitivity areas. It shall also detail the methods, consultation procedures, and timelines for addressing all post-review discoveries as well as unanticipated effects to known historic properties. To comply with the requirements of CUL-3, the MDP shall include a plan for the initiation of NAGPRA compliance and consultation in the event of post-review discovery of human remains and other NAGPRA objects, including securing the discovery site, notifying the Coroner and tribes, and implementing subsequent steps required by law and regulations.

In addition, the MDP shall include the following elements, with specific details to be determined based on input from consulting parties:

1. A general research design;
2. Protocols for the National Register evaluation (for all criteria) and treatment of known and newly discovered prehistoric and historic-period archaeological resource types. Treatment may involve data recovery as mitigation. Protocols shall be specified for addressing unanticipated effects to known historic properties. Protocols for addressing new discoveries and unanticipated effects to known historic properties will involve notification procedures for contacting the BLM, BLM review, and how the BLM will involve consulting parties.
3. Artifact collection and curation policies, as related to the research questions formulated in the research design, that apply to cultural resources materials and documentation resulting from evaluation and data recovery at both known prehistoric and historic-period archaeological sites and any National Register-eligible (as determined by the BLM) prehistoric and historic-period archaeological sites discovered during construction;

4. The implementation sequence and the estimated time frames needed to accomplish all Project-related tasks during the ground disturbance and post-ground-disturbance analysis phases of the Project;
5. The person(s) expected to perform each of the tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team;
6. Description of all impact-avoidance measures (such as flagging or fencing) to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during ground disturbance, construction, and/or operation and identification of any areas where these measures are to be implemented shall be identified;
7. The commitment to record on Department of Parks and Recreation (DPR) 523 forms, to map, and to photograph all encountered cultural resources over 50 years of age and to curate all archaeological materials excavated and/or recovered as a result of fieldwork under the MDP (i.e., data recovery), in accordance with 36 CFR Part 79 (or if applicable, the California State Historical Resources Commission's Guidelines for the Curation of Archaeological Collections);
8. The commitment of the Project Owner to pay all curation fees for artifacts recovered and for related documentation produced during cultural resources investigations conducted for the Project and, through the Project Archaeologist, to identify a curation facility that will accept cultural resources materials resulting from the project cultural resources investigations;
9. The Project Archaeologist shall attest to having access to equipment and supplies necessary for site mapping, photography, and recovery of all cultural resource materials (that cannot be treated prescriptively) from previously identified National Register- and California Register-eligible archaeological resources and from National Register- and California Register-eligible resources that are encountered during ground disturbance;
10. The contents, format, and review and approval process of the final Cultural Resource Report (CRR; see CUL-6);
11. Monitoring recommendations for different areas of the direct APE including the level of monitoring intensity based on subsurface sensitivity;
12. Procedures for discoveries of human remains including initiating NAGPRA compliance; and
13. A Tribal Participation Plan is strongly encouraged, and if completed should be appended to the MDP. The TPP shall include employment opportunities for tribal members, access to any necessary job training programs to ensure performance and experience requirements can be met, and an opportunity for tribal enterprises to bid on sourcing construction materials.

As described in CUL-4, the Project Archaeologist shall manage all monitoring, mitigation, curation, and reporting activities under the MDP. The Project Archaeologist shall have a primarily administrative and coordination role for the Project. The Project Archaeologist may obtain the services of additional cultural resource specialists, if needed, to assist in monitoring, mitigation, and curation activities. The Project Archaeologist shall have a BLM California cultural resource use permit and all supervisory cultural resource field staff (Principal Investigators and Field Directors or Crew Chiefs) shall be listed on that permit and otherwise meet the requirements outlined in BLM Manual 8150. The Project Owner shall ensure that the Project Archaeologist makes recommendations regarding the eligibility for listing in the National Register and California Register of any cultural resources that are newly discovered or that may be affected in an unanticipated manner.

The MDP shall address monitoring reporting. On forms provided by the BLM project manager, CRMs shall keep a daily log of any monitoring and other cultural resources activities and any instances of noncompliance with the mitigation measures. Copies of the daily monitoring logs shall be provided by the Project Archaeologist to the BLM, if requested by the BLM project manager. From these logs, the Project Archaeologist shall compile a monthly monitoring summary report to be

submitted for BLM review monthly. If there are no monitoring activities, the summary report shall specify why monitoring has been suspended. The Project Archaeologist or alternate shall report daily to the BLM project manager on the status of the Project's cultural resources-related activities, unless reducing or ending daily reporting is requested by the Project Archaeologist and approved by the BLM project manager. In the event that the Project Archaeologist believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the BLM project manager for review and approval prior to any change in the level of monitoring. Cultural resources monitoring activities are the responsibility of the Project Archaeologist. Any interference with monitoring activities, removal of a monitor from duties assigned by the Project Archaeologist, or direction to a monitor to relocate monitoring activities by anyone other than the Project Archaeologist shall be considered non-compliance with this mitigation measure. Upon becoming aware of any incidents of non-compliance with the mitigation measures the Project Archaeologist and/or the Project Owner shall notify the BLM Authorized Officer by telephone or e-mail within 24 hours. The Project Archaeologist shall also recommend corrective action to resolve the problem or achieve compliance with the mitigation measures. When the issue is resolved, the Project Archaeologist shall write a report describing the issue, the resolution of the issue, and the effectiveness of the resolution measures. This report shall be provided monthly for the review of the BLM project manager.

The MDP shall address the authority to halt ground disturbance during construction. The Project Owner shall only grant authority to halt ground disturbance during construction to the Project Archaeologist, alternate Project Archaeologist, and other supervisory cultural resource field staff (i.e., PI or Field Director listed on the BLM California cultural resource use permit) in the event of a discovery. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the Project Archaeologist. In the event that a cultural resource over 50 years of age is found (or if younger, determined exceptionally significant by the BLM), or impacts to such a resource can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts. Monitoring and daily reporting shall continue during the Project's ground-disturbing activities elsewhere. Additional procedures regarding halting ground disturbance to address a post-review discovery or unanticipated effects shall be described in the MDP.

As agreed to by the applicant, during construction, reasonable opportunities shall be provided for monitoring by a tribal monitor for all ground disturbing activities, including grading, disc and roll, and pile or stake driving, mechanical excavation, drilling, digging, trenching, blasting, or using high pressure water to cut into the ground. In addition, to confirm that vandalism of the Mule Tank Petroglyph Site and the Mule Canyon Intaglio Site is not occurring as a result of the Project, the applicant shall provide opportunities for quarterly tribal monitoring of these sites beginning with the commencement of construction until the end of the first year of Project operation. The results of such monitoring shall be reported to BLM and procedures to address unanticipated effects to these sites will be developed as needed in consultation with interested tribes.

Materials that are archaeological resources under ARPA, NAGPRA materials, or historic properties under the NHPA are subject to the processes and procedures set forth in the applicable laws and regulations. In accordance with 43 C.F.R. 7.33, the BLM land manager may determine that certain materials are not or are no longer of archaeological interest and therefore not considered archaeological resources. For those materials that are determined to not be archaeological resources under 43 C.F.R 7.33, the BLM land manager may determine appropriate conservation measures, including, but not limited to, avoidance, leaving materials in situ or relocated nearest the discovery locale as practicable, reburial, curation, or any other measure as the BLM land manager deems appropriate under applicable laws, regulations, and BLM policies related to such activity. are "not or no longer of archaeological interest" under that regulation.

CUL-6: **Cultural Resources Monitoring Report and Cultural Resources Report (CRR).** Cultural Resources Monitoring Reports shall be required and must meet BLM requirements. The report shall include documentation of the required cultural/historical sensitivity training for the construction staff held during the pre-grade meeting (see CUL-7). BLM and CDFW shall review the report to determine adequate compliance. The details of the report's structure and contents will be described in the MDP (see CUL-5).

The CRR, if required as the result of a discovery during construction, shall conform to BLM Cultural Resource Use Permit stipulations regarding reporting which include, but are not limited to, those listed in the California Office of Historic Preservation's Preservation Planning Bulletin Number 4(a) December 1989, Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports.

CUL-7: **Worker Environmental Awareness Program (WEAP).** Prior to issuance of a NTP by the BLM and for the duration of ground disturbance (as defined in CUL-4), the Project Owner shall provide Worker Environmental Awareness Program (WEAP) training to all workers within their first week of employment at the project site, along the linear facilities routes, and at laydown areas, roads, and other ancillary areas. The training shall be prepared by the Project Archaeologist, may be conducted by any member of the archaeological team, and may be presented in the form of a video. Tribal representatives will be given the opportunity to participate in the WEAP training. The Project Archaeologist shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance is completed or suspended, but must be resumed when ground disturbance, such as landscaping, resumes. The training shall include:

1. A discussion of applicable laws and penalties under the law;
2. Samples or visuals of artifacts that might be found in the project vicinity;
3. A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed;
4. A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits;
5. Instruction that only the Project Archaeologist, alternate Project Archaeologist, and supervisory cultural resource field staff have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the Project Archaeologist;
6. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the Project Archaeologist or supervisory cultural resource field staff, and that redirection of work would be determined by the construction supervisor and the Project Archaeologist;
7. An informational brochure that identifies reporting procedures in the event of a discovery;
8. An acknowledgement form signed by each worker indicating that they have received the training; and
9. A sticker that shall be placed on hard hats indicating that environmental training has been completed.
10. No ground disturbance shall occur prior to implementation of the WEAP program, unless such activities are specifically approved by the BLM project manager.

Cultural Resources – CDFW/CEQA Mitigation

CUL-8: **CDFW Tribal Cultural Resources Treatment Plan (CDFW only).** Prior to the initiation of ground-disturbing activities, the California Department of Fish and Wildlife (CDFW) shall require the Project owner to retain a Secretary of the Interior-qualified archaeologist to develop and implement a Tribal Cultural Resources Treatment Plan (Treatment Plan) that shall address the 23 historical resources determined eligible for the California Register of Historical Resources under the California Environmental Quality Act (CEQA). The purpose of the Treatment Plan is to document the procedures to be followed to ensure avoidance or minimization of impacts to tribal cultural resources consistent with CEQA Guidelines Section 15126.4(b), and to lay out a detailed program of mitigation for direct impacts to tribal cultural resources during implementation. The Treatment Plan shall cover all Project activities across the entire Project site and for the life of the Project. For tribal cultural resources located on lands administered by the Bureau of Land Management (BLM), the Treatment Plan shall be subject to review and approval by the BLM.

The Treatment Plan shall include, but not be limited to, the following elements, and shall be consistent with all other mitigation measures contained in this document, including treatment requirements developed as part of a Memorandum of Agreement (CUL-1) and Historic Properties Treatment Plan (CUL-2) if these documents become necessary:

- Specific measures to be taken to avoid impacts, where possible, to the 23 significant archaeological sites that are also tribal cultural resources, such as the designation of Environmentally Sensitive Areas. The 23 tribal cultural resources are listed in Table 3.5-1 of this document.
- Preparation and implementation of a data recovery plan to be used to guide the data recovery excavation of the 23 tribal cultural resources (considered historical resources under CEQA) that cannot be avoided, and any other tribal cultural resources that may be encountered during construction. The data recovery plan shall include, minimally, a regional cultural setting, appropriate regional research questions, field and laboratory methods for the data recovery effort, and analysis and reporting requirements. The data recovery plan shall include treatment measures that focus on recovering information related to tribal values. The treatment measures shall be developed through consultation among CDFW, the Native American Heritage Commission–listed traditionally culturally affiliated tribes, and the BLM as the landowner. Treatment measures may include detailed resource documentation, preparation of interpretative or educational materials, reburial of artifacts that convey tribal values, or other measures identified in coordination with the tribes.
- For data recovery affecting tribal cultural resources on BLM-administered land, a BLM-issued Archaeological Resources Protection Act permit shall be required for fieldwork.

Following implementation of data recovery excavation and other treatment protocols, a report documenting the methods and results of the data recovery and treatment program shall be prepared by a Secretary of the Interior–qualified archaeologist following Archaeological Resources Management Report guidelines, and shall be submitted to CDFW and BLM for review and approval.

CUL-9: **CDFW Tribal Cultural Resources (CDFW only).** Prior to construction, all construction personnel shall receive training from a qualified tribal cultural resources specialist regarding the appropriate work practices necessary to effectively comply with all applicable environmental laws and regulations. This training shall include a presentation or prepared materials detailing procedures to be followed for the handling of tribal cultural resources (TCRs) encountered during construction that cannot be avoided (e.g., isolated finds, archaeological sites), and upon discovery or suspected discovery during construction of TCRs. The tribal cultural resources treatment plan (Mitigation Measure CUL-8) shall specify appropriate handling and treatment of TCR materials prior to construction ground disturbance in the vicinity of the TCR materials. Moreover, the Long-Term Management Plan (Mitigation Measure

CUL-2) provides for periodic monitoring of avoided TCRs to assess unanticipated effects, such as effects from increased public access, trespass, and vandalism. If potential archaeological resources, TCRs, or human remains are discovered during Project activities, work shall cease in the immediate vicinity of the find. If the unanticipated resource is archaeological in nature, appropriate management requirements shall be implemented as outlined in Mitigation Measure CUL-5 (Monitoring and Discovery Plan) in conjunction with the following provisions specific to the management of TCRs. The Project archaeologist or another qualified cultural resources specialist under his/her supervision shall be contacted to inspect the find and to assess if the resource is of Native American origin or otherwise has potential to be considered a TCR. If the newly identified resources are identified as a potential TCR by the tribal observer, treatment of the find shall follow the procedures outlined in the tribal cultural resources treatment plan. The Project may recommence ground-disturbance activities in the vicinity of the find after it has complied with agency-approved recommendations. If human remains are found, then the procedures outlined in Mitigation Measure CUL-3 shall be implemented.

CUL-10: **Tribal Observer (CDFW only).** Prior to any ground disturbances within the Project area, the Project owner shall enter into a contract with and retain monitors designated by tribal representatives as directed by the California Department of Fish and Wildlife (CDFW) pursuant to its Assembly Bill 52 consultation efforts. These monitors shall be known as the Tribal Observers for this Project, and shall have the authority to identify resources as tribal cultural resources under Mitigation Measure CUL-9. Documentation of retention and correspondence shall be submitted to the CDFW.

Appendix V
Comment Letters

From: **John Kriebel** <kilaya726@hotmail.com>
Date: Sun, Nov 3, 2019 at 8:06 PM
Subject: [EXTERNAL] Re: Crimson Solar Project Draft EIS
To: blm_ca_crimsonsolar@blm.gov <blm_ca_crimsonsolar@blm.gov>

Please don't do this project. I am a high school teacher and this is one of my favorite areas to camp and explore the beautiful desert there. I often share my experiences and knowledge of this area with my students. I have come across ancient native American dwellings, artifacts and trails there. I have seen burrowing owls and tortoises and a mountain lion there. Nearby is the historical Bradshaw Trail. The desert crust is so fragile. These big solar projects destroy it and you can see them for miles. It ruins the sense of being out in nature. I and most others who love the desert don't go out there to experience industrial projects. We treasure the natural world and silence that are getting so much harder to find. **1-1**

John Kriebel

From: CNRCC Desert Forum <CONS-CNRCC-DESERT-FORUM@LISTS.SIERRACLUB.ORG> on behalf of atomictoadranch@netzero.net <atomictoadranch@netzero.net>
Sent: Thursday, October 31, 2019 2:29 PM
To: CONS-CNRCC-DESERT-FORUM@LISTS.SIERRACLUB.ORG <CONS-CNRCC-DESERT-FORUM@LISTS.SIERRACLUB.ORG>
Subject: Crimson Solar Project Draft EIS

This one will be 2,500 acres on BLM land next to their pending approval of the 3,800 acre Desert Quartzite Solar Project making about 6,300 acres of good quality California Desert habitat the latest sacrifice for the big green industry. You know the drill: Cultural sites, Mule Mountains Area of Critical Environmental Concern, Bradshaw Trail, desert pavements, biological soil crust, burrowing owls, Mojave fringe-toed lizards, tortoise, etc.. **1-2**

All in the East Riverside Solar Zone and DRECP Development Focus. The pending November dicing of the DRECP will now most likely help these developers in the protected areas. **1-3**

https://www.blm.gov/press-release/blm-seeks-public-comment-proposed-crimson-solar-project?fbclid=IwAR3M9YuQNCHy0lHuYNzC6xNCq8mlbSrh3CWHgk4aJxg8NxQGaJRKRBYk40Y

Map: https://eplanning.blm.gov/epl-front-office/projects/nepa/88925/142202/174606/Crimson_Project_Location_508.pdf

Doctors Stunned: Simple Tip Melts Belly Fat (Try Tonight)
thehealthreports24.com
http://thirdpartyoffers.netzero.net/TGL3242/5dbb52915eb7e52912edfst02duc

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Mojave Desert Air Quality Management District
Brad Poiriez, *Executive Director*
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 • Fax 760.245.2022
www.MDAQMD.ca.gov • @MDAQMD

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NOV 15 2019
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OFFICE

November 8, 2019

Crimson Solar Project
Bureau of Land Management
3040 Biddle Road
Medford, OR 97504
Attn: Miriam Liberatore, Project manager

Subject: Draft Environmental Impact Statement/Environmental Impact Report for the Crimson Solar Project

Dear Ms. Liberatore:

The Mojave Desert Air Quality Management District (District) has received the request for comments for the Draft Environmental Impact Statement/Environmental Impact Report for the Crimson Solar Project (Project). This project proposes to construct, operate, maintain, and decommission the Project. The Project is an approximately 350-megawatt (MW) photovoltaic (PV) solar energy generating facility and related infrastructure. If approved, the Project would be constructed on BLM-administered public lands in the eastern portion of Chuckwalla Valley near the City of Blythe, within unincorporated Riverside County, California. The Project would generate solar power and deliver it to the California electrical grid through 230 kV gen-tie lines to interconnect with the Colorado River Substation (CRS), owned by Southern California Edison (SCE).

The DEIS/EIR contains Air Quality mitigation measures that adequately address previous comments submitted by the District, including submission of a Dust Control Plan.

The District supports the development of renewable energy sources; such development is expected to produce cumulative and regional environmental benefits.

2-1

Thank you for the opportunity to review this planning document. If you have any questions regarding this letter, please contact me at (760) 245-1661, extension 6726, or Tracy Walters at extension 6122.

Sincerely,

Alan J. De Salvio
Deputy Director – Mojave Desert Operations

AJD/tw

California Program Office
980 Ninth Street, Suite 1730 | Sacramento, California 95814 | tel 916.313.5800
www.defenders.org

DESERT TORTOISE COUNCIL
4654 East Avenue S #257B
Palmdale, California 93552
www.deserttortoise.org

November 15, 2019

Crimson Solar Project
Attn: Miriam Liberatore, Project Manager
Bureau of Land Management
3040 Biddle Road
Medford, OR 97504
Via email to: blm_ca_crimsonsolar@blm.gov; mliberat@blm.gov

Magdalena Rodriguez, Project Manager
Inland Deserts Region
California Department of Fish and Wildlife
3602 Inland Empire Blvd Suite C-220
Ontario, CA 91764
Via email to: Magdalena.Rodriguez@wildlife.ca.gov

Dear Ms. Liberatore and Ms. Rodriguez;

Thank you for the opportunity to review and provide comments to the Bureau of Land Management (BLM) and the California Department of Fish and Wildlife (CDFW) on the Draft Environmental Impact Statement (DEIS)/Draft Environmental Impact Report (DEIR) for the proposed Crimson solar project (Crimson). This letter contains comments on the Crimson DEIS/DEIR from Defenders of Wildlife (Defenders) and the Desert Tortoise Council (Council).

Defenders has 1.8 million members and supporters in the U.S. including 279,000 in California. Defenders is dedicated to protecting all wild animals and plants in their natural communities. To this end, Defenders employs science, public education and participation, media, legislative

advocacy, litigation and proactive on-the-ground solutions to prevent the extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

The Council is a non-profit organization comprised of hundreds of professionals and laypersons who share a common concern for wild desert tortoises and a commitment to advancing the public's understanding of desert tortoise species. Established in 1975 to promote conservation of tortoises in the deserts of the southwestern United States and Mexico, the Council routinely provides information to individuals, organizations, and regulatory agencies on matters potentially affecting desert tortoises within their geographic ranges.

Defenders and the California Wilderness Coalition submitted scoping comments on Crimson on April 5, 2018, and the Council submitted scoping comments on April 20, 2018. Comments from Defenders and the Council on the Crimson DEIS/DEIR are as follows: 3-1

1. Alternatives to the Crimson project: The DEIS/DEIR includes four alternatives: Alternative A – Proposed Project, Alternative B – Proposed Project with specific Design Features to reduce surface disturbance, Alternative C – Reduced Acreage, and Alternative D – No Project.

In the introduction of the DEIS/DEIR, BLM states, "*The public is encouraged to provide information and comments about the Draft EIS/EIR/PA, including the adequacy and accuracy of proposed alternatives, analysis of respective management decisions, and new information. The BLM may select elements from each of the analyzed alternatives for the purpose of creating a management strategy that best meets the needs of the resources and values in this area under the principals of multiple use and sustained yield*."

Comment: Defenders and the Council recommend an additional alternative be included and analyzed in the Final EIS/EIR for the Crimson Project that would avoid direct impacts to occupied habitat for the desert tortoise within two separate solar array fields in the southwestern portion of the Project. With slight modification, the project footprint and perimeter fence would avoid at least six desert tortoises encountered during protocol surveys, which are displayed on Figure 3.3-5, Appendix A of the DEIS/DEIR. This slight modification would exclude a relatively small amount of land from the project, not appreciably reduce electricity generation, and decrease direct impacts to the desert tortoise. A map of our recommended changes to the project footprint and perimeter fence location is included in map attached to this letter. 3-2

There is an additional reason or incentive to adopting our recommendation to modify the project to avoid at least six known desert tortoises encountered during protocol surveys, namely that a five-year post-translocation effectiveness monitoring program would not be required if the five or fewer subadult and adult desert tortoises were translocated from the Project. Although pre-project survey data indicate that no more than five subadult and adult desert tortoises are expected to be translocated, it is possible that more than five would be found, thus triggering the need for the five-year post-translocation effectiveness monitoring. 3-3

2. Desert Tortoise Translocation Plan: Appendix I, the Desert Tortoise Translocation Plan, proposes to translocate desert tortoises from the Project to adjacent habitat on the lower alluvial fans and bajadas of the Mule Mountains, which is called the Primary Recipient Site comprised of approximately 3,500 acres of occupied suitable habitat. The Secondary Recipient Site is the translocation area associated with the Desert Sunlight solar project, which has been designated as a solar project exclusion area by BLM.

Comment: We recommend that the Mule Mountains Recipient Site be used for desert tortoise translocation given that is immediately adjacent to the Project and would be very similar habitat and that it would preclude the need to translocate individuals approximately 60 kilometers (37 miles) to the northwest at the Desert Sunlight Recipient Site. Studies have shown that shorter translocation distances for this species are more conducive to their survival and establishing home ranges near the release sites. Conversely, longer translocation distances have resulted in some individuals attempting to return to their home location, resulting in higher mortality due to dehydration, becoming disoriented and increased predation.

3-4

3. Compensatory Mitigation: Standard compensatory mitigation for unavoidable significant impacts resulting from the Project are included in all alternatives, and cover all sensitive habitats and sensitive/protected species. We appreciate the CDFW being a cooperating agency with BLM in development of the DEIS/DEIR, which has streamlined the compensatory mitigation needed to satisfy BLM and CDFW policies. Compensatory mitigation for unavoidable impacts to the desert tortoise and its habitat is proposed at a ratio of 1:1 for the 2,504 acre project footprint disturbance.

3-5

Comment: As in previous comments on solar projects in the Riverside East DFA/Solar Energy Zone, we have recommended that compensatory mitigation requirements be satisfied through acquisition and protective management of high quality habitat rather than through enhancement of habitat on federal land. Habitat enhancement in this arid and hot environment is extremely difficult and with uncertain outcomes, and if successful, would take an extremely long period of time measured in decades or centuries.

We also recommend that compensatory mitigation for loss of habitat occupied by the desert tortoise be at a ratio of 3:1 for the southwestern segments of the project. These project segments are shown on the map attached to this letter, which also include our recommendations for boundary adjustments. We make this recommendation based on the California Endangered Species Act (CESA) requirement that impacts to species listed as threatened or endangered under State law be fully mitigated. We do not consider the proposed 1:1 compensatory mitigation ratio as satisfying this requirement, which is the reason we recommend a 3:1 ratio for loss of occupied desert tortoise habitat. Whether our recommendation to increase the compensation ratio is implemented or not, the compensation lands should be situated within the Chuckwalla Critical Habitat Unit.

3-6

3-7

4. Project Fence Perimeter Road along Project Fence: The proposed Crimson project includes a perimeter road approximate 12 feet wide on both sides of the fencing around each solar array field to provide for fence construction and maintenance and a fire break around the facility.

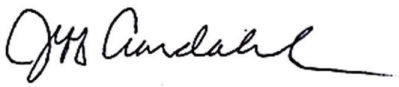
Comment: We recommend that the perimeter road is located on the inside of the project perimeter fence rather than on both sides. Given the low vegetation density in the project area, the likelihood of a fire starting and advancing across the landscape is highly unlikely.

3-8

5. Conclusion: Defenders and the Council hope that BLM and CDFW adopt our comments and recommendations for the Crimson Project and use them in preparing the Final EIS/EIR. We believe they are realistic, consistent with BLM and CDFW laws, regulations and policies regarding the desert tortoise due to its listing as threatened under both the Federal Endangered Species Act and CESA. If our comments and recommendations are adopted, they will benefit the project developer for reasons stated above, result in a relatively minor reduction in electricity generation from the Project, and hopefully enhance protection of tortoises and their habitats.

3-9

Sincerely,

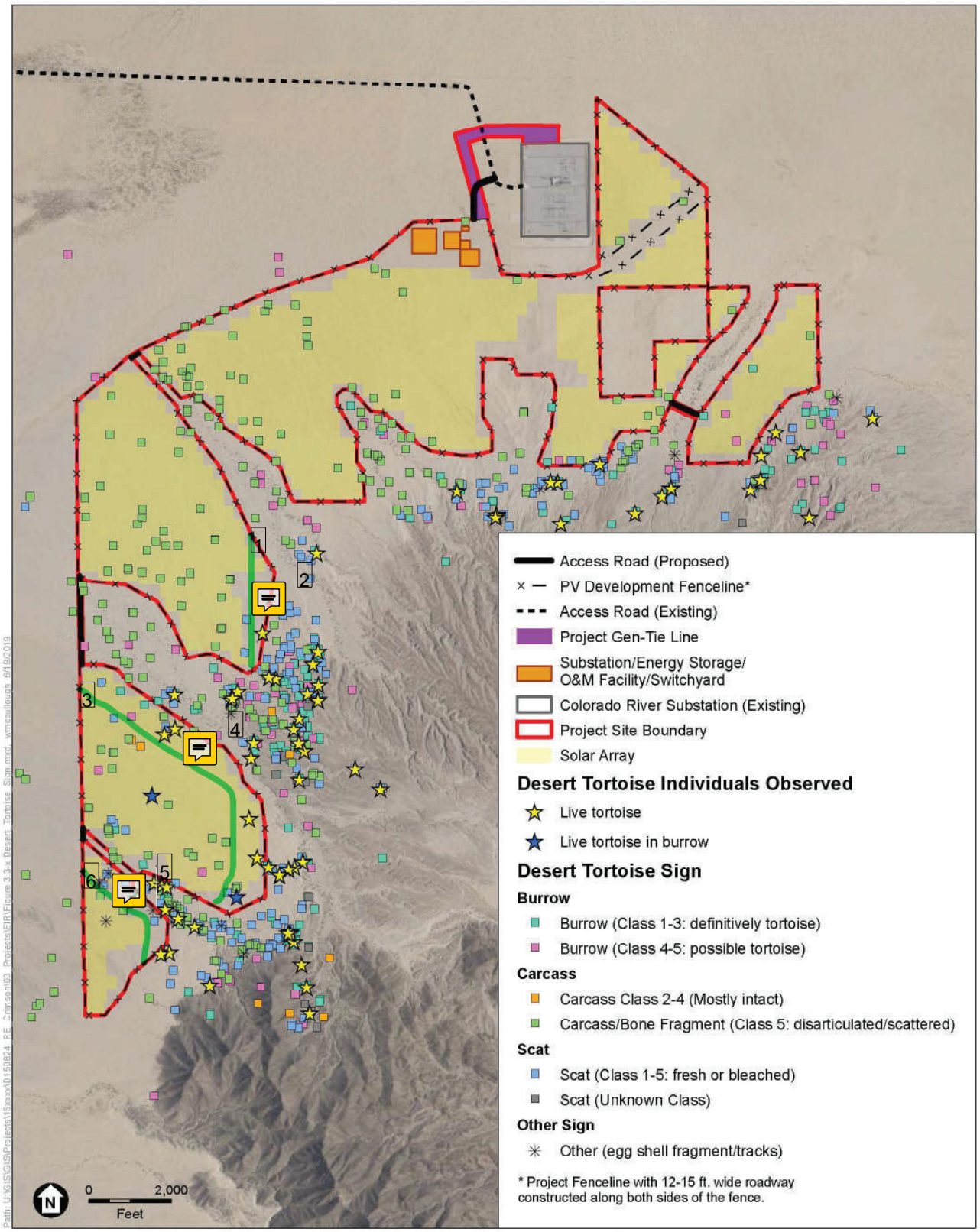


Jeff Aardahl
California Representative
Defenders of Wildlife
46600 Old State Highway, Unit 13
Gualala, CA 95445
jaardahl@defenders.org



Edward L. LaRue, Jr., M.S.
Chairperson, Ecosystems Advisory Committee
Desert Tortoise Council
4654 East Avenue S #257B
Palmdale, California 93552
www.deserttortoise.org
eac@deserttortoise.org

Attachment: map of recommended changes to project footprint



SOURCE: ESA; AECOM

Crimson Solar Project PA/EIS/EIR

Figure 3.3-5
Desert Tortoise

ESA

Letter 3

Summary of comments: Crimson solar Desert Tortoise Map Recommended Boundary Adjustments.pdf

Page:1

Number: 1 Author: JAardahl Subject: Highlight Date: 2019-11-04 10:23:48

Number: 2 Author: JAardahl Subject: Sticky Note Date: 2019-11-04 10:24:32

Recommended boundary adjustment to exclude area to avoid desert tortoises.

Number: 3 Author: JAardahl Subject: Highlight Date: 2019-11-04 10:20:15

Number: 4 Author: JAardahl Subject: Sticky Note Date: 2019-11-04 10:22:42

Recommended boundary adjustment to exclude area to avoid desert tortoises.

Number: 5 Author: JAardahl Subject: Sticky Note Date: 2019-11-04 10:21:39

Recommended boundary adjustment to exclude area to avoid desert tortoises.

Number: 6 Author: JAardahl Subject: Highlight Date: 2019-11-04 10:20:37

Letter 4

Chemehuevi Indian Tribe

760-858-4219 1990 Palo Verde Drive, PO Box 1976, Havasu Lake, CA 92363

November 20, 2019

As Director of the Cultural Center for the Chemehuevi Indian Tribe, I issue this public comment to assert our Tribe's opposition for the Crimson Solar Project. The project is residing within the traditional territory and boundaries of our ancestral lands within present day Riverside County in the Mule Mountains area. **4-1**

After overviewing a copy of the Draft Environmental Impact Statement/Report and Draft Plan Amendment provided by the Bureau of Land Management sent out via mail this month, we stand behind the Colorado River Indian Tribes comments of cultural resource concern with the project. **4-2**

The Colorado River Indian Tribes noted the site contains various sites, historic trails, petroglyphs as well as sacred sites. The Mule Mountains are settled between various mountain ranges like the Chocolate Mountains, Big Maria Mountains and Chuckwalla Mountains. This entire area is tied within the Chemehuevi's sacred songs known as the Salt Songs. The area of the Mule Mountains is talked about in our Salt Songs when the Sisters are approaching the area where they will cross the river. Clearly we have cultural and spiritual ties to the Mule Mountain Range. The public lands are still used for hunting and activities to the Colorado River Indian Tribes and our tribal members as well. **4-3**

The biodiversity of the landscape needs to be protected. Numerous plant and animal species and habitats will be destroyed by the impact of the 2,500 acre solar facility construction and activity. The area is a wildlife corridor that would substantially destroy a way of life for our desert animal species. **4-4**

Any reconsideration to dissolve this project we believe is what's best for the cultural significants and for the vast amounts of wildlife, flora and fauna. However, if the project were to follow through, we want Tribal Historical Officers present such as the Colorado River Indian Tribes THPO Department to oversee construction. We fully support their judgements on behalf of Chemehuevi. **4-5**

Thank you,

Bridget Sandate

Bridget Sandate, Cultural Director

Letter 4


RECEIVED
DEC 0 9 2019
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OFFICE

Public Comment Card

Crimson Solar Project Draft EIS/EIR/PA

Name: Maricela Lou Date: 12/05/19

Agency/Organization Affiliation:

Address: Blythe, CA 92225

Information Open to FOIA

Comment:

We need people of the government to understand and help us to support and protect our Sacred Lands and the Grant Intaglios located east of the Big Maria Mountain, west of U.S. Highway 95 along the Colorado River. There are part of our origin, there are part of where we come from, our ancestors emigrated to the four directions from here.. We pay respect and pray for this land that is part of our creation story.

We asking to those people to Not to Disturbe and distroy these lands to set their solar panels. Please respect our rights under the Existing Federal Law and Protection of the Sacred Sites.

Thank You

- Maricela

Letter 6

La Cuna de Aztlan Sacred Sites Protection Circle

Alfredo A. Figueroa
424 N. Carlton Ave
Blythe, Ca 92225

13

Phone: (760) 922-6422
E-mail: lacunadeaztlan@aol.com

January 5, 2020

Crimson Solar Project
Bureau of Land Management
Miriam Liberatore, Project Manager
3040 Biddle Road
Medford, OR 97504

RE: Comments in opposition to the proposed Crimson Solar Project

Miriam Liberatore,

My name is Alfredo Acosta Figueroa. I am a native of the Colorado River, born in Blythe, CA, elder, historian and Chemehuevi Sacred Sites Tribal Monitor since 2009. Our organization, La Cuna de Aztlan Sacred Sites Protection Circle, is a Native American organization whose mission is to protect and preserve sacred Indigenous sites that are located along the Colorado River. Our organization has a Memorandum of Understanding (MOU) with the Bureau of Land Management Yuma Office to work in partnership to enhance cultural resources, protection, conservation and interpretation efforts. We were also designated to be guardians of these sacred sites that begin in Needles, CA down to the Gulf of California and centered in the Palo Verde/Parker Valleys. These sites include the world-famous Blythe Giant Intaglios, Kokopilli, Cicimitl, El Tosco and Bouse Fisherman geoglyphs as well as over 300 other geoglyphs (intaglios), thousands of petroglyphs, hundreds of pictographs and mountains images. **6-1**

We are totally against the new proposed Crimson Solar Project that is to be located west of the Mule Mountains. Attached to this email is a power point about the sacredness of the Mule Mountain and surrounding areas. **6-2**

The project is proposed to be built approximately a mile north of the sacred Mule Mountains and west of the rich agricultural Palo Verde Valley. The Mule Mountains located 15 miles southwest of Blythe, California represent earth/calli, in Aztec history. The Mule Mountains represent "calli" in Nahuatl. Calli means "earth/house" and its glyph is the 3rd glyph left on top on the Aztec Sunstone calendar with the 20-day glyphs. The origin of the word "California" is derived from "Calli-Fornax" meaning "the hot house". In the Aztec cosmic tradition when the body of a person dies they first go to "Calli". There at Calli, "The Great Spirit, Cicimitl (El Cucuy, ET)" takes the spirit to one of the four final resting places all based on how the person died and how they lived during their life. In the beginning of the 10th century, the Mule Mountains were referred to as the "upside-down mountains" and as the "Molcajete Mountains" because of the three peaks. **6-3**

Ron Van Fleet, a Mojave Elder descendent of the last Traditional Mojave Chief Peter Lambert, explains that the Creator, Mastumho, with his magic wand, stirred the contents of a three-legged pot or molcajete. He threw the contents behind him, thus creating the Milky Way, the entire universe, water and air. When He was finished, He placed the empty pot upside down on earth, with the three legs up, which created the three peaks of "Hamock

Avi", the Mule Mountains (15 miles southwest of Blythe, CA). In the Mojave oral creation story, Hamock Avi, is similar to the Aztec Creation story in the Mule Mountains.The molcajete (grinding mortar) site is located on the north side of the Bradshaw Trail Road on a small hill. It is approximately 4' deep and 15' in diameter.

The Bureau of Land Management has designated the Mule Mountains as an Area of Critical Environmental Concern (ACEC) and is included in their maps. This area includes geoglyphs, hundreds of petroglyphs, cremation/burial sites, major trails and many other indigenous ritual artifacts. It also included the Molcahete with round-hole design on top of the small hill.

6-3 cont.

The project will destroy remnants of the north/south Quechan Trail that begins at Spirit Mountain Avi-Kwame, Mojave/Tlalocan Azteca, located 15 miles northwest of Laughlin, Nevada, south to Yuma, Arizona. Included in the destruction would also be a part of the Coco-Maricopa Trail that goes west to Point Dume, Malibu, on the Pacific Coast.

6-4

We have stated before in all our comments against the large solar projects being developed along the I-10 corridor in Eastern Riverside County that the sacred sites are all tied together and there is no way that they can be singled out. The solar projects cannot destroy just one sacred site without destroying the sacredness of the Creation story in the McCoy Valley.

6-5

The California Energy Commission's (CEC) own cultural resources investigation had found an abundant of cultural resources as stipulated in their report. C-3 Cultural Resources Docket 09-AFC-8 C.3.1 Summary of conclusions dated 06/22/10 by Elizabeth A. Bagwell, Ph.D., RPA and Beverly E. Bastian: *Staff Finds that the GSEP construction impacts, when combined with impacts from past, present, and reasonably foreseeable projects, contribute in a small but significant way to the cumulatively considerable adverse impacts for cultural resources at both the local I-10 Corridor and regional levels.* ***This analysis estimates that more than 800 sites within the I-10 Corridor and 17,000 sites within the Southern California Desert Region will potentially be destroyed. Mitigation can reduce the impact of the destruction, but not to a less-than-significant level.***

Yet the CEC has not respected nor honored its own research or the BLM's despite all our touring with them of the sacred sites and describing what they mean in the human creation story.

6-6

Due to the heat intensity by the project, it will change the atmospheric conditions and a lot of the agriculture in the Palo Verde Valley will be affected.

6-7

In a recent article regarding the Jenko Solar Project in China, the Chinese are setting an example in protesting against the large solar panel projects in their country because they have not only contaminated their drinking water but also the climate change has ruined their agriculture industry. Apparently not even China is benefitting from these solar panel projects. The Jenko Solar Project is an excellent example of why in the United States, we do not need these projects near agricultural land much less near the Colorado River where its water reserve in Lake Mead is barely 1/3 of its capacity and all of its water has already been allocated. Lake Mead is at its lowest level since Hoover Dam created the lake in the 1930s according to an article in the Press Enterprise of July 9, 2014. The Colorado River, as we all know, is one of the main water sources in the Southwest United States and Northwest Mexico.

The Crimson Solar Power Project will need a lot of water for the project. Currently the Mesa Verde Community's well is drying up and they will have to dig down deeper. The other well is contaminated and has been closed for years. The main reason the asparagus fields that were planted at the Palo Verde Mesa were abandoned was because of the lack of water.

The Crimson Solar Power Project will have to drill wells from aquifers that lead to the Colorado River. The Colorado River Board of California has stipulated that all these aquifers within 50 miles go the Colorado River and any water taken from these aquifers has to be approved by the Board of Directors.

6-8

The Blythe airport is also in opposition of the solar power projects that are proposed to be built around the airport. According to Pat Wolfe, past operator of the airport, stated "currently the pilots are experiencing severe flying conditions when they fly over the Florida Light and Power Plant (FLP) when they are taking off or when they are landing on the landing strip." The FLP was built despite the opposition of the Federal Aviation Administration (FAA). FAA regulations are that the plant was to be built no less than a mile away from the end of the runway and that the towers could not be more than 150 feet tall. These two regulations are being violated. The first phases of the proposed Blythe and McCoy Solar Power Projects have already been constructed. They are approximately five miles north of the Blythe Airport. The proposed plan is to build approximately on 15,000 acres.

6-9

Based, the United States Fish and Wildlife Service (USFWS) analysis states this area along the I-10 corridor, is an important migratory route for numerous species as well as breeding and wintering stopover destination. This area has been designated as a Globally Important Bird Area (see California Audubon http://ca.audubon/org/iba/).

In addition, four National Wildlife Refuges (NWR) have been established to restore and protect habitat and wintering grounds for migratory birds and wildlife along the Colorado River, including Havasu, Bill Williams, Cibola, and Imperial. The importance of this habitat for migratory birds is known and is further highlighted by the use of the area by birds designated by the USFWS as Birds of Conservation Concern and by the California Department of Fish and Game as Species of Special Concern.

6-10

Currently, one of the most recognized butterflies is the Monarch Butterfly that has its massive migration from the Northern United States and Canada down to Michoacán in the winter. It is an endangered species. One of its western migration routes is centered through the Colorado River/McCoy Valley. The Monarch image can be seen as part of the Midland Mountain outline in the Little Maria Mountain Range. The Monarchs, along with any other butterfly flying through the area will be completely destroyed as will the birds such as the eagles, herons, etc.

6-11

Given the area's importance for maintaining health and breeding fitness of migratory and resident birds, the USFWS and California Department of Fish and Game (CDFG) are concerned that avifauna protected by the Migratory Bird Treaty Act (MBTA), migrating Swainson's hawks(state listed as threatened under the California Endangered Species Act), and eagles protected by the MBTA, the Bald and Golden Eagle Protection Act and designated as fully protected under Section 3511 of the Fish and Game Code may be impacted by the construction and operations of the proposed Crimson Solar project.Special status species at risk also include the state listed Gila Woodpecker, the nahualli (animist) of Quetzalcoatl the Creator (occurs on site) and elf owl (suitable habitat is on the site) and burrowing owls.

6-12

Another consequence of the construction of more solar power plants in the area is the air pollution. Already, there are many complaints by the Mesa Verde Community residents that are suffering from bronchitis, asthma, and other respiratory illnesses that lead to Valley Fever. These illnesses are related to the dust storms caused by the leveling of the pristine desert. Solar sites have been proposed nearly surrounding the Mesa Verde Community. Likewise, the residents of San Joaquin Valley parallel to I-5 north from Bakersfield to Fresno have been suffering grave Valley Fever epidemic. Close to a hundred inmates from the State Correctional facilities including Avalon, Corcoran, Coalinga and Delano have died from Valley Fever which was caused by the leveling of 410,000 acres. The land was supposed to be for proposed solar power projects and also to be farmed but was fallowed because of the lack of water. The fungus is carried by the dust of the fields that are fallowed. Illnesses from Valley Fever have increased among prisoners at the Chuckawalla and Ironwood State Prisons in Eastern Riverside County.

6-13

The Blythe airport, which lies a couple miles from the proposed project, has been declared as a backup for the Los Angeles International Airport in case it is attacked. The Blythe airport will be available to provide safe

6-14

landing. Currently the Blythe airport is also used as a training site for pilots. Fortunately no pilots have yet crashed flying above the FLP. The FLP is a stand-by energy plant for the LA Airport and power emergency, and is rarely in operation.

As we know, two professional pilots of the First Solar Company crashed and died when they were flying above the Desert Sunlight Solar project north of Desert Center. They were reviewing the damage that had been done by the summer monsoons on the solar project in 2013. The solar power projects create a dramatic atmospheric change. This is not just a threat to the planes but also to all flying birds, etc. These are facts that have been researched and documented at the Ivanpah Solar Power Project plus at the Israel Bright Source Power Projects sites in Israel. This is proof that the atmosphere cannot sustain an airplane above or near the solar sites and the Crimson Solar project will be approx. 2 miles southwest of the airport landing strip.

6-14 cont.

According to David Danelski article of July 14, 2014, the heat created from the solar power towers of the Ivanpah plant creates up to 800 degree temperatures and now the company has trained dogs to retrieve birds that perish while flying above the solar power plant.

The Ivanpah project is currently receiving a lot of negative comments pertaining to the pilots that fly to and from Las Vegas International Airport and Nellis Air Force Base and other airports in Southern Nevada. As a matter of fact the Ivanpah Solar Project is brightly seen from the cosmos as seen by satellite photography.

In 1975, San Diego Gas & Electric proposed to construct the Sun Desert Nuclear Power Plant that was going to be built within the same area as the then proposed Rio Mesa Solar project site and now, proposed Crimson Solar Project. After 5 years of protest by members of the Riverside County Tribes and environmentalist and our group, we were able to stop the construction of this nuclear plant. The SDG&E had already bought the John Norton 10,000-acre ranch that was to provide water to run the nuclear power plant. During Jerry Brown's first term as California governor, he was able to establish the California Atomic Energy Commission and they would schedule their meetings in Blythe, CA so that the community could be well informed of the pros and cons of the construction of the nuclear power plant that was eventually the first nuclear power plant to be stopped in the United States.

Again in 2001, the Pacific Gas & Electric was going to construct a natural gas power line called the North Baja Pipeline that was to traverse through the base of the Mule Mountains and Palo Verde Peaks. This pipeline would eventually destroy some of the sacred sites that are within the area. In June 2001, Native Americans from the Colorado River, Chumash, Chemehuevi, Mojave, Quechan, the EDAW, Inc., representatives of the Bureau of Land Management (El Centro, CA & Yuma AZ offices), archaeological, anthropological consultants and our group toured the area. After seeing the significance and sacredness of the area, the Pacific Gas & Electric circumvented the sacred sites. In appreciation of our tour, Dr. James H. Cleland from the EDAW Inc. sent the following recommendation to our organization: ***I would like to take this opportunity to wish you well in your future endeavors (1) to educate the public about the importance of cultural heritage and (2) to work within the context of environmental and historic preservation programs to protect these unique and non-renewable resources from unnecessary damage.***

6-15

Climate change and global warning have dramatically impacted weather patterns and most importantly, the unpredictable weather has caused wildfires throughout the southwest and the world. To date, Australia continues to battle wild fires that seem to be out of control. Since our first letter of opposition to the first proposed solar plant, much has happened in terms of climate change with regards to droughts. California is experiencing its worst drought in years and has suffered the worst year of forest fires in the history of the United States. In the past year, the area of Blythe has been one of the hottest years of all times.

6-16

In conclusion, we do not oppose solar panels. However, we do believe solar plants should be built on previously disturbed land. Solar panels should be placed in areas such as rooftops and on top of parking lots. In urban

6-17

areas, they should be placed on the rooftops where energy is mostly needed (warehouses, supermarkets, apartment complexes, abandoned air bases, and along the current electrical transmission lines). This will exclude the need for transmission lines which continue to present a current danger to our communities throughout the desert and surrounding communities. Excessive transmission lines have also presented major terrorist threats like the blackout that occurred on September 8, 2011 in Mexico, Yuma, Imperial, San Diego and Riverside Counties.

6-17 cont.

Former Agriculture Secretary Tom Vilsack has called for the USDA and the U.S. Forest Service to work more closely with tribal governments in the protection, respectful interpretation and appropriate access to Indigenous Cultural sacred sites. Vilsack said, "American Indian and Alaska Native values and culture have spirit and deserve to be honored and respected. By honoring and protecting sacred sites on national forests and grasslands, we foster improved tribal relationships and a better understanding of the Native people's deep reverence for natural resources and contributions to society."

We wholeheartedly support cultural resources related to the Native American Human Creation Story and support all the laws that have been approved to protect the sacred sites by the United States government and the United Nations plus the resolutions by the Colorado River Indians Tribes and the National Congress of American Indians.

6-18

We are opposing the construction of Crimson Solar project because of their gross violations to the following Indigenous State, Federal, Mexico and United Nation laws that support our demands and why these projects should not be constructed within sacred areas:

*California is already meeting its anti-pollution quota.

*United Nations Declaration on the Right of Indigenous People. Resolution adapted by the general Assembly during the 107th plenary meeting, September 13, 2007. (61/295) (Includes: Article 11 that stipulates Indigenous archaeological rights.)

*Native American Sacred Places, March 6, 2003 (S.B. 18)

*Native American Sacred Lands Acr, June 11, 2003 (H.R. 2419)

*The Sacred Land Protection Act, July 18, 2002 (H.R. 5155)

*The Native American Sacred Sites Protection Act, February 22, 2002 (S.B. 1828)

*Accommodations of Sacred Sites and Federal Land, Signed by7 President Bill Clinton om May 24, 1996 (Executive Order 13007)

*Native American Graves Protection and Repatriation Act of 1990

*Archaeological Resource Protection Act of 1979

*American Indian Religious Freedom Act, August 11, 1978

*The Civil Rights Act of 1968

*Antiquities Act of 1906

6-19

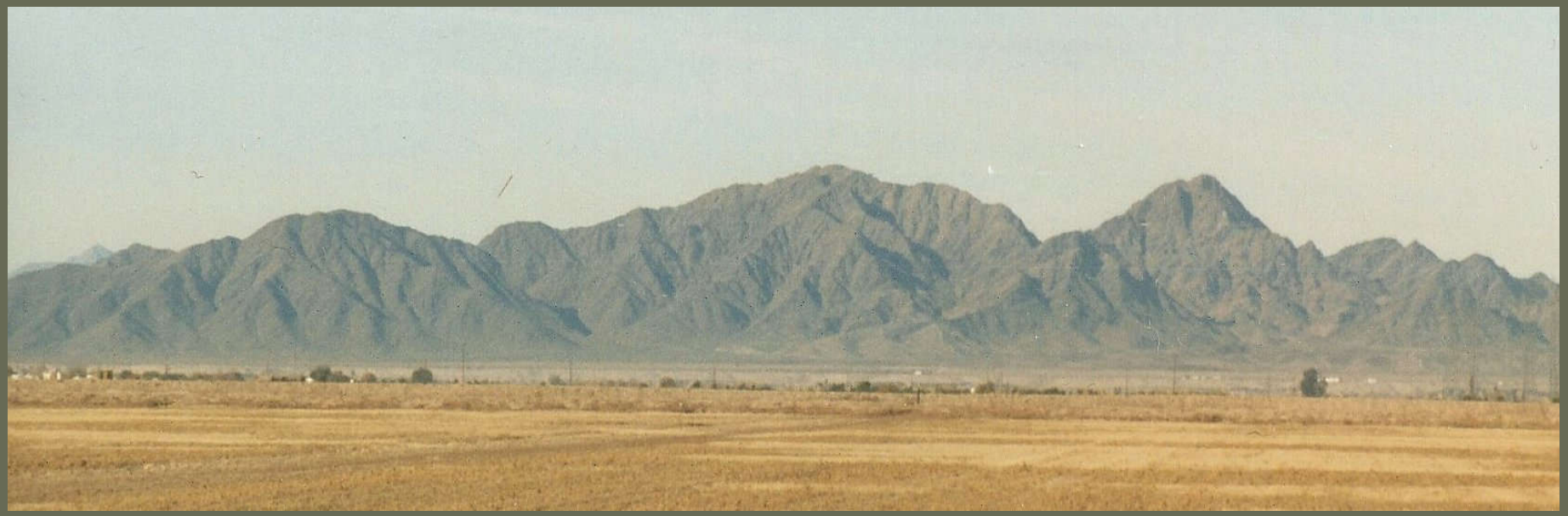
For all of these reasons, we are opposing the construction of the Crimson Solar Project and right-of-way that is proposed to be placed within sacred sites and pristine desert environment. 6-20

Sincerely ,

Alfredo A. Figueroa, Founder

Patricia F. Robles, Chairperson

Letter 6



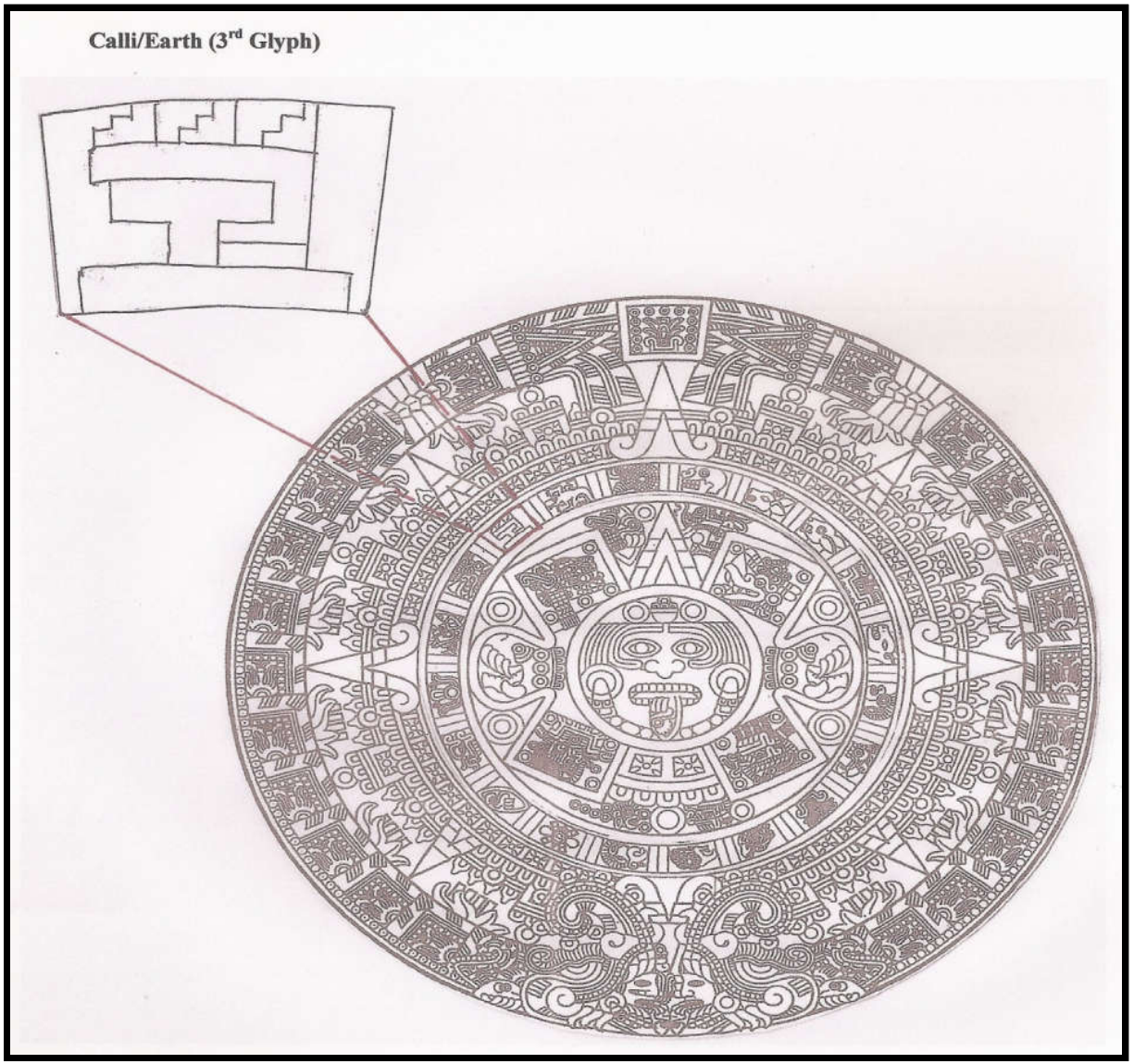
The Mule Mountains

(Proposed Crimson Solar Power site, 15 miles southwest of Blythe, CA)

By: Alfredo Acosta Figueroa
Chemehuevi Tribal Sacred Sites Monitor
Elder/Historian of La Cuna de Aztlan Sacred Sites Protection Circle

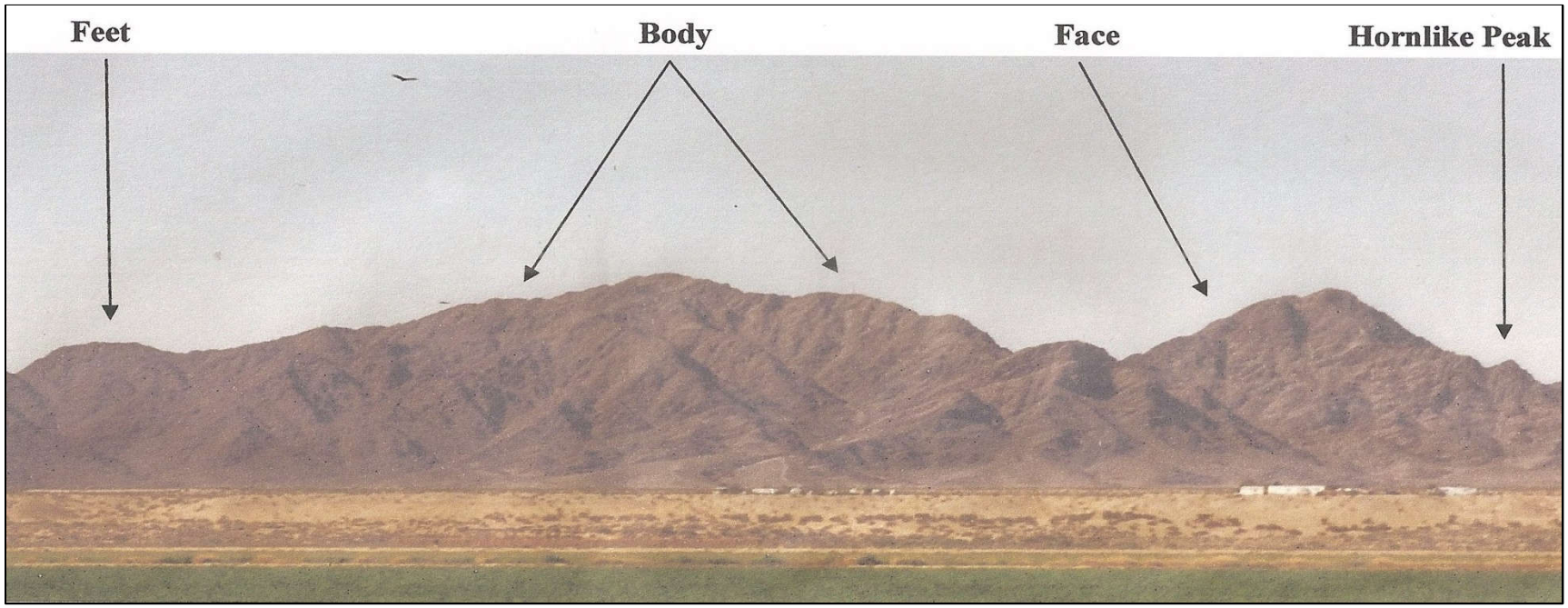
Aztec Sun Stone Calendar & its relation with the Mule Mts.

Our Great Beginning on Earth, Calli, from where the name of California originates.



The Mule Mountains

(Calli/Earth/Hamock-Avi)
Image of Amazon Calafia Giant

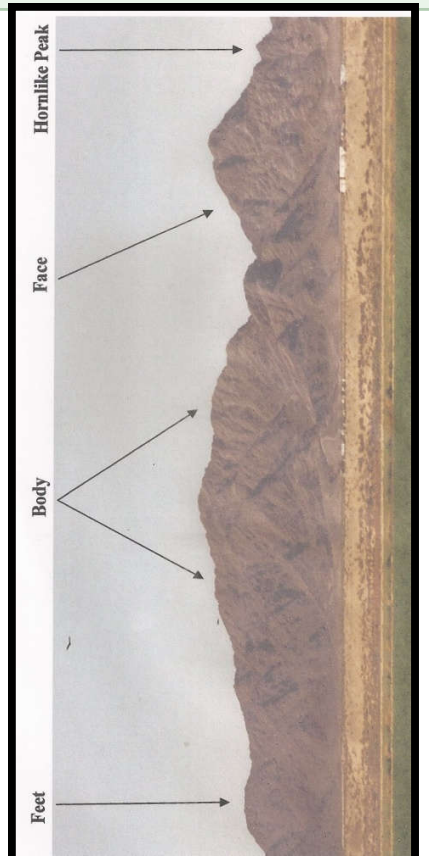


Calafia "The Giant Amazon Woman Warrior"

Giant Calafia
(Giant Amazon Woman Warrior)



Calafia's image in the Mule Mts.



Calafia descends from the constellation, Cassopeia, in the cosmos, to the Mule Mountains, and to the Cicimitl Geoglyph (8 miles north of Mule Mts.) All three are aligned with the Topock Maze located 13-Magnetic North near Needles, CA.



Calafia's popular image
"Giant Amazon Women Warrior"

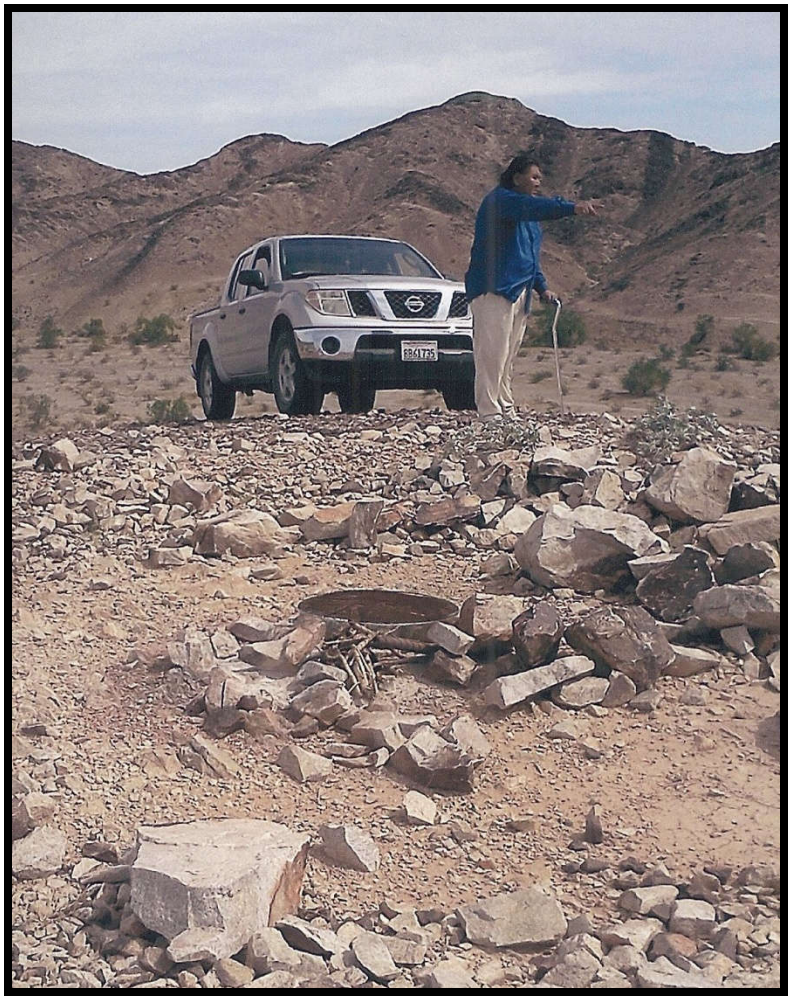


Image of Calafia in the Mule Mts.
"Calli/Hamock-Avi"



Cicimitl Geoglyph
(10-miles Magnetic North of Mule Mts.)

Hamock-Avi means three peaks/Mule Mts. in Mojave Oral Tradition.



Ron Van Fleet, grandson of the last Mojave Traditional Chief and spiritual leader from Fort Mojave, is seen here explaining the Mojave Creation Story of "Mastumho" at the "Molcajete" site. (Molcajete is a 3-legged pot). This site is where the spirits descend and they are taken by Cicimitl to the Topock Maze. This sacred site is located within the proposed Crimson site.

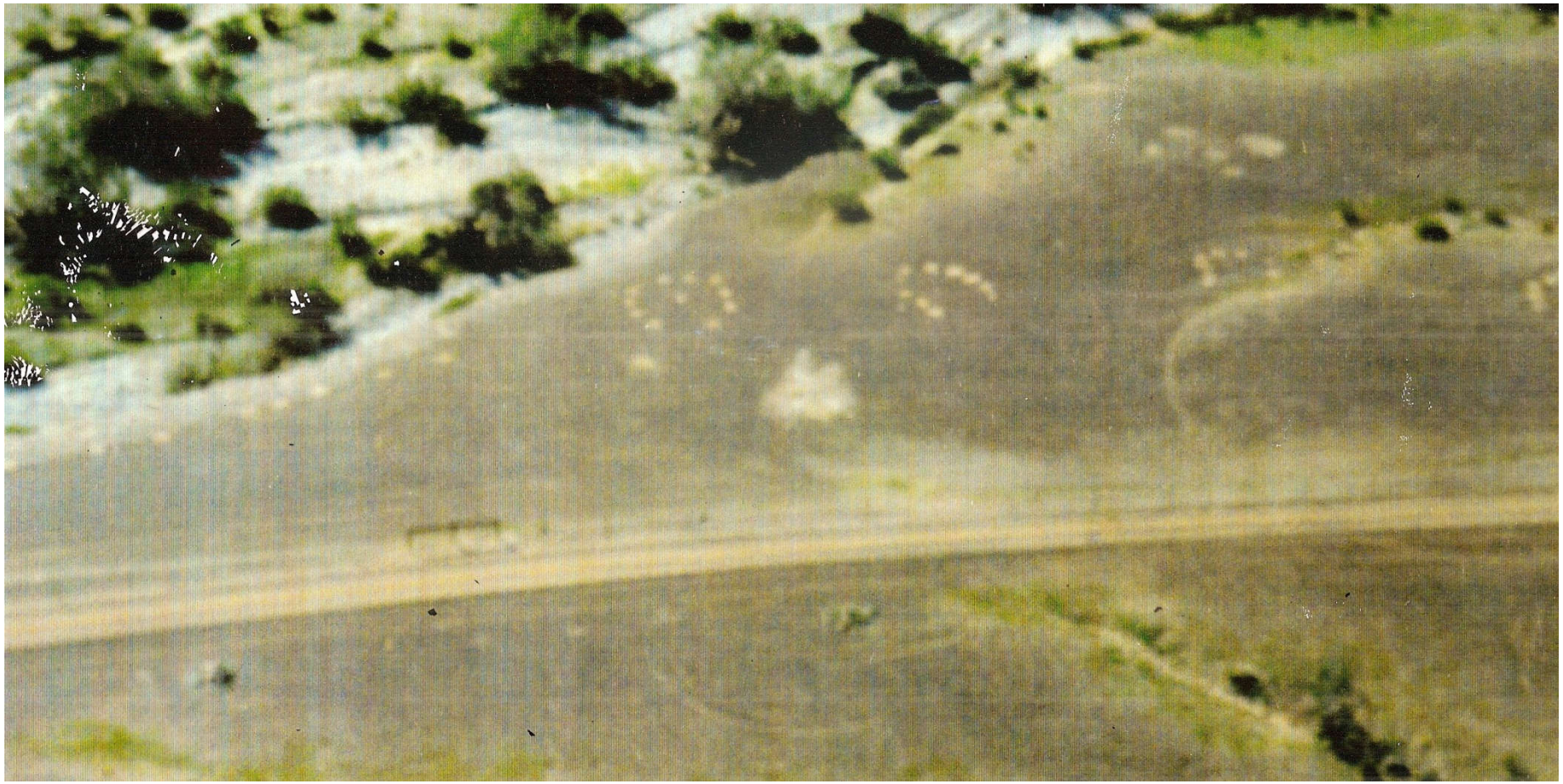
The Mule Mts. are called “Hamoc-Avi” by the Mojave/Hokan linguistic families and they represent the “Molcajete” (3-legged pot) that relates to the creation of the universe.

After Mastumho created the universe he placed an upside down 3-legged Molcajete which represents the 3-peaks of the Mule Mountains.

Picture of 3-legged Molcajete (Upside down & right side up)



Aerial photograph of sacred Rabbit *"Tochtli"* Geoglyph and other geoglyphs that relate to the Aztec Calendar located within the Mule Mountains.



Aerial and ground geoglyph images of the 20-Day Circle glyphs represented in the Aztec Calendar





Mule Mountain Petroglyphs of the Calafia

Calafia Petroglyph *"Amazon Women going east through the underworld."*



The "X" represents when Sky meets Earth at Granite Peak, Tamoanchan.



Tamoanchan, *"Where Sky meets Earth, represented by the "X"*

Granite Peak, where the planets aligned and descended from the cosmos on May 15, 2002.



El Tosco Geoglyph, the spirit descending to earth. (Arrow below is pointing to Granite Peak.)



Letter 7

From: Max Carmichael <max@maxcarmichael.com>
Sent: Friday, January 17, 2020 7:26 PM
To: CrimsonSolar, BLM_CA
Subject: [EXTERNAL] Crimson Solar project

I'm a large landowner in the California desert, writing to oppose the Crimson Solar project.

I represent a large group of desert lovers and conservation scientists who camp, hike, and perform conservation work in the desert throughout the year. **7-1**

We believe that wildlife habitat in the desert is being unfairly sacrificed. Urban and suburban consumers would be better served by site-specific rooftop solar installations rather than by these giant industrial farms, which permanently destroy natural habitat and entail waste through transmission losses. **7-2**

The Crimson proposal cites jobs and investment over a 30-year life cycle, but its damage to wildlife habitat will persist indefinitely. No short-term increase in jobs or investment should ever justify such long-term damage to our environment. **7-3**

Timothy Ludington
Silver City, New Mexico

Letter 8

From: Patricia Countryman <pdcountryman@live.com>
Sent: Friday, January 17, 2020 8:06 PM
To: CrimsonSolar, BLM_CA <BLM_CA_CrimsonSolar@blm.gov>
Subject: [EXTERNAL] Crimson Solar Project

Although I am for solar and have solar on my house, it looks to me BLM is giving away most of our desert in Riverside county. For this reason I am not in favor of this project we need to protect our desert and keep it open for public use. As it stands now these companies are taking our public lands and we the people can no longer use the areas they are putting these plants.

8-1

Regards;
Gordon Countryman
Gordon.countryman@yahoo.com

Sent from Mail for Windows 10

Letter 9

Public Comment Card

Crimson Solar Project Draft EIS/EIR/PA

Name: RON DAWSON Date: 1-25-20

Agency/Organization Affiliation:

Address: 16275 W. HOBSON WAY BLYTHE CA 92225 760 219 3788

Information Open to FOIA

Comment: IT will not do my land any good. it has been in my family for many years my fathers dream was to farm it but he did not make it. then my brothers were going to do it but they did not make. so I am the last one to do it and I well I have the machine to do it and the money. so all you are going to do is hurt me. and make a bad dream. so you can big me out or well have to put up with. me and what I can give. it is not good for water or the land. but it is ok. if you are making money off it. I guess like you all. and what pocket does it go in

Ron Dawson

1

RECURRENT ENERGY
A subsidiary of Canadian Solar

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Walnut Creek, CA 94597

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Letter 10

www.recurrentenergy.com

Sonoran West Solar Holdings, LLC

January 29, 2020

By Email/PDF

Miriam Liberatore
Bureau of Land Management
3040 Biddle Road
Medford, OR 97504

Magdalena Rodriquez
California Department of Fish and Wildlife
Inland Deserts Region
3602 Inland Empire Blvd, Suite C-220
Ontario, CA 91764

Re: Comments on Draft Environmental Impact Statement and Draft Environmental Impact Report and Draft Land Use Plan Amendment for the Crimson Solar Project, dated November 1, 2019

Dear Mss. Liberatore and Rodriquez:

On behalf of Recurrent Energy and its subsidiary Sonoran West Solar Holdings, LLC (collectively, "Recurrent"), we are providing our written comments on the Draft Environmental Impact Statement and Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan, DOI-BLM-CA-D060-2017-0029-EIS and State Clearinghouse No. 2018031027 ("Draft EIS/EIR") for the Crimson Solar Project ("Project"). Our written comments consist of this letter and Attachment A, along with the separate comment letter sent to the California Department of Fish and Wildlife ("CDFW") dated January 10, 2020. 10-1

At the outset, we thank Bureau of Land Management ("BLM") and CDFW staff and their consultant, Environmental Science Associates, for their hard work in compiling and preparing the Draft EIS/EIR in support of the Project. We also appreciate the significant public outreach efforts and the agency and tribal consultation process that has been conducted by the BLM and CDFW under their respective statutory and regulatory requirements.

Our written comments on the Draft EIS/EIR cover four general areas: (1) concurrence with BLM's and CDFW's selection of the proposed "Reduced Acreage Alternative" (Alternative C); (2) proposed minor reductions in the Project boundary and internal realignment of facilities within the scope of the analyzed impact area of proposed Alternative C; (3) proposed division of the Project into two separate Right-of-Way ("ROW") Grants; and (4) detailed edits and comments regarding specific text as set out in Attachment A.

First, BLM and CDFW included an alternative in the Draft EIS/EIR that would reduce the Project acreage and associated impacts to certain resources – specifically, sensitive vegetation, sand dune habitat and cultural resources – while maintaining the Project's energy output. This alternative, identified and evaluated in the Draft EIS/EIR as the "Reduced Acreage Alternative" 10-2

or Alternative C, would reduce the Project size by approximately 300 acres, to approximately 2,200 acres. Alternative C is identified as the BLM's Preferred Alternative (in combination with Alternative B) under the National Environmental Policy Act ("NEPA"), and as CDFW's Environmentally Superior Alternative under the California Environmental Quality Act ("CEQA").

As documented in the Draft EIS/EIR, Recurrent has worked diligently since the original filing of the Project's SF-299 application to substantially reduce and refine the Project's design to avoid impacts to sensitive resources to the greatest extent feasible, resulting in the reduction of the original Project from approximately 7,600 acres to the present proposed design of approximately 2,500 acres. In line with its historic approach and its commitment to the agencies, public and tribal governments, Recurrent's team has carefully analyzed Alternative C from a design, engineering and construction perspective and believes that it can be feasibly implemented, thereby concurring in the selection of Alternative C as the Preferred Alternative and Environmental Superior Alternative under NEPA and CEQA, respectively.

10-2 cont.

Second, consistent with the discussion above regarding the feasibility of Alternative C, Recurrent's team has been working closely with Southern California Edison regarding the interconnection of the Project into the Colorado River Substation ("CRS") and has been able to revise the design of the Project to facilitate a more direct and shorter gen-tie line interconnection to CRS. This minor revision in design will result in a reduction of approximately 60 acres of impacts under Alternative C and would not require any surface disturbance outside the scope of the analyzed footprint of Alternative C, thereby avoiding any new impacts or any increase in the severity of an existing impact as analyzed in the Draft EIS/EIR.

Because the design modification to the Project's interconnection into CRS will result in the gen-tie entering CRS from the east rather than the west, Recurrent has revised the internal design of the Project to relocate the on-site substation, O&M facility and energy storage system closer to that interconnection point on the east and moved solar arrays previously located in that area to the west. Again, these design revisions are wholly within the existing footprint of Alternative C and would not result in any new or additional impacts beyond those analyzed in the Draft EIS/EIR. Recurrent will provide a detailed description of these design changes, along with supporting maps and exhibits, in a revised Plan of Development ("POD"), such that these changes can be included in the Final EIS/EIR.

10-3

Third, Recurrent has updated its plans for the Project such that it is proposing to construct the Project in two distinct units. These units would consist of: (1) the interconnection facilities (including the on-site substation and O&M building) and the energy storage system, and (2) the solar generating facility. In light of these distinct units, Recurrent is requesting that the agencies include the unit descriptions and associated analyses in the Final EIS/EIR such that BLM can provide approval in the Record of Decision for the issuance of two separate ROW Grants for the Project. Recurrent will provide a more detailed description of the units in the revised POD, as noted above, and will also provide revised technical information supporting the separate units.

10-4

Fourth, Recurrent has identified edits and comments addressing specific text in the Draft EIS/EIR in the enclosed Attachment A.

We thank you for your consideration and evaluation of our comments and appreciate the considerable time and effort that BLM, CDFW and ESA have devoted to preparation of the Draft EIS/EIR. We look forward to working with the agencies to complete the Project review process in order to commence construction of this important renewable energy and storage project.

If you have any questions or need further information, please contact me at (949) 394-9175 or at scott.dawson@recurrentenergy.com.

Sincerely,



Scott Dawson
Director of Permitting
Recurrent Energy

Enclosures: Attachment A
Letter to CDFW, January 10, 2020

Attachment A

Sonoran West Solar Holdings, LLC

Comments on

Crimson Solar Project Draft Environmental Impact Statement/Environmental Impact Report and Draft Land Use Plan Amendment

January 29, 2020

Comment #	Page or Figure/Table Reference	Comment or Correction	
1	ES-6; 3.3-21	The Biological Resources impacts discussion identifies special-status wildlife impacts to multiple avian species (many of which were not detected on-site) without providing substantial evidence for such impacts beyond a general theory of potential collisions with solar PV panels based on a stated untested hypothesis and unknown causal mechanism. This issue is addressed in detail in our comment letter to CDFW, dated January 10, 2020, and is incorporated by reference herein.	10-5
2	ES-10, 3.19-2	Wildland Fire Ecology Alternative A should state: "Operation and Maintenance: Increased risk of wildland fire due to potential establishment of non-native plants."	10-6
3	ES-11, Appendix B[1]	Air Quality – MM AQ-1 references the need to submit the Dust Control Plan to the MDAQMD and the County of Riverside for review and approval, and to obtain follow-up approval from both agencies prior to any deviations. The County has no jurisdiction over the Project and should therefore not have any authority to review and/or approve the plan. Instead, we recommend that BLM and/or CDFW separately review/approve if authority beyond MDAQMD is required.	10-7
4	ES-12, Appendix B	Air Quality – MM AQ-1.o calls for the installation of wind fencing or the equivalent for all perimeter fencing, to a minimum of four feet of height or the top of all perimeter fencing. While this might be an appropriate dust control measure, the unknown impact to sand transport and to MFTL habitat and movement across the Project make this an unacceptable control feature. It should be deleted.	10-8

[1] Where the comments reference mitigation measures, the comment and/or recommended correction should apply to all references to the mitigation measure throughout the Draft EIS/EIR, including Chapter 3 and Appendix B, the latter of which details the mitigation measures.

Comment #	Page or Figure/Table Reference	Comment or Correction	
5	ES-13, Appendix B	Biological Resources, Impact 3.3.5a; MM BIO-1: This mitigation measure is the first instance where Resource Agencies are defined as comprising the BLM, USFWS, and CDFW. The "Resource Agencies" are then incorrectly used throughout the biological resources mitigation measures section as approvers of various items where one or more of the agencies don't have jurisdiction over the resource or action. The BLM AO has ultimate authority over the implementation of the mitigation measures with the consultation with either USFWS, CDFW, or both agencies. This needs to be revised appropriately throughout the section.	10-9
6	ES-13, Appendix B	Biological Resources, Impact 3.3.5a; MM BIO-1: The second paragraph, "DB Approval", should be changed to: "The DB shall be approved by the BLM's Authorized Officer (AO) in consultation with CDFW and USFWS. The Project proponent shall submit the resume of the proposed DB(s) with at least three references and their contact information. If the DB is not also a USFWS and CDFW Authorized Biologist (AB) for desert tortoise, a separate AB shall be approved by the Resource Agencies and be present onsite for measures associated with the federal- and state-listed desert tortoise. AB qualifications and responsibilities are detailed in BIO-21." DB Responsibilities, e) should reference BIO-17	10-10
7	ES-14, Appendix B	Biological Resources, Impact 3.3.5a; MM BIO-2: Reference to "both agencies" should be changed to "USFWS and CDFW." Recommend adding the following sentence to the end of BM Approval paragraph: "Alternatively, the BLM AO may allow AB(s) to select, train, and supervise BM(s)."	10-11
8	ES-14, Appendix B	Biological Resources, Impact 3.3.5a; MM BIO-3: Second paragraph. Text should be revised "level of take of endangered or threatened federal or states species on the Project site".	10-12
9	ES-15, Appendix B	Biological Resources, Impact 3.3.5a; MM BIO-5: DDWW is undefined in the document.	10-13
10	ES-15, Appendix B	Biology Impact 3.3.5a; MM BIO-7: Second sentence should be revised to clarify open habitat. Suggested text: "areas where desert tortoises may be present (e.g., unfenced and uncleared habitat)."	10-14
11	ES-15, Appendix B	Biology Impact 3.3.5a; MM BIO-8: Second paragraph should be revised as generators, pumps, and most other equipment and vehicles would not be located near Powerline Road, which is the	10-15

Comment #	Page or Figure/Table Reference	Comment or Correction	
		only paved road in the vicinity of the Project and the main access route. Suggested text: "Fueling and servicing of construction equipment shall take place only in a specifically designated area."	10-15 cont.
12	ES-17, Appendix B	Biology Impact 3.3.5a; MM BIO-14: The Project does not discharge to federal jurisdictional waters under the Clean Water Act (CWA) as determined by an Approved Jurisdictional Determination issued by the US Army Corps of Engineers (October 29, 2018) and, therefore, the Project does not require compliance with storm water permitting requirements under Section 402 of the CWA (e.g., filing a notice of intent under the construction general permit for storm water discharges as regulated by the Regional Water Quality Control Board). The Project will, however, prepare a management plan-level storm water pollution prevention plan to be approved by BLM and CDFW. To avoid confusion, we recommend referencing this document as "a SWPPP-equivalent or storm water management plan document".	10-16
13	ES-17, Appendix B	Biology Impact 3.3.5a; MM BIO-16: The Project's draft Weed Management Plan (Appendix I.10) includes information on the potential use of herbicides to control weeds. The weed plan was prepared and included as an attachment to the EIS. The analysis in the EIS does not appear to specifically address the application of herbicides. Please confirm that the BLM will support issuance of a Pesticide Use Proposal (PUP) without additional environmental analysis. This should be clarified in the text which otherwise implies additional federal, state or local review may be required.	10-17
14	ES-18, Appendix B	Biology Impact 3.3.5a; MM BIO-18: Under "Restoration Plan," "Resource Agencies" should be replaced by "BLM". Reference to topsoil salvaging should be qualified "as feasible." Site is dominated by shallow sand sheets or rocky substrate with little to no topsoil. Topsoil salvaging within temporary disturbance areas may result in greater impacts than the temporary disturbance itself.	10-18
15	ES-19, Appendix B	Biology Impact 3.3.5a; MM BIO-18: Under "Sensitive Vegetation Community Restoration or Compensation," add the following sentence to the end of paragraph to allow for nesting of mitigation lands: "If all or any portion of the acquired Mojave desert tortoise or other required compensation lands acquired under BIO-19, 20, 26, 28, or 29 meet the criteria above for sensitive vegetation community compensation lands, the portion of the other species' or habitat compensation lands that meets any of the criteria above may be used to fulfill that portion of the	10-19

Comment #	Page or Figure/Table Reference	Comment or Correction	
		obligation for sensitive vegetation community mitigation." The allowance of nesting of mitigation lands should be added to each mitigation measure that may require the acquisition of compensation lands.	10-19 cont.
16	ES-19, Appendix B	Biology Impact 3.3.5a; MM BIO-20: Under "Avoidance and Minimization," Item 3 address drive and crush should indicate only "if feasible" as some access roads will require blading.	10-20
17	ES-22, Appendix B	Biology Impact 3.3.5a; MM BIO-20: Under "1.5.9. Mitigation Security" first sentence, the reference to VEG-10.2 appears to be incorrect. No VEG-10.2 exists.	10-21
18	ES-25, Appendix B	Biology Impact 3.3.5a; MM BIO-22: The measure requires that "all" portions of the site subject to driving or construction disturbance be enclosed with desert tortoise (DT) exclusion fencing. This includes access roads between development areas (temporary fencing). The measure does reference the two southern most access road areas with "highest DT density"; however, in its entirety, the measure does not allow for unfenced areas that are otherwise monitored by biologists. MM BIO-23 references clearance of areas "not enclosed by exclusion fencing;" however, MM BIO-22 does not appear to allow for that flexibility. We therefore recommend removing the word "all" in the beginning of MM BIO-22 and referencing the use of monitors where work occurs in unfenced areas as provided in MM BIO-23.	10-22
19	ES-25, Appendix B	Biology Impact 3.3.5a; MM BIO-22: In the third paragraph of this measure, add the following sentence to the end of the paragraph to be consistent with the relevant USFWS guidance: "Shade structures shall be installed along the exclusion fence consistent with the guidance in the USFWS 2018 Translocation of Mojave Desert Tortoises from Project Sites: Plan Development Guidance."	10-23
20	ES-25, Appendix B	Biology Impact 3.3.5a; MM BIO-22: In the last paragraph, second sentence, the text should be modified as follows to conform to USFWS guidance: "Following installation, the fencing shall be inspected daily until the end of the subsequent desert tortoise active season, then monthly thereafter, and within 24 hours after all major rainfall events."	10-24
21	ES-27, Appendix B	Biology Impact 3.3.5a; MM BIO-26: In the second paragraph, second sentence, to be consistent with BIO-19, add "initiate or" to read as follows: "…the Project Owner shall initiate or complete the acquisition, protection, and transfer…".	10-25

Comment #	Page or Figure/Table Reference	Comment or Correction	
22	ES-30, Appendix B	Biology Impact 3.3.5a; MM BIO-28: In the third paragraph, second to last sentence, change "188" to "18".	10-26
23	ES-30, Appendix B	Biology Impact 3.3.5a; MM BIO-28: The text in the first paragraph needs clarification. It is unclear what "linear features" is referring to (access roads or gen-ties or both) as there is very little desert dune habitat on the Project site. Suggested changes, "During construction, the Project proponent shall minimize impacts to dune habitat from the construction of access roads or gen-ties. Roads shall be kept at-grade to avoid blocking local sand transport within desert dune habitat The second paragraph needs clarification as the mitigation measure has confused habitat classifications and recommendations found in the Biological Resources Technical Report (Appendix I.1). The suggested text revision, "Direct permanent impacts to Desert Dune habitat shall be mitigated at a ratio of 3:1. Potential suitable Mojave fringe-toed lizard habitat shall be mitigated at a ratio of 1:1. Estimated mitigation would total . . ." Add the following sentence to the end of the paragraph to allow for nesting of mitigation lands: "If all or any portion of the acquired Mojave desert tortoise or other required compensation lands acquired under BIO-18, 19, 20, 26, or 29 meet the criteria above for sensitive vegetation community compensation lands, the portion of the other species' or habitat compensation lands that meets any of the criteria above may be used to fulfill that portion of the obligation for Mojave fringe-toed lizard mitigation."	10-27
24	ES-31, Appendix B	Biology Impact 3.3.5a; MM BIO-29; Section c should be added: "If all or any portion of the acquired Mojave desert tortoise or other required compensation lands acquired under BIO-18, 19, 20, or 26, or 29 meet the criteria above for burrowing owl compensation lands, the portion of the other species' or habitat compensation lands that meets any of the criteria above may be used to fulfill that portion of the obligation for burrowing owl compensatory mitigation."	10-28
25	ES-32, Appendix B	Biology Impact 3.3.5a; MM BIO-32; BBCS/avian monitoring requirement (3)(c) states that the BBCS shall include the "latest monitoring, detection and avoidance measures" applicable to PV projects including Kagan et. al. 2014. Kagan et al 2014 was a very preliminary examination of avian mortality at solar facilities and had focused on technologies other than PV. The	10-29

Comment #	Page or Figure/Table Reference	Comment or Correction	
		recommendations for the "incorporation of visual cues into panel design (e.g., UV-reflective or solid, contrasting bands spaced no further than 28 cm apart)," were also were also preliminary and untested. Being 6 years old, Kagan et. al. 2014 doesn't adequately represent the latest understanding of avoidance measures. Additionally, any proposed module modifications would violate the module warranty from the manufacturer and would therefore not be feasible or possible for the Project, as a solar PV facility, to implement.	10-29 cont.
26	ES-33, Appendix B	Biology Impact 3.3.5a; MM BIO-33: The Project has provided a detailed comment letter to CDFW dated January 10, 2020 responding to the factual basis and legal support for this proposed mitigation measure with a request that CDFW revisit its proposed findings and eliminate this proposed mitigation measure.	10-30
27	Appendix B	Biology Impact 3.3.5a; MM BIO-34: Text should be changed to, "the Project proponent shall prepare a BLM AO approved Decommissioning Plan (Appendix I)".	10-31
28	ES-34, Appendix B	Biology Impact 3.3.5b; MM BIO-19: Under "2. Compensatory Mitigation", last sentence. Reference to Provision 33 should read "Provision 3. Additionally, the following text should be added, "If all or any portion of the acquired Mojave desert tortoise or other required compensation lands acquired under BIO-18, 20, 26, 28, or 29 meet the criteria above for riparian vegetation (microphyll woodlands) and ephemeral washes and riparian habitat, the portion of the other species' or habitat compensation lands that meets any of the criteria above may be used to fulfill that portion of the obligation for riparian vegetation (microphyll woodlands) and ephemeral washes and riparian habitat: mitigation."	10-32
29	ES-36	Biology Impact 3.3.5c concludes that there is a significant impact to state or federally protected wetlands, when there are no wetlands on the Project site. The Significance before Mitigation should be revised to "No impact".	10-33
30	ES-37, 3.5-8, 3.5-14 to 3.5-20	Cultural Impacts 3.5.5a, 3.5.5.b and 3.5.5.d The CEQA significance determinations of "significant and unavoidable" rely upon a draft report identifying preliminary eligibility recommendations (Addendum 1, Price 2019) that was subsequently revised prior to the issuance of the Draft EIS/EIR in consultation with the permitting agencies such that the cited information referencing 23 potential eligible sites was not accurate, as explained in the BLM summary in the first full paragraph of 3.5-8 referencing 6 potential eligible sites. The final	10-34

Comment #	Page or Figure/Table Reference	Comment or Correction	
		recommendations were submitted to the State Historic Preservation Office for concurrence post-issuance of the Draft EIS/EIR and it is anticipated that the SHPO will issue its eligibility determinations prior to issuance of the Final EIS/EIR. The CEQA conclusions and any required mitigation measures in the Final EIS/EIR should conform with the factual record and, moreover, be revised to reflect the final SHPO eligibility determination.	10-34 cont.
31	ES-42, 3.5-14 to 3.5-20, Appendix B	Cultural Impact 3.5.5b; CUL-8, CUL-9 and CUL-10: The CEQA-only mitigation measures are based on the incorrect factual premise that there are 23 eligible resources to which there are adverse effects. As discussed above, the information relied upon for this assessment was revised prior to issuance of the Draft EIS/EIR and final SHPO eligibility determinations are anticipated prior to issuance of the Final EIS/EIR. Each of the CDFW-proposed mitigation measures should be drafted as "conditional" upon the ultimate SHPO findings rather than mandatory irrespective of that factual record. Therefore, the CEQA-only mitigation measure should be revised as contingent on the outcome of the SHPO eligibility determination process and/or eliminated based on the findings of the SHPO process. Finally, any remaining CDFW- proposed measures that are redundant with BLM-proposed mitigation (e.g., CUL-8 requiring a CDFW Archaeological Resources Treatment Plan that is already encompassed by CUL-2, CUL-3 and CUL-5) to avoid unnecessary confusion and duplication of effort.	10-35
32	ES-48	Paleontology Impact 3.11.5a; MM PALEO-2: For clarification on specimen collection in specific areas, the proposed text revision to the first sentence "Prior to the initiation of any ground-disturbing activities, including geotechnical work, grubbing, or grading, all scientifically significant specimens will be collected from the surface of the Project site where ground-disturbing activities will occur."	10-36
33	ES-51, Appendix B	Utilities and Public Services Impact 3.16.5d; PSU-1: The measure requires the preparation of a Waste Recycling Plan by the Lead Agencies and the Riverside County Department of Waste Resources. Because Riverside County does not have jurisdiction over the Project, County approval of the WRP should not be required.	10-37
34	ES-53	Visual Impact 3.17.5c; VIS-1; The use of "BLM Compliance Project Manager (CPM)" is inconsistent with the rest of the	10-38

Comment #	Page or Figure/Table Reference	Comment or Correction	
		document and should be changed to "BLM AO" Second paragraph, it is unclear what "measured by size" means in this context. BLM has the authority and technical expertise in VRM, not CDFW. #1. The later part of the sentence doesn't make sense, recommended revised text, "darken the ground plane for a short time period." #2. Is isn't possible to color treat the backs of modules. Manipulating modules voids their warranty. The use of paints, coatings, and non-spectral material must be caveated "where appropriate and feasible". Suggested text, "a. Materials, coatings, or paints having little or no reflectivity shall be used whenever feasible. b. Grouped structures, including the water tanks and prefabricated buildings, shall be painted the same color to reduce visual complexity and color contrast. c. The gen-tie line shall utilize to the extent available and feasible nonspecular conductors and nonreflective coatings on insulators."	10-38 cont.
35	ES-55, Appendix B	Visual Impact 3.17.5c; VIS-3: The measure states that "no new disturbance shall be created during operation without completion of a VRM analysis." However, the measure does not define what constitutes "new disturbance" thereby creating uncertainty and potential overbreadth in application of the measure. We recommend including a definition that allows for access for operations and maintenance activities that may require stationing equipment, clearing or other ground disturbing activities to the existing site during operations.	10-39
36	1-2	Editorial correction to "Lead Agency" instead of "Lead Agencies".	10-40
37	1-5, Appendix F	BLM included Appendix F which provides a detailed analysis of the Project's consistency with the Desert Renewable Energy Conservation Plan (DRECP) and, specifically, the Conservation Management Actions (CMAs) identified in the DRECP. As explained in the Draft EIS/EIR, however, the Project is not subject to the DRECP because the SF-299 application for the Project was filed prior to June 30, 2009, and the Project is therefore considered a "pending project" under the Western Solar Plan Record of Decision and exempt from the DRECP (Draft EIS/EIR at 1-5). Instead, the Project is subject to the California Desert	10-41

Comment #	Page or Figure/Table Reference	Comment or Correction	
		Conservation Act (CDCA) Land Use Plan as it existed prior to the Western Solar Plan and DRECP amendments to the CDCA. Despite BLM's express recognition that the DRECP does not apply, Appendix F evaluates the consistency with DRECP CMAs in a manner that is both unnecessary and confusing to the reader because the CMAs do not apply to the Project. BLM should clarify in both the Draft EIS/EIR and Appendix F that the analysis contained in Appendix F has no relevance to the Project's compliance with any applicable legal standard or requirement or, alternatively, eliminate Appendix F in its entirety.	10-41 cont.
38	1-6, Table 1-1	The reference in Table 1-1 to State Water Resources Control Board approval should clearly state that such requirements would apply to the Project only to the extent the US Army Corps of Engineers (Corps) determines that federal jurisdictional waters are present at the Project site and, in fact, the Corps has determined that federal jurisdictional waters are not present at the Project site, see Appendix U.4 (Approved Jurisdictional Determination, October 29, 2018).	10-42
39	2-4, Section 2.4.2.3, Appendix A (Figures)	As described in the Project's comment cover letter, new site design exhibits reflecting the minor modifications to the alignment of the Project's gen-tie and associated i6nterconnection point, along with related internal equipment locations, will be provided to BLM in a revised Plan of Development for inclusion in the Final EIS/EIR.	10-43
40	2.4.2.7 Access Roads	There was a missing capitalization in the third paragraph. Suggested text: "There would be five sections of new access roads, consisting of one new access road from Power Line Road and four wash crossings that connect the proposed solar array fields."	10-44
41	3.2-3, Section 3.2.3	The Air Quality analytical methodology background states that the USEPA has not approved EMFAC2017 for emission evaluations related to the State Implementation Plan or General Conformity. USEPA approved EMFAC2017 on August 15, 2019, and can therefore be updated in the Final EIS/EIR. The text can be updated to state the USEPA approval also sets the date after which, EMFAC2017, rather than EMFAC2014, must be used to satisfy the requirement that conformity determinations be based on the latest emissions model available to be August 16, 2021.	10-45
42	3.2-6	Based on review of Appendix H.1, it is not clear how implementation of an idling policy which limits all diesel-powered off-road engines to 2 minutes was applied to the mitigated	10-46

Comment #	Page or Figure/Table Reference	Comment or Correction	
		emission estimates. Additional explanation is needed for how the mitigation works, and how it would further reduce emissions.	10-46 cont.
43	3.2-8	The second full sentence on this page states: "Even with implementation of the mitigation measures, maximum daily emissions of NOx and PM10 within the MDAQMD and maximum daily emissions of NOx within the SCAQMD would continue to exceed the thresholds and the residual impact on air resources would be adverse." However, Table 3.2-3 does not present mitigated emissions for maximum daily emissions within the SCAQMD. We therefore suggest an explanation that mitigation is not assumed for on-road vehicles for the emissions presented within the SCAQMD.	10-47
44	3.2-12	There is a minor typographical error for "NOx" in the text: "To minimize this impact, implementation of Mitigation Measures AQ-1 through AQ-4 would be required, which would reduce the maximum daily emissions, but emissions of NO<u>x</u> and PM10…"	10-48
45	3.2-11	Inconsistency within Tables 3.2-7 and 3.2-10 for the number of decimal places shown for the emissions estimates (See emissions for NOx, ROG, and PM).	10-49
46	3.3-7, Table 3.3-4	With regard to the reference to Desert kit fox and American badger surveys, the text should mention that surveys were also conducted as part of October 2016 desert tortoise surveys.	10-50
47	3.3-8, Table 3.3-5	With regard to the reference to Mojave fringe-toed lizard, the species was also detected incidentally within the Project site in 2012 and 2016/2017 and during surveys in 2018.	10-51
48	3.3-8, Table 3.3-5	With regard to the reference to Long-eared owl, one individual was detected near the Project site in 2016. This was likely a migrant winter resident with no nesting potential. Preferred foraging habitat is absent but may occasionally forage on-site. The text should clarify that it was detected in a microphyll woodland between two proposed solar array blocks, which are avoided in Project design.	10-52
49	3.3-8 & 3.3-9, Table 3.3-5	With regard to the references to Mountain plover, Western yellow-billed cuckoo, purple martin, vermillion flycatcher, Gila woodpecker, elf owl, American white pelican, Yuma Ridgway's rail, Bendire's thrasher, these species should not be presumed present. These species were never detected in site surveys and, therefore, should be presumed absent.	10-53
50	3.3-9, Table 3.3-5	With regard to the reference to LeConte's thrasher, this species is not a SSC, only the subspecies in the San Joaquin Valley is a SSC.	10-54

Comment #	Page or Figure/Table Reference	Comment or Correction	
51	3.3-9, Table 3.3.-5	With regard to the reference to Arizona Bell's vireo, it cannot be assumed that a species is present if it was never detected during surveys. In addition, the species is not likely to occur just because of the proximity to the Colorado River. There is no suitable habitat onsite.	10-55
52	3.3-9, Table 3.3-5	With regard to the reference to Least Bell's Vireo, it cannot be assumed that a species is present solely because it has a potential to migrate through the desert. LBVI do not normally occur along the Colorado River. It is incorrect to presume the species is present, particularly where the evidence cited supports the conclusion that it not being present.	10-56
53	3.3-10, Table 3.3-5	With regard to the reference to Desert bighorn sheep, there are no documented records of presence and, therefore, this species should not be presumed present.	10-57
54	3.3-11, Table	With regard to the reference to Yuma mountain lion, there we no documented records of presence and, therefore, this species should not be presumed present.	10-58
55	3.3-11, Table 3.3-5	With regard to the "species occurrence description" in the Notes for "Low probability of detection, if present, based on the types of surveys conducted for the Project," this is misleading and is not supported by multiple years of avian surveys by qualified biologists. If a species was not detected, it is not appropriate to consider it "presumed present".	10-59
56	3.3-11, Table 3.3-5	With regard to the reference in the Notes to "High probability of detection, if present, based on the types of surveys conducted for the Project; or Suitable habitat is absent," this text should be inserted under "Presumed Present", not under "Presumed Absent".	10-60
57	3.3-11	The last footnote in the Notes should reference footnote 3, not footnote 2.	10-61
58	3.3-12	That data collected over the course of species surveys does not support the statement that Burrowing Owls have the potential to occur in a breeding capacity. This species has never been detected breeding onsite.	10-62
59	3.3-12	The statement noting the observation of "a potential golden eagle kill" observed on site should be revised to avoid being misinterpreted to imply that a golden eagle mortality was identified on site. The reference should state that a desert kit fox mortality was observed that could potentially represent a golden eagle kill.	10-63
60	3.3-12	The statement that Swainson's hawks were commonly observed is	10-64

Comment #	Page or Figure/Table Reference	Comment or Correction	
		not accurate. The surveys indicate that they were rarely observed. There were a few flocks, but that does not make it "common".	10-64 cont.
61	3.3-19	The introductory paragraph to Table 3.3-9 notes that the 414 observations of lizards and 138 observations of sign were detected during 2012 surveys; however, the species were also detected in 2016, 2017, and 2018. The text should acknowledge the multiple years of surveys.	10-65
62	3.3-20	The statement regarding burrowing owl observations is misleading and should be clarified to state that they were detected primarily as fall migrants and potential winter residents.	10-66
63	3.3-21	With regard to the section addressing Special-Status and Migratory Birds, it is disingenuous to include species in this list that were not detected onsite and have a very low potential to occur. We recommend revising this list based on our comments to Table 3.3-5 above.	10-67
64	3.3-21	There should be no space between "Le" and "Conte's" i.e. LeConte's.	10-68
65	3.3-28 and 3.3-32	In the section addressing Special Status and Migratory Birds, the reference to the BBCS states that it would provide mitigation and adaptive management for both this Project and future projects. It is unclear why or how the BBCS would apply to future projects and, therefore, we recommend eliminating this reference.	10-69
66	3.3-33	The reference to Table 3.3-5 identifying 9 federal or State listed species and 18 species of special concern should be revised based on the comments above addressing the accuracy of information in Table 3.3-5 and, specifically, revising species identified as "presumed present" to "presumed absent".	10-70
67	3.3-34	Consider revising the estimates of percentage of birds based on changes to presumed present versus presumed absent as noted in previous comments (3.3-33; page 3.3-10/11 Table 3.3-5.	10-71
68	3.4-4	Given case law developments, we suggest the discussion of the "Climate Change Effects on the Project" be removed as the California Supreme Court has held that CEQA requires a lead agency to evaluate the effect of a project on the environment, but not the effect of the environment on the project (*California Building Industry Association v. Bay Area Air Quality Management District* (2015), 62 Cal.4th 369; *Baird v. County of Contra Costa* (1995) 32 Cal.App.4th 1464.)	10-72
69	3.4-4 and 3.4-7	The amount of carbon savings that would be derived from implementation of the Project should be described as "possible	10-73

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		carbon savings of 'up to 355,836 MT CO2e in the first year of operations'" as that value was calculated using SCE's 2015 average CO2e intensity factor. Due to increasing RPS requirements, the power mix will vary and CO2e intensity will decrease in the future, so actual savings may be less.	10-73 cont.
70	3.4-7	We recommend that the last paragraph in this section also discuss how the functions of the Project are consistent with the goals of SB 32, in addition to AB 32 Scoping Plan and County General Plan and CAP.	10-74
71	3.7-2	This section references ongoing research being conducted by USGS which may determine if Wiley's Well Wash is a sand source for the Project site and improperly implies that the conclusions regarding this issue remain open when in fact it has been analyzed and addressed by the 2018 Kenney Geosciences study (Appendix I.3). This reference should be revised to avoid any implication that further study is required as part of either the NEPA or CEQA analyses.	10-75
72	3.7-4	This section improperly states that the Project is subject to the CWA Section 402 NPDES program. As noted in our comments above, this is not factually correct. The Project site does not contain federal jurisdictional waters and, therefore, the Project is not required to comply with the general construction storm water permit and its notice of intent and storm water pollution prevention plan requirements. The Project will, however, prepare a storm water management plan (i.e., a SWPPP-equivalent document) for review and approval by BLM and CDFW. This information is correctly stated at 3.8-3.	10-76
73	3.7-8	As noted above, the reference to the NPDES program is misleading. The Project is not subject to the CWA Section 402 NPDES program and no SWPPP is required.	10-77
74	3.7-10	As noted above, the reference to the NPDES program is misleading. The Project is not subject to the CWA Section 402 NPDES program and no SWPPP is required.	10-78
75	3.8-3	This section refers to the 40 CFR § 112 SPCC rule with the 1,320 gallon trigger. This regulation only applies to projects that discharge to federal jurisdictional waters which, as noted above, is not the case here. Although the Project would implement a spill plan, it is not technically subject to the code and the SPCC regulation. This should be clarified in the text.	10-79
76	3.10-1	The Noise Exposure and Community Noise discussion cites	10-80

Comment #	Page or Figure/Table Reference	Comment or Correction	
		"Caltrans 1998". This reference is missing from Appendix C and is likely outdated. AECOM recommends this is updated to Caltrans' 2013 "Technical Noise Supplement to the Traffic Noise Analysis Protocol", which provides the same position in Table 2-10. This reference is cited again in Sections 3.10.3.1 and 10.3.5.1.	10-80 cont.
77	3.10-2	The list of measured sound levels at Wiley's Well Campground states a nighttime Leq of 22 dBA. The level reported in the AECOM study is 21 dBA.	10-81
78	3.10-3	This section states that CadnaA Noise Prediction Model Version 2017 was used for the analysis. To be consistent with the technical report, this should be updated to reference Version 2019.	10-82
79	3.16-2 to 3.16-13, Exhibit B	Mitigation Measures WAT-1 and WAT-2 should be qualified to state that they apply only in the event the Project utilizes groundwater and not surface water, the latter of which is one of the water supply options for the Project. This groundwater use qualification is generally implied in WAT-1 but is not expressly stated in WAT-2 and should be added to avoid confusion.	10-83

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Letter 10

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Sonoran West Solar Holdings, LLC

January 10, 2020

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California Department of Fish and Wildlife
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Re: Background and Response to CDFW's Proposed "Special-Status Bird Collision Compensatory Mitigation" Measure in the Crimson Solar Project Draft PA/EIS/EIR

Dear Ms. Rodriquez:

On behalf of Recurrent Energy and its subsidiary Sonoran West Solar Holdings, LLC (collectively, "Recurrent"), we are providing factual background and legal analysis regarding the California Department of Fish and Wildlife's ("CDFW's") proposed Special-Status Bird Collision Compensatory Mitigation Measure (MM-BIO-33) in the Crimson Solar Project ("Crimson" or "Project") Draft Environmental Impact Statement and Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan (DOI-BLM-CA-D060-2017-0029-EIS and State Clearinghouse No. 2018031027 (the "Draft PA/EIS/EIR"). The Bureau of Land Management ("BLM") and the CDFW published the Draft PA/EIS/EIR on November 1, 2019, and provided a 90-day public comment period that closes on January 30, 2020. This letter is focused solely on CDFW's proposed MM-BIO-33. Recurrent will be separately providing comments on the Draft PA/EIS/EIR to both CDFW and BLM and will incorporate this letter by reference into those comments.

If approved, Crimson will play an important role in efforts to revitalize our energy infrastructure and increase the nation's energy independence. The Project will help meet federal and state renewable energy mandates and goals by generating roughly 350 MW of clean, renewable energy. It has been conscientiously sited in the Riverside East Solar Energy Zone ("SEZ")/Development Focus Area ("DFA") for solar energy generation, immediately adjoining existing transmission and access road infrastructure, which will minimize its impact on the environment and related resources.

We are concerned by a significant change in the assessment of potential avian collision impacts associated with the Project compared to previous analyses under the California Environmental Quality Act ("CEQA") prepared for other utility-scale solar projects in the region and question the factual and legal support for this change in position taken by CDFW. Specifically, we note that CDFW has advanced the position for the first time that a solar project could have a significant impact on special status birds, including raptors, passerines, and riparian/water-associated birds, as a result of collisions with solar panels such that the agency has proposed substantial compensatory and replacement in kind mitigation pursuant to CEQA. This abrupt

shift in position in contrast to how comparable Environmental Impact Reports ("EIRs") have analyzed this issue is not warranted by the growing body of avian monitoring data at solar projects in the region. In fact, more recent avian monitoring of other solar projects suggests that early hypotheses and concerns about avian impacts from photovoltaic ("PV") solar projects is not supported by the actual factual evidence. If not corrected, CDFW's position taken in the Draft PA/EIS/EIR threatens to impose inappropriate and unnecessary mitigation and undermine important federal and state renewable energy goals, including California's carbon-free electricity target set forth by SB100, by discouraging California-based solar generation.

We appreciate the effort that has gone into preparing the Draft PA/EIS/EIR and recognize that CDFW must allocate limited resources to several applications for utility-scale renewable energy projects and related endangered species take permits and lake and streambed alteration agreements, as well as to other priorities. For the reasons stated below, however, additional review and revision to the avian impacts analysis presented in the Draft PA/EIS/EIR is needed and different conclusions should be provided in the Final PA/EIS/EIR.

1. Discussion of Collision Risks in the Crimson and Other Environmental Impact Reports

Citing "[d]ata from other solar projects in Southern California, including PV projects (Desert Sunlight ("DSL"), California Valley Solar Ranch, Blythe Solar Power, McCoy Solar Power, Solar Gen 2, Campo Verde, ISEC West, and ISEC South) and solar thermal (Genesis, Mojave, and Ivanpah)," the Draft PA/EIS/EIR concludes that individual special-status birds "may be injured or killed due to collisions or interactions with solar panels or other infrastructure." (Draft PA/EIS/EIR at p. 3.3-33.) The Draft PA/EIS/EIR more specifically notes that "[f]ederal and State listed species (Ridgway's rail, bank swallow, willow flycatcher, peregrine falcon), along with several species of special concern have been found dead on these sites during systematic avian mortality monitoring." (*Ibid.*) The Draft PA/EIS/EIR does not discuss how many of each species was found at each monitored site or the location of the relevant finds (geographically speaking and with regards to the solar field), notwithstanding its recognition that location can be an important factor in avian mortality. It also fails to distinguish between mortality at PV facilities compared to solar thermal plants, the latter of which have been associated with higher mortality rates. Relying on this questionable background, the Draft PA/EIS/EIR goes on to conclude that "[g]reater than 1 and as many as 5 individuals from among the 27 species of listed or special-status birds from Table 3.3-5 have the potential to be killed on the Project site each year, based on monitoring data from existing solar PV projects." (*Id.* at p. 3.3-34.) It then adds that "[b]ased on these numbers, it estimated that the Project may kill up to 150 listed or special-status birds during the 30-year life of the Project." (*Ibid.*)

To mitigate the impacts on species of birds presumed to be present onsite (22 percent raptors, 37 percent passerines, 33 percent riparian/water-associated, and 7 percent other), CDFW proposes the implementation of Mitigation Measure BIO-33, which would mandate:

> the permanent protection of 225 acres of habitat that benefits one or more species within the three [aforementioned] species groupings. Specifically, to mitigate for the direct loss of riparian/water-associated and passerine birds from the Project, the Applicant must enhance and conserve 175 acres of riparian breeding habitat. . . . The remaining 50 acres of compensatory habitat must meet breeding habitat requirements for raptors [and only 25 acres of this land may be nested within or overlap with other mitigation. . . . All habitat acquired must be

> permanently protected through a conservation easement and enhancement actions.

(*Ibid.*)

These conclusions and mitigation measures are drastically different from those found in other EIRs for solar projects, including EIRs for neighboring and surrounding solar projects where CDFW actively participated in the development of the EIR as a responsible agency. For example, the final EIR for the Desert Quartzite Solar Project ("DQSP"), published September 11, 2019, concluded that project would not have significant impacts on migratory birds or special status avian species. In support of this conclusion, the DQSP EIR discussed the monitoring results for the projects closest and most comparable to the Project – i.e., the McCoy Solar Energy Project ("MSEP") and the Blythe Solar Power Project ("BSPP"). As reported in that EIR,

> No bird species listed as Federal or state threatened or endangered species, California Species of Special Concern, bird species listed in the USFWS – Bird Conservation Region 33 (Sonoran and Mojave Deserts), or BLM Sensitive Species were identified at either site. The reports also noted that no one species was found in large numbers. At McCoy, 16 of the 27 species were detected only once, and 16 of the 29 species detected at Blythe were detected only once. The species found in the greatest numbers were Savannah sparrow, Wilson's warbler, white-crowned sparrow, Brewer's sparrow, western meadowlark, and mourning dove. These species were reviewed in the Partners in Flight population database estimates, and were found to have large population sizes that would not be affected by the projects (WEST 2018d and 2018c).

(DQSP Final Plan Amendment/Environmental Impact Statement/Environmental Impact Report at p. 4.4-14.)

The draft EIR prepared for the Palo Verde Mesa Solar Project (SCH 2012081026) went even farther than the DQSP EIR, determining at first that "[t]he anticipated low level of avian mortality associated with the construction and operation of the Project is expected to result in a less than significant impact to avian species. Based on available information, significant impacts to migratory birds are not expected, and no mitigation is recommended." CDFW submitted a nine-page comment letter to the lead agency for the project (Riverside County), which at no point indicated that there were any issues with the avian impacts analysis. Based on comments from the U.S. Fish and Wildlife Service ("USFWS"), the County ultimately revised the analysis to conclude that "the risk of significant impact to avian populations is minimal" and would be mitigated to a level of insignificance not through compensatory mitigation, but through a Bird and Bat Conservation Strategy ("BBCS") requiring the establishment of an "accepted processes to monitor and mitigate bird and bat fatalities, as well as implementation of an adaptive management framework as new data become available." This mitigation was upheld as proper under CEQA in the trial court's decision in *Citizens for Responsible Solar v. County of Riverside*, Case No. RIC1718458 (July 11, 2019) (Attachment 1).

2. CEQA Factual and Legal Requirements for Significance Determinations

As an initial matter, CEQA does not require a finding of significance whenever an individual of a special status species might be taken. Under 14 California Code of Regulations ("Guidelines"), Section 15065(a)(1), a lead agency must find that a project may have a significant effect on the environment if it has the potential, among other things, to "substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; [or] substantially reduce the number or restrict the range of an endangered, rare or threatened species . . . ." Prior to amendments in September 2004, this provision arguably required a finding of significance when just one individual of a rare or endangered species, or portion of its habitat, would be adversely affected.

Importantly, when the Governor's Office of Planning and Research ("OPR") revised the provision in 2004 to include "substantially" before the phrase "reduce the number", the agency clarified that loss of a single individual does not necessarily constitute a significant environmental impact pursuant to CEQA. This interpretation of CEQA is more consistent with the plain language of the law, which aims to "[p]revent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife **populations** do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities . . . ." (Pub. Resources Code, § 21001, subd. (c), emphasis added.) It is also consistent with the understanding that, under CEQA, impacts must rise to an *environmental* level. (See 14 CCR § 15360 [defining Environment to mean "the *physical conditions which exist within the area* which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance", italics added]; *id.*, § 15382 [defining "Significant effect on the environment" to mean "a substantial, or potentially substantial, adverse change in any of the physical conditions *within the area*", italics added].) CEQA is generally not concerned with individual-level impacts. (See Pub. Resources Code, § 21083(b)(1) [specifying that "a project may have a 'significant effect on the environment' if . . . [a] proposed project has the potential to degrade the quality of the environment [or] curtail the range of the environment"]; cf. *Topanga Beach Renters Assn. v. Department of General Services* (1976) 58 Cal.App.3d 188, 195 [recognizing that the issue under CEQA is not whether a project "will adversely affect particular persons but whether demolition of structures will adversely affect the environment of persons in general"].)

CEQA requires that an EIR "reasonably describe the nature and magnitude of . . . adverse effect[s]." (*Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 514-515.) Under a variety of laws, including CEQA, an agency cannot simply assume an environmental impact, require mitigation, and then consider the matter resolved. (*Ibid.*; see also *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 514; *Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs.* (2001) 91 Cal.App.4th 1344, 1371 ["The EIR's approach of simply labeling the effect 'significant' without accompanying analysis of the project's impact on the health of the Airport's employees and nearby residents is inadequate to meet the environmental assessment requirements of CEQA."].) Before it can conclude that the collision impact on birds is significant, CDFW must develop a rationale, backed by substantial – in this case, scientific – evidence that describes the magnitude of the impact and then match that impact to a threshold of significance. The analysis in the Draft PA/EIS/EIR fails to do this and furthermore, the existing data does not support this outcome.

CEQA also recognizes that CDFW was not obligated to find, and in light of the forgoing principles should not have found, a significant collision impact from the Project on special-status avian species or birds generally. Most, if not all, studies of avian mortality at solar projects to date have recognized that "no empirical research has been conducted to evaluate the attraction of utility-scale solar facilities to migrating or foraging birds."[1] Generic studies (studies of other projects) are not substantial evidence that a specific project could have a particular significant environmental impact. *Save the Plastic Bag Coalition v. City of Manhattan Beach* (2011) 52 Cal.4th 155, 175; see also *Clews Land & Livestock, LLC v. City of San Diego* (2017) 19 Cal.App.5th 161, 195 [project-specific factual foundation or expert rationale for extrapolating conclusions from other data is required].) Indeed, as the data from the BSPP and MSEP projects discussed above indicates, no pattern has emerged from the monitoring data. Many deceased specimens found have been the only one of their species. Rather than multiplying the data from other projects by some factor that fails to take into account whether the observation might be an aberration or whether different conditions could impact the attractiveness of one solar project compared to another, the Draft PA/EIS/EIR should have concluded, as others have, (1) that there is no substantial evidence that the Project is likely to have significant impacts on avian mortality, (2) if the Project has such impacts, that there is no evidence of a population level effect, or (3) that the evidence of collisions with PV panels is only circumstantial and the cause, magnitude and impact of avian collisions is uncertain (all examples of conclusions reached in other EIRs).

The fact that the impact is uncertain does not mean that CDFW must await further studies before proceeding. "CEQA does not require a lead agency to conduct every recommended test and perform all recommended research to evaluate the impacts of a proposed project." (*Ass'n of Irritated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1396; Guidelines, § 15204, subd. (a).) CEQA also recognizes that an agency need only use "its best efforts to find out and disclose all that it reasonably can." (Guidelines, § 15144.) Taking into account the fact that recent data on surrounding projects suggests that PV solar in this area does not have a comparably significant avian mortality impact, the approach that other agencies have used on this matter in EIRs – require monitoring and adaptive management – should be applied here as well.

Finally, whether CDFW is the lead or a responsible agency under CEQA, its obligations to evaluate impacts on biological and aquatic resources before making discretionary decisions (i.e., issuing an incidental take permit for protected species or a lake and streambed alteration agreement) are the same. We are aware that CDFW has taken the position in several recent notices of determination that when acting as a responsible agency, "CDFW's CEQA obligations are more limited than those of the lead agency, in that CDFW is responsible for considering only the effects of those activities involved in the Project which it is required by law to carry out or approve." Where CDFW's exercise of discretion is limited to issuance of an incidental Take Permit, CDFW has claimed to be responsible only "for considering . . . the environmental effects that fall within its permitting authority under [the California Endangered Species Act]." (See, e.g., California Department of Transportation Alameda Creek Bridge Replacement Project CEQA Findings (July 11, 2019),[2] citing *San Diego Navy Broadway Complex Coalition v. City of San Diego*

[1] Leroy J. Walston Jr. et al., *A Preliminary Assessment of Avian Mortality at Utility-Scale Solar Energy Facilities in the United States*, Renewable Energy vol. 92 (2016) 405-414 [Attachment 3].

[2] https://ceqanet.opr.ca.gov/2010082001/10/Attachment/Gx1aCP.

(2010) 185 Cal.App.4th 924, 935-941.) But the topic at issue here falls squarely within the environmental effects within CDFW's permitting authority. The different role CDFW may have had on projects where avian collisions were not found to be significant (i.e., responsible agency) does not justify engaging in a different analysis of the same issue when it is the lead agency.

3. CDFW's Proposed Significance Finding in the Crimson Draft EIR in Connection with Special-Status Avian Species is Improper

CDFW has suggested that its position on avian collision impacts, which sharply departs from the analysis in other documents it has reviewed without comment and/or helped develop, is potentially justified based on new data. The explanation, however, defies the facts as demonstrated by actual recent data discussed herein. It is difficult to say with certainty what studies CDFW relied on in the Draft PA/EIS/EIR because the references only very generally cite "Post-Construction Avian Mortality Monitoring" reports prepared by a handful of consultants in given years. Without knowing the projects studied for these reports, it is impossible to assess their relevance since, as noted above, the biologists studying this issue have recognized a variety of site characteristics that appear to impact collision rates.[3] From the dates of the reports, however, it is evident that two of the four, and the information contained therein, predated the agency's comments on the Palo Verde project and its work as a responsible agency on other recent solar projects. In addition, the 2018 Western EcoSystems Technology monitoring reports appear to be the reports for BSPP and MSEP which, as discussed above, did not find mortality to any one species in large numbers and, moreover, found that most identified mortality involved very common species – not special-status species. In addition, the rates at both those projects were lower compared to previously conducted studies. The suggestion that the data has been trending toward evidence of a more significant impact that previously believed is not supported by these studies. (See also Table 1, below.)

This is particularly true when it comes to endangered and threatened species. The discovery of two deceased Yuma Ridgway's rails at or in the vicinity of solar projects near Desert Center (May 2013) and in Imperial County (April 2014) in isolated and inconclusive circumstances resulted in early speculation that solar projects may present a collision risk for this species. However, no Yuma Ridgway's rail mortalities have been reported at a solar project since these initial observations, which, incidentally, did not result from collisions with solar panels. Indeed, one of the two rails was found outside the fenced project. Furthermore, in 2018, the United States Fish and Wildlife Service, after speculating for years about the possible impact of solar projects on Yuma Ridgway's rails, recognized that the information it had since collected to evaluate the risk of collisions at solar energy projects supported a "determin[ation] that the risk to individuals of listed migratory birds, including the Yuma Ridgeway's rail was unquantifiably low and therefore discountable." (Letter from Glen W. Knowles, Field Supervisor, Southern Nevada Fish and Wildlife Office to Dave Sterner, Senior Manager, Siting and Permitting, First Solar (Feb. 5, 2018) [Attachment 2].)

[3] Specifically, the draft EIR references "Western EcoSystems Technology, Inc. 2018. Post-Construction Avian Mortality Monitoring", "Mortality Reporting 2014. Post-Construction Avian Mortality Monitoring", "Heritage Environmental Consultants, LLC 2014-2016. Post-Construction Avian Mortality Monitoring," and "Dudek 2018 and 2019. Post-Construction Avian Mortality Monitoring."

No yellow-billed cuckoo collisions have been found at PV solar plants and no southwestern willow flycatcher collisions have been reported at a solar facility of any type. Yet these species are also commonly listed as potentially impacted by solar projects, notwithstanding that, as recognized in the draft EIR, no habitat for these species is present and they have not been observed onsite. As reported in the Department of the Interior's Desert Renewable Energy Conservation Plan, two willow flycatchers have been found dead at solar facilities under generator-tie lines (subspecies *brewsteri*) and six willow flycatchers that were not identified to subspecies were found under a transmission line over a three-year period. However, the use of other species of willow flycatchers as a proxy for special status willow flycatchers has been shown to be scientifically flawed because different subspecies have different migration patterns and seasons and migrate in different numbers. In short, in contrast to CDFW's supposition, there has not been an increasing body of evidence that solar projects pose a significant collision risk to special status species.[4]

The species detected most commonly in the publicly available avian mortality monitoring data sets (monitoring results from DSL, MSEP, BSPP, Silver State South, and the California Valley Solar Ranch ("CVSR")) include mourning dove, western meadowlark, and horned lark. These three species, along with house finch, also composed the highest proportion of detections across these studies. Mourning dove, western meadowlark, and horned lark share several traits including that they are primarily ground dwelling, inhabit landscapes with low-growing vegetation, and have large populations in the United States. According to the Partners in Flight Bird Population Database (PIF 2019), there are an estimated 7.4 million mourning doves, 2.1 million horned larks, 10.8 million house finches, and 1.8 million western meadowlarks in the two Bird Conservation Regions (BCRs) represented by the data above (BCR 32 Coastal California and BCR 33 Sonoran and Mojave Desert).[5] In other words, the species occurring the most in site-years and/or that were the highest proportion of the fatality estimates are abundant in the regions where the studies occurred.

On top of this, the number of avian mortalities, regardless of species, are not significant. Table 1 shows annual fatality estimates from the aforementioned projects with readily available reports. The fatality estimates (adjusted for biases such as carcass removal and searcher efficiency) during the first year of monitoring for the projects nearest to Crimson (BSPP and MSEP) are very low (<0.04 per acre per year) with only one estimated bird detection for every 20 acres searched per year. At CVSR, where detections were noticeably higher, fatality monitoring conducted at reference plots outside of the solar facility was used to estimate an adjusted fatality rate of 1.73 birds/ area of a tracker unit (i.e. sample unit) in the reference area, which was only slightly less than the estimates of mortality in the solar fatalities, strongly

[4] Two loggerhead shrikes, listed by California as Species of Special Concern, were found in the solar arrays four yellow warblers found along the generation-tie (transmission interconnection) line at DSL. However, the DSL gen-tie is 19.2 km long, while the Crimson gen-tie line is only 1.8 km in length. In addition, no state Species of Special Concern were found on the most relevant comparison sites, BSPP and MSEP.

[5] BCRs are ecologically distinct regions in North America with similar bird communities, habitats, and resource management issues that encompass millions of square miles of area.

suggesting that some of the mortality in the solar arrays may not be caused by the project[6] and in any event is not made significantly worse by the project. (HT Harvey and Associates, 2015.)[7]

Table 1. Annual array per acre estimates for projects with readily available public data.

Site	Years of Study	Year	MW	Analysis Detections	Fatalities/acre
Silver State South	1	2016-2017	250	7	0.013 (0.004-0.034)
BSPP	1	2016-2017	235	2	0.028 (0.001-0.064)
MESP	1	2016-2017	250	3	0.032 (0.006-0.068)
DSL	2	2016-2017	550	74	0.354 (0.272-0.475)
DSL	1	2015-2016	550	74	0.194 (0.163-0.288)
CVSR	2	2013-2014	250	150	2.092 (1.709-2.681)

The Table 1 estimates include all carcasses and feather spots observed, even if cause of death was uncertain. Across these projects, actual cause of death could not be determined for 92% of the carcasses or feather spots found during standardized monitoring. Collision with panels was determinable in <4% of the cases. Over 50% of the carcasses were feather spots, which could be attributable to a number of circumstances, including background mortality (i.e., mortality from predation; Erickson et al. 2014).

No additional mitigation has occurred at Desert Sunlight as a result of the two years of required monitoring that were reviewed by the agencies.

We further note that while the draft EIR does not identify the causal theory for potential avian collisions with PV solar panels, the popular theory has been for years that such projects have a "pseudo-lake effect," which occurs when a solar projects' reflective panels resemble water from above and attract birds – especially migratory birds – searching for water. This theory

[6] The majority of detections were mourning dove, a prey species that may be preyed upon within and outside the facility by raptors and also there may be some cases where molt feathers and roosting sites could be confused with actual carcasses.

[7] There are no reliable estimates of background mortality in the desert. Fesnock (2019) did present some background fatality estimates for desert environments based on single searches along desert tortoise transects that were extrapolated to predict mortality in all seasons (i.e., mortality observed during one search in August was presumed to be representative of mortality throughout the year). The estimates coming out of this exercise were 0.024 birds per acre, which is in the lower end range of the fatality rates calculated for the desert projects that have been monitored. Regardless, given the low numbers of mortality associated with the desert projects, the background or baseline mortality is less important. Even in absolute terms, the numbers are low.

gained traction after some water bird deaths were documented while monitoring DSL. DSL is a distinctive project among other I-10 corridor projects in that it (1) installed fixed-tilt solar panels and (2) incorporated open water features, which some have recognized both attracted birds and "habituated [them] to the presence of an accessible aquatic environment in the area." (Rebecca A. Kagan et al., Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis (2014) at p. 17.) Substantial evidence of the so-called lake effect theory has not materialized in the data collected on other Projects. In particular, less than 10% of the detections at BSPP and MSEP were water-associated birds and of the handful of detections (four at BSPP and five and MSEP), no more than one bird per species was found. While a higher proportion of waterbirds were found at DSL, the waterbirds found were not groups (i.e. Not multiple individuals of the same species found in proximity during a search). Agencies with solar project development experience have accordingly stopped using the term and regularly dismiss claims that the lake effect of solar projects will cause significant collision impacts. We urge CDFW to follow this trend and the data that supports it.

4. Conclusion

Contrary to CDFW's preliminary findings in the Draft PA/EIS/EIR, the mortality monitoring data from the MSEP and BSPP projects does not provide any evidence of special status bird collisions and demonstrates impacts to only low numbers of mortality for common species. Given the close proximity, similar PV technology, similar geographic setting and recent vintage of this information, this is the most relevant data for assessing the impacts of this Project and it indicates that the impacts are likely to be insignificant. As a result, substantial evidence does not exist to support a finding of significance or a requirement for costly mitigation as part of the analysis and permitting of the Project pursuant to CEQA. We thus respectfully request that CDFW more closely review its analysis, revise its findings and proposed mitigation in the Final PA/EIS/EIR to be consistent with the actual evidence and the similar findings of no or low impacts to special-status avian species made in prior EIRs, and to eliminate its proposed mitigation associated with its preliminary finding. As with other solar projects, Crimson fully intends to comply with the monitoring and adaptive management provisions of MM-BIO-32 and these measures should be, as they have been on other solar projects, sufficient to address what is still an undefined impact.

As demonstrated here, the proposed conclusions and burdens in the Draft PA/EIS/EIR with regards to avian collision impacts are unsupported, arbitrary compared to other projects, and onerous. They threaten to discourage solar project development in California where it is needed and mandated by statute. Revising the analysis as proposed here would allow CDFW to avoid these unintended consequences.

If you have any questions or need further information, please contact me at (949) 394-9175 or at scott.dawson@recurrentenergy.com.

Sincerely,



Scott Dawson
Director of Permitting
Recurrent Energy

cc: Leslie MacNair, CDFW, Inland Deserts Region, Ontario, CA
Ali Aghili, CDFW, Inland Deserts Region, Ontario, CA
Miriam Liberatore, Medford District Office, BLM, Medford, OR
Doug Herrema, Palm Springs-South Coast Field Office, BLM, Palm Springs, CA

ATTACHMENT 1

Letter 10

FILED
SUPERIOR COURT OF CALIFORNIA
COUNTY OF RIVERSIDE

JUL 11 2019

L. Howell

SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF RIVERSIDE

TITLE:	DATE & DEPT.	NUMBER
CITIZENS FOR RESPONSIBLE SOLAR VS. COUNTY OF RIVERSIDE	July 11, 2019 Dept. 7	RIC1718458
COUNSEL None	**REPORTER** None Present	
PROCEEDING NOTICE OF RULING		

4AT

JUL 15 2019

BY

Ruling on Petition for Writ of Mandate

The Petition for Writ of Mandate of Citizens for Responsible Solar, California Unions for Reliable Energy, George Ellis, James Hennegan, and, Golden State Environmental Justice Alliance (collectively "Petitioners") is GRANTED as to the issue of analysis and mitigation of soil contamination impacts, and as to mitigation on the solar facility site for the burrowing owl. Otherwise, the Petition is DENIED.

Facts and Procedural History

This matter involves the construction, operation, and eventual decommissioning of an up to 450 megawatt (MW) solar facility on 3,400 acres (3,250 acres for solar facility site and 143 acres for a transmission line) (the Project) in the Palo Verde Mesa area of Riverside County. That is located five miles northwest of central Blythe and 40 miles east of Desert Center in Riverside County. (AR 434, 435.) The Project consists of a solar field of solar trackers, two on-site substations, an operations and maintenance building (O&M), inverters, underground interior collection power lines between inverters and substations, and interior access roads. (AR 437.) There will also be a 230 kilovolt (kV) transmission line (gen-tie)

R. STAMEN, Judge
L. Howell (vis), Clerk

that will connect to the Southern California Edison Colorado River Substation that is approximately seven miles away from the Project site. (AR 434.)

The Project site is located on former agricultural land near, but outside of the site of the Blythe Lemon Ranch. It has a history of pesticide and herbicide use. (AR 3636, 3646, 10376-10378.) The site also has a history of soil contamination from 80 underground storage tanks (USTs) that were used to fuel gasoline-powered wind turbines previously at the site. Many of the underground storage tanks leaked (LUSTs). (AR 1866, 3244, 10376-10378.) It is a cleanup site included on the State Water Resources Control Board (SWRCB) Geotracker Website known as the "Cortese List". The cleanup involved removal of the USTs. (AR 1866, 3244, 10376.) The site was the subject of a 1991 Colorado River Basin Regional Water Quality Control Board (Water Board) cleanup of shallow soil contamination from the USTs.

The Petition alleges residual gasoline concentrations remain significant in shallow soil under 44 of the 80 USTs. (*Id.*) It further alleges it will take three years to construct the Project and will require excavation, road construction, and light grading. Finally, it alleges the Project will last for thirty years and that when the Project is decommissioned, the Project site will be returned to agricultural use.

On 8/8/12, respondent County of Riverside (County) issued a Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) for the Project. (AR 77.) The DEIR was released on 9/29/16 for a 45-day public comment period. Petitioners submitted extensive written comments to the County. The Final Environmental Impact Report (FEIR) was released in August 2017. It included responses to the comments. The County's Board

of Supervisors conducted a hearing on the Project and the FEIR on 8/29/17 and approved the FEIR at the hearing. (AR 1.) The County then filed and posted the Notice of Determination (NOD) on 8/30/17. (AR 1.)

Petitioners challenge the Board's 8/29/17 decision to adopt Resolution No. 2017-168[1]. The Resolution certified Environmental Impact Report (EIR) No. 532 for the Palo Verde Mesa Solar Project, Conditional Use Permit (CUP) No. 3684, Public Use Permit (PUP) No. 916, Development Agreement (DA) No. 86, adopting a Mitigation Monitoring and Reporting Program (MMRP), adopting Ordinance No. 664.59 and findings for approval of the CUP, PUP, and DA pursuant to the California Environmental Quality Act (CEQA.) The Petition, which was filed on 9/29/17, also contains requests for declaratory and injunctive relief.

Petitioners allege that the FEIR fails to adequately disclose and mitigate the Project's potentially significant impacts on hazardous materials, biological resources, water resources, air quality, as well as the Project's significant cumulative impacts. (Only some of these issues were raised in the parties' briefs.) Specifically, Petitioners argue in their Opening Brief that the EIR: 1) did not disclose and mitigate hazardous waste impacts associated with the disturbance and removal of contaminated soil at the Project site; 2) failed to establish an accurate baseline for biological resources; 3) failed to disclose and mitigate significant avian mortality impacts resulting from collisions with Project components; 4) failed to adequately assess and mitigate biological resource impacts to the burrowing owl (the

[1] Resolution No. 2017-168 was incorrectly identified in the Board's approvals as "Resolution No. 2017-199"; Resolution No. 2017-168 is the correct number.

"BUOW"), desert tortoise, mojave fringe-toed lizard (MFTL), golden eagles, and bald eagles; and, 5) failed to disclose the Project's potentially significant impacts on state and federal jurisdictional waters by improperly deferring a jurisdictional wetlands delineation survey.

In their Reply, Petitioners added that the EIR lacks substantial evidence to support the conclusion that Mitigation Measure HAZ-1 will effectively reduce soil contamination to less than significant levels. They argued, for the first time, that the County is using the wrong standard of review. Petitioners argue the County incorrectly characterizes Petitioners' claims as factual disputes, when they are issues of law in that the EIR fails to make adequate disclosures. Petitioners rely on the recent opinion of *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502. (Petitioners and Respondents were permitted to file supplemental briefs regarding the proper standard of review and *Sierra Club*.)

The Court rules as set forth below. It addresses Petitoners' claims in the order Petitioners argued them in their joint Opening, Reply, and Supplemental briefs.

A

Petitioners' Contention that the EIR Improperly Deferred Analysis and Mitigation of the Project's Potentially Significant Hazardous Materials Impacts That Will be Caused by Disturbance and Removal of Contaminated Soil at the Project Site

The Court finds that the standard of review on this issue is de novo. Petitioners challenge the adequacy of the EIR. That is a procedural challenge. (*Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502.) Additionally, the Court notes that:

"[U]nderlying factual determinations—including, for example, an agency's decision as to which methodologies to employ for analyzing an environmental effect—may warrant deference." (*Id.* at 516.) Nonetheless, "[w]hether or not the alleged inadequacy is the complete omission of a required discussion or a patently inadequate one-paragraph discussion devoid of analysis, the reviewing court must decide whether the EIR serves its purpose as an informational document." (*Sierra Club, supra.* at 514.)

1. Deferred Analysis of Soil Contamination Impacts

Petitioners argue that the EIR improperly defers analysis of potentially significant soil contamination to the future when a post-approval investigation will occur during a Phase II Environmental Site Assessment (ESA). (AR 418 [only mentions residual pesticides or herbicides from past agricultural uses].) They assert that the Phase I ESA in the Draft EIR (DEIR) was reviewed by an expert, Matt Hagemann, who concluded soil disturbance during construction was a potentially significant impact, should be sampled under a Phase II ESA, and disclosed in a revised DEIR. (AR 10377, 12428.) They argue that the County dismissed the Phase I ESA and Mr. Hagemann's recommendations by deferring preparation of the Phase II ESA until after Project approval, and by designating it as a mitigation measure prior to construction.

There is a critical distinction between deferred *analysis* and deferred *mitigation.* (Reply, p. 7:13-8:11.) Deferred analysis of the impacts and effects of soil disturbance during construction is prohibited by CEQA unless it is not feasible to perform the analysis or where the impact is less than significant. (*City of Maywood v. LAUSD* (2012) 208 Cal.App.4th 362,

406; *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 794.) The EIR makes no showing that it is not feasible to perform the Phase II ESA analysis or that the impacts are less than significant before and after mitigation.

Petitioners argue that the soil disturbance during construction of the Project will potentially exacerbate an existing hazardous condition, which must be analyzed prior to approval of the EIR. (*Cal. Build. Indust. Ass'n (CBIA) v. BAAQMD* (2015) 62 Cal.4th 369, 389, 392 [held "that CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents. What CEQA does mandate ... is an analysis of how a project might exacerbate existing environmental hazards ...."]) .) The existing site contains soil contamination from the use of pesticides and potentially from LUSTs in the form of fuel contamination. That soil disturbance during construction will cause potentially significant impacts is acknowledged.

The EIR fails to disclose whether any of the Project's construction activities involving pile driving and excavation will occur at depths that residual contamination from LUSTs has been documented or the location and extent of residual toxins under the Project site. (AR 532, 533, 12428.) As a result, the proposed Mitigation Measure, MM HAZ-1, defers *analysis* of the Project's soil contamination impacts until after the Project has been approved. (*Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal.App.4th 48, 81-82 [A "postcertification verification procedure allows for an environmental decision to be made outside an arena where public officials are accountable."])

Respondents argue that use of the Phase II ESA, which is provided for in MM HAZ-1, is not deferred analysis. They argue that the EIR indicates that the presence of hazardous

materials has already been investigated in the Phase I ESA, which determined that there is a potential for exposure to hazardous materials in the soil at the Project site. (AR 797-798, 821-826, 837, 3062-3063.) The EIR acknowledges that residual fuel constituents were identified in soil underneath the subject property from 44 USTs. (AR 798.) The EIR states that the Colorado River Basin Regional Water Quality Control Board (RWQCB) reviewed UST closure reports and found "no further action required" since levels detected did not present a potential threat to human health or the environment. (AR 798.) However, this finding by the RWQCB does not consider soil disturbance during construction, which all parties acknowledge as a potentially significant impact. The EIR acknowledges that excavation will occur down to 3 feet. There is no analysis as to the nature and magnitude of the disturbance.

The EIR also mentions the potential for pesticides and other chemicals to be present in shallow soils and concludes they will be evaluated through implementation of mitigation measures HAZ-1 and HAZ-2. (AR 822.) This reference concedes that analysis of the contaminants is deferred. It also does not specifically address residual fuel constituents. The language in HAZ-1 is limited to residual pesticides or herbicides from past agricultural land uses, and HAZ-2 only provides for a Worker Environmental Awareness Program. (AR 418, 837.)

Respondents argue that the issue is not inadequate disclosure of the soil disturbance, but the *timing of performing the mitigation,* which is a question of fact for the Board, not a question of law for the Court.[2] However, deferred *mitigation* is not the issue here. The issue

[2] Respondents assert that the Project site is not located on a site that is on the Cortese list but, the EIR

is that the EIR does not contain an adequate analysis of the nature and magnitude of the intended soil disturbance, which has been improperly deferred to a time prior to construction and post-approval. While the EIR does not completely omit the discussion of soil disturbance, the current analysis is insufficient. (*Sierra Club, supra.* at 516.)

Based on the foregoing, the Court Grants the Petition on the issue of deferred analysis of soil contamination impacts.

2. Mitigation – Investigation and Removal of Contaminated Soil

CEQA requires an EIR to propose mitigation measures that will minimize a project's significant impacts by reducing or avoiding them. (Pub. Res. Code §21002, §21100.) Courts generally defer to an agency's assessment of the effectiveness of the mitigation measures proposed in the EIR. (Kostka & Zische, Practice Under the CEQA, 2d Ed. (CEB 2018) Ch. 14, §14.9, p. 14-10.) "For projects for which an EIR has been prepared, where substantial evidence supports the approving agency's conclusion that mitigation measures will be effective, courts will uphold such measures against attacks based on their alleged inadequacy." (*Sacramento Old City Ass'n v. City Council* (1991) 229 Cal.App.3d 1011, 1027.)

Petitioners assert that the County relies on mitigation measure HAZ-1 to conclude that the soil contamination impacts will be mitigated to less than significant levels. (AR 822, 3062-3063.) They argue that the County's reliance is contrary to law because it defers soil contamination analysis until after Project approval. (*Madera Oversight, supra.* at 81-82.) As

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disclosed the nearby Blythe Lemon Ranch, and acknowledged the potential exposure to contaminated soil at the Project site.

discussed above, the EIR fails to adequately disclose the impacts and effects of soil disturbance during construction and attempts to defer this analysis to a time before construction.

Petitioners argue that mitigation measure HAZ-1, in its current form is limited to "the potential presence of residual pesticides or herbicides from past agricultural land uses." (AR 5307.) It omits a discussion of whether other contaminants, such as residual fuel contaminants in the soils would cause significant impacts, if disturbed. Petitioners also argue that mitigation measure HAZ-1 included a performance standard related only to removal of pesticides. (*Id.*) Mitigation measure HAZ-1 does not address all soil contamination to be removed, including soil contaminated by fuel from LUSTs or other sources.

The conclusion that mitigation measure HAZ-1 is sufficient to reduce soil disturbance contamination impacts to less than significant is not supported by substantial evidence.

Based on the foregoing, the Court Grants the Petition on the issue of mitigation – investigation and removal of contaminated soil.

B

Petitoners' Contention that the EIR Failed to Establish an Accurate Baseline for the Desert Tortoise, Burrowing Owl (BUOW), Mojave Fringed-Toed Lizard (MFTL), and Golden and Bald Eagles

Protection of biological resources is a fundamental policy incorporated in the CEQA. (Pub. Res. Code §21001(c).) Petitioners argue that the DEIR fails to establish baselines for

biological resources, including the desert tortoise, the burrowing owl (BUOW), the Mojave fringed-toed lizard (MFTL), and golden and bald eagles.

"An EIR must include a description of the physical environmental conditions in the vicinity of the project ... as they exist at the time the notice of preparation is published or, if no notice of preparation is published, at the time the environmental analysis is commenced." (14 Cal. Code Regs. [CEQA Guidelines] §15125(a), (a)(1); *Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 320.) Lead agencies have significant discretion in determining the appropriate "existing conditions" baseline. (See *Neighbors for Smart Rail v. Exposition Metro Line Constr. Auth.* (2013) 57 Cal.4th 439, 453.)

The EIR's description of the existing environmental setting or baseline should be comprehensive enough so that the project's significant impacts can "be considered in the full environmental context." (CEQA Guidelines §15125(a).) However, while the description is important to set the starting point for the impact analysis, it is not required to be as comprehensive and detailed as the impact analysis itself. (CEQA Guidelines §15125(a),(c).)

The substantial evidence standard applies to the determination of existing physical conditions that constitute the baseline for the environmental impact analysis (*Neighbors for Smart Rail v. Exposition Metro Line Constr. Auth.* (2013) 57 Cal.4th 439, 449; *Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 328.)

1. Desert Tortoise

Petitioners assert that Respondents acknowledged desert tortoises were likely to be present on the Project site, but failed to conduct "protocol-level surveys for this critically threatened species" and, therefore, could not have concluded "that there was a low

probability of occurrence for that species." (AR 2844-2845, 2864, 3077, 3082.) They assert that the EIR's analysis was extremely limited and inconsistently stated "*no* impact" as well as a "potentially significant impact." (AR 693-694; 712-713.) This assertion is taken out of context. The EIR states that the site of the solar facility is agricultural land, which is not suitable habitat for the desert tortoise. (AR 693, 713.) A*t the same time* the "[h]abitat quality along the transmission line corridor [gen-tie] is higher" than the solar facility site but, is considered of marginal habitat quality for the desert tortoise. (AR 693.) The EIR characterizes the potential for desert tortoise occurrence along the "marginal habitat present along the gen-tie corridor" as "moderate." (AR 693.) Thus, the EIR adequately explains the inconsistency pointed out by Petitioners. This does not end the inquiry concerning the baseline analysis for the desert tortoise.

Petitioners argue that the EIR failed to provide an adequate baseline upon which to measure impacts because it relied on a 2012 memo from the USFWS to the Federal Bureau of Land Management (BLM), which concerned another project (the Blyth Mesa Solar Project, not the Palo Verde Mesa Solar Project project. (AR 2864 [this comment acknowledges that this Project and the BMSP share the same gen-tie line.]) They assert that the County *presumed* significant impacts on the solar facility site, and adopted mitigation measures accordingly. Petitioners rely on *Communities for a Better Environment (CBE) v. Richmond* (2010) 184 Cal.App.4th 70, 85 for the general proposition that without a baseline, it is impossible to know the actual impact and whether mitigation measures will reduce that impact. While *CBE v. Richmond* is factually distinguishable, it is accurately cited for the

general proposition. However, Petitioners did not demonstrate that no baseline was provided.

Petitioners take issue with the surveys that were conducted, claiming the scope and methodologies were inadequate. An agency is not required to undertake a protocol-level survey when assessing whether a project will affect endangered, rare, or threatened species. A lead agency may employ other survey methodologies, such as reconnaissance-level surveys, as long as its choice of methodology is supported by substantial evidence. (*Gray v County of Madera* (2008) 167 CA4th 1099, 1124; *Association of Irritated Residents v County of Madera (AIR)* (2003) 107 CA4th 1383, 1396.) Also, a quantified analysis of biological impacts is not required, as long as the supporting biological studies or analysis are sufficiently credible to support the EIR conclusions. (*Save Round Valley Alliance v County of Inyo* (2007) 157 CA4th 1437, 1468.)

Petitioners assert that no one walked "transects" or did systematic analyses of the presence or potential numbers of desert tortoises on the site or gen-tie corridor including sampling according to the USFWS survey protocol. (AR 16061-16065.) A reconnaissance-level survey of all species including plants was conducted on the 3400-acre site in October of 2011 by the EIR's experts. (AR 1684-1687.) Petitioners argue that the EIR fails to indicate that "detection surveys" were performed even to determine the presence of the desert tortoise. (AR 11909.) Significantly, the EIR does not conclude that the desert tortoise could not be present.

Respondents reasonably relied on the analysis made by the EIR's expert biologists. (See AR 670-673, 694.) Respondents point out that Petitioners are not challenging the

"findings" that the desert tortoise could be present. Rather, Petitioners want "even more evidence" based on additional surveys. The analysis relied on field surveys of various species, including plants, conducted prior to issuance of the survey report in 2012. (AR 670.) Those field surveys were not specific to the desert tortoise Protocol-level surveys are not required where the methodology chosen is supported by substantial evidence. (*Gray, supra.; AIR, supra.*)

Significantly, the EIR provides a baseline analysis as to the presence of the desert tortoise at the gen-tie corridor, which was based on a survey conducted for a nearby solar facility, the Blyth Mesa Solar Project. (AR 670.) It was reported that "there is a moderate potential for the desert tortoise to occur within the transmission line corridor." (AR 670.) This Project and the Blyth Mesa Solar Project will share the same transmission line corridor. The County was aware that a desert tortoise was sighted at the gen-tie corridor in 2014. (AR 2864.) Thus, the finding of "moderate" potential for the desert tortoise in the gen-tie corridor is supported by substantial evidence, a species-specific survey conducted on the gen-tie corridor. (AR 670; see also DEIR, Appendix D.) It is also a reasonable inference, according to this finding, that the desert tortoise "could be present" on the solar facility site.

Based on the foregoing, the Court finds that the baseline analysis for the desert tortoise is supported by substantial evidence.

2. Burrowing Owl (BUOW)

The DEIR surveyed the gen-tie corridor in 2011 and 323 acres of the 2,982-acre solar facility site in 2013 (about 11% of the site). Petitioners contend the DEIR improperly justified the omission of the remaining 2,660 acres due to lack of vegetation. Therefore the baseline

analysis was inadequate. Specifically, Petitioners argue that the decision to omit a survey of the remaining site was arbitrary because: 1) some of the areas excluded from the survey efforts had vegetation at the time of the surveys (AR 2946); 2) the BUOW habitat does not require vegetation (AR 2946); and, 3) the County's assumption that BUOWs do not burrow in lands under cultivation is incorrect (AR 3588-3589, 11910, 3084 [BUOW habitat defined in CDFW protocol as "short or sparse vegetation."]) Petitioners assert that in addition to failing to survey most of the solar facility site, the data that was collected was substandard. (AR 11890-11893.)

Petitioners take issue with the surveys that were conducted, claiming the scope and methodologies were inadequate. The EIR found a high potential for BUOW occurrence at the Project site based on reconnaissance-level surveys and protocol-level surveys from 2011 and 2013. (AR 658, 673, 695, 1693-1718 [Western Burrowing Owl Monitoring and Mitigation Plan.]) Conducting additional or different surveys would likely reach the same conclusion as to the baseline occurrence of the BUOW. Petitioners failed to show that the baseline findings for the BUOW were unsupported by substantial evidence.

Petitioners argue that the County changed its position as to the BUOW because the DEIR stated that the BUOW "may be occasionally present as foragers but unlikely to be present as residents", but the phrase "unlikely to be present as residents" was deleted in the FEIR. (AR 673, 3183.) Petitioners argue that this change of position requires recirculation. Public Resource Code §21092.1 provides for recirculation when significant new information is added to an EIR after the public comment period, but prior to certification. Petitioners did not show that significant new information was added to the EIR so as to require recirculation.

Petitioners also argue that the County did not follow protocol survey method, set forth in the CDFW 2012 BUOW Staff Report, for the small areas it did survey. (AR 11890, 11891, 11893.) A lead agency is not required to follow the recommendations of wildlife agencies on how an impact should be studied, provided that substantial evidence supports the agency's chosen methodology. (*North Coast Rivers Alliance v Marin Mun. Water Dist.* (2013) 216 CA4th 614, 643.)

Based on the foregoing, the Court finds the baseline analysis for the BUOW is supported by substantial evidence.

3. Mojave Fringe-Toed Lizard ("MFTL")

Petitioners assert that the County acknowledged a large MTFL population on the proposed gen-tie corridor; but, 1) the EIR inconsistently asserts that the MTFL was not detected on the solar facility site during three days of reconnaissance-level surveys (AR 674 [Table 3.4-4]; and, 2) that the MTFL was detected on the solar facility site, despite no actual MTFL surveys (AR 672 [Figure 3.4-3.]). Although Figure 3.4-3 depicts the presence of a MTFL on the solar facility site, this finding does not require that the entire baseline analysis of the MFTL should be disregarded. (AR 672.) Baselines do not have to be perfect. Rather, they must be supported by substantial evidence.

Petitioners assert their expert, Mr. Cashen, found reconnaissance-level surveys on the solar site were inadequate because the MTFL hibernates and because its daily activity patterns are dependent on temperature. (AR 2943.) Petitioners claim the County failed to meaningfully respond to this comment by asserting that the MTFL habitat on the *gen-tie* corridor would be compensated at a 3:1 ratio and that the Project's contribution to *cumulative*

impacts would be "incremental, given the low potential for the MFTL within the Project site." (AR 3028.) They argue that this conclusion was unsupported because MFTL was actually sighted on the solar facility site during hibernation and because of the acknowledgement that the potential MTFL habitat was detected on 3% of the solar site. (AR 12496 [Cashen comments], AR 694.) Petitioners then conclude there was an inadequate baseline for the MFTL.

Petitioners take issue with the methodology used to analyze the MFTL baseline. The EIR concludes a moderate potential for the MFTL at the solar site and a substantial population at the gen-tie corridor. (AR 673.) The EIR explains that there is potentially suitable habitat on 3% of the solar facility site and suitable habitat at the gen-tie corridor where the MFTL are present. (AR 673.) The EIR explains that Project impacts are significant based on the loss of known and potential habitat and potential effects on the MFTL. (AR 694-695.) Conducting additional or different surveys would likely lead to the same conclusion of moderate occurrence on the solar facility site.

Based on the foregoing, the Court finds the baseline analysis for the MFTL is supported by substantial evidence.

4. Golden and Bald Eagles

a. Bald Eagles

Petitioners assert that the conclusion in the EIR, that the probability of occurrence of bald eagles was "diminishingly small" due to the Project site being 8.5 miles from the Colorado River, is unsupported. (AR 1742.) They assert that Dr. Smallwood provided substantial evidence based on personal observations of bald eagles foraging many miles

from water sources and riparian habitat. (AR 3097.) Dr. Smallwood's observations were dismissed in the FEIR as "anecdotal". (AR 3145.) Petitioners assert that another expert, USFWS Raptor Ecologist Joel Pagel, criticized the McCoy Solar Project's Golden Eagle Risk Assessment that the County relied on for the same reason. (AR 2934 [C. 03-60]; AR 3267-3268 [C. 03-138.]) Petitioners contend that the issue here is not a disagreement among experts, but a lack of a baseline analysis. (CEQA Guidelines §15151).

Petitioners' contention is without merit. The EIR states a baseline for the bald eagle. Bald eagles usually forage near large bodies of water, but because the Project site is 8.5 miles away from the Colorado River, the probability of occurrence is diminishingly small. (AR 1742.) This assessment was made by Respondents' experts in the BBCS. It is a satisfactory, though not an exhaustive analysis.

Based on the foregoing, the Court finds Petitioners have not established that there is no substantial evidence to support the EIR's stated baseline for the bald eagle.

b. Golden Eagles

Petitioners content that the EIR's conclusion, that the site has no golden eagles, is not supported by substantial evidence. (AR 677.) Specifically, Petitioners argue that the survey relied upon lasted for only three days and was a simultaneous search for all species, including plants (AR 1642-1643.) They assert that: more time was needed to adequately survey the golden eagle (AR 3081 [C. 04-59]); golden eagles are present in foraging range (AR 696, 2902, 2961); a golden eagle tagged with GPS was documented flying by the Project a month before Dr. Smallwood submitted his DEIR comments; (AR 3081 [C. 04-60]; 3082, 3083 [Fig. 1, 2]); and, the baseline analysis consisted of reviewing surveys for other

projects five or more years ago that did not follow applicable protocols (AR 2959-2960 [C. 03-93].)

Importantly, the EIR found a moderate likelihood of golden eagle occurrence for foraging purposes based on 2010 and 2013 regional surveys, found one active nest 10.9 miles from the Project boundary and an inactive nest 4.5 miles north of the gen-tie line. (AR 673.) The EIR found that while there were no nests or nesting habitat in the Project area, there was foraging habitat that golden eagles may fly into. (AR 657, 677.) Petitioners want additional or different studies, despite the fact that the experts for Petitioners and Respondents agree that there is a moderate foraging habitat for the golden eagle.

Based on the foregoing, the Court finds that baseline analysis for golden eagles is supported by substantial evidence.

C

Petitioners' Contention the EIR Failed to Adequately Disclose and Mitigate the Project's Significant Avian Mortality Impacts from Collision

Petitioners argue that the EIR inadequately disclosed and mitigation of avian mortality impacts from collisions with solar panels and other components. The issue concerns the "fake lake effect" of solar facilities that causes migrating birds to perceive the reflective surfaces of solar panels as bodies of water and collide with them when trying to land on or dive into the "water". (AR 2860, 10237-10238, 12463.)

Respondents argue that the EIR concludes that avian impacts are potentially significant and that MM BIO-7 will reduce impact to a level of insignificance (AR 700, 719-

720, 3191-3193, 2989.) Respondents argue this is supported by substantial evidence and that the findings were informed by comments (including comments from USFWS and CDFW).

1. **Disclosure of Avian Mortality**

Petitioners assert that the DEIR initially concluded avian impacts from colliding with Project components were less than significant, requiring no mitigation. (AR 700-701.) They assert that the conclusion was based on the County's review of less than a year's worth of avian mortality studies from three solar projects, which were acknowledged to be "opportunistic" and not the best available scientific information. (AR 701, 1770-1771. 11720.) Petitioners' experts and the USFWS commented that the lake effect is causing increasingly significant impacts. (AR 10237-10238, 11502-11504, 11514.)

The FEIR revised the analysis by: providing that avian mortality due to collisions is a potentially significant impact; identifying specific risk factors including the "fake lake effect"; and, recognizing that causes of avian injuries at commercial solar projects are still being evaluated. (AR 700-701.) Petitioners do not take issue with this conclusion. Instead, they claim more studies should have been reviewed (i.e., studies from three solar projects were not sufficient). Respondents counter that more data was reviewed, including data provided in the Bio Survey Report (AR 3002) and publicly available data for recent solar projects in the area. (AR 700, 1730, 3054-3055, 2869-2870, 11746.) The FEIR acknowledged significant impacts from the "fake lake effect" and provided substantial evidence to support the avian mortality analysis.

Petitioners assert that they obtained from the USFWS and CDFW nearly 50,000 pages of reports for numerous solar projects over four years, documenting thousands of avian deaths. (AR 51836-94014.) Petitioners only cite to a vast range of documents, without pinpointing a single page. (AR 51836-94014.) An EIR is presumed to be adequate and a petitioner in a CEQA action has the burden of proving otherwise. (*Paulek v. Department of Water Resources* (2014) 231 Cal.App.4th 35, 43; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 530. *See also Young v. Gannon* (2002) 97 Cal.App.4th 209, 225 ["The burden is on [petitioner] to prove an abuse of discretion...."]) In addition, "[a] reviewing court will not independently review the record to make up for the appellant's failure to carry his burden." (*Bay Area Clean Environment, Inc. v. Santa Clara County* (2016) 2 Cal.App.5th 1197, 1212.) Petitioners did not demonstrated a lack of substantial evidence by inviting the Court's attention to a voluminous range of documents.

Petitioners also argue that the County should have revised the EIR and recirculated it to address the evidence. Pub. Res. Code §21092.1 provides for re-circulation when significant new information is added to an EIR after the public comment period, but before certification. Petitioners did not show that significant new information was added to the EIR. Further, Petitioners have the burden of showing that the decision not to recirculate the FEIR is supported by substantial evidence. (*Beverly Hills Unified School Dist. v. Los Angeles Metropolitan Transp. Authority* (2015) 241 Cal.App.4th 627, 661.) Petitioners did not meet their burden.3

3 The Court notes Respondents' arguement that their experts considered the information, and determined that the FEIR adequately analyzed the issues raised in the voluminous records. (*San Joaquin Raptor Rescue Ctr. v. County of Merced* (2007) 149

2. BBCS

Petitioners argue that: 1) Mitigation Measure (MM) BIO-7 requires preparation of a BBCS to monitor and quantify the Project's effects on birds and bats; and, 2) the BBCS fails to meet CEQA standards because it does not comply with CDFW and USFWS guidelines for developing a BBCS, lacks substantial evidence to support its underlying mitigation assumptions, is undefined, etc.

MM BIO-7 requires protective measures, including no-disturbance buffers, preconstruction surveys for active nests by a qualified biologist, a biologist to monitor during construction, and that the BBCS will be submitted for review to the USFWS and CDFW. (AR 3199-3200.) The BBCS sets specific thresholds, that if surpassed, trigger adaptation or additional mitigation. (AR 1751, 11880; see AR 2872.) MM BIO-7 provides that the BBCS is a "living document" and it will be reviewed, modified, and updated in coordination with USFWS and CDFW. (AR 2872.) The EIR contains a preliminary BBCS, which includes a statement of coordination with the USFWS and the CDFW; recognition of avian mortality, the "fake lake effect", and how to avoid, monitor, report, and mitigate the collision-related fatalities. (AR 1728, 1737-1740, 1771-1772, 2872, 11880.)

Respondents responded to each of Petitioners' arguments with specific citations to the preliminary BBCS and to the EIR. For instance, Petitioners take issue with the statement that "birds will only 'incidentally' use the Project site" arguing it is "unsupported." However, the EIR acknowledges that the Project site may be used as a foraging habitat for raptors or

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Cal.App.4th 645, 664-667 ["a disagreement among experts over methodology does not make an EIR inadequate.]

waterfowl using the Colorado River, which is 8.5 miles away; and, that the land was previously disturbed so, it contains limited habitat for birds. (AR 1739, 1746, 3022-3023.) Thus, while Petitioners raised numerous challenges to the proposed mitigation, Respondents addressed each challenge with specific citations to the record, which show that MM BIO-7 is supported by substantial evidence.

Based on the foregoing, the Court finds that the impacts analysis and mitigation for avian mortality is supported by substantial evidence.

D

Petitioners' Contention that the EIR Inadequately Assessed, and the County Failed to Adequately Mitigate, Impacts to the BUOW, Desert Tortoise, MFTL, and Golden and Bald Eagles Biological Resources Impacts – Mitigation

Petitioners argue that in addition to the baselines discussed above, the EIR does not properly assess impacts or mitigate. Respondents argue that Petitioners' experts disagree with the EIR's findings and conclusions, but that Petitioners again fail to show that the EIR lacks substantial evidence. (*Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1027 [where substantial evidence supports the conclusion that the mitigation measure will be effective, courts will uphold them against attacks on alleged inadequacy]; *National Parks & Conservation Assn. v. County of Riverside* 71 Cal.App.4th 1341, 1366 [does "the County have a sufficient basis in expert opinion and other evidence to conclude that the potential impacts of the project on the desert tortoise had been mitigated to a level of insignificance"]; *Association of Irritated Residents v. County of Maderia (AIR)* 107 Cal.App.4th 1383, 1398 [despite differing opinions on impacts to biological resources

and effectiveness of the mitigation for impacts, the agency is entitled to resolve the conflict and find the mitigation is sufficient.])

1. Mitigation as to BUOW

Petitioners argue that Project and cumulative impacts to the BUOW were not adequately assessed because the County did not conduct an adequate survey for the BUOW. They assert that Dr. Smallwood opined that using regression models or average density estimates, the EIR should have concluded that 15 to 67 pairs of BUOW would be affected on the Project site and 38 to 1,498 pairs of BUOW would be affected by the cumulative solar project area. (AR 3086-3088.) This is clearly a different opinion on the impacts to the BUOW.

A CEQA petitioner is required to "lay out the evidence favorable to the other side and show why it is lacking. Failure to do so is fatal. A reviewing court will not independently review the record to make up for the appellant's failure to carry his burden." (*Bay Area Clean Environment, Inc. v. Santa Clara County* (2016) 2 Cal.App.5th 1197, 1212.) Petitioners did not demonstrate that the impacts analysis of the BUOW is lacking. They offer a different analysis. Petitioners did not meet their burden of showing that Project and cumulative impacts to the BUOW were inadequate.

Petitioners argue that the County found impacts would be reduced to less than significant levels by MM BIO-6. It proposes, in part, setting aside 146 acres of habitat adjacent to the Project area. Petitioners challenge the effectiveness of MM BIO-6 on three grounds. First, they assert that the proposed mitigation lands were already dedicated as mitigation for another project, the Blythe Mesa Solar Project. (AR 2969.) They argue that

using the same lands for this Project essentially splits the mitigation in half and that the EIR does not evaluate the impact of halving the value of the mitigation lands. Petitioners rely on *San Bernardino Valley Audubon Society v. Metro. Water Dist.* (1999) 74 Cal.App.4th 382, 397 for the proposition that it is ineffective, even illegal, to use mitigation already dedicated to another project.

Respondents assert that the EIR biologists opined that 146 acres would be more than sufficient and that an additional 132 acres are identified as potential mitigation lands if needed. (AR 3013-3014, 1710.) Also, the mitigation lands must be approved by CDFW before they can be disturbed. (AR 3014.) Respondents add that the EIR states impacts to BUOW can be avoided by use of several Best Management Practices: BMP-7 – Trash Abatement Plan to minimize attraction to BUOW predators by controlling trash; BMP-12 – gen-tie lines design standards to discourage predators of young BUOW from perching; BMP-10 – invasive weed management to maintain habitat; BMP-14 – travel and traffic; and, BMP-19 – plants and wildlife in order to limit traffic to existing or designated routes. (AR 695-696.) Courts do not determine if other evidence would support a competing determination.

Further, the mitigation bank in *San Bernardino Valley Audubon Society* was quite different from the mitigation proposed in this case in MM BIO-6. It was on a larger scale addressing 65 species. It allowed for mitigation bank lands to be sold to outside Projects. It was calculated using a very complicated "habitat value formula" which allowed compression of habitat that could have a significant effect on several species. (*Id.* at 397.) Importantly, the *San Bernardino Valley Audubon Society* Court's finding on the mitigation bank issue was made to show that petitioner's contentions as to the inadequate mitigation

were sufficient to require an EIR be prepared. Here, an EIR was already prepared. Despite differing opinions on impacts to biological resources and effectiveness of the mitigation for impacts, the County is entitled to resolve the conflict and find the mitigation is sufficient. (*AIR*, 107 Cal.App.4th at 1398.)

The Court also notes that the *San Bernardino Valley Audubon Society* Court did not hold that "compression of habitat" was illegal. Moreover, the other solar Project (BMSP) that would share the mitigation lands also shares the gen-tie corridor. Under the circumstances, the decision to share the mitigation lands for purposes of the gen-tie corridor presented is supported by substantial evidence.

Petitioners argue that the proposed mitigation lands will not be adequate because more than 3,000 acres of potential habitat are proposed to be replaced with only 146 acres. That is insufficient according to the CDFW 2012 Staff Report. It provides that an equivalent or greater habitat area is needed for the BUOW. (AR 2970.) The Court notes that the specific nexus Respondents asserted is between the 146-acre mitigation lands and the gen-tie corridor. The cited portions of the EIR do not discuss the solar facility site itself. (AR 3013-3014.) There is confusion in the EIR due to the lack of a sufficient explanation as to whether and how the 146-acre mitigation lands adjacent to the gen-tie corridor is to compensate for the loss of more than 3,000 acres of total land. As a result, on this narrow issue, the EIR lacks substantial evidence and the Petition is GRANTED.

Petitioners argue that there is no substantial evidence that the mitigation lands are "of equal value or better than the land impacted" (AR 458) or that they would be maintained for the BUOW in perpetuity. (AR 2970.) MM BIO-6 does provide that the mitigation land is

to be of equal value or better than the land impacted (AR 458). However, the EIR does not address whether the mitigation land will be maintained in perpetuity. Respondents did not discuss this issue or cite to anything in the record. As a result, on this narrow issue, the EIR lacks substantial evidence and the Petition is GRANTED.

Based on the foregoing, the Court finds that the Project and cumulative impacts analysis for the BUOW and the mitigation as to the gen-tie corridor are supported by substantial evidence. However, the mitigation as to the Project facility site (as opposed to the gen-tie corridor) is not supported by substantial evidence. The Petition is GRANTED on this narrow ground.

2. Mitigation for Desert Tortoise

Petitioners argue that: 1) the County presumed the desert tortoise was present on the solar facility site; and, 2) there was no baseline. Hence, Petitioners argue that any finding on impacts are invalid. The argument fails. As discussed above, the baseline analysis for the desert tortoise is supported by substantial evidence.

Petitioners also take issue with the mitigation proposed in the EIR for the desert tortoise. Importantly, Respondents argue that the proposed mitigation measures would avoid a take of the species. (AR 693-694.) The EIR provides that if a desert tortoise is found, construction stops and USFWS will be contacted for guidance. (AR 455). The EIR states conservation measures, including installing desert tortoise exclusion fencing, pre-construction clearance surveys, construction monitoring by a biologist, a desert tortoise education program, and trash disposal requirements to reduce ravens (which are desert

tortoise predators). (AR 693-694.) The EIR also provides for oversight by USFWS and CFWS. (AR 449, 452-457; AR 2875.)

Petitioners argue that the conclusion that impacts would be reduced to less than significant levels by MM BIO-1 and MM BIO-5 (AR 694, 452-457, 449) is unsupported because the EIR ignored the Northern and Eastern Colorado Desert Coordinated Management Plan (NECO Plan) requirement that impacts to the desert tortoise habitat be mitigated. They argue that the EIR does not require mitigation for the lost tortoise habitat. The NECO Plan was not ignored. It was determined to be irrelevant because the Project does not overlap with the NECO planning area, which is sufficiently explained in the FEIR. (AR 677-678; 3050-3051.)

Petitioners argue that the FEIR relied on a USFWS letter that had been revoked as to the BMSP. (AR 3050-3051, 2864.) However, the commenter does not state that the USFWS letter was "revoked", it stated it was "reassessing". (AR 2864.) This does not change the finding in the EIR that there is a potential for a significant impact on the desert tortoise at the Project site.

Petitioners also argue that the EIR's conclusion, that impacts on the desert tortoise would be reduced to less than significant, is not supported by substantial evidence. They base the contention on the assertion that the Project will attract ravens, which are predators to the tortoise, but there is no raven management plan. (AR 2969.) Petitioners then argue that the proposed mitigation measures and BMPs (even if the BMPs were enforceable) would be ineffective to reduce impacts to less than significant. They argue that: perch deterrents on gen-tie posts for ravens are ineffective; there are no perch deterrents for gen-

tie lines; the trash abatement plan does not include enforceable standards, such as number of receptacles and how often trash is picked up; the biologist is only on site twice a month; and, no mitigation measure provides that the biologist will locate ravens or report them to USFWS.

Petitioners did not cite any authority that requires a raven management plan. It is suggested by a USFWS commenter. The FEIR explains that the mitigation measures and BMPs specifically address Petitioners' concerns about ravens and other predators by controlling litter and using design standards to discourage perching. (AR 3051, 693-694.) As to the biologist on a "bi-weekly" basis, MM BIO-5 provides that one will be there during all construction. (AR 453.)

Based on the foregoing, the Court finds that the impacts analysis and mitigation are supported by substantial evidence.

3. MFTL Mitigation

Petitioners argue that the EIR's conclusion, that impacts to the MFTL would be reduced to less than significant after mitigation, was not based on substantial evidence. First, they argue that no baseline surveys were conducted for MFTL. The argument fails. As discussed above, the baseline analysis for the MFTL is supported by substantial evidence.

Second, Petitioners argue that the EIR relies on arbitrarily selected habitat mitigation ratio of 3:1, but does not indicate: where mitigation would occur; whether sites have any value for the species; how mitigation is to be funded; or, the County's success record for mitigating impacts to this species. (AR 2982-2983.) Petitioners argue that this is a violation of CEQA's requirement that mitigation ratios for lost habitat be supported by substantial

evidence. (*Save Panoche Valley v. San Benito County* (1999), 217 Cal.App.4th 503, 528; *Banning Ranch Conservatory v. Newport Beach* (2012) 211 Cal.App.4th 1209, 1232.) These cases do not hold that the specific details demanded by Petitioners are required to be provided. Nonetheless, Respondents revised the EIR to include additional information including the fact that the ratio is consistent with USFWS recommendations provided for the BMSP in 2014, and how funding will be provided under MM BIO-8. (AR 2878, 3017, 3057.) Petitioners do not cite to this evidence and show how it is incorrect. That is fatal to their argument.[4]

Petitioners rely on work performed by their consultant Mr. Cashen. He mapped proposed and approved similar projects with populations of the MFTL and concluded all known populations in Chuckwalla Valley would be impacted by renewable energy projects. (AR 2962.) Petitioners argue that these projects threaten the MFTL habitat, so impacts are significant and cumulatively considerable. (CEQA Guidelines 15065(a)(1), (3).)

References to the MFTL metapopulation in the entire Chuckwalla Valley does not demonstrate how the 3:1 ratio stated in the EIR lacks substantial evidence. In addition, Respondents addressed Mr. Cashen's comments from the DEIR concerning the question of availability and value of any mitigation sites[5], and funding, and explained that CEQA does

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[4] A CEQA petitioner is required to "lay out the evidence favorable to the other side and show why it is lacking. Failure to do so is fatal. A reviewing court will not independently review the record to make up for the appellant's failure to carry his burden." (*Bay Area Clean Environment, Inc. v. Santa Clara County* (2016) 2 Cal.App.5th 1197, 1212.)

[5] Construction impacts could be reduced by BMPs-7, 12, 10, 14, 19. (AR 695.) The EIR does not have to identify a specific mitigation site. (*Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App. 4th 260, 279-280 ["Generally, an agency does not need to identify the exact location of offsite mitigation property for an EIR to comply with CEQA]; see also, *California Native Plant Society v. City of Rancho Cordova* (2009) 172 Cal.App.4th 602, 620-

not require the County's success record. (AR 3017, 3057.) While Mr. Cashen may disagree with the proposed ratio, a disagreement among experts is not sufficient to invalidate an EIR. (CEQA Guidelines §15151.)

Based on the foregoing, the Court finds that impacts analysis and mitigation for the MFTL is supported by substantial evidence.

4. Golden and Bald Eagles

a. Habitat Loss

Petitioners argue that the EIR's conclusion of no significant impact after mitigation was not based on substantial evidence because the County provided no mitigation for habitat loss. They are concerned that this Project has cumulative impacts by removing 3,400 acres of habitat and 75,720 acres of foraging habitat where other approved renewable energy projects are constructed in the area. (AR 3081, 3078, 2960.) Petitioners did not demonstrate a lack of substantial evidence. Petitioners assert that the FEIR relied on MM BIO-7's BBCS, and BMP-10 [controls "introduction and proliferation of non-native invasive plant species that commonly accompanies construction projects that could degrade raptor foraging habitat"], which would only "incidentally reduce damage to foraging habitat around the margins" of the Project. (AR 3043-3044, 12493-12494.) Petitioners conclude that there is a lack of substantial evidence to support that impacts would be reduced to less than significant levels. This is not a sufficient showing that the FEIR lacked substantial evidence

621.)

that these proposed mitigation measures and BMPs would reduce impacts to less than significant levels.

Respondents demonstrated that the EIR's conclusion, that MM BIO-7 would reduce significant impacts to less than significant levels (AR 697), is based on substantial evidence (i.e., that the measure requires pre-construction surveys in bird breeding season, location of active nests, and avoidance buffers.) The BBCS also requires additional protective measures based on specific recommendations from USFWS and CDFW (i.e., documentation of conservation measures; consistent, practical and up-to-date direction to staff on how to avoid reduce and monitor bird and bat fatalities; and, that the BBCS would be required for the life of the project.) (AR 697, 3199-3200.) Also, BMP-10 will reduce degradation of the foraging habitat and BMP-12 requires installation of bird flight diverters. (*Id.*) Petitioners failed to demonstrate that the proposed mitigation measure and BMPs would not mitigate habitat loss or degradation of the foraging habitat. Any conflict of opinion involved in determining the effectiveness of the chosen mitigation measure is resolved by the agency. The Court defers to the decision so long as supported by substantial evidence. (*AIR* 107 Cal.App.4th 1383, 1398.)

b. Remedial Measures

Petitioners assert that despite the DEIR's conclusions that potential significant impacts on golden and bald eagles are likely, the DEIR failed "to require any remedial actions (i.e., compensatory mitigation) if an eagle is injured or killed by the Project's transmission lines, security fence, or other infrastructure." (AR 2960.) Petitioners acknowledge that the FEIR addressed the comment indicating that remedial measures were

adopted in the BBCS in sections 6.2, and 6.3. They argue that the document is uncertain, unenforceable, and that MM BIO-7 does not require any remedial action if the Project results in a take of an eagle. (AR, 458-460, 3199-3200, 12495-12496.)

This issue was raised in comments on the DEIR and was responded to in the FEIR. If a take occurred, appropriate mitigation in sections 6.2, 6.3 would be triggered and USFWS consulted for procedures. That is remedial action. (AR 3044.) There is also a reference to compensatory measures in the BBCS (MM BIO-7), which is subject to modification. (AR 1752.) Petitioners did not establish that a specific reference of remedial action is required in the EIR. In addition, the EIR provides an explanation for the uncertainty, and requires consultation with the USFWS if a take occurs. (AR 1752.) There is substantial evidence that remedial action is required. (AR 1752, 3044.)

Based on the foregoing, the Court finds that the mitigation for golden and bald eagles is supported by substantial evidence.

E

Petitioners' Contention that the EIR Fails to Disclose the Project's Potentially Significant Impact on State and Federal Jurisdictional Waters and Improperly Defers a Jurisdictional Wetlands Determination Until After Project Approval

Petitioners argue that a potentially significant impact occurs when a project removes, fills, or interrupts hydrology or adversely affects State or jurisdictional waters of the U.S. (wetlands) as defined by the Clean Water Act (CWA.) (CEQA Guidelines, App. G (IX)(c) [hydrology/drainage], (IV)(c) [federally protected wetlands]). They argue EIR analysis fails

to include a jurisdictional wetlands delineation and fails to disclose that the Project will require a CWA section 404 permit from U.S. Army Corps of Engineers (USACE) and a section 401 permit from the Colorado River Regional Water Quality Control Board (CRRWQCB). The Project site contains jurisdictional surface water. (AR 839-841). Two washes, the Sothern Wash and McCoy Wash, are federal jurisdictional waters because they are tributaries of the Colorado River. (AR 839, 11852.)

Petitioners assert that the EIR acknowledged that such waters may be significantly impacted by the Project due to installation of temporary stream crossings during construction, site grading, blading and vegetation removal for road construction, installation of solar arrays and other Project components. (AR 858.) The EIR identified the relevant washes based on a 'preliminary assessment', topographic maps, aerial photography, and a field reconnaissance survey." (AR 1642, 2848, 2856.) Petitioners argue that EIR admits that the description of jurisdictional waters is incomplete without a wetland delineation, but improperly defers the study as mitigation under MM BIO-9. (AR 412, 2856-2857.)

The potential jurisdictional waters were identified. (AR 703-704, 839-842.) The DEIR explained that a CWA section 404 permit, and a CRRWQCB water quality certification pursuant to CWA section 401, are required. (AR 845.) Respondents assert that commenters misinterpreted the language of the DEIR as to MM BIO-9 to conclude that no delineation would be required. They also acknowledge that the DEIR "suggests a jurisdictional delineation would not be needed." (AR 720, 2856.) The FEIR explained and clarified that a formal jurisdictional delineation and permitting are required. (AR 2856-2857, 3174, 3200, 3622.) This is not improper deferral because the Project is required to obtain

permits and before a CWA section 401 permit may be issued, a formal jurisdictional delineation must be obtained. (*Clover Valley Foundation v. City of Rocklin* (2011) 197 Cal.App.4th 200, 236-237 ["Impermissible deferral of mitigation measures occurs when an EIR puts off analysis or orders a report without either setting standards or demonstrating how the impact can be mitigated in the matter described in the EIR." [Citations.] "A condition requiring compliance with environmental regulations is a common and reasonable mitigating measure. [Citation.]") There is substantial evidence that under MM BIO-9, compliance with permit procedures, which require a jurisdictional delineation, will ensure adverse impacts will be avoided.

Based on the foregoing, the Court finds that the proposed mitigation under MM BIO-9 for jurisdictional waters is supported by substantial evidence.

Petitioners' Request for Judicial Notice

Petitioners request that the Court take judicial notice of two documents: 1) Appendix D to the Northern and Eastern Colorado Desert Management (NECO) Plan, which is part of the NECO Plan already in the Administrative Record at pages 15167-15638; and, 2) California Department of Fish and Wildlife and California Attorney General Xavier Becerra's November 29, 2018 Advisory Affirming California's Protections for Migratory Birds (Advisory).

Reports and studies prepared for a project and relied on in an environmental document are part of the record if they are made available to the public during the public review period or included in the agency's files on the project. (Kostka and Zischke, Practice Under Cal. Envir. Quality Act (CEB 2018) Ch. 23, §23.73, p. 23-85.) Documents cited as

source documents in an EIR, but not included in the agency's files or made available for public review, are not ordinarily included in the record. (*Id.* at p. 23-86.) In determining whether a decision has evidentiary support, the only evidence that is relevant is that evidence that was "before the agency at the time it made its decision." (*Western States Petroleum Assn. v. Sup. Ct.* (1995) 9 Cal.4th 559, 574, fn.4.) Because extra-record evidence, not before the lead agency is inadmissible, the Request for Judicial Notice is DENIED.

R. STAMEN, Judge
L. Howell (vis), Clerk
Pages 35 of 35

ATTACHMENT 2

Letter 10

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Southern Nevada Fish and Wildlife Office
4701 North Torrey Pines Drive
Las Vegas, Nevada 89130

IN REPLY REFER TO:
08ENVS00-2014-TA-0022

February 5, 2018

Dave Sterner
Senior Manager, Siting and Permitting
135 Main Street, 6th Floor
San Francisco, California 94105

Subject: Recommendations related to the proposed Sunshine Valley Solar photovoltaic electric facility in Amargosa Valley, Nye County, Nevada

Dear Mr. Sterner:

This letter transmits the U.S. Fish and Wildlife Service's (Service) latest recommendations regarding impacts of the proposed Sunshine Valley Solar photovoltaic (PV) facility on the Yuma Ridgeway's rail (*Rallus longirostris yumanensis*; formerly Yuma clapper rail), a species listed as endangered under the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*). The proposed project would consist of a 110-megawatt alternating current solar PV electric generating facility occurring on approximately 745 acres of private lands and would include a 0.5 mile long, 138-kilovolt generation-tie line also occurring on private lands, in the Amargosa Valley, Nye County, Nevada.

We had previously provided recommendations to you on this project by letter dated July 11, 2014, in which we recommended that you apply for an incidental take permit, pursuant to section 10(a)(1)(B) of the Act, because of the potential for take of individuals of Yuma Ridgeway's rail. Our letter was based on our knowledge and assumptions at the time; specifically, we were aware of the mortality of two Yuma Ridgeway's rails at PV projects in southern California and of the presence of individuals of this species at Ash Meadows National Wildlife Refuge (Refuge), which is approximately 8 miles southeast of the project site. Since that time, we have continued to collect information regarding the mortality of listed migratory birds at solar facilities and their associated generator tie-in lines; we have also attempted to analyze the effects of specific renewable energy facilities on listed bird species.

The information we have collected to date indicates that individuals of listed migratory birds have indeed died as a result of interactions with solar facilities. However, when we attempted to evaluate the risk of collision at specific renewable energy projects, we determined that the risk to individuals of listed migratory birds, including the Yuma Ridgeway's rail was unquantifiably low and therefore discountable. We will continue to evaluate this risk on a case-by-case basis and to provide site-specific recommendations to Federal agencies regarding consultation

pursuant to section 7(a)(2) of the Act and to non-Federal entities regarding applying for incidental take permits.

Although the Sunshine Valley Solar PV facility would be built near occupied Yuma Ridgeway's rail habitat at Ash Meadows National Wildlife Refuge, we nevertheless consider the risk of mortality of Yuma Ridgeway's rail posed by the project to be unquantifiably low and therefore discountable. Therefore, based on the information that is available to us at this time, we do not recommend that you apply for an incidental take permit for the proposed action.

During our discussions, you indicated that First Solar was interested in making positive contributions to our knowledge of the movements of Yuma Ridgeway's rails and their overall conservation. To this end, we have jointly developed the following conservation actions that First Solar has voluntarily proposed to implement. We appreciate your willingness to implement these actions.

Measure 1. Yuma Ridgeway's Rail Habitat Enhancement and Maintenance (Prescribed burning). This measure is based on the assumption that prescribed burning temporarily reduces density of vegetation thus increasing habitat quality (including breeding habitat) for Yuma Ridgeway's rails. In June, 2017, First Solar and a biologist from WEST Inc. met biologists from the Desert National Wildlife Refuge and Southern Nevada Fish and Wildlife Office to discuss potential habitat improvement measures. As a result, a rotational approach to prescribed burning over a 30-year period was developed. Three habitat units were identified within the Refuge as targets because they are currently occupied by rails or have potential as rail habitat. A different unit would be burned every two years. This would provide a six-year burning cycle for each unit (i.e., each unit would be burned 5 times over a 30-year period). The prescribed burning activities would be funded by First Solar and managed by the Refuge.

Measure 2. Provide Funds for Yuma Ridgeway's Rail Telemetry Research. Dr. Courtney Conway, avian researcher at the University of Idaho, is in the final year of a three-year study on Yuma Ridgway's rail dispersal patterns funded by the Service and the Bureau of Land Management. Study methods involve capturing rails and attaching satellite transmitters, and then using relocation records to discern patterns in the dispersal movements and behavior of the rails. As part of this measure, First Solar proposes to provide a financial contribution in support of Dr. Conway's research. This money will ideally be used to increase the research capacity of the third year of Dr. Conway's rail dispersal study in 2018, logistics and timing considerations permitting. Alternatively, the money will be used to fund a fourth year of the rail dispersal study in 2019. Study sites for 2018 and/or 2019 are to be determined based on funding availability, the particulars of Dr. Conway's pending permit renewal from the Service, and research priorities. Under any scenario, First Solar's contribution will be aimed at supporting the ability of Dr. Conway's study to provide valuable data for management of the Yuma Ridgway's rail.

Our staff is currently working on a large-scale strategy to address the issue of the mortality of listed migratory birds at renewable energy facilities in a way that would provide a reasonable and prudent approach for applicants to obtain incidental take permits or exemptions to the prohibitions against take. I look forward to engaging you in this conversation in the near future.

Again, we appreciate your willingness to engage in these discussions with us and to undertake actions to conserve the Yuma Ridgeway's rail. If you have any questions regarding this matter, please contact me at 702-515-5244.

Sincerely,

Glen W. Knowles

Glen W. Knowles
Field Supervisor

ATTACHMENT 3

Letter 10

Renewable Energy 92 (2016) 405–414

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A preliminary assessment of avian mortality at utility-scale solar energy facilities in the United States

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ABSTRACT

Despite the benefits of reduced toxic and carbon emissions and a perpetual energy resource, there is potential for negative environmental impacts resulting from utility-scale solar energy (USSE) development. Although USSE development may represent an avian mortality source, there is little knowledge regarding the magnitude of these impacts in the context of other avian mortality sources. In this study we present a first assessment of avian mortality at USSE facilities through a synthesis of available avian monitoring and mortality information at existing USSE facilities. Using this information, we contextualize USSE avian mortality relative to other forms of avian mortality at 2 spatial scales: a regional scale (confined to southern California) and a national scale. Systematic avian mortality information was available for three USSE facilities in the southern California region. We estimated annual USSE-related avian mortality to be between 16,200 and 59,400 birds in the southern California region, which was extrapolated to between 37,800 and 138,600 birds for all USSE facilities across the United States that are either installed or under construction. We also discuss issues related to avian–solar interactions that should be addressed in future research and monitoring programs.
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1. Introduction

Renewable energy development has been increasing as an alternative to fossil-fuel based technologies, in large part to reduce toxic air emissions and CO_2-induced effects on climate [1,2]. According to the U.S. Energy Information Association [3], electric generation from renewables in the United States has increased by over 50% since 2004 and renewable energy sources currently provide approximately 14% of the nation's electricity. Solar energy-based technologies represent a rapidly developing renewable energy sector that has seen exponential growth in recent years [4,5]. For example, since 2013 alone, cumulative installations of photovoltaic (PV) solar energy technologies, including residential, commercial, and utility-scale installations, have more than doubled in the United States [6].

Utility-scale solar energy (USSE) projects generate electricity for delivery via the electric transmission grid and sale in the utility market. This differs from distributed solar energy systems which are designed for electric generation and utilization at local scales. According to the Solar Energy Industries Association (SEIA) [7], there currently are approximately 800 USSE projects (≥1 MW [MW]) in the United States that are either in operations or under construction, representing approximately 14 GW (GW) of electric capacity. Based on solar insolation models developed by the National Renewable Energy Laboratory [8], the greatest solar resource potential in the United States occurs in the southwest within the six following states: Colorado, New Mexico, Utah, Arizona, Nevada, and California (Fig. 1). Indeed, most of the installed or planned utility-scale solar facilities in the United States (based on electric capacity and includes projects that are operating, under construction, and under development) are located within these six southwestern states (Fig. 2) [7].

There are two basic types of solar energy technologies employed at USSE installations in the United States [9]: photovoltaic (PV) and concentrating solar power (CSP). Photovoltaic systems use cells to convert sunlight to electric current, whereas CSP systems use reflective surfaces to concentrate sunlight to heat a receiver. That heat is subsequently converted to electricity using a thermoelectric power cycle. CSP systems typically include power tower systems

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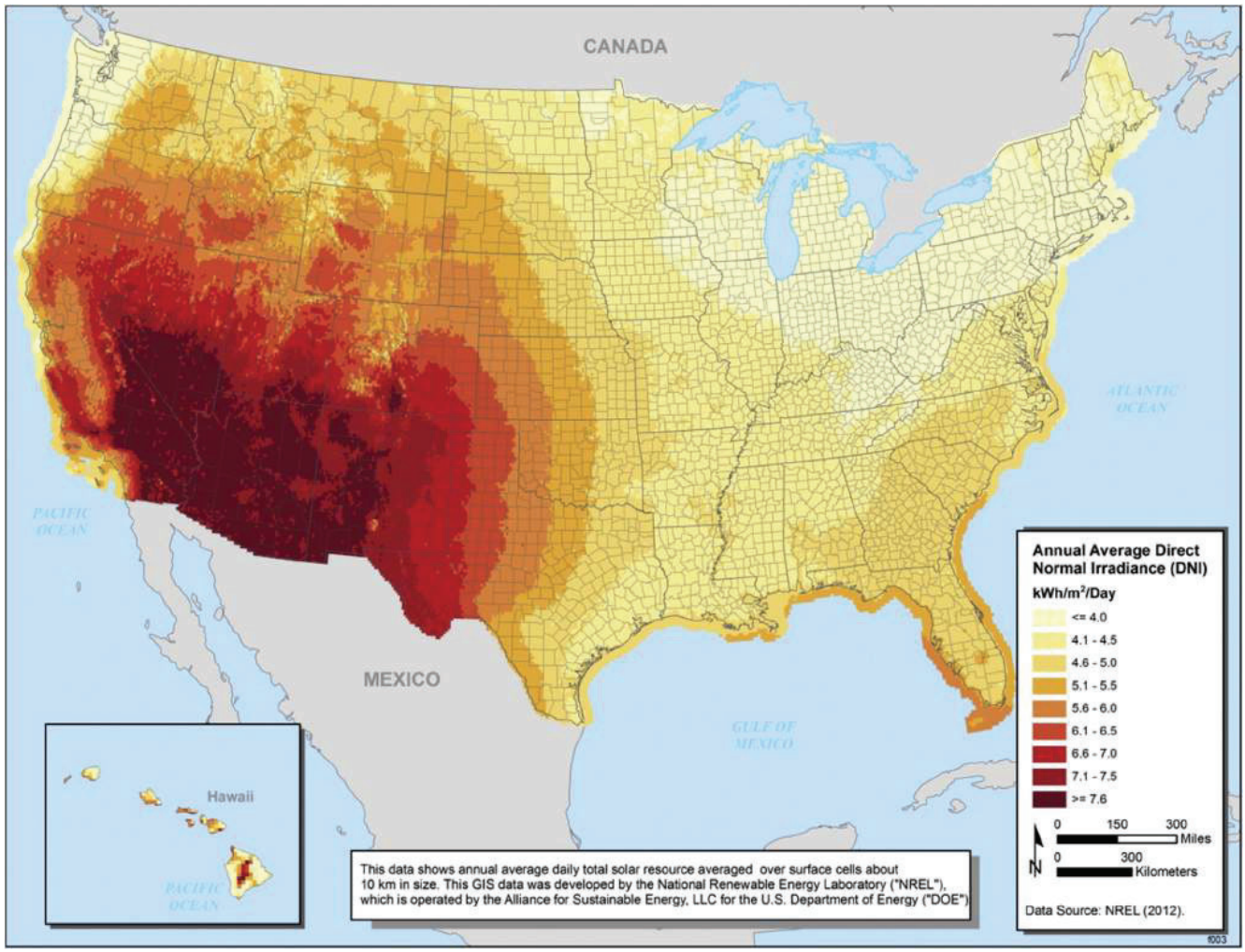

Fig. 1. Solar energy potential in the United States [8].

with heliostats (angled mirrors) and parabolic trough systems (parabolic mirrors). In the United States, most of the electricity produced by utility-scale solar energy projects through 2015 was generated using PV technologies [6].

Despite the benefits of reduced toxic and carbon emissions from a perpetual energy resource, there is potential for negative environmental impacts resulting from utility-scale solar development [9,10]. Utility-scale solar energy facilities in the United States require large spatial footprints (between 1.4 and 6.2 ha of land per MW of electric production) and are projected to require a total of 370,000–1,100,000 ha of land by 2030, mostly in the arid regions of the southwestern states [11]. These large scale developments and land-cover change associated with them may result in a variety of environmental impacts. Among the potential environmental impacts are ecological impacts to wildlife species and their habitats. Recent studies have suggested that utility-scale solar developments may represent a source of mortality for wildlife such as birds [12]. There are currently 2 known types of direct solar energy-related bird mortality [9,12,13]:

1. Collision-related mortality – mortality resulting from the direct contact of the bird with a solar project structure(s). This type of mortality has been documented at solar projects of all technology types.
2. Solar flux-related mortality – mortality resulting from the burning/singeing effects of exposure to concentrated sunlight. Mortality may result in several ways: (a) direct mortality; (b) singeing of flight feathers that cause loss of flight ability, leading to impact with other objects; or (c) impairment of flight capability to reduce the ability to forage or avoid predators, resulting in starvation or predation of the individual [12]. Solar flux-related mortality has been observed only at facilities employing power tower technologies.

The nature and magnitude of impacts to bird populations and communities is generally related to the following three primary project-specific factors [10,14]: location, size, and technology. Bird abundance and activity at local and regional scales varies by the distribution of habitat and other landscape features (e.g., elevation) in the environment [15–19]. Therefore, the location of a solar energy project relative to bird habitats, such as migration flyways, wetlands, and riparian vegetation, could influence avian mortality risk. The footprint size of the solar project is a direct measure of the amount of surface disturbance and human activity. Projects with larger footprints, therefore, may result in more avian fatalities than projects with smaller footprints. Lastly, different solar technologies and project designs may influence avian mortality risk. For example, project designs that utilize constructed cooling ponds, or

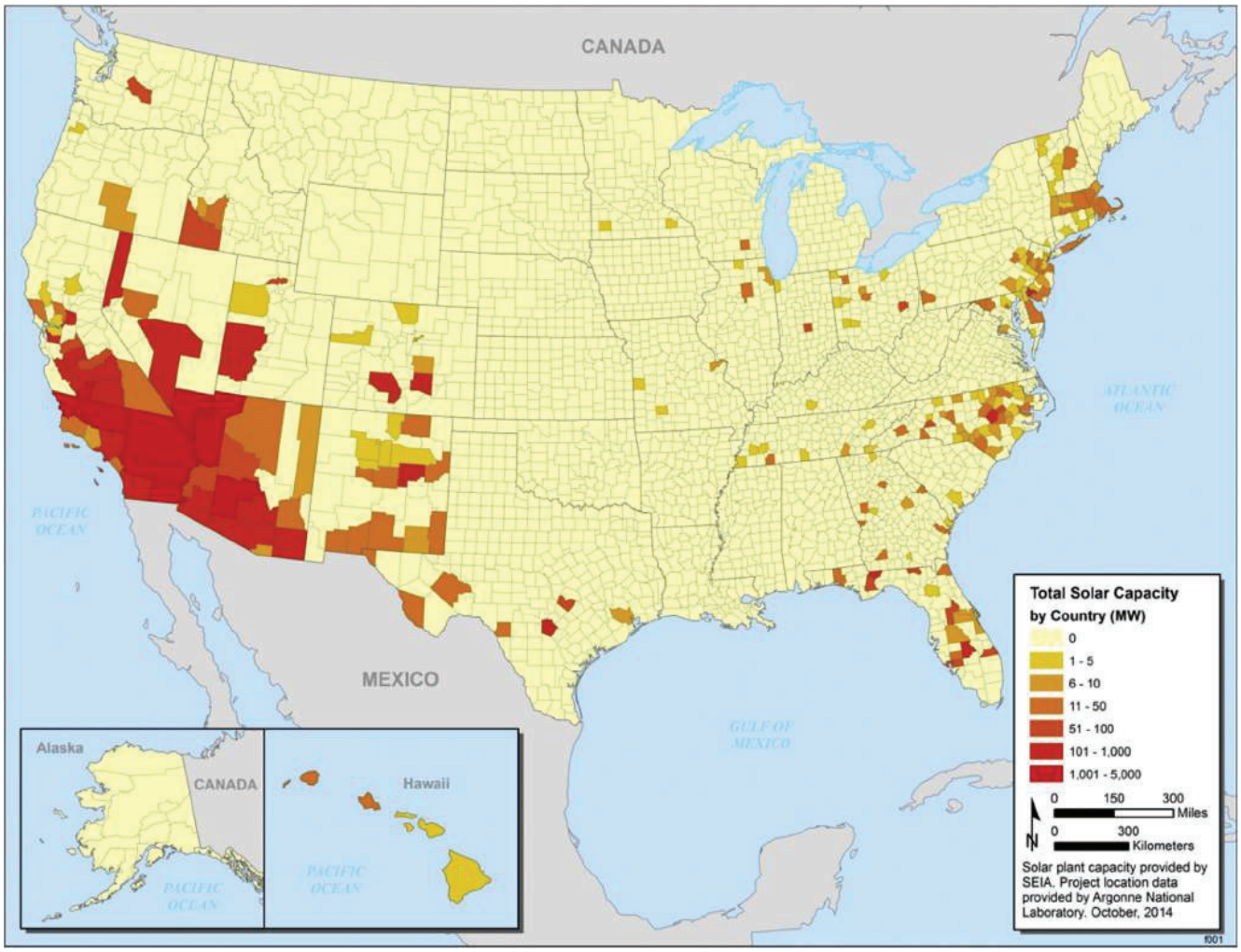

Fig. 2. Total solar energy production capacity (MW) by County [7].

solar collectors that reflect polarized sunlight in such a way so as to be perceived as waterbodies, may attract birds and their prey (e.g., insects), thereby increasing the risk of bird collisions with project structures [10,12,14,20]. To date, however, no empirical research has been conducted to evaluate the attraction of utility-scale solar facilities to migrating or foraging birds. Although collision-related impacts may occur at all types of solar energy technologies, the effects of solar flux on birds to date have been observed only at facilities employing power tower technologies [9,12,13].

One approach to understanding the impacts of utility-scale solar energy development on birds is through understanding mortality risk from solar energy development in the context of other industrial developments. Techniques to estimate avian mortality based on systematic monitoring methods have been previously employed for other sources of avian mortality (e.g., [21–24]). Despite the potential for avian mortality from solar energy development, however, there is currently little empirical data on avian mortality at solar facilities (but see McCrary et al. [13]). However, as more data resulting from avian monitoring at solar energy facilities become available, a systematic assessment of available data can provide a better understanding of avian fatality risk at utility-scale solar energy developments.

The objectives of this study were to 1) synthesize currently-available information regarding avian mortality at utility-scale solar facilities; 2) contextualize avian mortality at utility-scale solar facilities relative to other human sources of avian mortality; and 3) discuss issues related to avian–solar interactions that need to be addressed in future research and monitoring designs.

2. Methods

2.1. Study area

Despite efforts to collect avian–solar data at USSE facilities throughout the United States (see RESULTS), our comprehensive search for available avian fatality information at USSE facilities revealed that information was primarily only available within the region of southern California. For this reason, we defined our study area as the area that encompassed approximately 148,000 km^2 within the 10 southern-most counties of California (Fig. 3). This region was chosen for the amount of current and planned utility-scale solar energy development and availability of project-specific information on avian fatalities. Nearly 50% of utility-scale solar developments either under construction or in operation in the

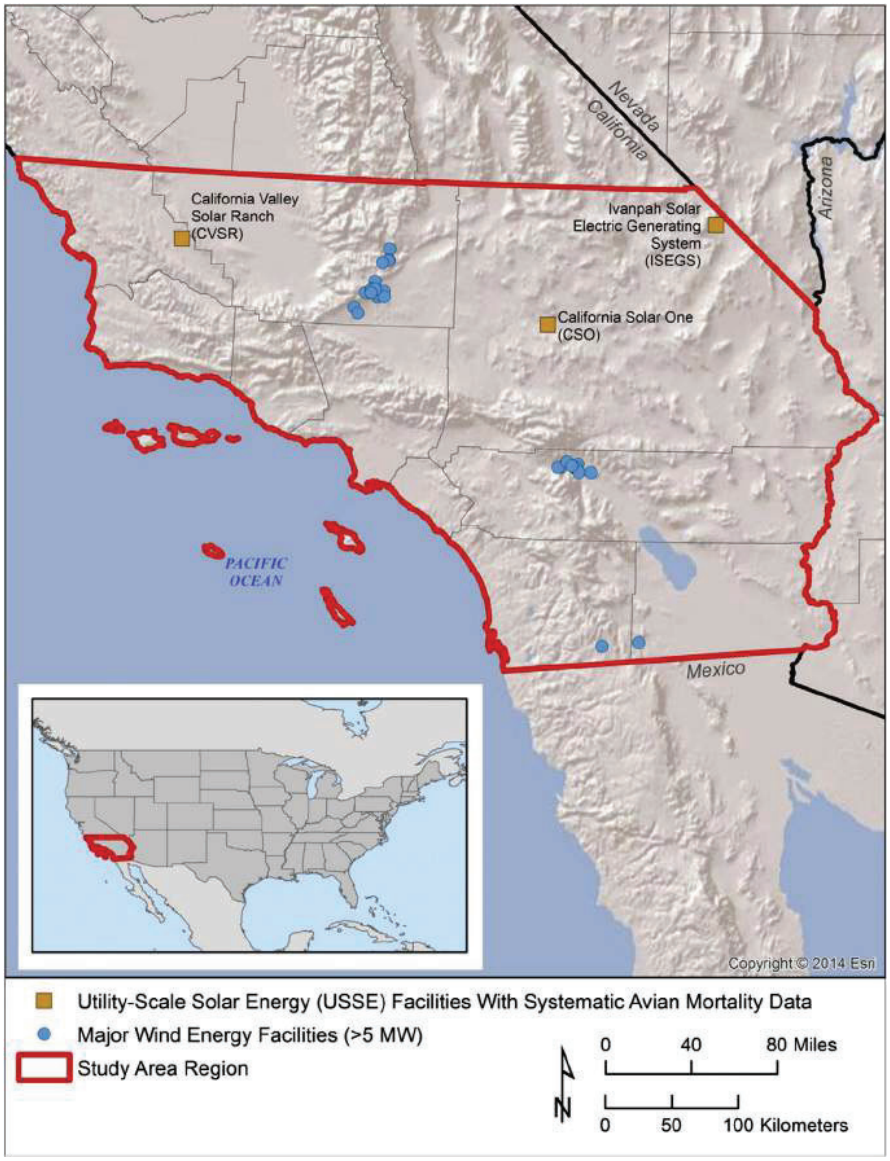

Fig. 3. Utility-scale solar facilities with available avian fatality data and major wind projects within the Southern California study area.

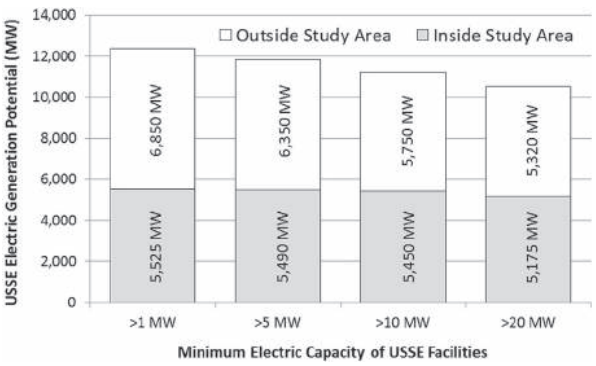

Fig. 4. Utility-Scale Solar Energy (USSE) electric generation potential in the Southern California Study Area and within the United States by minimum name plate electric capacity category.

United States are located in this region (Figs. 2 and 4) [7]. In addition, all currently-available information on avian mortality at U.S. utility-scale solar energy facilities are associated with only those projects occurring in this region (see Results).

2.2. Literature review

We conducted a review of available information on avian monitoring and mortality at utility-scale solar energy facilities by obtaining project-specific information from publicly-available online sources, such as the California Energy Commission (CEC; http://www.energy.ca.gov/). We conducted a comprehensive online search of the open literature on Web of Science (https://webofknowledge.com/) and Google Scholar (http://scholar.google.com/) using search terms "solar energy" and a combination of "bird", "deaths", "fatality", "mortality", "monitoring", "avian mortality", and "avian monitoring". We also contacted and requested avian mortality information from solar energy developers and

industry representatives operating in the United States and internationally.

Only studies at solar facilities in which avian fatalities were recorded from systematic surveys were considered in this study. Systematic data include fatalities observed during the course of survey efforts designed to characterize avian mortality at the project. Other fatality observations, such as incidental fatality data, were not part of focused systematic searches for carcasses and therefore could not be used to estimate project-specific mortality rates.

2.3. Mortality rate estimation

A standard metric commonly used for assessing avian mortality at energy production facilities is the mortality rate estimated as the total number of bird deaths per unit of energy production (e.g., bird deaths per MW per year) [24,25]. Our primary focus was to standardize avian mortality rates to the name plate capacity of utility energy developments to enable more direct comparison to other energy-related mortality sources such as wind energy. However, we also calculated mortality rates by the amount of electricity produced at each facility assuming a 30% capacity factor (the approximate capacity factor observed during the first year of operations at the Ivanpah Solar Electric Generating System). Using these metrics, a regional avian mortality rate was estimated for utility-scale solar projects in the study area (Fig. 3).

It is important that mortality estimates be adjusted to account for biases in scavenging and ability of searchers to detect carcasses [28–30]. Searcher efficiency is a metric to quantify the ability of searchers to detect carcasses. It typically refers to the percentage of carcasses observed by searchers relative to a known number of carcasses. Factors such as bird size and the presence of obstructions such as vegetation and structures may influence searcher efficiency [28,30]. The carcass persistence rate is a metric to quantify the amount of time (usually days) that a carcass is available to be observed before it is scavenged by predators. Factors such as bird size and local predator densities may influence carcass persistence estimates [28–30]. We ensured that all studies used in avian mortality rate estimates included mathematical approaches to account for predation and searcher efficiency biases (e.g., [30,31]. For those studies that did not consider predation and searcher efficiency biases in mortality rate estimation, we applied adjustments for those biases based on average predation and searcher efficiency rates observed at nearby solar and wind energy projects in the region (see supplemental information).

Avian mortality at some USSE facilities was recorded as separate mortality rates for fatalities known to be attributable to the facility (e.g., observable collision trauma or singed feathers) and unknown fatalities in which carcasses found on the project site showed no observable project-associated cause of death. The total avian mortality rate was calculated as a range representing the minimum (based on carcasses with a known cause of death attributable to the facility) and the maximum (based on the sum of birds with known and unknown causes of death). It is important to identify and distinguish between these two types of mortality estimates because birds with an unknown cause of death may have died due to natural causes (i.e., predation or disease) and may not be attributed to the solar facility. Following this, we used information provided by SEIA [7] to determine the total name plate electric capacity of all current and planned USSE facilities in the study region. We multiplied total USSE electric capacity with estimated USSE mortality rates to calculate total annual USSE-related avian mortality. We also used the regional USSE mortality rate to estimate USSE-related avian mortality across all USSE facilities that were in operations or under construction in the United States [7]. We used the regional USSE mortality rate to extrapolate USSE-related mortalities at a national scale because USSE developments in the southern California study region represented nearly 50% of all USSE developments in the United States (Fig. 4).

2.4. Contextualizing solar avian mortality

To our knowledge, this study is the first systematic synthesis of avian mortality at USSE facilities. There are no previous efforts to systematically contextualize solar–avian mortalities to other avian mortality sources. There have been several efforts to assess avian mortality associated with other renewable energy developments such as wind energy [23,24] and non-energy sources such as road mortality [32], collisions with buildings and other structures such as communication towers [21,32–34], and cat predation [35]. We reviewed these avian monitoring and mortality studies to estimate mortality rates from energy and non-energy sources that could be comparable to USSE-related mortalities. The mortality sources chosen for comparison include (1) wind energy development, (2) fossil fuel energy development, (3) collisions with communication towers, (4) road mortality, and (5) building collisions. We used mortality rate estimates from these sources to contextualize avian mortality at two geographic scales: within the southern California study region and across the United States.

2.4.1. Wind energy development

Recent assessments of avian mortality at wind energy facilities across the United States have been reported by Loss et al. [36] and Smallwood et al. [23]. To assess avian mortality associated with wind energy developments in the southern California study region, the locations of wind energy facilities and associated electric generation capacity within the study region were obtained using turbine locations mapped by the U.S. Geological Survey (USGS) through July 2013 [37]. We searched available literature for systematic avian monitoring and mortality studies that provided statistically-based adjusted mortality estimates at these wind energy facilities in the region. Using these studies, we calculated a capacity-weighted average mortality rate (number of birds/MW/year) across the wind energy projects in the region and determined the total electric energy production of the mapped wind energy facilities in the region to estimate total annual avian mortality associated with wind energy developments in the southern California region. We used estimates provided by Loss et al. [36] and Smallwood [23] to estimate avian mortalities at wind facilities across the United States.

2.4.2. Fossil fuel energy development

Sovacool [25] estimated avian mortality from fossil fuel power plants across the United States as a result of collision with infrastructure, electrocutions, pollution and contamination, and climate change. In addition, Sovacool [25] estimated climate change-induced avian mortality (in terms of habitat loss and changes in migration) predicted to be the result of fossil fuel power plant operations. We obtained data on the number and electric capacity of fossil fuel power plants in the southern California region from the California Energy Commission Almanac of Power Plants (http://energyalmanac.ca.gov/powerplants/). We applied the fossil fuel mortality estimate from Sovacool [25] to calculate a regional annual mortality estimate resulting from fossil fuel power plants. We also used the mortalities calculated by Sovacool [25] as an estimate of avian mortalities associated with fossil fuel power plants across the United States.

2.4.3. Collisions with communication towers

Longcore et al. [33] conducted a systematic review of avian

mortality at communication towers in an effort to estimate avian mortality resulting from collisions with communication towers and associated structures (e.g., guy wires) across North America. Mortality estimates were calculated within Bird Conservation Regions (BCR) and aggregated to represent an overall mortality estimate across North America. Longcore et al. [33] estimated over 6 million bird mortalities resulting from collisions with communication towers across North America. To estimate annual avian mortality associated with collisions with communication towers in the study region, we applied the mortality estimates within the BCRs reported by Longcore et al. [33] proportional to the distribution of BCRs in this study's region.

2.4.4. Road mortality

The avian impacts of roadways, including direct collision mortality and indirect effects such as habitat fragmentation, have been a concern among scientists for many years [32,38,39]. Knowledge about avian fatality estimates associated with roadways in the United States comes from the works of Banks [40] and Erickson et al. [32]. In a synthesis of existing fatality information, Banks [40] found that avian mortality along roadways in the United States ranged from 2.7 to 96.2 bird deaths per mile of roadway (4.3–153.9 bird deaths per km). Based on an analysis of all roadways in the United States, Erickson et al. [32] estimated total avian mortality associated with vehicle traffic along roadways in the United States between 89 million and 340 million birds per year. In a more recent study in Canada, Bishop and Brogan [41], found that, after accounting for scavenging, total estimated road mortality was 21.6 bird deaths per mile of roadway (34.6 bird deaths per km). We obtained roadway GIS data from the U.S. Census Bureau [42] to estimate the amount of paved roadways in the study region. We used this estimate to calculate avian road mortality within the range of mortality rates reported by Banks [40] and Bishop and Brogan [41].

2.4.5. Building collisions

Loss et al. [34] provided a systematic review and estimate of avian mortality associated with building collisions in the United States. Reviewing published literature and unpublished data, Loss et al. [34] estimated avian mortality at buildings of three different classes: residential structures, low-rise buildings (1–3 stories high), and high-rise buildings (≥4 stories tall). Estimated mortality in each building class was calculated by multiplying data-derived mortality probabilities by the estimated number of buildings in the United States. Based on this approach, Loss et al. [34] calculated annual bird mortality at building structures across the United States to be between 365 million and 988 million birds. For purposes of establishing context in this study, avian mortality at buildings was only calculated for residences in the study region because information on residential structures were readily available from the U.S. Census Bureau housing unit statistics [43] and information provided by individual county assessor's offices. The calculation of avian mortalities resulting from collisions with residential structures, therefore, represents a minimum building collision mortality estimate for the region and is used solely for contextualization purposes. Loss et al. [34] calculated the 95% CI of annual bird mortality at residences to be between 1.3 and 3.1 birds per residence across the United States (median: 2.1 birds). We obtained data on the number of residential structures within the southern California region from the U.S. Census Bureau American Housing Survey [43] and individual county assessor's offices and applied the building collision-related mortality estimates provided by Loss et al. [34] to calculate a regional annual mortality estimate resulting from bird collisions with residential structures.

3. Results

3.1. Avian mortality at USSE facilities

A summary of all USSE facilities in the United States with available avian monitoring and mortality information is provided in the Supplemental Information. We identified 3 USSE facilities in the United States at which avian fatality data have been systematically collected and suitable for mortality rate estimation (Table 1). These three USSE facilities occur in the southern California study region: California Solar One (CSO), California Valley Solar Ranch (CVSR), and Ivanpah Solar Electric Generating System (ISEGS) (Fig. 3). The CSO facility was a CSP power tower project with a name plate electrical capacity of 10 MW that was decommissioned in 1987. Systematic surveys on CSO's 7.3 ha (18 acre) project area were conducted over the course of one year between 1982 and 1983 by McCrary et al. [13]. These survey results were used to calculate a site-wide avian mortality estimate for the facility (see Supplemental Information for more details on avian mortality estimation). The CVSR facility is an operational PV project with a name plate electrical capacity of 250 MW. Annual systematic surveys on CVSR's 1902 ha (4700 acre) project area were used to calculate site-wide avian mortality estimates [44]. The ISEGS facility is an operational CSP power tower project with a name plate electrical capacity of 377 MW. Annual systematic surveys on ISEG's 1457 ha (3600 acre) project area were used to calculate site-wide avian mortality estimates [45].

Avian mortality estimates at each of the three USSE facilities were adjusted to account for scavenger and searcher efficiency biases. These adjustments were included in the mortality estimates determined for CVSR and ISEGS [44,45]. However, McCrary et al. [13] did not present an adjusted mortality rate for CSO. To calculate an adjusted mortality rate for CSO, we used average estimates of carcass persistence and searcher efficiency from nearby studies using the formula developed by Shoenfeld [31]. In addition, separate mortality rates were calculated at CVSR and ISEGS for those carcasses with a cause of death that could be attributed to known site-related factors (e.g., collision trauma) as well as those carcasses found on site that did not show observable site-related causes of death [44,45]. These separate estimates were used to compute the total potential site-wide mortality rate (which is the sum of the known and unknown mortality rates). At CSO, McCrary et al. [13] attributed 100% of the fatalities to a project-related cause of death. At the CSO facility; therefore, the mortality rate for carcasses with unknown causes of death was assumed to be zero (Table 1). See the Supplemental Information for more information on data collection and mortality rate estimation at each of these facilities.

There was considerable variability in mortality rates for carcasses with known project-related causes of death at USSE facilities (ranging between 0.50 and 10.24 birds/MW/year) (0.23 and 3.90 birds/GWh/year) (Table 1). However, incorporating mortality of carcasses with no observable project-related cause of death resulted in less variable total potential mortality rates across USSE facilities (ranging between 9.30 and 10.70 birds/MW/year) (3.55 and 4.08 birds/GWh/year). Calculating the capacity-weighted average mortality rate of known USSE-related mortalities and total potential mortality rate results in a range of 2.7–9.9 birds/MW/year (1.06–3.78 birds/GWh/year) (Table 1). This range represents the uncertainty in including fatalities with no observable USSE-related cause of death to the total mortality estimate. Presumably, some carcasses found on site that showed no signs of USSE-attributable cause of death would actually be associated with other causes (e.g., natural background mortality, predation, disease, etc.). Based on SEIA [7], there is a total name plate electric capacity of 6 GW for current and planned USSE facilities in the study region. Applying

Table 1
Avian mortality estimates from systematic surveys at utility-scale solar energy (USSE) facilities.

Project name	Technology type and MW (in Parentheses)[a]	Mortality rate for known USSE-related fatalities[b]	Mortality rate for unknown USSE-related fatalities[c]	Total mortality rate for known and unknown USSE-related fatalities[d]	Source of mortality estimate[e]
California Solar One	CSP – Power tower (10)	10.24 (3.90)	0 (0)	10.24 (3.90)	McCrary et al. [13]; See also Supplemental Information
California Valley Solar Ranch	PV (250)	0.50 (0.23)	10.20 (3.89)	10.70 (4.08)	H.T. Harvey & Associates [44]
Ivanpah	CSP – Power tower (377)	3.96 (1.53)	5.34 (2.05)	9.30 (3.55)	H.T. Harvey & Associates [45]
Capacity-weighted average mortality rate (birds/MW/year)		**2.7 (1.06)**	**7.3 (2.79)**	**9.9 (3.78)**	

[a] CSP = Concentrating Solar Power; PV = Photovoltaic.
[b] Mortality rate for fatalities known to be attributable to the facility (e.g., observable collision trauma or singed feathers). Mortality rate represents the annual number of estimated bird deaths per megawatt of name plate electric capacity. Values in parentheses represent the annual mortality rate estimated by the amount of electricity produced in gigawatt hours (GWh), assuming a 30% capacity factor.
[c] Mortality rate for carcasses found on the project site of unknown cause (e.g., show no observable USSE-associated cause of death). Mortality rate represents the annual number of estimated bird deaths per megawatt of name plate electric capacity. Values in parentheses represent the annual mortality rate estimated by the amount of electricity produced in gigawatt hours (GWh), assuming a 30% capacity factor.
[d] Total mortality rate includes the mortality rate calculated for carcasses found at USSE facilities with known and unknown causes of death (i.e., sum of known and unknown mortality rates). Mortality rate represents the annual number of estimated bird deaths per megawatt of name plate electric capacity. Values in parentheses represent the annual mortality rate estimated by the amount of electricity produced in gigawatt hours (GWh), assuming a 30% capacity factor.
[e] Refer to Supplemental Information for summary of data collection and mortality estimation at each solar energy facility.

the range of USSE capacity-weighted average mortality rates to the total USSE electric generation potential for the region, we estimate between 16,200 and 59,400 avian fatalities per year from USSE facilities within the southern California study region. Across all USSE facilities in operation or under construction in the United States (approximately 14 GW name plate electric capacity), between 37,800 and 138,600 bird deaths are estimated each year associated with USSE developments (Table 2).

3.2. Contextualizing avian mortality to other sources

Based on turbine locations mapped by the USGS through July 2013 [37], we calculated 4402 MW of total electric energy production of wind energy facilities in the study region. Of the wind energy facilities known to occur in the region, avian mortality data were available for 5 facilities (Table 3). These projects contain a wide range of avian mortality estimates (0.55–38.62 mortalities/MW), most likely due to changes in turbine technology over time. Taking a capacity-weighted average mortality rate across projects in the region results in an estimate of 6.71 bird deaths/MW/year. In addition, based on Smallwood's [23] national mortality estimate of 573,093 birds across a total installed wind energy capacity of 51,630 MW in the United States (as of 2012), we estimated a national avian mortality rate of 11.10 birds/MW. Applying this range of annual wind-related mortality rates (6.71–11.10 birds/MW) to the total electric generation potential for wind energy facilities in the study region results in an estimate of 29,537–48,862 bird mortalities per year among wind energy facilities in the region (Table 2).

Sovacool [25] estimated approximately 14.5 million birds die annually across the United States as a result of fossil fuel power plant operations, at a rate of approximately 74.2 birds/MW/year of nameplate electrical generation. Based on information obtained from the California Energy Commission, the total electric capacity rating of fossil fuel power plants in the study region was approximately 48,000 MW. Combining this electricity production capacity with the fossil fuel mortality estimate from Sovacool [25] (74.2 birds/MW/year) results in a regional mortality estimate of 3,561,600 birds associated with fossil fuel power plants (Table 2).

The following BCRs occur in the study region [33]: Sonoran and Mojave Deserts (57%), Coastal California (42%), and Sierra Nevada (1%). Based on avian mortality estimates from Longcore et al. [33] at communication towers in the United States and adjusting for the percentage of BCRs occurring in the region, we estimated avian mortality resulting from collision with communication towers in the study region to be 70,552 birds per year (Table 2).

Based on roadway GIS data obtained from the U.S. Census Bureau [42], there are approximately 167,700 miles of paved roadways in the study region. Banks [40] and Bishop and Brogan [41] estimated avian road mortality to range from 2.7 to 96.2 bird deaths/mile. Multiplying that range by the number of paved miles in the

Table 2
Estimated annual avian mortality from various sources in the Southern California Region and United States.

Mortality source	Southern California region	United States
Utility-scale solar energy (USSE) developments	16,200–59,400	37,800–138,600[a]
Wind energy developments	29,537–48,862	140,000–573,000[b]
Fossil fuel power plants	3,561,600	14.5 million[c]
Communication towers	70,552	4.5–6.8 million[d]
Roadway vehicles	>453,000[e]	89–340 million[f]
Buildings and windows	>7,800,000[g]	365–988 million[h]

[a] Based on approximately 14 GW total name plate capacity of utility-scale solar facilities in operations or under construction across the United States [7].
[b] Sources: Loss et al. [36], Smallwood [23], Erickson et al. [24].
[c] Source: Sovacool [25].
[d] Sources: Erickson et al. (2005), Longcore et al. [33].
[e] Represents a minimum estimate using only estimated mortality for paved roadways in the southern California study region.
[f] Source: Loss et al. [49].
[g] Represents a minimum estimate using only estimated mortality for residential structures in the southern California study region.
[h] Source: Loss et al. [34].

Table 3
Avian mortality estimates at wind energy facilities within the Southern California study Region[a].

Project name	Location	Electric generation capacity (MW)	Estimated mortality rate (per MW per year)	Source of mortality estimate
Alite Wind Energy Facility	Kern County, CA	24	0.55	Chatfield et al. [50]
Dillon Wind Energy Facility	Riverside, CA	45	4.71	Chatfield et al. [51]
Tehachapi Wind Resource Area (West Ridge)	Kern County, CA	11.88	38.62	Smallwood [23]
Tehachapi Wind Resource Area (Middle Ridge)	Kern County, CA	19.56	5.67	Smallwood [23]
Tehachapi Wind Resource Area (East Slope)	Kern County, CA	30.24	2.72	Smallwood [23]
Capacity-weighted average mortality rate within the study region			**6.71**	
Estimated average mortality rate for wind energy projects in the United States [23]			**11.10**[b]	

[a] Mortality estimates are based on studies that calculated avian mortality for all birds (e.g., passerines and raptors).
[b] National estimate calculated by Smallwood [23] based on estimated total mortality of 573,093 birds at installed wind energy capacity of 51,630 MW.

region results in 452,790–16,132,740 bird deaths/year due to road mortality in the study region (Table 2).

Based on data provided by the U.S. Census Bureau American Housing Survey [43] and information provided by each of the county assessor's offices, there are approximately 6,000,000 residential structures in the southern California study region. Applying the residential 95% confidence interval (CI) of the avian mortality estimate calculated by Loss et al. [34] results in an estimated 95% CI of 7,800,000 to 18,200,000 bird fatalities per year in the study region resulting from collisions with residential structures. The lower 95% CI mortality estimate of 10,500,000 birds represents a lower-bound estimate intended only for comparison purposes in this study (Table 2). Additional avian fatalities associated with collision with low-rise and high-rise buildings that were not evaluated in this study would contribute to total avian mortality associated with building collisions in the study area.

4. Discussion

To our knowledge, this is the first systematic assessment and contextualization of avian mortality at USSE facilities in the United States. Like all industrial developments, USSE developments have the potential to impact birds and bird communities in a number of ways, including direct fatality as a result of collision with USSE infrastructure or solar flux-related injuries. The studies reviewed in this article revealed that avian fatalities occur at USSE facilities employing both CSP and PV technologies. Systematic data collection and science-based methodologies to estimate adjusted mortalities to account for bias factors (e.g., predation, searcher efficiency, etc.) are important to understand avian impacts of USSE developments in the context of other human activities. The studies at the three USSE facilities from which systematically-derived avian mortality estimates could be calculated were all located in a region of southern California currently experiencing an accelerated rate of USSE development. According to SEIA [7], this region accounts for nearly 80% of all USSE developments in the state of California and nearly 50% of all USSE developments in the United States (Fig. 3).

Our evaluation of existing avian mortality information at USSE facilities provided a multi-scalar contextualization of USSE-related avian mortality in relation to other human activities at a regional and national scale. At both spatial scales, we found that avian mortalities at USSE facilities were considerably lower than most other human activities (Table 2). Within the southern California study region, avian mortalities at USSE facilities were within the range of mortalities estimated for utility-scale wind energy facilities. Estimated across the United States, however, avian mortality was greater at wind energy facilities, presumably due to the greater amount of wind energy development in other parts of the country. Total electric capacity of installed wind energy facilities in the United States was nearly 69 GW by the end of 2014 (>48,000 turbines; [46]), as opposed to total electric capacity of installed USSE facilities of approximately 14 GW by the end of 2015 [7].

Although USSE-related avian mortality was estimated to be orders of magnitude less than estimated mortality from other human activities across the United States (except wind energy development; Table 2), the number of avian fatalities at solar facilities may increase in future years as more solar facilities are constructed. The amount of planned future USSE development in the United States is nearly 4 times the current installed electric capacity [7]. Based on the current USSE avian mortality rates examined in this study, full build-out of the nearly 48 GW of potential future USSE developments may account for as many as 480,000 bird deaths annually in the United States. However, avian activity and abundance varies regionally [26,27,47] and may result in regional variation in avian mortality risk to human activities [25,27]. Because of this variation, additional systematic monitoring of avian fatality from various geographic regions where USSE projects are being developed would be needed to better understand overall avian mortality at USSE facilities across the United States.

Our preliminary assessment identified several opportunities to improve consistency in avian monitoring and data collection efforts at existing USSE facilities. For example, not all USSE facilities in the United States operate with an existing avian monitoring and reporting protocol, nor is there consistency in the survey design and reporting among the facilities that do implement such protocols. Only three USSE facilities were reported to have systematic avian fatality information that could be used to estimate project-specific avian mortality, and all of these facilities were located in southern California. Even among these facilities, there were differences in survey design and analytical approaches. For example, methods to estimate mortality based on carcasses with observable USSE-related cause of death separately from all other carcasses with unknown cause of death were developed at two of the three USSE facilities [44,45]. Moving forward, several data needs and recommendations can be made to improve understanding of avian fatality issues at USSE facilities:

1 There is a basic need to better understand the causal factors that contribute to fatalities, such as siting considerations, the potential for avian attraction to USSE facilities (e.g., the “lake effect” hypothesis), and project design (e.g., whether evaporative cooling ponds are used).
2 There is a need for more standardized, consistent, and science-based avian monitoring protocols to improve comparability of

the data being collected. Standardized monitoring methodologies will improve the scientific certainty of conclusions about avian mortality.

3 As efforts get under way to improve the quality of avian mortality data collected from USSE facilities, researchers should focus on (a) uncertainties related to avian risks; (b) population-level impacts to migratory birds; (c) development of more effective inventory and monitoring techniques; and (d) developing appropriate and cost-effective mitigation measures and best management practices to reduce mortality risk.

While our study provides a preliminary assessment of avian mortality at USSE facilities, it could serve as a reference for future study as more avian monitoring is conducted at USSE facilities. There still remains uncertainty in the population-level impacts of USSE avian mortality. Despite this uncertainty, available information suggests that USSE-related avian mortality is considerably lower than mortality from other human activities. However, USSE facilities may still contribute to the cumulative effects of all avian mortality risk factors (including all other energy developments, vehicle and building collisions, etc.). Additional study is needed to understand the combined influence of all avian mortality risk factors, including USSE-related mortality, on avian populations.

Over time, it is possible for mortality rates to change, or even decrease, as the USSE industry works to address avian–solar issues through more environmentally-conscious siting decisions and the implementation of more effective minimization and mitigation measures. In fact, cost effective mitigation measures have already been identified to reduce mortality risk. For example, Walston et al. [48] reported that measures to alter the standby positioning of heliostats at USSE facilities employing power tower technologies could significantly reduce the amount of heat flux around the tower receiver and thus reduce flux-related mortality risk at CSP facilities. Additional studies to identify optimal project siting locations that avoid major avian migratory routes, stopover sites, and important habitats will also work to reduce regional mortality risk. These activities hold promise for the future of solar energy industry to become a low cost and low conflict source of electricity.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.renene.2016.02.041.

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COLORADO RIVER INDIAN TRIBES

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RE: Comments of the Colorado River Indian Tribes on the Draft Environmental Impact Statement/ Environmental Impact Report and Draft Land Use Plan Amendment for the Crimson Solar Project

Dear Ms. Liberatore,

On behalf of the Colorado River Indian Tribes (CRIT or the Tribes), I write to provide comments on the Draft Environmental Impact Statement/Environmental Impact Report/Land Use Plan Amendment (DEIS) for the Crimson Solar Project (Project). After carefully reviewing the DEIS, the Tribes have concluded that it fails in many respects to meet the requirements of the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), the California Environmental Quality Act (CEQA), and other federal, state, and local laws.

As a preliminary matter, the Colorado River Indian Tribes are a federally recognized Indian tribe comprised of over 4,440 members belonging to the Mohave, Chemehuevi, Hopi and Navajo Tribes. The almost 300,000-acre Colorado River Indian Reservation sits astride the Colorado River between Blythe, California and Parker, Arizona. The ancestral homelands of the Tribes' members, however, extend far beyond the Reservation boundaries. Significant portions of public and private lands in California, Arizona, and Nevada were occupied by the ancestors of the Tribes' Mohave and Chemehuevi members since time immemorial. These landscapes remain imbued with substantial cultural, spiritual, and religious significance for the Tribes' current members and future generations. For this reason, the Tribes urge BLM and the County to deny the proposed Project, which has the potential to continue transforming a significant cultural landscape to an industrial one. In the event the Project does move forward, however, the agencies must take steps to revise the DEIS to adequately consider and mitigate for impacts to cultural and other resources.

11-1

The DEIS Is Inadequate under NEPA and CEQA.

The purpose of NEPA is to inform the public and agency decisionmakers of a project's potential environmental impact before those decisionmakers act. By requiring an EIS to provide a complete picture in advance, the drafters of NEPA expected that decisionmakers would make better decisions. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989) (NEPA "ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts"). BLM has an obligation pursuant to NEPA to conduct its analysis "objectively and in good faith, not as an exercise in form over substance, [ ] not as a subterfuge designed to rationalize a decision already made . . . [and] not just to file detailed impact studies which will fill governmental archives." *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000); *see also Earth Island Institute v. U.S. Forest Service*, 351 F.3d 1291, 1300 (9th Cir. 2003) (NEPA requires that federal agencies "consider every significant aspect of the environmental impact of a proposed action . . . [and] inform the public that [they have] indeed considered environmental concerns in [their] decision-making process[es].") (citations omitted).

Likewise, the EIR is "the heart of CEQA." *Laurel Heights Improvement Ass'n v. Regents of University of California*, 47 Cal.3d 376, 392 (1988) (citations omitted). It is "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return. The EIR is also intended 'to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.' Because the EIR must be certified or rejected by public officials, it is a document of accountability." *Id.* (citations omitted).

Beyond merely disclosing potential environmental impacts, the environmental review statutes require agencies to develop tactics to address them. Specifically, CEQA requires the EIR not only identify a project's significant effects, but also requires the agency to adopt measures to avoid or minimize them. Pub. Res. Code § 21002.1. An EIR may not defer evaluation of mitigation to a later date. CEQA Guidelines[1] § 15126.4(a)(1)(B). NEPA's requirements are similar: the EIS must "[i]nclude appropriate mitigation measures" and discuss the "[m]eans to mitigate adverse environmental impacts." 40 C.F.R. §§ 1502.14(f), 1502.16(h). The statute "require[s] that an EIS discuss mitigation measures, with 'sufficient detail to ensure that environmental consequences have been fairly evaluated.' An essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective." *South Fork Band Council of W. Shoshone of Nevada v. U.S. Dep't of Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989)).

Where, as here, the environmental review document fails to fully and accurately inform decisionmakers and the public of the environmental consequences of proposed actions, or identify ways to mitigate or avoid those impacts, it does not satisfy the basic goals of either NEPA or CEQA. *See* 40 C.F.R. § 1500.1(b) ("NEPA procedures must insure that environmental

[1] The CEQA Guidelines can be found at Cal. Code Regs., tit. 14, § 15000 et seq.

information is available to public officials and citizens before decisions are made and before actions are taken."); Pub. Res. Code § 21061 ("The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect that a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project."). As a result of the DEIS's numerous and serious inadequacies, there can be no meaningful review of the Project by either the public or the agencies' decisionmakers.

I. The DEIS Fails to Adequately Analyze or Mitigate for the Project's Impacts on Cultural Resources.

The proposed Project analyzed in the DEIS is "an approximately 350-megawatt (MW) photovoltaic (PV) solar energy generating facility" bounded by the McCoy Mountains to the north, the Mule Mountains to the south, the Colorado River to the east. DEIS at ES-1, 3.70-1, 3.11-1. The Colorado River Indian Reservation is located approximately 15.5 miles east of the Project. DEIS at 3.13-5. CRIT is traditionally and culturally affiliated with the Project area and the ancestors of CRIT's Mohave and Chemehuevi members have lived and traveled in the Project area since time immemorial. *See, e.g.*, DEIS at 3.5-3 ("In the Southern California desert regions, cultural development was heavily influenced by the Patayan culture of the lower Colorado River area.") (citation omitted).

A. The DEIS Fails to Adequately Analyze or Mitigate for Impacts to the Mule Mountains and Surrounding Area.

The Mule Mountain Area of Critical Environmental Concern, "designated to protect cultural values," is located less than a mile from the Project. DEIS at 3.14-1, 3.14-2. The Mule Tank Petroglyph Site (CA-RIV-504) and the Mule Canyon Intaglio Site (CA-RIV-773), which are currently listed on the National Register under Criteria C and D individually and as contributors to the Mule Tank Discontiguous Rock Art District, are located within 5 miles of the Project site. DEIS at 3.5-7, DEIS at 3.5-9. As BLM recognized in establishing this ACEC, the Mule Mountains have tremendous cultural significance for area tribes, including CRIT. Because of this, the proximity of the proposed Project to the Mule Mountains, as known as Avi Ismalyk, is alarming to the Tribes. The dance circles, trails, petrogylphs, and intaglios associated with Avi Ismalyk play an integral role in Mohave cultural and spiritual beliefs, in addition to the plans and animals of the area. The landscape is identified in Mohave songs and stories.

11-2

Indeed, BLM recently recognized "the area of dense cultural resources associated with the Mule Mountains south of Blythe" in its environmental review of the proposed Ten West Link Project, selecting the resource avoidance alternative as its preferred option to avoid development in close proximity to the Mule Mountains. *See* Ten West Link EIS at ES-4.

While the Tribes appreciate the attempt to avoid cultural resource impacts—and likewise appreciate that Riverside County and BLM preliminarily identified Alternative C: the Reduced Acreage Alternative as their environmentally superior/agency preferred alternative—CRIT must once again voice its opposition to the development of the Project in any form on this sensitive landscape. As this letter describes further below, the Tribes remain troubled by the Project's potential to remove, damage, or destroy cultural resources and artifacts. These resources are

sacred and finite, and together make up the cultural footprint of the Tribes' ancestors. According to the belief system of CRIT's Mohave members, the disturbance of any cultural resources affiliated with their ancestor is taboo, and thus considered a severe cultural harm. CRIT therefore cannot support any project that will likely result in the disturbance or destruction of cultural resources and artifacts.

11-2 cont.

Moreover, despite the DEIS's attempt to downplay the possibility of unanticipated cultural resource discoveries, CRIT has every reason to fear that cultural resource impacts will be worse than the analysis predicts. As the DEIS acknowledges, the Project are is located in a region of significant prehistoric human activity. DEIS at 3.5-2 to 3.5-5; *see e.g.* DEIS at 3.5-4 ("[Religion, cultural identity, various aspects of daily life, and the landscape on which the tribes lived were intricately intertwined. Important ceremonial locations include intaglios, petroglyphs, lithic scatters, and cleared circles along the Colorado River and in the surrounding hills. As previously mentioned, one key component of the cultural landscape is the regional trail system.") (citation omitted). Much of the site contains is characterized by a moderate or high sensitivity for finding buried cultural resources. DEIS at 3.5-9.[2] These facts not only increase the likelihood that previously undiscovered resources will be unearthed during the Project construction, but enhances the cultural significance of this landscape to Tribal members as a means of connection to their ancestors. This is a high stakes location for cultural resource discoveries. Significant cultural harm will occur if resources are indeed discovered and disturbed. CRIT has seen that pattern play out all too often with projects like Genesis Solar, in which almost 3,000 cultural artifacts were collected from the site during development. To add insult to injury, these artifacts are now being stored in a museum hundreds of miles away, where CRIT's members are not allowed to view them.

11-3

Despite the Tribes' grave concerns and the close proximity of the Project to such a sensitive cultural resource area, the DEIS insists that the Project will have "[n]o adverse indirect impacts [on the cultural, tribal, and historic resources] on sites within the indirect effects APE," which include the Mule Tank Petroglyph Site (CA-RIV-504) and the Mule Canyon Intaglio Site (CA-RIV-773)--contributors to the Mule Tank Discontiguous Rock Art District. DEIS at ES-7. Yet, the analysis utterly fails to consider the real risks to cultural resources that come from being in the vicinity of a large development: vandalism, destruction, visual intrusion, loss of cultural value and tribal connection to the landscape, etc. By narrowly focusing on whether a visitor could see the project from a particular vantage point and whether the identified cites might be impacted by noise or dust, the DEIS ignores the impacts that come from industrializing an adjacent landscape. DEIS at 3.5-12. The DEIS analysis must be revised to adequately consider these impacts.

11-4

Moreover, much of the traditional value of these cultural resources to the Tribes comes from maintaining the connectivity between cultural resource sites stretching south from Spirit Mountain in Nevada. The Mule Mountains play a key role in maintaining this connectivity within Tribal members' ancestral landscape. The DEIS briefly recognizes that, given the

11-5

[2] The DEIS also notes that a buried site sensitivity analysis has not been completed, and this information is "dependent almost wholly on interpretation of satellite imagery." DEIS at 3.5-9. This deferral of analysis violates both NEPA and CEQA.

project's location, "access to places of traditional cultural and religious importance may not be maintained." Appendix F, at 41. However, this crucial fact is given short shrift—it is buried in an appendix and not discussed further. To the extent that this proposed Project and its impacts prevent access to the Mule Mountains for traditional practitioners or destroy the landscape connectivity necessary to traditional cultural practices, and thereby present a substantial burden on their religious free exercise, the federal government violates the Religious Freedom Restoration Act. *See Burwell v. Hobby Lobby Stores, Inc.* (2014) 573 U.S. 682. The agencies must engage in lawful and thorough consultation to fully understand these important issues.

11-5 cont.

B. The DEIS Incorrectly Determines that All Impacted Cultural Resources Are Valuable for Data Recovery Only, If At All.

1. The Project Will Significantly Impact Prehistoric Cultural Landscapes.

Both state and federal law recognize that cultural resources include cultural landscapes. *See* National Register Bulletin, "Guidelines for Evaluating and Documenting Traditional Cultural Properties" ("A culturally significant natural landscape may be classified as a site" eligible for the National Register); Pub. Res. Code § 21074(a) (tribal cultural resources include "cultural landscapes"). Indeed, evaluation and protection of such landscapes is necessary to ensure adequate protection of both individual resources and their historic context. The California Office of Historic Preservation has explicitly recognized the need for cultural resource professionals working on renewable energy projects to shift focus from a site level to the landscape level of assessment. While the DEIS recognizes that cultural landscapes may be protected under state law, the DEIS does not identify or define any cultural landscapes in the vicinity of the Project. This omission is contrary to law, and not supported by the significant evidence available to the agencies.

The DEIS's cultural resource section reveals abundant evidence to support a cultural landscape eligibility determination. As the DEIS notes,

> "By the late Prehistoric period, [...] [l]ong-range travel for resource procurement and trade resulted in a system of trails through the Colorado Desert. The increased mobility along the trail system allowed the opportunity for interaction between neighboring tribes. As the Spanish began to explore the area, native trails and trade routes were used and expanded.
>
> Trails were also used for trade routes. [...] Exchange items included California marine shell and Southwestern pottery. Trails are also a significant element in the Native American sacred landscape; they link the spiritual world to the natural landscape. Trails have been marked with rock shrines and artifacts such as pottery drops and flaked stone scatters, particularly white quartz. Songs and stories contain named places such as mountains, water sources, valleys, and other geographical locations along known trails." DEIS at 3.5-3 (citations omitted).

11-6

Other parts of the EIR briefly mention the presence of trails in the area. DEIS at 3.5-7.

Other agencies have recently identified cultural landscapes in this region based on much the same trail systems. *See* Palen Solar Electric Generating System Revised Presiding Member's Proposed Decision (PMPD) at 6.3-34 to -48. The cultural landscape is the Tribes' way of life. The trails, which pass through the site, link the petroglyphs and rock shelters found on each surrounding mountain. The ancestors who created the petroglyphs in the boulders each had ties to the area and reasons for doing so and the entire landscape remains important to each tribal member individually and the Tribes collectively.

11-6 cont.

Project by project, the Tribes' cultural footprint is being erased and this Project is no exception. The DEIS's omission of any discussion of cultural landscapes violates both NEPA and CEQA. The analysis must be revised to properly account for and mitigate these impacts.

2. As the Prehistoric Sites Destroyed by the Project Contribute to Cultural Landscapes, Their Removal Constitutes a Significant Impact.

The California Environmental Quality Act ("CEQA") requires lead agencies to identify significant impacts to "historic resources" and mitigate these impacts. *See, e.g.*, CEQA Guidelines § 15064.5. Moreover, CEQA requires lead agencies to use preservation in place for archaeological resources if feasible, unless other mitigation would be more protective. CEQA Guidelines § 15126.4(b); *Madera Oversight Coal. v. County of Madera*, 199 Cal.App.4th 48, 82-87 (2011).

The DEIS explains that there are 82 prehistoric sites, 27 multicomponent sites, and 177 prehistoric isolates within the APE. DEIS at 3.5-11.[3] BLM is currently in the process of reviewing NRHP eligibility evaluations and has not made formal determinations of eligibility and findings of effect under Section 106 of the NHPA for these resources. DEIS at 3.5-12.[4] As a preliminary matter, it is unacceptable that BLM has rushed forward with releasing an EIR without completing its analysis of these sites. As a result of this omitted information, it is impossible to tell the number or type of eligible sites that will be damaged or destroyed by the project, and therefore impossible to discern the significance of the potential adverse impact. CRIT urges BLM to complete this analysis and then re-release the DEIS for public comment.

11-7

[3] As currently written, the DEIS does not make these totals readily apparent, instead providing a piecemeal accounting of survey results. In order to better inform the public regarding potential cultural resource impacts, the DEIS should be revised to include a concluding paragraph to the Cultural Resources section that clearly sets out the number of prehistoric, historic, and multicomponent sites and isolates that will be impacted by each of the Project alternatives.

[4] CRIT has provided a separate letter objecting to BLM's failed efforts to consult on these determinations. The agency has thus far refused to provide access to the site data that would allow CRIT to understand the scope, potential importance, and eligibility of these resources.

Moreover, although CRIT appreciates that the analysis acknowledges that avoidance of direct impacts is the preferred measure for resolving adverse effects, the proposed mitigation measures are inadequate to address the potential adverse effects if avoidance is not feasible. The proposed mitigation measures center almost exclusively on "eligible" resources. This focus on NRHP-eligible resources as the only impacts requiring mitigation is arbitrary and capricious, and not supported by substantial evidence. 11-8

Indeed, the DEIS's analysis inappropriately silos these archaeological resources. Under its logic, if an individual resource is not *independently* significant, it does not merit protection. In ignoring the connective and cumulative value of these resources, the DEIS fails to evaluate whether any of these non-eligible prehistoric archaeological sites or isolates contribute to the cultural landscapes discussed in the prior section. Even if these resources are not significant on their own—a characterization that the Tribes do not support—the DEIS must be revised to evaluate whether these resources are significant because of their contribution to a broader cultural landscape. 11-9

The DEIS's focus only on "eligible" resources misconstrues state and federal law. The DEIS must avoid conflating eligibility for the CRHR with significant impacts analysis under CEQA. Impacts to archaeological resources considered non-eligible for listing on the CRHR—perhaps because of their lack of integrity—may nevertheless be significant for CEQA purposes. Similarly, BLM must not equate significant cultural resources with only those buildings, sites, structures, objects, and districts eligible for inclusions on the NRHP. NEPA guidelines specify that EISs must address impacts to "historic *and* cultural resources." (40 C.F.R. § 1502.16(g)) (emphasis added), thus requiring a more expansive analysis than the one undertaken for National Historic Preservation Act purposes. The DEIS must be revised to properly consider these resource impacts under CEQA and NEPA, respectively. 11-10

3. The Project Will Significantly Impact Areas of Critical Environmental Concern.

The DEIS notes that five areas of critical environmental concern are located near the Project site: Mule Mountain, Mule-McCoy Linkage, Chuckwalla and Chuckwalla Valley Dune Thicket, McCoy Valley, and McCoy Wash. DEIS at 3.14-1. The DEIS concludes that none of the ACECs will be directly impacted by the Project but provides little to no explanation to support its conclusion, especially with respect to the Mule Mountain ACEC, which is only less than a mile from the Project site. DEIS at 3.14-2 to 3.14-3. Although the DEIS acknowledges that indirect effects could occur at the Mule-McCoy Linkage ACEC the Mule Mountains ACEC due to their proximity to the Project site, the DEIS offers no explanation for why the significant cultural resources protected by the other ACECs may not be indirectly and adversely impacted by the proposed Project. DEIS at 3.14-3. As demonstrated above, these cultural resources include areas sacred to area tribes, linked to cultural practices, and grounded in the undisturbed cultural landscape. The addition of a massive, industrial system to the area directly adjacent to the Mule Mountains has the real potential to adversely impact these values. The agencies must consider these impacts in a revised DEIS. 11-11

4. The Project Will Significantly Impact Tribal Cultural Resources

Finally, the DEIS utterly fails to consider the proposed Project's potential to adversely impact Tribal Cultural Resources, which are specifically protected under CEQA. As the DEIS explains, tribal cultural resources (TCRs) include "a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe." DEIS at 3.5-14. To qualify as a TCR, the resource must be "(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or (ii) [a] resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1." DEIS at 3.5-14. In making this determination, the lead agency is required to consider the significance of the resource to a California Native American tribe. Moreover, "[p]er CEQA requirements, tribal cultural resources are primarily identified through outreach to the NAHC and government-to-government consultation between the Lead Agency and appropriate California Native American tribes." DEIS at 3.5-14. Despite acknowledging CEQA's requirement to consider impacts to Tribal Cultural Resources and despite input from multiple tribes regarding the importance of the cultural landscape in the Project area, the DEIS fails to analyze or identify any TCRs in its impact analysis. DEIS at 3.5-17. CRIT renews its request for government-to-government consultation with CDFW to help the agency better understand the importance of this area. 11-12

5. The DEIS Fails to Adequately Analyze Cultural Resource Impacts from Increased Erosion.

The DEIS recognizes that the geomorphology of the Project area is controlled by fluvial erosion and deposition. In layman's terms, this means that the site's topography can be modified by annual monsoon rains, in which heavy rains and runoff cause erosion and deposition.

As BLM is aware, such events can exacerbate exposure of cultural resources. At the Genesis Solar Energy Project, annual monsoon rains overwhelmed the project's stormwater drainage plans, resulting in significant erosion and exposure of cultural resources. BLM brought in tribes for consultation, asking what should be done to the resources that were exposed. Overwhelmingly, the response was that BLM should have better reviewed the designs of the project in the first place, to ensure that the project did not exacerbate runoff and erosion. 11-13

The DEIS does not discuss this issue. The document notes that the project could "re-route existing flowpaths [and] and erosion." DEIS at ES-10. However, the analysis must be revised to specifically address whether the Project will result in increased erosion and deposition, including in a manner that would adversely impact cultural resources.

C. The DEIS Provides and Inadequate Analysis of Cumulative Adverse Effects on Cultural Resources

The DEIS acknowledges that "[n]umerous significant archaeological and historical resources have been previously discovered within this broader geographical area, although many are not thoroughly documented." DEIS at 3.5-18. Cultural resources represent a direct linkage between present-day tribal members and their ancestors. Removal of these resources from the landscape is removal of the Tribes' footprint. Once such resources are gone, it will be difficult, if 11-14

not impossible, for the Tribes to prove that these lands are part of their ancestral homeland, and that their ancestors lived and worked on these lands since time immemorial.

The DEIS acknowledges that there are 43 other projects in the vicinity of the Project, including 15 large-scale solar energy projects, 2 wind projects, 5 electrical substation or generation facility projects, 7 transmission line projects, and over 14 other projects (such as commercial and residential construction, mining, and transportation). DEIS at 3.5-18. However, the DEIS provides an inaccurate picture of cultural resource impacts. In particular, the DEIS fails to describe the cumulative impacts of the listed projects in the vicinity. The DEIS should provide information as to how many cultural resources were actually discovered and/or disturbed when those projects were constructed. As BLM is very aware, it is impossible to predict the location of undiscovered cultural resources and, therefore, actual cultural resource impacts can only be known once project construction has concluded. For the vast majority of the projects BLM lists in its cumulative analysis, those final impact numbers are readily available. Yet, BLM fails to provide the cultural resource information from each respective project, effectively guaranteeing that cumulative impacts are understated.

11-14 cont.

Further, the DEIS analysis focuses solely on NRHP- and/or CRHR-eligible resources and ignores non-eligible and isolate discoveries. BLM's discussion of only eligible resources ignores the broader cumulative impact of these projects for CRIT's members. The disturbance, destruction, and/or removal of any cultural resource—including isolates and non-eligible artifacts—contributes to the steady erosion of Tribal members' cultural footprint from their ancestral landscape. The DEIS's methodology fails to acknowledge this devastating impact and provides the public with an inaccurate cumulative picture.

Although the DEIS concludes that the "overall cumulative impact on cultural resources would be significant, and the Project's contribution to cumulative impacts would be considerable, even with implementation of mitigation measures," the DEIS must be revised to fully analyze the cumulative impacts of past projects and non-eligible resources that would be impacts.

D. The DEIS Fails to Adequately Mitigate for the Project's Significant Cultural Resource Impacts

The DEIS relies on numerous mitigation measures to purportedly reduce the Project's significant cultural resource impacts. *See, e.g.*, DEIS at 3.5-14 to -17. However, as detailed below, these mitigation measures are wholly inadequate, and provide little to no protection for cultural resources:

- CRIT acknowledges and appreciates the DEIS's emphasis on "[a]voidance of direct impacts is the preferred measure for resolving adverse effects on National Register-eligible or -listed properties." DEIS at 3.5-12. However, as explained throughout these comments, the only way to truly avoid cultural resource impacts is to deny Project approval outright. Moreover, the DEIS's emphasis on protecting only NRHP- or CRHR-eligible resources ensures that this avoidance policy will do nothing to prevent the wholesale destruction of countless cultural resources on the Project site. These isolates and non-eligible resources make up

11-15

the cultural footprint of many Tribal members' ancestors. Unless avoidance extends to these cultural resources as well, this measure does not provide effective mitigation of the Project's significant cultural resource impacts.

11-15 cont.

- BLM continues to rely on data recovery, removal of resources, and long-term curation as "mitigation" for impacts to prehistoric cultural resources. *See, e.g.*, Appx. B-26 ("Resolution of adverse effects to historic properties will be developed in consultation with consulting parties and may require data recovery excavations, public interpretation, and other activities."); Appx. B-32. ("Preparation and implementation of a data recovery plan to be used to guide the data recovery excavation of the 23 historical resources eligible under California Register criterion 4, and that cannot be avoided."); DEIS at 3.5-14 (CDFW claims that data recovery would mitigate for impacts to numerous cultural resources). Data recovery ignores the very real cultural and spiritual impacts caused by the removal of cultural resources from the landscape, even if intentional and with the intent to preserve. CRIT has repeatedly informed BLM, such efforts do not—in any way—mitigate for the significant cultural harms caused by removing the footprint of tribal members' ancestors from the landscape. Indeed, such measures cause more harm than good. BLM has informed CRIT that it is "required" by law to curate such resources, and that it cannot allow such resources to be reburied or otherwise left on-site. As CRIT has previously explained to BLM, this position is not supported by the Archaeological Resources Protection Act, curation regulations, or any ongoing or prior litigation.[5] Moreover, the U.S. House of Representatives recently passed the La Paz County Land Conveyance Act, H.R. 2630, which specifically authorized reburial of cultural resources unearthed on 8,800 acres of federal land transferred to La Paz County for commercial development. Finally, it is increasingly apparent that solar project developers support allowing reburial, as a means of properly mitigating for adverse impacts and reducing potential conflict during project development. *See* Exhibit A. Consequently, the Tribes respectfully request that BLM reconsider its position on reburial and revise CUL-1, CUL-2, CUL-5, CUL-6, and CUL-8 accordingly. At the very least, the agencies should permit reburial of any isolates or other non-eligible prehistoric archaeological resources, as recently included in the programmatic agreement for the Ten West Link Transmission Line Project. *See* Exhibit B.

11-16

- The DEIS must be revised to clarify that archaeological monitoring and tribal monitoring will be required for *all* ground disturbing activities, including grading, disc and roll, and pile or stake driving, mechanical excavation, drilling, digging, trenching, blasting, or using high pressure water to cut into the ground. As the

11-17

[5] In responding to a similar issue on the Ten West Link Transmission Line Project, BLM cited to "ongoing litigation" as a reason why reburial could not be accommodated. Further explanation included citations to CRIT's challenges to the Blythe and Genesis projects. Both court cases have been resolved, and neither involved a determination regarding the propriety of reburial on public lands.

DEIS acknowledges, "[p]roject-related ground-disturbing construction activities could directly affect both known cultural resources and those inadvertently discovered during construction by damaging and displacing artifacts." DEIS at 3.5-11. Thus, comprehensive monitoring by both archaeological monitors and tribal monitors is necessary. A mitigation measure that fails to use tribal monitors for *all* ground disturbing activities will result in significant impacts, and the DEIS cannot conclude that partial monitoring will reduce impacts to the extent feasible. To reduce impacts to the extent feasible, tribal monitors must be present for all the activities described above and whenever machines are active. The DEIS, including CUL-1, CUL-4, CUL-5, and CUL-10, must be revised accordingly.

It appears from the DEIS that BLM might believe that it lacks authority to require tribal monitors. DEIS at ES-40 (stating that a "tribal participation plan is strongly encouraged" not required). This position is unsupported by federal law. On the recent Ten West Link Transmission Line Project, BLM California staff informed the working group that it could not require tribal monitors. However, the BLM project managers for that project sought the opinion of the Solicitor General, and determined that it was well within the BLM's authority to require tribal monitoring, much like any other biological, archaeological, or other monitor required as a condition of approval. *See* Exhibit C. CRIT urges BLM California to reconsider this unsupported and harmful position.

11-17 cont.

- BLM refers to "tribal monitors" throughout the DEIS. However, the glossary does not define this term or explain how or if it is different from a tribal observer. CUL-10 simply states that "monitors shall be known as the Tribal Observer for this Project." Appx. B-32. To avoid confusion on this point, the DEIS should be revised to exclusively use the term tribal monitor or to provide an exact definition of "Tribal Observer."

11-18

- The DEIS proposes to defer the development of historic properties treatment plans and a monitoring and discovery plan until just "prior to the issuance of the NTP." *See* CUL-2, CUL-5. This deferral is inappropriate, particularly because neither CUL-2 nor CUL-5 provides any performance standards or other mechanisms for determining whether these plans are sufficient to mitigate the proposed Project's impacts. It also runs afoul of both NEPA and CEQA, as it fails to provide any performance standards or guarantee of success. *E.g.*, *Communities for a Better Environment v. City of Richmond*, 184 Cal.App.4th 70 (2010). Consequently, the Tribes request that any historic properties treatment plans and monitoring and discovery plans be developed and circulated for review and comment in advance of the release of any FEIS.

11-19

- BLM has traditionally required tribal representatives participate in the WEAP Training (CUL-7), to ensure that construction personnel can identify tribal cultural resources and other prehistoric properties. This mitigation measure should be modified to include this requirement.

11-20

- CULs -5 and -10 must be revised to provide tribal monitors with the authority to halt construction, at least until there can be the opportunity for review by CRS, alternate CRS, or other field staff. Without this power, the tribal monitors will be unable to minimize the potential impacts of the proposed Project. 11-21

- In order to comply with the purposes of the NHPA, CUL-5 must be revised to state that BLM shall make cultural resource treatment decisions in consultation with local area tribes. CUL-5 should also be revised to state that ground disturbance shall not resume in the area of the discovery until a meeting this consultation is completed. Likewise, CUL-5 must be clarified to provide that tribes must receive notice of newly discovered prehistoric resources within 24 hours of the notification to BLM. Without this time requirement, tribes will be unable to effectively participate in the determination of how to treat any newly discovered prehistoric resource. 11-22

- The DEIS includes three mitigation measures that are for "CEQA only." DEIS at ES-42 to -43. However, the document offers little clarity as to what this designation means. Will these mitigation measures apply throughout the site? Is BLM approval required, and if so, what is the agency's determination? If these measures are intended to be implemented separately, why is BLM unwilling or unable to simply incorporate them into existing standards? The document fails in its informational purpose without these clarifications. 11-23

II. The DEIS's Analysis of Impacts to Visual Resources Is Inadequate.

The Visual Resources section of the DEIS does not address the cultural implications of the Project's disruption of the visual landscape. While the DEIS considers impacts to general "viewer groups," it fails to consider the Project's visual impact on Tribal members. DEIS at 3.17-2. The Mule and McCoy Mountains are more than a recreational resource for the Tribes; they have longstanding cultural and spiritual significance as ancestral lands. Any large-scale visual alteration to this space disturbs the sanctity of the outdoor environment, degrades cultural values, and constitutes a significant impact. Despite this special significance, the DEIS does not mention the visual impact on CRIT members in the Visual Resources section, and the Tribes were not consulted for this section. BLM must consult with the Tribes to determine the full significance of the visual landscape of the Mule and McCoy Mountains as cultural resources, and to explore possible additional or alternative mitigation that would best minimize visual impacts as a whole. 11-24

Additionally, the DEIS downplays the visual resources impacts by assigning the Project area "VRM Class IV" despite the fact that the Project area is assigned "VRI Class II," indicating "high scenic value." DEIS at 3.17-2 to 3.17-3. The Project area was designated "VRI Class II" given that the project area is assigned a high visual sensitivity level and the distance zone is assigned "foreground/middleground." DEIS at 3.17-1 to 3.17-2. The sensitivity level is the highest possible and the foreground/middleground is the closest and most disruptive distance zone. 11-25

Nevertheless, the DEIS then states that the Project area is assigned a "VRM Class IV" category, which allows strong visual resource impacts. This analytical method seems to classify visual resource landscapes based on *the type of project BLM wants to allow*, rather than based on the visual resources of the area. This reverse engineering is untenable under both NEPA and CEQA. Instead, the DEIS should evaluate the importance of the visual resources landscape, and then determine if the Project would result in a significant and adverse affect or impact. The desired outcome should be irrelevant.

11-25 cont.

CDFW also concludes that mitigation measures will reduce the Project's significant visual resource impacts to a less-than-significant level. DEIS at ES-53, 3.17-12. However, this conclusion is without support. The mitigation measures involve identifying and incorporating "visual design elements," managing potential impacts during constructions, and taking steps to keep the facility in good repair. *Id.* However, none of these minor alternations will appreciably reduce the strong contrast and visual intrusion of the project on the landscape, especially from vantage points on Mule Mountain. DEIS at 3.17-5 (noting that from KOP 4, "visual contrast would be strong due to the scale of the Project . . ., the broad, flat form and dark, reflective surface of the solar panels against the existing muted tones of the landscape" and that the project would "dominate" the landscape). This is demonstrated through the KOP simulations, which presumably take into account the minor mitigation efforts. The DEIS must be revised to either accurately acknowledge that the Project, even with mitigation, will create significant visual resource impacts, or to better support CDFW's conclusion that some paint and revegetation efforts will somehow result in a massive project that blends into the otherwise undisturbed landscape.

11-26

III. The DEIS Fails to Recognize the Environmental Justice Impacts of the Project on Tribes.

A. The Environmental Justice Analysis is Overly Narrow.

Under NEPA, BLM must consider, to the extent practicable, whether there is or will be an impact on the natural or physical environment that significantly and adversely affects Native American tribes. Specifically, BLM must consider whether significant environmental effects may have an adverse impact on Native American tribes that appreciably exceeds those on the general population. *See, e.g.*, EPA's 1998 Environmental Justice Guidance; Executive Order 12898. These analyses are required for an adequate consideration of environmental justice impacts.

11-27

Similarly, California law requires that local agencies consider issues of fairness and environmental justice in the planning context. *See* Cal. Gov. Code, § 11135. "Environmental justice" is defined in the Government Code as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." Cal. Gov. Code, § 65040.12(e). Likewise, CEQA and its implementing Guidelines require lead agencies to consider the public health burdens of a project as they relate to environmental justice for certain communities. A 2012 report from the California Attorney General discussing environmental justice concerns under CEQA explained that, "where a local agency has determined that a project may cause significant impacts to a particular community or sensitive subgroup, the alternative and mitigation analyses

11-28

should address ways to reduce or eliminate the project's impacts to that community or subgroup." "Environmental Justice at the Local and Regional Level: Legal Background," State of CA DOJ, at 4.

11-28 cont.

While the DEIS recognizes the disproportionate impact of the project on Native Americans and tribal members, the document does nothing to identify potential mitigation measures to address this injustice. One of the most substantial environmental costs of the proposed Project is the destruction of tangible cultural resources and the wholesale transformation of the ancestral homelands of Indian tribes, including CRIT. This cost is borne exclusively by tribal members. The power produced at the proposed Project, however, is unlikely to serve residents of the Colorado River Indian Reservation, and the climate change benefits will be spread across the globe. The massive profits, moreover, will benefit a small number of private companies. This imbalanced allocation of costs and benefits, which disproportionately disadvantages a minority population while providing them little or no benefit from the program, satisfies any recognized definition of environmental justice.

11-29

To begin to right this imbalance, CRIT urges BLM and CDFW to adopt a mitigation measure to give employment preferences to Indians, as well as access to any necessary job training programs to ensure performance and experience requirements can be met. The agencies should also adopt mitigation measures that ensure that the project developer sources construction materials from tribal enterprises. CRIT has serious questions as to whether the proposed Project will bring much needed construction and permanent jobs to an area close to the Reservation. At a minimum, please provide additional information about the nature of the jobs related to the Project to ensure that Tribal members may be available for hire. Tribal members must have access to these jobs to ensure that at least some of the benefits of the proposed Project flow back to the disadvantaged minority community on the Reservation.

IV. The Alternatives Section is Inadequate under State and Federal Law.

A. The Project's Narrow Purpose Impedes an Adequate Alternatives Analysis under NEPA.

An agency cannot unreasonably narrow the objective of the proposed action to limit the range of alternatives considered. *See Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1066 (9th Cir. 1998) ("[T]he discretion we have afforded agencies to define the purposes of a project is not unlimited . . . .[A]n agency cannot define its objectives in unreasonably narrow terms." (internal citations omitted)); *Simmons v. United States Army Corps of Eng'rs*, 120 F.3d 664, 666 (7th Cir. 1997) ("One obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing 'reasonable alternatives' out of consideration (and even out of existence)."); *see also Methow Valley Citizens Council v. Regional Forester*, 833 F.2d 810, 815 (9th Cir. 1987) (EIR inadequate for failure to analyze alternative sites).

11-30

BLM's purpose and need for the Project "is to respond to the ROW grant applicant under Title V of the Federal Land Policy and Management Act FLPMA (43 USC Section 1761(a)(4)) to construct, operate, maintain, and decommission a solar PV facility on public lands in compliance with the FLPMA, BLM ROW regulations, and other applicable federal laws." DEIS

at ES-1. While it says that BLM will consider "changing the route or the location of the proposed facilities," the agency unreasonably narrowed the objective of the proposed action by focusing on this particular application, rather than the public goals of providing renewable energy. DEIS at 1-3. This narrowing limited the range of reasonable alternatives considered.

BLM states that "[t]he Applicant and Lead Agencies considered multiple alternative locations for the proposed solar development, including sites on private land and on other BLM-administered lands." DEIS at 2-18. However, the alternative locations considered were all rejected. DEIS at 2-18 to -19. Relying on its improperly narrow statement of purpose and need, BLM failed to consider alternative technologies, projects, or locations that could meet the same renewable energy goals as the proposed Project without the same devastating environmental and cultural impacts. The DEIS analysis must be revised to correct this error.

11-30 cont.

B. The DEIS Must Be Revised to Include a DRECP-Compliant Alternative.

Under both NEPA and CEQA, the goal of an alternatives analysis is to educate both decisionmakers and the public about options that may reduce the significant impacts of a proposed project. *E.g.*, *Citizens of Goleta Valley v. Bd. of Supervisors*, 197 Cal.App.3d 1167, 1180 (1988). Here, the agencies invested years in determining how to appropriately balance the need for renewable energy with the biological, cultural, and other impacts associated with public lands. This effort culminated in BLM's adoption of the Desert Renewable Energy and Conservation Plan.

Rather than rely on this important analysis in developing and evaluating potential alternatives, the agencies utterly ignore it. The DEIS could have easily included an alternative that complied with the DRECP, to provide information for the public about how that long-standing plan would shape the outcome on this site. Instead, the DRECP is barely referenced in the alternatives chapter. The Tribes recognize BLM's inclusion of Appendix F, which discusses the proposed Project's relationship to the DRECP, but this is not a substitute. The public is completely unable to determine what a DRECP-compliant project would look like, and whether it would be feasible for the project applicant to comply. The DEIS must be revised to analyze such an alternative.

11-31

C. The DEIS Fails to Accurately Identified as BLM Preferred Alternative.

As BLM acknowledges, it is required to identify a preferred alternative in the EIS. 40 C.F.R § 1502.14(e); DEIS at ES-3. However, the DEIS raises internal inconsistencies in its attempt to comply with this requirement. In the executive summary, the DEIS states that BLM's preferred alternative is Alternative C – the reduced acreage alternative. DEIS at ES-3. But elsewhere in the document, DEIS states that BLM's preferred alternative is a combination of Alternative B and C. *See* DEIS at 2-17 ("the BLM preliminarily has identified a combination of Alternative B and Alternative C as the preferred alternative"). In revising the document to address this error, BLM should select the combination approach. By applying both design elements to reduce grading and reducing the Project footprint, the agencies have the best shot of reducing impacts to cultural resources. While CRIT does not support any development of the cite, the Alternative B/C combination appears to be both feasible and more protective. If this

11-32

option is not selected, the agencies must explain why application of both the design elements and the reduce footprint would be infeasible.

11-32 cont.

D. CDFW Improperly Determines that the No Project Alternative Is Not the Environmentally Superior Alternative.

Pursuant to CEQA, CDFW is required to identify an environmentally superior alternative. CEQA Guidelines § 15126.6(e)(2). The purpose of this identification is to clearly inform the decisionmakers and the public of the least environmentally damaging alternative, so the impacts of a decision to proceed are clear.

Here, CDFW claims that the no project alternative "is reasonably likely to result in solar development of some kind and in some configuration on the proposed site consistent with the property's land use designations under the DRECP and Western Solar Plan." DEIS at ES-3. However, the EIR then proceeds to analyze the no project alternative assuming that no future development occurs. This analytical approach is confusing and unsupported. CDFW cannot both claim that future development would occur, and then analyze impacts associated with no development.

11-33

Moreover, this statement only further supports the idea that the agencies should prepare a DRECP-compliant alternative in a revised and recirculated DEIS. If CDFW claims that a new DRECP-compliant alternative is "reasonably likely" to occur in the absence of project approval, the public and decisionmakers are entitled to understand what such project would look like before making a decision that would permanently lock in this design and configuration.

V. The DEIS Fails to Include an Analysis of the Growth-Inducing Impacts of the Project.

A draft EIR must discuss the ways in which the proposed project could foster growth-inducing impacts. Pub. Resources Code § 21100(b)(5); CEQA Guidelines §§ 15126(d), 15126.2(d). As part of this analysis, CEQA requires an agency to also "discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively." CEQA Guidelines § 15126.2(d). However, the DEIS fails to include an analysis of the growth-inducing impacts of the Project and must be revised to comply with CEQA.

11-34

As part of this analysis, DEIS should consider the characteristic of this project to induce further solar development. Specifically, the construction of the gen-tie line may "encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively." *See* CEQA Guidelines § 15126.2(d). Similarly, the viability of the proposed project could also serve to attract new project applicants to the area or ease the way for approval of other nearby projects. The analysis must consider future solar projects, which are constructed due to the growth-inducing effect of this Project, and their impacts to the environment.

VI. The Project Is Not Exempt from the DRECP and the Western Solar Plan.

The DEIS claims that the Project qualifies as a "pending" application that is not subject to either the Western Solar Plan or the Desert Renewable Energy Conservation Plan (DRECP). DEIS at 1-4 to -5. The DEIS argues that the Project is exempt from Western Solar Plan and DRECP given that "the initial application for this Project was filed before June 30, 2009" and "the site is located within a SEZ." DEIS at 1-5.

However, BLM should not apply these exceptions to the proposed Project. The original ROW grant application—the one that pre-dated the Western Solar Plan and DRECP—was originally filed in 2009 for "a 540MW dual-turbine solar thermal tower project on approximately 7,600 acres of combined BLM-administered and privately owned land." DEIS at 1-2. However, in 2016, the applicant submitted a new Plan of Development (POD) to BLM, converting the technology from solar thermal to solar PV, decreasing the energy output from 540 MW to 450 MW, and decreasing the land area to approximately 4,000 acres of BLM-administered land. DEIS at 1-2. The Project was further transformed in 2017, when the applicant submitted POD revisions further reducing the energy output to 350 MW and decreasing the land area to approximately 2,500 acres of BLM-administered land. DEIS at 1-2. As such, the DEIS evaluates the 350 MW solar PV project on 2,500 acres of BLM-administered land, rather than the project as described in the original application. The ROW application has been pending for over a decade, and the DEIS evaluates a substantially different Project than the one originally proposed in 2009. As such, it should be evaluated under the Western Solar Plan and the DRECP. The DRECP was intended to mitigate impacts across a broad range of development activities, and BLM should be applying the Conservation and Management Actions (CMAs) at every opportunity, regardless of when a project application was first submitted. 11-35

Even if BLM views the Project changes as minor, evaluating all ongoing solar projects under these new standards will ensure the type of region-wide, programmatic conservation and consistency that the Western Solar Plan and DRECP were designed to promote. For this reason, and as discussed above, BLM should have at least analyzed an alternative that applied the DRECP CMAs.

Finally, even where the DEIS makes an effort to understand the interaction between the proposed Project and the DRECP, it fails to provide a helpful or accurate analysis. [more]

VII. The Biological Resources Analysis Is Inadequate under CEQA.

The California Department of Fish and Wildlife ("CDFW") has the authority to regulate projects that may impact species protected by the California Endangered Species Act. Under CEQA case law, the DEIS should have discussed CDFW's permitting process and any potential mitigation or project modifications that may be required by the agency. Specifically, the EIR project description must include a list of consultation requirements and "to the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements." CEQA Guidelines § 15124(d)(1)(C); *see Banning Ranch Conservancy v. City of Newport Beach*, 2 Cal.5th 918, 936-942 (2017). In *Banning Ranch*, the city ignored its "obligation to integrate CEQA review with the requirements of the Coastal Act" (specifically the Coastal Act's habitat designation requirements). *Id.* at 936. The Court 11-36

invalidated the City's CEQA analysis because the "omission resulted in inadequate evaluation of project alternatives and mitigation measures. Information highly relevant to the Coastal Commission's permitting function was suppressed. The public was deprived of a full understanding of the environmental issues raised by the Banning Ranch project proposal." *Id.* at 942.

The DEIS notes that the California Department of Fish and Wildlife (CDFW) "has regulatory authority to protect resources." DEIS at 4-2. It further mentions CDFW's jurisdiction over modifications to stream and lake beds under § 1602 of the California Fish and Game Code, as well as CDFW's authority to regulate potential impacts to species protected under the California Endangered Species Act. *Id.* The DEIS acknowledges that the Project applicant may need to complete a Lake and Streambed Alteration Agreement (LSAA), and also notes the possibility of CDFW requiring an Incidental Take Permit for species impacts and/or a permit for removal of native plants. *Id.* However, the DEIS analysis fails to discuss the results of it consultation with CDFW for the project. Indeed, the only discussion of consultation is a declaration that the Applicant is currently consulting with CDFW. DEIS at 4-2. Further, the DEIS fails to include an analysis of areas potentially subject to jurisdiction under CDFW's Streambed Alteration Program or any substantive discussion of the additional mitigating requirements that will be imposed through consultation with and permitting from CDFW. Where consultation has not yet taken place, and the results of said consultation and its resulting plans are not included in the DEIS, this delay undermines the functions of both CEQA and NEPA—to inform both the decisionmakers and the public as to the true environmental impacts of the Project. 40 C.F.R. § 1502.1; CEQA Guidelines § 15002(a)(1). As in *Banning Ranch*, where there was "ample evidence" that sensitive coastal habitat was present, here there is ample evidence of occupied habitat for a number of sensitive species, and "the decision to forego discussion of these topics cannot be considered reasonable." *See Banning Ranch*, 2 Cal. 5th at 937; DEIS at 4.4-5. The DEIS must discuss the consultation with CDFW and compliance with its requirements, as well as those of any other local, state, or federal agency with jurisdiction over the Project. The BLM should complete this consultation before the final environmental review document is issued so that decisionmakers and the public are fully informed of Project impacts. Until it does so, BLM's conclusions that biological impacts will be less than significant are unsupported.

11-36 cont.

The DEIS also fails to acknowledge the cultural significance of these desert species to local tribes—either in the cultural resources analysis or the biological impacts discussion. A number of the animals at greatest risk from the proposed project (Mojave desert tortoise, Mojave fringe-toed lizards, golden eagles, Western burrowing owls, American badgers, desert kit foxes, and other various birds) are important to tribal culture because they hold power and spiritual value in Native American belief systems and oral traditions. The CEQA Guidelines explain that a historic resource need not be eligible for the California Register of Historical Resources ("CRHR") to be a "historic resource" under Public Resources Code sections 5020.1(j) or 5024.1; "historic resources" thus require a more expansive analysis than the one required under the CRHR criteria. CEQA Guidelines § 15064.5(a)(4). Such resources necessarily include viewsheds and landscapes, plants and animals used in and/or central to cultural and religious practices and creation stories, and religious and customary practices (e.g., hunting and gathering, religious

11-37

ceremonies, and trailwalking). The DEIS must be revised to apply the correct definition of cultural resources for this Project and properly analyze these impacts. 11-37 cont.

A number of the plants at the project site also hold cultural value for CRIT. For example, the DEIS explains that "the sparse vegetation on the Project site is dominated by creosote scrub habitat and desert dunes." DEIS at 3.19-1. Creosote has topical and internal medicinal purposes for tribal members, and was traditionally used by Mohave and Chemehuevi craftspeople for a number of utilitarian purposes, including waterproofing of baskets, cordage objects, and pottery. Once these and other desert sensitive plants have been destroyed through surface disturbing activities, this loss of traditional cultural lifeways cannot be readily mitigated. 11-38

Moreover, CRIT has serious concerns that the piecemeal mitigation measures proposed in the DEIS will adequately alleviate the tremendous stress that these large-scale renewable energy projects place on sensitive desert species. Much of DEIS's analysis of potential biological impacts relies on surveys to determine what species are present in the Project area, yet this methodology does not necessarily capture the extent to which other solar projects in the vicinity have already destroyed habitat and impacted the future viability of these desert species. The DEIS analysis must be revised to consider these devastating impacts. 11-39

II. The Project Violates the CDCA Plan and FLPMA and Presents a Misleading Cumulative Impacts Analysis.

Under FLPMA, Congress determined that the California Desert contains "historical, scenic, archeological, environmental, biological, cultural, scientific, educational, recreational, and economic resources that are uniquely located adjacent to an area of large population" and as such, these resources, including "numerous archeological and historic sites, are seriously threatened." 43 U.S.C. § 1781. In response, Congress directed BLM to prepare a land use management plan for the area that would protect these fragile and threatened resources. *Id.*

BLM's subsequent California Desert Conservation Act Plan (CDCA Plan) includes four land use classifications (Classes C, L, M, and I) that direct the multiple uses accommodated on BLM land into appropriate areas. CDCA Plan at 13. The Project area falls entirely within Class M, which permits energy and utility development but "is also designed to conserve desert resources and to mitigate damage to those resources which permitted uses may cause." DSEIS at 3.8-2. 11-40

As outlined in this comment letter, it is clear that sensitive values within the Project site—particularly cultural and visual resources—are significantly diminished by the proposed Project. As such, any approval of the Project as currently designed would violate both the CDCA Plan and FLPMA. *See also* CDCA Plan, Table 1 (requiring projects within Class M lands to *preserve and protect* archaeological resources).

VIII. Neither BLM Nor Riverside County Has Adequately Consulted with the Tribes.

In May 2017, the Colorado River Indian Tribes adopted a government-to-government consultation policy to manage its relationship with federal agencies. *See* Exhibit D. The genesis of this policy was the ongoing failure of the federal government to live up to the requirements for consultation contained in federal statutes, regulations, policies, and executive orders. CRIT 11-41

requested that each federal agency acknowledge the policy prior to conducting government-to-government consultation with its Tribal Council.

CRIT requested by letter government-to-government consultation with BLM on April 22, 2016 and with CDFW on September 25, 2017. CRIT has also developed and shared with both BLM and CDFW its Government-to-Government Consultation Policy and requested that prior to scheduling an in-person consultation with Tribal Council both agencies review and acknowledge the Policy. To the Tribes' knowledge, neither BLM nor CDFW has acknowledged CRIT's Policy. While CRIT is open to conducting in-person, government-to-government consultation with BLM and CDFW regarding this Project, any consultation meeting would need to include acknowledgment and discussion of this policy. 11-41 cont.

BLM claims that a government-to-government consultation meeting occurred on November 28, 2016. DEIS at 4-4. However, while BLM appears to believe that a November 28, 2016 meeting qualified as government-to-government consultation, this meeting does not. The BLM attendees at that meeting were unprepared to substantively respond to the points raised by the Tribes at that time, even though the Tribes had provided BLM with comment letters outlining the Tribes' primary concerns in advance. Without back-and-forth communication, such meetings do not meet the definition of government-to government consultation. For numerous renewable projects throughout the region, including the Genesis Solar Energy Project, the Modified Blythe Solar Energy Project, and the Six-State Solar Programmatic EIS, BLM utterly failed to engage CRIT in meaningful consultation regarding the impacts of the projects. Instead, the agency has resorted to generic form letters arriving late in the process to fulfill its responsibility under the NHPA and other federal policies. CRIT therefore reiterates its request that BLM review and acknowledge the Tribes' Consultation Policy and promptly engage with the Tribes on a meaningful, government-to-government level for this Project. 11-42

Additionally, CRIT requests that CDFW promptly acknowledge the Tribes' Consultation Policy and then engage with the Tribes on a meaningful, government-to-government level for this Project, consistent with the policies expressed in the Tribes' Policy and Assembly Bill 52. 11-43

Thank you for your consideration. As required by state, federal, and tribal law, we look forward to receiving your response to these comments. Please copy the Tribes' Attorney General, Rebecca A. Loudbear, at rloudbear@critdoj.com, Deputy Attorney General Antoinette Flora, aflora@critdoj.com, and THPO Director Bryan Etsitty, at betsitty@crit-nsn.gov, on all correspondence to the Tribes.

Respectfully,

Dennis Patch
Chairman, Colorado River Indian Tribes

Cc: Tribal Council of the Colorado River Indian Tribes
Bryan Etsitty, THPO Director
Rebecca A. Loudbear, Attorney General, Colorado River Indian Tribes

Exhibits

A – Letter from EDF Renewables re Reburial of Cultural Resources on Federal Land Managed by the Bureau of Land Management

B – Ten West Link Programmatic Agreement

C – Letter from Aron King re Ten West Link Transmission Line Project Section 106 Programmatic Agreement

D – CRIT Government to Government Consultation Policy

Secretary David Bernhardt
Department of the Interior
1849 C Street, N.W.
Washington DC 20240

Deputy Director William Perry Pendly
Bureau of Land Management
1849 C Street NW
Rm. 5665
Washington, DC 20240

Re: Reburial of Cultural Resources on Federal Land Managed by the Bureau of Land Management

Dear Secretary Bernhardt and Deputy Director Pendly,

I write on behalf of EDF Renewables, a market leading independent power producer and service provider with over 30 years of experience. As you may know, EDF Renewables has partnered with the Bureau of Land Management to construct approximately $1.3 billion of renewable energy projects on federal lands in California, including the 150 MW Desert Harvest Solar Project and the 500 MW Palen Solar Project, both in Riverside County, California. These projects are significant contributors to the local economy and play an important role in fulfilling the President's desire to promote domestically produced energy resources (Executive Order 13783). However, these projects are now burdened and jeopardized by California BLM's resistance to a practical, legally supported solution to an issue of extreme sensitivity to the Native American community.

In our development of these projects, we have formed working relationships with the Indian tribes that have occupied this area since time immemorial, including the Colorado River Indian Tribes. Through these relationships, we have come to understand the importance of the physical cultural resources—such as manos, metates, pottery sherds, flakes, cores and artifacts—that tangibly link the members of the Colorado River Indian Tribes to the landscape. We understand the Tribes' perspective: this footprint should remain intact if feasible, either through preservation in place, or reburial on adjacent land if development projects render avoidance infeasible.

Consequently, EDF Renewables supports the reburial of prehistoric cultural resources on federal lands managed by the Bureau of Land Management. To the extent such resources are not eligible for listing on the National Register of Historic Places and are not considered "archaeological resources" protected by the Archaeological Resources Protection Act, EDF Renewables supports BLM policy changes to permit reburial of such resources by tribal monitors in the course of ground-disturbing activities. We understand that BLM Palm Springs-South Coast Field Office permitted such activities during construction of the Blythe Solar Power Project and the McCoy Solar Energy Center. We also understand that the BLM Arizona State Director recently worked with the Colorado River Indian Tribes to develop language in the Programmatic Agreement for the Ten West Link Transmission Line Project to allow such activities. We ask BLM to adopt a similar policy across all of the federal lands it manages, or at least where requested by affected tribes.

I should emphasize this is not an academic issue: We are presently facing delays in the construction of the Desert Harvest Solar project in Riverside County, California because of differences in opinion between California BLM and

the tribes monitoring construction of the project. The tribes would like the ability to bury or relocate artifacts that are not considered "archaeological resources" protected by the Archaeological Resources Protection Act, but California BLM now prohibits the practice, asserting that destruction or off-site curation are the only options, neither of which are palatable to the tribes. This is in contrast to Arizona BLM, which, as mentioned above, allows the tribes to rebury or relocate artifacts not considered to be "archaeological resources". We are of the opinion that the law allows the current Arizona approach, which is also good policy. We request that California BLM reemploy a similar policy. Doing so will allow projects like Desert Harvest to move forward and will only improve relations between the tribes and California BLM.

Finally, EDF Renewables also supports revisions to the National Historic Preservation Act and the Archaeological Resources Protection Act to allow reburial of eligible historic properties and protected archaeological resources. We understand BLM's opinion that statutory changes are required to allow reburial. EDF Renewables supports such changes to facilitate better relationships between renewable energy developers and the tribes who have occupied public lands since time immemorial.

Thank you for your attention to this important matter.

Sincerely,

Devon Muto

Devon Muto
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**PROGRAMMATIC AGREEMENT
AMONG
THE BUREAU OF LAND MANAGEMENT,
ARIZONA YUMA FIELD OFFICE,
THE ARIZONA STATE HISTORIC PRESERVATION OFFICER,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,
THE COLORADO RIVER INDIAN TRIBES,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE
TEN WEST LINK TRANSMISSION PROJECT
BETWEEN TONOPAH, MARICOPA COUNTY, ARIZONA
AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

1. **WHEREAS,** DCR Transmission, LLC (the Applicant), intends to construct, operate and maintain the Ten West Link Transmission Project (the Undertaking) in Arizona and California according to general parameters contained in the Undertaking's Plan of Development (POD), as summarized in Stipulation II and Attachment 1; and
2. **WHEREAS,** the Undertaking consists of the construction, operation and maintenance of a 500 kV transmission line approximately 114 miles in length, proposed to begin at the Delaney Substation near Tonopah, Arizona and end at the Colorado River Substation west of Blythe, California, crossing lands with the following jurisdictions: the Bureau of Land Management (BLM); Bureau of Reclamation (Reclamation); U.S. Fish and Wildlife Service (FWS); Colorado River Indian Tribes (CRIT); Arizona State Land Department (ASLD); California State Land Commission (SLC); Counties of Maricopa and La Paz, Arizona and Riverside, California; Town of Quartzsite, Arizona; and private lands (Attachment 1); and
3. **WHEREAS,** the Yuma Field Office of the BLM may issue a right-of-way (ROW) grant to the Applicant for the construction, operation, and maintenance of the Undertaking, and if issued, the ROW grant will incorporate this Programmatic Agreement (PA); and
4. **WHEREAS,** the BLM has determined that issuance of the ROW grant and related authorizations is an Undertaking as defined at 36 C.F.R. § 800.16 that triggers the requirements of 54 U.S.C. § 306108, commonly known as Section 106 of the National Historic Preservation Act (NHPA) of 1966 (54 U.S.C. § 300101 et seq., as amended), hereinafter referred to as Section 106, on Federal and non-Federal lands during the planning, construction, operation, and maintenance of the Undertaking; and
5. **WHEREAS,** this PA and the Historic Properties Treatment Plans (HPTPs), one for each State, that will be developed pursuant to this PA will be incorporated into the POD; and
6. **WHEREAS,** the Federal agencies involved have designated the BLM to serve as the lead Federal agency for the Undertaking, and has identified the area of potential effects (APE) as described in Stipulation V (also see Attachment 1); and
7. **WHEREAS,** the BLM in consultation with the other parties to this PA, has determined that the Undertaking may have adverse effects upon historic properties as defined in 36 C.F.R. § 800.16(l)(1); and this PA has been negotiated to resolve any adverse effect; and

8. **WHEREAS,** pursuant to 36 C.F.R. § 800.6 and 800.14, the BLM has consulted with the Arizona State Historic Preservation Officer and the California State Historic Preservation Officer (collectively, the SHPOs), and the CRIT Tribal Council, and they are Signatories to this PA; and

9. **WHEREAS**, the Arizona and California SHPOs and CRIT Tribal Historic Preservation Officer are authorized to enter this agreement in order to fulfill their roles of advising and assisting Federal agencies in carrying out Section 106 responsibilities under the following Federal statutes: Sections 101 and 106 of the NHPA, at § 800.2(c)(l)(i), and § 800.6(b)(1)(i); and

10. **WHEREAS,** the AZ SHPO is authorized to advise and assist the Federal and State agencies in carrying out their historic preservation responsibilities and cooperate with these agencies under A.R.S. § 41-511.04(D)(4); and

11. **WHEREAS,** pursuant to 36 C.F.R. § 800.6(a)(1)(i)(C), the BLM, on February 15, 2017, notified the Advisory Council on Historic Preservation (ACHP) that the Undertaking may have adverse effects on historic properties that will be resolved through the PA, and the ACHP declined on March 9, 2017 to participate as a party to the PA to resolve such adverse effects; and the BLM requested that the ACHP participate as a party to the PA on January 11, 2018; and the ACHP accepted on January 25, 2018 and are a Signatory to this PA; and

12. **WHEREAS,** CRIT has assumed the role of THPO with respect to lands within its reservation boundaries and this Undertaking may cross lands under its jurisdiction; and

13. **WHEREAS,** no provision of this PA will be construed by any of the Signatories, Invited Signatories, or Concurring Parties to the PA as: (a) abridging, debilitating, or in any way affecting any sovereign powers of CRIT; (b) affecting the trustee-beneficiary relationship between the United States Secretary of the Interior and CRIT (or individual Indian landowners); or (c) interfering with the government-to-government relationship between the United States and CRIT; and

14. **WHEREAS,** the Bureau of Indian Affairs Western Regional Office (BIA) is the agency responsible for issuing permits and approving ROWs on tribal and allotted lands of CRIT, and the BLM has consulted with the BIA about the effects of the Undertaking on historic properties and has invited them to be an Invited Signatory to this PA; and

15. **WHEREAS,** the Applicant has participated in Section 106 consultations and the BLM has consulted with the Applicant about the effects of the Undertaking on historic properties and has invited them to be an Invited Signatory to this PA; and

16. **WHEREAS,** no provision of this PA shall be construed by any of the Signatories, Invited Signatories, or Concurring Parties to the PA as: (a) diminishing or reducing the Applicant's property rights or business operation discretion as provided by law, (b) expanding or increasing the authority of any governmental or Tribal entity beyond that explicitly provided by law or regulation or (c) waiving the Applicant's right to contest and/or appeal any governmental action; and

17. **WHEREAS,** the Undertaking crosses lands in California that are subject to the Programmatic Agreement Regarding Renewable Energy Development on a Portion of Public Lands Administered by the Bureau of Land Management – California, dated February 5,

2016 (the Desert Renewable Energy Conservation Plan or DRECP PA); the California portion of the PA tiers from this version of the DRECP PA, pursuant to Stipulation I(B)(2) of the DRECP PA; and certain stipulations of the DRECP PA apply to the portion of the Undertaking in California; and

18. **WHEREAS,** because the Undertaking crosses lands under the jurisdiction of the ASLD, the ASLD may use provisions of the PA to address the applicable requirements of the Arizona State Historic Preservation Act (A.R.S. § 41-861 et seq.) on State Trust lands in Arizona and may issue a ROW for the Undertaking; the BLM has consulted with the ASLD about the effects of the Undertaking on historic properties and has invited the ASLD to be an Invited Signatory to the PA; and

19. **WHEREAS,** the SLC may authorize alternatives of the Undertaking on State land and has certain responsibilities under California State laws and regulations to take into account and mitigate the impacts on properties eligible for or included on the California Register of Historic Places; and the SLC has declined in a Consulting Party Return Form dated March 6, 2017 to participate as a Consulting Party in the negotiation of the PA; and

20. **WHEREAS,** the BLM has consulted with the California Department of Transportation (Caltrans), which may issue ROWs to the Applicant for access to and construction of certain components of the Undertaking, about the effects of the Undertaking on historic properties and Caltrans has declined in a Consulting Party Return Form dated February 24, 2017 to participate as a Consulting Party in the negotiation of the PA; and

21. **WHEREAS,** the BLM has consulted with Arizona Department of Transportation (ADOT), which may issue ROWs to the Applicant for access to and construction of certain components of the Undertaking, about the effects of the Undertaking on historic properties and has invited ADOT to be an Invited Signatory to the PA; and

22. **WHEREAS,** the Lower Colorado Region of Reclamation is considering issuing a license to the Applicant to construct, operate, and maintain the proposed transmission line on any Reclamation lands crossed by the Undertaking; and the BLM has consulted with Reclamation about the effects of the Undertaking on historic properties and has invited Reclamation to be an Invited Signatory to the PA; and

23. **WHEREAS**, the Department of Defense Yuma Proving Ground (YPG) is considering issuing a license to the Applicant to construct, operate, and maintain the proposed transmission line on any YPG lands crossed by the Undertaking; and the BLM has consulted with YPG about the effects of the Undertaking on historic properties and has invited YPG to be an Invited Signatory to the PA; and

24. **WHEREAS,** the California Public Utilities Commission (CPUC) agrees that the California State Historic Preservation Officer (SHPO), per 36 CFR 800(c)(2) reflects the interests of the State of California and its citizens in the preservation of their cultural heritage; and

25. **WHEREAS,** the CPUC is the lead State agency for compliance with the California Environmental Quality Act (CEQA) and has certain responsibilities under California State laws and regulations to take into account and mitigate the impacts on properties eligible for or included on the California Register of Historical Resources; and the BLM has consulted with the CPUC about the effects of the Undertaking on historic properties and has invited the CPUC to be an Invited Signatory to the PA; and

26. **WHEREAS,** the Undertaking may cross lands under the jurisdiction of La Paz and Maricopa Counties, Arizona and Riverside County, California. The Undertaking may cross lands under the jurisdiction of the Town of Quartzsite, Arizona; and the BLM has invited the above counties and the Town of Quartzsite, Arizona to be Consulting Parties. La Paz County and the Town of Quartzsite have accepted the invitation to be Consulting Parties. The BLM has consulted with them about the effects of the Undertaking on historic properties and has invited each of La Paz County and the Town of Quartzsite to be Invited Signatories to this PA; and

27. **WHEREAS,** the Arizona State Museum (ASM) has been invited to participate in the PA pursuant to 36 C.F.R. § 800.6(c)(2)(iii) as it has mandated authority and responsibilities under the Arizona Antiquities Act (AAA) A.R.S. § 41-841 et seq. that apply to that portion of the Undertaking on State lands as defined in the AAA in Arizona; and the ASM has mandated authority and responsibilities under A.R.S. § 41-865 that apply to that portion of the Undertaking on private lands; and the BLM has consulted with the ASM about the effects of the Undertaking on historic properties and has invited the ASM to be an Invited Signatory to the PA; and

28. **WHEREAS,** the Western Area Power Administration (WAPA) may participate in the Undertaking by providing funding to the Applicant; and the BLM has consulted with WAPA about the effects of the Undertaking on historic properties and has invited WAPA to be an Invited Signatory to the PA: and

29. **WHEREAS,** the BLM is responsible for government-to-government consultation with Indian tribes pursuant to 36 C.F.R. § 800.2(c)(2)(ii), the American Indian Religious Freedom Act (42 U.S.C. § 1996) (AIRFA), Executive Order 13175, and Section 3(c) of the Native American Graves Protection and Repatriation Act (25 U.S.C. § 3001-13) (NAGPRA), and has formally invited the twenty-three (23) Indian tribes listed below to participate in consultations regarding the potential effects of the Undertaking on properties to which they ascribe traditional religious and cultural significance, provided that CRIT and the CRIT THPO take no position on whether consultation has occurred or is consistent with Federal law; and

30. **WHEREAS,** the Agua Caliente Band of Cahuilla Indians, the Ak-Chin Indian Community, the Augustine Band of Cahuilla Indians, the Cabazon Band of Mission Indians, the Chemehuevi Tribe, the Cocopah Tribe, the Fort McDowell Yavapai Nation, the Fort Mojave Indian Tribe, the Quechan Tribe, the Gila River Indian Community, the Salt River Pima-Maricopa Indian Community, the Hopi Tribe, the Moapa Band of Paiute Indians, the Morongo Band of Mission Indians, the San Manuel Band of Mission Indians, the Soboba Band of Luiseno Indians, the Tohono O'odham Nation, the Torres Martinez Desert Cahuilla Indians, the Twenty-Nine Palms Band of Mission Indians, the Yavapai-Apache Nation, the Yavapai-Prescott Indian Tribe, and the Pueblo of Zuni (collectively, the Tribes) have been contacted, invited to engage in consultations and invited to be Concurring Parties to the PA; and

31. **WHEREAS,** the Ak-Chin Indian Community, the Cocopah Tribe, the Fort Mojave Indian Tribe, the Gila River Indian Community, the Hopi Tribe, the Morongo Band of Mission Indians, the Quechan Tribe, the Salt River Pima-Maricopa Indian Community, the Soboba Band of Luiseno Indians, the Tohono O'odham Nation, the Torres Martinez Desert Cahuilla

Indians, the Twenty-Nine Palms Band of Mission Indians, and the Yavapai-Apache Nation, and the Yavapai-Prescott Indian Tribe have participated in consultations for the Undertaking and the development of the PA consistent with 36 C.F.R. § 800.2(c)(2); provided that CRIT and the CRIT THPO take no position on whether consultation has occurred or is consistent with Federal law; and

32. **WHEREAS,** the CPUC is responsible for government-to-government consultation with Indian tribes pursuant to CEQA for non-Federal lands, the CPUC has informed consulting Indian tribes in California that the BLM's consultation process fulfills part of CPUC's consultation obligations; and

33. **WHEREAS,** the BLM has provided the public with opportunities to comment on the Undertaking and participate in the National Environmental Policy Act (NEPA) process through a Notice of Intent to Prepare an Environmental Impact Statement (EIS) published in the Federal Register on March 23, 2016 for the development of the EIS; held three public scoping meetings in April 2016; published the Draft EIS on August 31, 2018 and held three public meetings in Phoenix, AZ on October 9, 2018, Quartzsite, AZ on October 10, 2018, and Blythe, CA on October 11, 2018. Public meeting materials included information about the NHPA and the Section 106 process, and the BLM considered comments received through the NEPA and NHPA processes concerning cultural resources in the development of the PA; and

34. **WHEREAS**, Human Remains, Associated/Unassociated Funerary Objects, Sacred Objects, and Objects of Cultural Patrimony recovered within or on Federal and tribal land will be treated in accordance with NAGPRA pursuant to 25 U.S.C. § 3001–13, ARPA pursuant to U.S.C. 470aa, and in accordance with the AIRFA pursuant to 42 U.S.C. § 1996; and

35. **WHEREAS,** Human Remains and Funerary Objects discovered on State or private land in Arizona will be treated in accordance with A.R.S. § 41-844 and A.R.S. § 41-865, respectively; and in California, in accordance with the Cal. Pub. Res. Code §§ 5097.98, 5097.991 and the Cal. Health & Safety Code § 7050.5(c); and

36. **WHEREAS,** Termination of the agreement by an Invited Signatory shall only apply to lands under their respective jurisdiction. In such case, the BLM shall comply with 36 C.F.R. § 800, subpart B, for all undertakings affecting the terminating Signatory's lands within the scope of the PA. Dispute resolution (Stipulation XV) is strongly encouraged prior to termination

NOW, THEREFORE, the BLM, the Arizona SHPO, the California SHPO, CRIT, and the ACHP (collectively, the Signatories) agree that the Undertaking shall be completed in accordance with the stipulations established in the PA in order to take into account the effects of the Undertaking on historic properties. The BLM shall ensure that the Undertaking is carried out in accordance with the following stipulations in order to take into account the effect of the Undertaking on historic properties:

STIPULATIONS

I. DEFINITIONS USED IN THIS PA: Definitions used in this PA are included as Attachment 2.

II. DESCRIPTION OF THE UNDERTAKING

A. The Undertaking encompasses the construction phase of the proposed transmission line project that takes place after the BLM ROW grant is issued and includes the construction of associated project facilities as well as the reclamation of areas used during construction but not necessary for operation and maintenance of the facilities. The Undertaking may include surveys, geotechnical testing, engineering, mitigation planning and design, or other activities initiated prior to construction of the transmission line and project facilities. The potential effects to historic properties will be the most extensive and substantial during the construction phase. The Undertaking also encompasses those activities necessary to operate and maintain the transmission line and project facilities over the life of the project. Operation and maintenance activities are approved in the ROW grant and confined to the areas specified in the ROW grant. This PA stipulates the process necessary to comply with Section 106 obligations for construction and reclamation as well as operation and maintenance of the proposed transmission line and associated facilities. A detailed description and a map of the Undertaking are included as Attachment 1.

B. Changes to approved operations and maintenance activities, including new actions on BLM lands outside of the approved BLM ROW grant, require BLM approval and may necessitate a separate Section 106 review and additional ROWs, subject to Stipulation XI.

C. If decommissioning occurs in the future, it will be considered a separate undertaking. The ROW grant shall stipulate, and the BLM shall ensure, that decommissioning will be considered a new action for Section 106 review, and that historic properties potentially affected by decommissioning will be considered in accordance with the pertinent laws, regulations, and policies extant at the time.

III. TRIBAL CONSULTATION

A. The BLM acknowledges its government-to-government responsibilities to the Tribes for Section 106 review and implementation of the PA and commits to accord tribal officials the appropriate respect and dignity as leaders of sovereign nations. The BLM shall facilitate meaningful consultation with the Tribes during the planning and implementation of the Undertaking.

B. The BLM will continue to engage the Tribes in meetings and discussions regarding the Undertaking. The BLM has invited the Tribes to engage at the earliest stages of the Undertaking to gather ethnographic information, property information, and other resource information to help identify areas which may be of religious and cultural significance to them and which may be eligible for the National Register of Historic Places (NRHP). Engaging in consultation at the earliest stages of project planning has assisted and will continue to assist the BLM in identifying significant issues and resources that may not be identified during conventional cultural resources survey and identification efforts. As part of the consultation process the BLM shall endeavor to provide information and maps that are easily understood by tribal representatives.

C. The BLM will continue to discuss and seek agreement with the Tribes regarding processes of consultation that are clear, open and transparent. If a Tribe would like government-to-government consultation with the BLM will honor the request on an individual basis at the earliest possible time. If a Tribe would like to establish regular

meetings with a BLM Field Office regarding the Undertaking, the Tribe and the BLM Field Manager should consult to develop specific procedures for consultation.

D. The BLM will require the Applicant to hire tribal monitors during archaeological surveys, construction monitoring, reclamation, and archaeological field work activities for the Undertaking, including the monitoring of ground-disturbing activities. The BLM will ensure that tribal participation is in coordination with archaeological surveys by the Applicant's cultural resources consultant. Procedures for participation during the construction and reclamation activities of the Undertaking will be coordinated with all the Tribes with whom the BLM consulted through the development of a Tribal Participation Plan specific to the Undertaking. All the Tribes with whom the BLM consulted will be afforded the opportunity to be hired by the Applicant to monitor and be on site during ground disturbance construction activities for facilities, roads, or other components associated with the Undertaking.

E. The objective of consultation is for BLM to seek agreement with the Tribes regarding matters arising in the Section 106 process. The BLM will identify as early as possible any potential historic properties, properties with cultural or religious significance to Indian tribes (including landscape-level resource concerns), or tribal concerns associated with the Undertaking in order to avoid, minimize or mitigate effects on historic properties.

F. The BLM shall make reasonable attempts to contact the Tribes to confirm that the party has elected not to comment or agrees with the course of action proposed by the BLM. "Reasonable attempts" include two forms of written communication, including a formal letter and/or email to the Tribal Chairperson and designated representative for the Tribe; and two follow-up phone calls to the Tribe's designated representative. Unless otherwise agreed to, the BLM shall respond to any request from a Tribe for information and clarification about any proposed language or element that is part of the implementation of the PA, within thirty (30) calendar days of receipt of the request. Where the time period for review or comment has passed after such reasonable attempts, the BLM may proceed with the course of action proposed.

G. The BLM shall coordinate with the CPUC on tribal consultation efforts for all non-Federal lands in California, including outreach, information sharing, and other activities, to allow the CPUC to fulfill its tribal consultation obligations under CEQA. The CPUC is responsible for tribal consultation under California State law.

H. In all instances where the BLM provides documents for review by the THPO or Tribes, the BLM shall either incorporate requested changes into the document or provide a written explanation of its inability to make such changes. The BLM shall consult with the appropriate reviewer(s) to resolve differences and/or disagreements.

IV. STANDARDS AND QUALIFICATIONS

A. PROFESSIONAL QUALIFICATIONS. The BLM will ensure that all actions prescribed by this PA shall be carried out by or under the direct supervision of a person or persons meeting, at a minimum, the applicable professional qualification standards set forth in the Office *of* Personnel management professional qualifications for archaeology and historic preservation, or the Secretary of the Interior's Professional

Qualification Standards (PQS), as appropriate (48 Fed. Reg. 44739 dated September 29, 2983, and C.F.R. § 61. The PQS are available online at: http://www.nps.gov/history/local-law/arch_stnds_9.htm.

1. Individuals must also meet the regional experience or other requirements of a BLM-issued Cultural Resources Use Permit issued under the authority of the Archaeological Resources Protection Act of 1979 (ARPA) (16 U.S.C. 470aa-mm) and U.S.C. 431-433) and its regulations (43 C.F.R. § 7), the Antiquities Act of 1906 (P. L. 59-209; 34 Stat. 225, 16 U.S.C. 431-433) and its regulations (43 C.F.R. § 3), and/or the Federal Land Policy and Management Act of 1976 (FLPMA) (Public Law 94-570). However, nothing in this Stipulation may be interpreted to preclude any party qualified under the terms of this paragraph from using the services of persons who do not meet the PQS, so long as the work of such persons is directly supervised in the field and laboratory by someone who meets the PQS.
2. On State lands in Arizona, all actions prescribed by this PA shall be carried out by or under the direct supervision of an AAA-permitted consultant.

B. DOCUMENTATION STANDARDS. The BLM will ensure that reporting on and documenting the actions cited in this PA shall conform to every reasonable extent with the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 Fed. Reg. 44716-40 dated September 29, 1982) and take into consideration the ACHP's handbook, *Section 106 Archaeology Guidance* (http://www.achp.gov/archguide) as well as *Guidelines for Identifying Cultural Resources* BLM Manual H-8110 and Guidelines for Evaluating and Documenting Traditional Cultural Properties, National Register *Bulletin 38*, 1989. The following guidelines are available during development of this PA. Should the guidelines be updated after the execution of the PA, the latest versions will take precedent. In the event that any guidelines are modified in the future to conflict with this PA, the BLM shall notify all Consulting Parties and will consult to determine how this PA should be revised, if necessary, pursuant to **Stipulation XVI**.

1. Arizona:
   - **a.** The BLM will ensure that on State land in Arizona, all activities and documentation shall be consistent with the AAA and its implementing rules. Additionally, rules for implementing the AAA and AZ SHPO guidance on implementing the Arizona State Historic Preservation Act shall conform to specifications and guidelines contained in *Guidelines for State Historic Preservation Act.* Additionally, *AZ SHPO Standards for Documents Submitted for SHPO Review in Compliance with Historic Preservation Laws* (Revised January 2016) shall guide inventory reports for all work done in Arizona.
   - **b.** In Arizona, the Applicant shall ensure that its cultural resources contractor obtains the appropriate AAA permit from the ASM prior to conducting archaeological work for the Undertaking.
2. California: The BLM will ensure that on State land in California, all activities and documentation shall be consistent with the standards as outlined in the California Office of Historic Preservation Archaeological Resource Management Reports

(ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports.

3. CRIT: The Applicant shall ensure that its cultural resources contractor obtains any necessary permits from CRIT prior to working on CRIT lands. Afterwards, the Applicant's cultural resources contractor shall approach the BIA to consult and determine the need to obtain an ARPA permit.

C. CONFIDENTIALITY. Information concerning the nature and location of any historic property, archaeological resource (historic or prehistoric), or other confidential cultural resource will be considered sensitive and protected from release under the provisions of the Freedom of Information Act (FOIA) (5 U.S.C. § 552, as amended by Public Law No. 104-231, 110 Stat. 3048), Section 9 of ARPA (16 U.S.C. § 470hh), Section 304 of the NHPA (54 U.S.C. § 307103), and Executive Order 13007. For the purposes of consultation under this PA, the BLM may release certain information for the benefit of the resource. Consideration may result in the sharing of summary reports that do not contain sensitive location information. Other than the respective SHPOs/THPO and the ACHP, the BLM will only consider the release of complete reports or other information concerning the nature and location of any historic property, archaeological resource, or other confidential cultural resource to a Consulting Party with a demonstrated interest in the information requested and a signed data sharing agreement. The data sharing agreement shall include provisions to ensure protection to tribal sovereign immunity. It shall also permit tribal members to review reports and information without individually signing the agreement, provided that the affiliated THPO or tribe has signed the data sharing agreement. All Consulting Parties will ensure that all sensitive information is protected from release.

D. CURATION STANDARDS.

1. Collections from Federal Lands:

a. All records and materials removed from Federal lands as a result of the actions required by this PA shall be curated in accordance with 36 C.F.R. § 79, and the provisions of the NAGPRA, 43 C.F.R. § 10, as applicable.

b. Materials that are archaeological resources under ARPA, NAGPRA materials, or historic properties under the NHPA are subject to the processes and procedures set forth in the applicable laws and regulations. In accordance with 43 C.F.R. 7.33, the BLM land manager may determine that certain materials are not or are no longer of archaeological interest and therefore not considered archaeological resources. For those materials that are determined to not be archaeological resources under 43 C.F.R 7.33, the BLM land manager may determine appropriate conservation measures, including, but not limited to, avoidance, leaving materials in situ or relocated nearest the discovery locale as practicable, reburial, curation, or any other measure as the BLM land manager deems appropriate under applicable laws, regulations, and BLM policies related to such activity. Any reburial or conservation decisions will be conducted by or in consultation with the relevant Tribes or their representatives, as provided for in the Tribal Participation Plan.

2. Collections from State Lands:

   a. All artifacts recovered from lands owned, controlled or operated by the State of Arizona, including associated records and documentation, shall be curated at the ASM, or an approved and certified repository, in accordance with the standards and guidelines required by the ASM.

   b. To the extent permitted under Sections 5097.98 and 5097.991 of the California Public Resources Code and by private property owners, the materials and records results from the actions required by this PA for lands owned, controlled or operated by the State of California and private lands in California, including associated records and documentation, shall be curated in accordance with 36 C.F.R. § 79.

3. Collections from CRIT lands: On lands within the Colorado River Indian Reservation, all records and materials resulting from the actions required by this PA shall be managed in accordance with tribal law, including any CRIT reburial policy.

4. Collections from Private Lands: To the extent a private landowner requests that the materials be removed from the site, the BLM will seek to have the materials donated through a written donation agreement developed in consultation with the Tribes or their representatives. The BLM will seek to have all materials from each State curated together in the same curation facility within the State.

V. IDENTIFICATION, EVALUATION, AND FINDINGS OF EFFECT

A. AREAS OF POTENTIAL EFFECTS (APEs, see map in Attachment 1) are defined as:

1. **Direct effects:** The APE for direct effects for the Undertaking will include all areas likely to be affected by construction and reclamation activities. This APE will include the 200-foot-wide permitted ROW corridor for one 500 kV transmission line and access roads (within the corridor), plus 100 feet on either side of the corridor (400 feet total width). This width will allow for adjustments in transmission line or access road placement to avoid when possible any modern infrastructure, natural features such as drainages and bedrock outcrops, or cultural resources such as archaeological sites and historic buildings or structures.

   a. Proposed new access routes and existing roads requiring improvement outside the transmission line ROW will have a 150-foot wide direct effects APE (75 feet from centerline).

   b. The direct effects APE for staging areas, borrow areas, substations and other transmission infrastructure will include the footprint of the facility and a buffer of 250 feet around the footprint of the proposed activity/facility.

   c. The direct effects APE for pulling/tensioning sites that fall outside the ROW will be the footprint of the site plus a 250-foot buffer around the footprint of these sites.

   d. The BLM has provided the APE definitions above concurrently to the SHPOs/THPO and Consulting Parties for a single thirty (30)-calendar-day review and comment period.

2. **Indirect effects**: There are two APEs to account for indirect effects, one that addresses effects from the construction of the transmission line components that will be visible after construction, and one that addresses atmospheric effects from new or maintained access routes. The indirect effects APE for visible transmission line components (consisting of the transmission towers and the series compensation station) shall be within 3 miles from the center of the ROW unless consultation identifies a reasonable need to expand this APE in certain locations. The indirect effects APE for new or maintained roads (includes new or maintained roads within the 200-foot ROW) shall be 1/8-mile from the centerline of the access road, or to the nearest existing road, transmission line tower, or other pre-existing built feature on the landscape, as applicable.

   a. BLM will use a Geographic Information System (GIS) view shed analysis to identify areas in both of the indirect effects APE from which the Undertaking may be visible.

   b. The indirect effects APE may extend beyond the 1/8-mile and 3-mile conventions to encompass properties that have traditional religious and cultural importance, including traditional cultural properties (TCPs) or other geographically extensive historic properties, such as trails, when a Consulting Party requests and the BLM and SHPO/THPO concur that the APE be extended.

3. **Cumulative effects**: The APE for cumulative effects shall be the same as that for direct and indirect effects combined and shall be reasonably foreseeable.

4. **Final APE**

   a. The final APE is shown on the map included with Attachment 1, the Agency Preferred Alternative in the Draft Environmental Impact Statement published on August 31, 2018.

   b. Should the APE require modification as a result of a refinement in the construction POD, the BLM will consult with the Consulting Parties for no more than fifteen (15) calendar days to establish the new APE. The BLM will then prepare a description and map(s) of the modified APE and any additional identification efforts and provide them to the Consulting Parties within thirty (30) calendar days of the day upon which agreement was reached.

B. Identification of Historic Properties and/or Historic Districts: The BLM shall ensure that the Applicant completes a cultural resources inventory to identify historic properties and/or historic districts that could be affected by the Undertaking to include the following reports:

1. Class I Literature Review, Ethnographic Overview, and Research Design and Work Plan

   a. A Class I records search and literature review (as defined in Attachment 2) of Federal and State agency files has been completed for a 1.0-mile wide corridor (.5 miles on either side of centerline) along all alternatives of the proposed Undertaking. The Class I report will inform all subsequent phases and will be used as a reference document to support the Class III surveys (as defined in

Attachment 2) conducted for this Undertaking. The BLM will ensure that additional file searches are conducted as needed to address changes in the APE and to be current in advance of any additional Class III inventories.

b. The BLM has consulted and will continue to consult with the Tribes to identify any resources that have cultural or religious significance to the Tribes.

i. The Applicant, through its cultural resources contractor, has completed an ethnographic literature review (Ethnographic Overview) based on the review of existing information about resources with cultural or religious significance to the Tribes.

ii. The BLM requires the development of an Ethnographic Assessment for a specific geographic area within the Undertaking's APE because a Tribe has indicated that they have additional information not included in the Ethnographic Overview that should be considered in the Section 106 identification efforts. All the Tribes with whom the BLM consulted will be afforded the opportunity to participate in the Ethnographic Assessment per a work plan to be developed by the Applicant's cultural resources contractor and to review the resulting draft report.

c. The BLM has submitted the Class I report (Brodbeck and Glenny 2017 – See Attachment 3. References Cited) and Ethnographic Overview (Leard and Brodbeck 2017) to the SHPOs, Tribes, and Federal and State land managing agencies for review and comment and to seek any additional information regarding resources in the APE with cultural or religious significance to the Tribes.

d. Research Design and Work Plan: The information in the Class I report has been used to develop a Research Design and Work Plan for all cultural resources inventory studies for the proposed Undertaking. The BLM has submitted the Research Design and Work Plan (Brodbeck et al. 2017) to the Consulting Parties for a thirty (30) day review and comment period and has concurrently requested SHPOs/THPO review and concurrence on the proposed identification efforts. The Research Design and Work Plan describes the proposed Class III inventory, the geo-archaeological study, the built environment survey, and the identification and assessment of effects to historic properties in the indirect effects APE.

e. The AZ SHPO commented on the above documents, including the geo-archaeological study referenced in **Stipulation V.B.2** below, in a letter to the BLM dated August 23, 2017. The CA SHPO concurred in a letter to the BLM dated November 16, 2017. The CRIT THPO commented on the above documents in a letter to the BLM dated November 9, 2017.

2. Geo-archaeological Study: At the BLM's request, the Applicant, through its cultural resources contractor, has completed a geo-archaeological study of the entire direct effects APE (Brodbeck et al 2017), which is included in the Research Design and Work Plan (**Stipulation V.B.1.d**). The study considers natural and archaeological site formation processes to determine the likelihood of subsurface

archaeological remains within the APE. The purpose of the geo-archaeological study is to assist in the identification of locations where archaeological remains that cannot be seen on the surface are likely to be found, in anticipation of the Class III inventory and construction.

3. Class III Inventory of Geotechnical Testing Locations

   a. The Applicant, through their cultural resources contractor, will complete a Class III inventory of geotechnical testing locations required prior to final engineering.

   b. The Applicant, through their cultural resources contractor, will submit the Class III Inventory Report of geotechnical testing locations to the BLM Upon approval by the BLM, the report will be submitted to the SHPOs/THPO and the CPUC for a thirty (30)-calendar day review.

4. Pre-Construction Class III Inventory: Any part of the APE for direct effects for the final selected route that has not already been inventoried to current standards, or not considered by the BLM, the SHPOs/THPO, or other land managing agencies to be adequately inventoried, and which can be accessed safely and legally, shall be completely inventoried at a Class III level to the standards of the BLM and SHPO for Arizona and California as detailed in **Stipulation IV.A and B.** Determinations of eligibility, findings of effect, and possible treatment shall be made by the BLM in consultation with the SHPOs/THPO and appropriate Consulting Parties, including Tribes. Identification efforts shall be performed regardless of the ownership (public, private, State, or Tribal) of the lands. The Applicant shall be responsible for gaining access to non-BLM lands. In the event access to non-BLM lands is not obtained, the Applicant will provide documentation to BLM sufficient to demonstrate two (2) unsuccessful efforts to secure access or showing that the landowner has affirmatively denied such access. Where access cannot be obtained, resorting to other means for survey such as aerial imagery may be used to determine likelihood of presence of historic properties. The Class III Inventory will be conducted with sensitivity for locations or other features identified as important through Tribal consultation or ethnographic studies.

   All previously recorded cultural resources within the direct effects APE will be re-visited and the associated records updated and revised as appropriate, including NRHP eligibility recommendations and determinations. Previously recorded cultural resources and newly recorded cultural resources whose boundaries lie partially within or straddle the direct effects APE will be fully recorded outside the direct effects APE, to the extent practical and within .25 miles of the direct effects APE, regardless of surface ownership in order to provide context for any necessary treatment within the direct effects APE.

5. Historic Built-Environment Study: The BLM will require the Applicant, through their cultural resources contractor, to complete a separate Historic Built-Environment study for the entire APE to identify built-environment resources within the direct and indirect APE and assess their eligibility for listing in the NRHP. For the APE for direct effects as defined in **Stipulation V.A**, all historic and in-use linear cultural resources such as canals, roads, trails, and railroads will be

identified and recorded where they intersect the APE and will be fully recorded within the APE.

C. Determination of Eligibility and Finding of Effect

1. For each cultural resource within the APE, the BLM shall consult with the SHPOs/THPO and any Native American tribe that attaches religious and cultural significance to any identified resource and other Consulting Parties to determine NRHP eligibility pursuant to 36 C.F.R. § 800.4(c)(1) following guidance in *How to Apply the National Register Criteria for Evaluation.* If the BLM and the SHPOs/THPO cannot reach concurrence on NRHP eligibility, the documentation will be forwarded to the Keeper of the National Register (Keeper) for a formal determination.

2. The Applicant, through their cultural resources contractor, will use existing resources to the extent available to identify historic properties eligible under Criteria A, B and/or C, that fall within the indirect effects APE and that may be affected by the Undertaking. The Applicant will ensure that ethnographic and other information provided by the Consulting Parties will be included in this identification and assessment effort, including comments on the eligibility of and effects on TCPs. Some historic properties eligible under Criterion D may be included at the BLM's discretion, if requested by a Consulting Party. This analysis will include potential impacts to historic properties within the indirect effects APE from increased access occurring as a result of the Undertaking. The methods for assessing indirect effects are described in the Research Design and Work Plan.

The BLM shall make findings of the effects to historic properties identified in the APE in consultation with the SHPOs/THPO after Consulting Party comment. If the BLM and the SHPOs/THPO cannot reach concurrence on findings, the question will be referred to the ACHP, per 36 C.F.R. § 800.5(c)(2).

D. Reporting

1. For each State, the Applicant shall prepare a comprehensive Inventory Report or Reports incorporating findings from the Class III Intensive Field Inventory, the geo-archaeological study, the Historic Built-Environment study, and the study on the effects of the Undertaking on historic properties in the APE for indirect effects. The comprehensive Inventory Report or reports will include a summary of results from the Ethnographic Overview and Ethnographic Assessment; and any additional information provided by the Consulting Parties about places of concern to them, the location of those places in relationship to the Undertaking, and an assessment of the effect of the Undertaking on those places. The reports shall include recommendations on NRHP eligibility and treatment recommendations for historic properties within the APEs for direct, indirect and cumulative effects of the Undertaking as described in **Stipulation V.A**. Any assessment that avoidance during construction is not possible will be supported by documentary evidence from the Applicant.

2. The Applicant shall submit drafts of the Inventory Report for each State to the BLM. The BLM will provide the reports to the SHPOs, THPO, appropriate land

managers, the ASM, the CPUC, and the Tribes within each State for review, concurrent with BLM review. These parties will provide written comments to the BLM within sixty (60) calendar days regarding:

a. The adequacy of the identification effort;

b. The NRHP eligibility of the cultural resources identified;

c. The assessment of effects of the Undertaking on the historic properties identified.

d. The presence of TCPs or any properties of traditional religious or cultural importance to the Tribes that were not identified in the inventory but that may be affected by the Undertaking.

Each SHPO/THPO will review any reports within the sixty (60) calendar day review period, but each SHPO/THPO will be afforded an additional seven (7) calendar days to respond to the BLM in order to consider comments made by any of the land managers, the ASM, the CPUC, and the Tribes.

3. The BLM shall ensure that comments received within sixty (60) calendar days are considered in development of the revised Inventory Reports. The BLM shall submit a consolidated set of comments on the draft Inventory Report within fifteen (15) calendar days following end of the review period. The applicant shall have forty-five (45) calendar days to address comments and return a revised Inventory Report to the BLM. The BLM will submit the revised Inventory Report to the appropriate SHPO/THPO, Tribes, and Consulting Parties for a sixty (60)-calendar-day concurrent review, and will request SHPO/THPO concurrence on the BLM's determinations of NRHP eligibility and treatment recommendations for each historic property identified. The BLM will notify the Consulting Parties via electronic mail (email) of the submittal and the date that comments are due. If the sixty (60)-calendar-day review time frame cannot be met, the SHPO/THPO, Tribe or Consulting Party will notify the lead BLM Office main point of contact by email requesting a review extension. The lead BLM Office will determine whether to grant an extension, not to exceed an additional thirty (30) calendar days.

4. The Inventory Reports will provide the following (except for unevaluated cultural resources [see definition in Attachment 2] or properties found during possible future variances and discoveries):

a. Characterization of the efforts to identify historic properties

b. Inventory of cultural resources and recommendations of NRHP eligibility

c. Recommendations for treatment measures to be applied to historic properties affected by the Undertaking.

VI. RESOLUTION OF ADVERSE EFFECTS: The BLM, in consultation with the Applicant, the SHPOs/THPO, and Consulting Parties, shall ensure that an HPTP is developed and implemented to avoid, minimize and/or mitigate Project-related adverse effects on historic properties.

A. Avoidance

1. The BLM shall make every reasonable effort to avoid adverse effects to historic properties, including those of traditional religious and cultural significance to Tribes, with input from Consulting Parties and affected Tribes.

2. Avoidance measures for historic properties may include (but are not limited to) realignment of the transmission line, fencing of historic properties with a buffer zone during construction, monitoring of construction near the boundaries of historic properties, or placing towers, maintenance roads and ancillary facilities outside of the boundaries of historic properties.

3. BLM will ensure that the Applicant, through their cultural resources contractor, includes a description of these proposed efforts for each applicable historic property in the Class III Inventory Report and in the applicable State HPTP.

B. Minimization of Adverse Effects

1. When complete avoidance of adverse effects to historic properties is not possible, the BLM shall ensure that the Applicant, in consultation with the Consulting Parties, makes a good faith effort to minimize adverse effects on historic properties by efforts minimizing the visual effects of the Undertaking.

2. The BLM shall ensure that the Applicant, through their cultural resources contractor, includes a description of these proposed efforts for each applicable historic property in the Class III Inventory Report and in the applicable State HPTP.

C. The BLM shall ensure that the Applicant, through its cultural resources contractor, prepares an HPTP for each State that addresses the effects of the proposed Undertaking on historic properties, including properties of traditional religious and cultural importance to Tribes, and TCPs. The HPTP shall address direct, indirect and cumulative effects from construction and reclamation as well as from operation and maintenance of the proposed transmission line and associated facilities. The HPTP will be incorporated into the POD as an appendix.

D. The HPTPs will be consistent with the Secretary of the Interior's Standards for Archeology and Historic Preservation (48 FR 44716) (*Federal Register*, September 29, 1983), hereinafter referred to as Secretary's Standards; the ACHP's Section 106 Archaeology Guidance (2009); and all applicable NPS guidance for evaluating and documenting NRHP properties (e.g., *Guidelines for Evaluating and Documenting Traditional Cultural Properties*, *Guidelines for Evaluating and Documenting Rural Historic Landscapes*); and the Rules Implementing the AAA in Arizona as well as the guidelines in California.

E. The HPTPs will include treatment measures developed through the efforts of all Consulting Parties that address adverse effects on all historic properties that will be adversely affected.

F. The HPTP must include the following information:

1. All identified historic properties within the APE by land ownership and by township. The HPTPs will identify the specific avoidance, minimization, and/or

treatment strategies proposed to address the direct, indirect, and cumulative adverse effects of the Undertaking on historic properties. Any finding that avoidance during construction is not possible will be supported by documentary evidence from the Applicant.

2. Research questions and goals that are applicable to the Undertaking area and can be addressed through data recovery and archival studies, along with an explanation of their relevance and importance. These research questions and goals will incorporate the concept of historic contexts as defined in *National Register Bulletin 16*.
3. A description of fieldwork and analytical methods and strategies applicable to the Undertaking, along with an explanation of their relevance to the research questions. If phased data recovery will be employed, describe the fieldwork and analytical methods and strategies that will be employed during each phase. Treatment methods will be developed for each class of property identified in the Inventory Report and may include, but are not limited to, excavation, archival research, ethnographic studies, and oral history, as appropriate and as agreed upon by the Consulting Parties.
4. The level of effort to be expended on the treatment of each property. For archaeological data recovery, this will include methods of sampling, i.e., sample size, and rationale for specific sample unit selection.
5. Data needs for each research question, i.e., items (for example, ceramics, obsidian, thermal features) that need to be present to be able to address the research question.
6. Results of tribal consultation regarding the incorporation of tribal perspectives into the cultural history, research design, data recovery/treatment methodology, analysis and interpretation.
7. A plan for the use of tribal monitors during archaeological field work.
8. Professional qualifications of staff, including archaeological field personnel, laboratory and analysis personnel, personnel in charge of report writing, and subcontractors.
9. Permits required and obtained.
10. Curation arrangements.
11. Project suspension/termination plan.
12. Monitoring and Discovery plan, as described in **Stipulation VIII** below.
13. Protocol for sensitive treatment of human remains, as described in **Stipulation VIII** below.
14. Historic Properties Management Plan (HPMP), as described in **Stipulation IX** below. The HPMP describes management of historic properties during operation and maintenance.
15. Treatment measures will include but not be limited to those that address public outreach as appropriate, such as journal articles, public site visits, brochures, or web sites focusing on the historic properties impacted by the Undertaking. Any proposed

public outreach will be developed in consultation with the Tribes to ensure that sensitive cultural resource material is kept confidential.

16. Treatment measures may include but not be limited to the synthesis of regional data and the study of related collections.

G. The HPTPs will provide a table listing each historic property, including:

1. The site number and name of the historic property or unevaluated property by land ownership and by township, range, and section number. Locational information for historic properties shall be included as an appendix that can be redacted for the version of the HPTP available to the general public;

2. A brief description of the historic property or unevaluated property;

3. The type of disturbance that will affect the historic property or unevaluated property;

4. For unevaluated properties, the testing plan for determining the eligibility of the property; for nature and extent testing; and for establishing required treatment;

a. The BLM will ensure that the Applicant, through their cultural resources contractor, implements the approved testing plan in the HPTP and submits a draft testing report including eligibility and treatment recommendations to the BLM.

b. BLM shall review the testing report and provide comments to the Applicant within fifteen (15) calendar days. The Applicant shall respond to the BLM's comments and submit a revised testing report within fifteen (15) calendar days of receipt of comments. Upon the BLM's approval of the testing report, the BLM will submit the eligibility determinations, the treatment recommendations, and the supporting reports for unevaluated cultural resources via email and regular mail to the respective SHPOs/THPO and land manager as well as to the CPUC in California with a request for concurrence. The SHPOs/THPO and land manager will respond to the BLM within fifteen (15) calendar days. If the SHPOs/THPO or the land manager do not respond to the BLM within fifteen (15) calendar days, the BLM will make a good faith effort to contact the entity via email or telephone, rather than assume concurrence with the determination(s) of NRHP eligibility. A "good faith effort" includes two forms of communication, including an email and a telephone call to the SHPOs/THPO or land manager point of contact for the Undertaking. After no response to a good faith effort, the BLM will proceed.

c. Where resources are identified that are evaluated as not eligible under Criteria A-C, and where their Criterion D values are unknown but will be avoided by project design or by implementing protection measures, the BLM will treat such resources as eligible for the NRHP under Criterion D without formal evaluation, and their significant values will be avoided. In California, the Applicant must submit a formal letter committing to the avoidance of any resources that are unevaluated under Criterion D; this applies to resources identified on Federal and non-Federal lands. Any such resources must be included in the HPMP.

5. The nature or kind of each required treatment measure (avoidance, minimization, mitigation) pertaining to each historic property (e.g., landscape photography, archaeological data recovery, etc.);

6. The identification of treatment measures, if any, which must be completed prior to authorization of ground-disturbing activities (e.g., barricading or fencing, archaeological data recovery, landscape photography) and/or those measures which may be completed after authorization of ground disturbance (e.g., historical research, installation of an interpretive kiosk, public education materials, etc.); and

7. The documentation and reporting procedures for each proposed treatment measure, including data management and dissemination methodologies and a proposed schedule of reports.

H. The HPTP may include but is not limited to the following examples of treatment measures for adverse effects:

1. Treatment measures for tribal values that focus on benefit to tribes through public outreach or other means; completion of NRHP nomination forms; Historic American Building Survey, Historic American Engineering Record, and Historic American Landscape Survey documentation to be submitted to the Library of Congress; documentation of local or regional resources to be submitted to the appropriate SHPO/THPO or State Archives; and partnerships and funding for public archaeology projects; print publication (brochure/book); digital media publication (website/podcast/video).

2. Treatment measures may also include, but not limited to, conservation easements, including easements held by a Tribe, OR purchase of land containing historic properties for transfer to a protective preservation organization or a Tribe, with willing consent of landowner

   a. These options should only be considered in rare and special cases because of their difficulty of implementation and preservation in perpetuity.

   b. Implementation of either of these options would require a commitment to long term monitoring, a second legally binding agreement document, and a third-party preservation entity to hold the easement or covenant, and the involvement of the SHPO/THPO.

I. Review and Approval of the HPTPs

1. The Applicant shall submit the draft HPTP to the BLM for initial review and comments. BLM shall review the draft HPTP and provide comments to the Applicant within thirty (30) calendar days. The Applicant shall respond to BLM's comments and submit a revised HPTP within thirty (30) calendar days of receipt of comments. Upon approval by the BLM, the BLM shall provide the SHPOs/THPO and other Consulting Parties within each State a copy for review, requesting comments on the adequacy of the proposed treatment measures. These parties will be notified of the review period via email and will have sixty (60) calendar days to review and comment on the plan. If the SHPO/THPO does not respond to the BLM within sixty (60) calendar days, the BLM will contact the SHPO/THPO via email or

telephone rather than assume concurrence with the proposed treatment measures embodied in the respective HPTP. After a good faith effort, the BLM will proceed.

2. The BLM will convene at least one consultation meeting to discuss comments on the HPTP in each State with all interested Consulting Parties after the sixty (60)-calendar-day comment period. Tribes may request individual government-to-government consultation meetings, rather than or in addition to participating in the collective consultation meeting. If the sixty (60)-calendar-day review time frame cannot be met, the SHPO/THPO, Tribe or Consulting Party will notify the lead BLM Office main point of contact by email requesting a review extension. The lead BLM Office will determine whether to grant an extension, not to exceed an additional thirty (30) calendar days.

3. The BLM shall consolidate the comments from Consulting Parties in each State and advise the Applicant of necessary revisions to the draft HPTP. The BLM shall ensure that all comments are taken into consideration in revising the HPTP and will provide the revised HPTP to the SHPO/THPO for a twenty-one (21)-calendar-day review period. Comments from Consulting Parties will be addressed in the final HPTP. The BLM will notify and provide the Applicant and the Consulting Parties with a copy of the final HPTP when approved.

J. During the treatment phase, if deviations to the approved HPTP are warranted, the Applicant will submit proposed deviations from the HPTP to the BLM for review prior to implementation. The BLM shall provide copies of the proposed deviation via email to the appropriate SHPO/THPO, the Tribes, the ASM and land manager(s) within the respective State for a five (5)-calendar-day review. The BLM shall consider comments received within the review period and shall determine the adequacy of the proposed deviation. The BLM will notify the Applicant if and when the deviation has been approved.

VII. MONITORING, POST-REVIEW DISCOVERIES, AND UNANTICIPATED EFFECTS

A. All monitoring shall follow clearly stated objectives and methodologies for achieving those objectives delineated in the Monitoring and Discovery Plan (MDP) or the HPMP, both of which are parts of the HPTP, such as to ensure avoidance or minimization during construction and reclamation; to measure the effectiveness of avoidance, minimization and treatment measures; to assess the effects of operations and maintenance activities; or to help define treatments for historic properties with long-term concerns. The MDP describes the monitoring and discovery protocol during construction and reclamation. The HPMP describes the monitoring and discovery protocol during operations and maintenance.

B. Monitoring During Construction and Reclamation

1. The Applicant, through their cultural resources contractor, shall conduct monitoring during construction activities as described in the MDP, to manage post-review discoveries and unanticipated effects during project construction. Monitoring locations will include all areas identified in the MDPs in the HPTPs, including areas of ground disturbance not associated with historic properties. Monitoring

procedures, the evaluation of NRHP eligibility, tribal consultation, and the treatment of discovered historic properties shall be handled in accordance with the MDPs in the HPTPs.

2. Post-review discoveries: Any cultural resources determined by the BLM to be historic properties that were discovered or adversely affected during construction and not subjected to pre-construction treatment will be addressed in accordance with the MDP.

3. Roles and responsibilities of the Applicant, the Applicant's cultural resources contractor, the BLM, and the Tribes, including those pertaining to the determinations of eligibility, and treatment of discoveries, are described in the MDP.

4. The MDP includes a Tribal Participation Plan to be prepared as an appendix so that it can be used as a stand-alone document. The BLM will require the Applicant to hire tribes' designated representatives (tribal cultural consultants or tribal monitors) to monitor and be on site during Class III cultural resources inventory, as well as all ground disturbing construction activities for facilities, roads or other components associated with the Undertaking, post-construction reclamation activities, and any archaeological field work required by the HPTP or any subsequent plan. The Tribal Participation Plan describes the logistics and protocols for tribal participation.

C. Post-Review Discoveries

1. Cultural Resources: All discoveries made during construction shall be addressed in accordance with the MDP, which is a part of the HPTP. A process for timely Tribal notification of discoveries shall be included in the MDP.

   a. In Arizona on State and private land, the BLM shall ensure that the discoveries are treated according to A.R.S. § 41-841, and that the SHPO is notified of the discovery.

   b. In California on State and private land, the BLM shall ensure that discoveries follow the process in California Public Resources Code (PRC) Sections § 5020 et seq.; § 21000 et seq.; California Code of Regulations (CCR), Title 14, Chapter 3, Sections § 4850 et seq.; § 15000 et seq.; and that the SHPO is notified of the discovery.

2. Human Remains

   a. The BLM and Applicant shall ensure that in the event human remains are discovered during the construction activities, work within 300 feet of the discovery will cease and the area will be secured; the Applicant will immediately contact the BLM authorized officer. The BLM will notify the appropriate County officials as outlined in the MDP.

   b. The BLM and the Applicant shall ensure that any human remains, funerary objects, items of cultural patrimony, or sacred objects encountered during any construction activities are treated with the respect due such materials and consistent with the MDP.

c. The BLM shall ensure that any Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony discovered on Federal or tribal lands shall be treated in accordance with the provisions of NAGPRA and its implementing regulations at 43 C.F.R. § 10.

d. In consultation with the Tribes and prior to any ground disturbing work associated with construction and with the HPTP, the BLM shall seek to develop a written NAGPRA plan of action pursuant to 43 C.F.R. § 10.5(e) to manage the inadvertent discovery or intentional excavation of human remains, funerary objects, sacred objects, or objects of cultural patrimony.

e. On lands within the exterior boundaries of the Colorado River Indian Reservation, the CRIT THPO will be contacted and consulted to ensure compliance with NAGPRA and tribal law.

f. In Arizona, the BLM shall ensure that, in consultation with the ASM, human remains and/or funerary objects identified on State and/or private land, will comply with the methods and procedures within A.R.S. § 41-844 and A.R.S. § 41-865 and their implementing rules. The Applicant, through their cultural resources contractor and working through the ASM, shall obtain "burial agreements" with Indian tribes pursuant to Rules Implementing A.R.S. § 41-844 and A.R.S. § 41-865, which govern discoveries of human remains and funerary objects on State, city, county and private lands. The SHPO shall be notified of such discoveries.

g. In California, the BLM shall ensure that the Native American Heritage Commission is notified so that Native American human remains and/or funerary objects discovered on non-Federal lands in California are treated in accordance with the applicable requirements of the Cal. Pub. Res. Code §§ 5097.98, 5097.991 and the Cal. Health & Safety Code § 7050.5(c).

h. When the BLM has verified that the requirements of the NAGPRA and Arizona and/or California State laws and tribal law have been met, the BLM may authorize the Applicant to resume operations in the vicinity of the discovery, as described in the MDP.

VIII. HISTORIC PROPERTIES MANAGEMENT

A. The BLM shall ensure that an HPMP will be developed as part of the HPTP (but as a stand-alone document) to establish the protocol for the long-term management of historic properties during operations and maintenance. The HPMP will be developed in consultation with the SHPOs/THPO and the Consulting Parties. The HPMP will identify how historic properties will be managed throughout the operations and maintenance of the Undertaking. The BLM will ensure that the Applicant implements the terms of the HPMP, with BLM oversight.

B. The HPMP will prescribe the monitoring of or other protective measures for historic properties (such as fencing, barricades, limiting access, or other protective measures) that may be affected by operations and maintenance within the area of the ROW grant or by increased access to historic properties through the access road network associated with the Undertaking and the related risk of vandalism to those properties.

C. The HPMP shall lay out a protocol for monitoring and protective measures that includes:

1. The specific historic properties to be monitored or subjected to protective measures; the reason for monitoring of each historic property (e.g., proximity to Undertaking components with the potential for damage from operation and maintenance, a property identified as being of particular importance to a Tribe, a property especially susceptible to vandalism, etc.); and schedule for monitoring of each historic property;

2. How these historic properties will be avoided during operations and maintenance and how impacts would be minimized or mitigated if they could no longer be avoided during operations and maintenance;

3. The professional qualifications of archaeologists doing the monitoring;

4. A protocol for involving the Tribes in monitoring;

5. A protocol for the schedule, production and distribution of monitoring reports; and the review of monitoring reports;

6. The objectives that long-term monitoring would achieve as part of the effort to avoid, minimize and/or mitigate adverse effects to those properties.

7. A plan for consultation on subsequent post-review discoveries and any post-review effects to any historic properties.

IX. REPORTING

A. Preliminary/End of Fieldwork Report

1. Upon completion of fieldwork at each historic property or group of historic properties, the Applicant, through their cultural resources contractor, shall provide the BLM with a Preliminary/End of Fieldwork Report of treatment completed at that site. The Preliminary/End of Fieldwork Report will include a brief characterization of the site assemblage/contents, the types of analyses yet to be completed, and a brief description of how the provisions of the HPTP were implemented. The Preliminary/End of Fieldwork Report shall include a description of any deviations from the HPTP that were implemented and the reasons for such deviations.

2. BLM shall review the Preliminary/End of Fieldwork Report and provide comments to the Applicant within seven (7) calendar days. The Applicant shall respond to BLM's comments and submit a revised report within seven (7) calendar days of receipt of comments. After the BLM's approval, the BLM shall provide a copy of the Preliminary/End of Fieldwork Report for each site via email and regular mail to the appropriate SHPO/THPO and other Consulting Parties for review. For previously unevaluated sites subjected to eligibility testing (discussed in **Stipulation VI.G.4**), the review period will be fifteen (15) calendar days for comments and concurrence with eligibility determinations and findings of effect as well as review of the proposed treatment. For sites at which data recovery was conducted as per the HPTP, the review period for the adequacy of treatment

measures will be fifteen (15) calendar days. The BLM shall consider comments submitted during the review period and shall consult with the appropriate reviewer(s) and SHPOs/THPO to resolve differences and/or disagreements. If the SHPO/THPO does not respond to the BLM within fifteen (15) calendar days, the BLM will contact the SHPO/THPO via email or telephone rather than assume concurrence with the contents of the Report. After a good faith effort, the BLM will proceed.

B. Final Treatment Reports

1. The BLM shall ensure that the Applicant, through their cultural resource contractor, prepares a draft Final Treatment Report for each State that incorporates the results of all the site-specific Preliminary/End of Fieldwork Reports along with post-fieldwork data analysis and synthesis into a comprehensive regional overview for each State. The Final Treatment Reports will also include updated site forms that reflect treatment.

2. The BLM shall review the draft Treatment Reports and provide a copy to the appropriate SHPO/THPO and Consulting Parties for a sixty (60)-calendar-day review, and comment period. The BLM will notify these parties of the submittal and review periods via electronic mail. The BLM shall consider comments received during the review period and shall consult with the appropriate reviewer(s) to resolve differences and/or disagreements. If the SHPO/THPO does not respond to the BLM within sixty (60) calendar days, the BLM will contact the SHPO/THPO via email or telephone rather than assume concurrence with the contents of the Report. After a good faith effort, the BLM will proceed. If the sixty (60) calendar-day review time frame cannot be met, the SHPO/THPO, Tribe or Consulting Party will notify the lead BLM Office main point of contact by e-mail requesting a review extension. The lead BLM Office will determine whether to grant an extension, not to exceed an additional thirty (30) calendar days.

3. The BLM shall ensure that the Applicant prepares a revised Treatment Report that considers comments received on the draft Treatment Report. The BLM shall provide copies to the appropriate SHPO/THPO and other Consulting Parties for a concurrent thirty (30)-calendar-day review period. The BLM will notify these parties of the submittal and review periods via electronic mail. The BLM shall consider comments submitted during the review period and shall consult with the appropriate reviewer(s) to resolve differences and/or disagreements. If the SHPO/THPO does not respond to the BLM within thirty (30) calendar days, the BLM will contact the SHPO/THPO via email or telephone rather than assume concurrence with the Report contents. After a good faith effort, the BLM will proceed. The BLM shall notify the Applicant when the final Treatment Report has been accepted and will distribute the final version to the Consulting Parties.

4. All Final Treatment Reports will be completed within three years of the termination of fieldwork. The BLM may grant an extension in the event of extenuating circumstances.

X. INITIATION OF CONSTRUCTION ACTIVITIES

A. Land managing agencies may issue a Notice to Proceed (NTP) for any and all segments of the Undertaking only if such authorizations will not restrict subsequent measures to avoid, minimize or mitigate the adverse effects to historic properties through rerouting of the corridor or placement of ancillary facilities.

B. For each segment of the Undertaking, upon the BLM's acceptance of the final Inventory Report for each State, as described in **Stipulation V**, the BLM, at its discretion and pending compliance with all other applicable laws and regulations, may issue an NTP on lands under any ownership or jurisdiction, subject to the appropriate jurisdiction's right-of-entry and ROW requirements, where there are no historic properties present.

C. For each segment of the Undertaking, upon the BLM's acceptance of the final HPTP for each State, the BLM, at its discretion and pending compliance with all other applicable laws and regulations, may issue an NTP on lands under any ownership or jurisdiction, subject to the appropriate jurisdiction's right-of-entry and ROW requirements, if historic properties are present but will not be adversely affected, and all stipulations in the HPTP are in place to ensure no adverse effect. Such measures may include a buffer for avoidance clearly marked in the field and provision for any monitoring, if required (as described in the approved HPTP/MDP/HPMP).

D. For each segment of the Undertaking, if historic properties are present and such historic properties may be adversely affected by the Undertaking, then the BLM may issue an NTP for that segment only if the BLM has accepted a final Preliminary/End of Fieldwork Report of treatment that has occurred at each site described in the HPTP for that segment, and in consultation with all Consulting Parties.

E. Contingent upon **Stipulation XI.D**, the BLM, at its discretion, and pending compliance with all other applicable laws and regulations, may issue an NPT on lands under any ownership or jurisdiction, subject to the appropriate jurisdiction's right-of-entry and ROW requirements for segments where provisions of the HPTP have been successfully implemented.

XI. CHANGES IN CONSTRUCTION ACTIVITIES

A. General requirements for variances: The BLM will require that a Class III inventory be conducted for any variances or amendments to the ROW grant or any other changes to the Undertaking that are outside the APE surveyed for the Undertaking. Where the BLM determines that additional inventory is needed, the BLM will issue an NTP only after the Section 106 process is completed. The BLM will determine where construction may continue while the additional work is being completed.

1. The APEs of all variance areas and the identification and evaluation of historic properties within variance areas will be consistent with those defined in **Stipulation V.**

2. A Record Search and Literature Review (Class I Inventory) and a Class III Intensive

3. Field Inventory will be performed on all variance areas, where not previously inventoried for cultural resources or where SHPO/THPO guidance indicates that new Class III inventory of previously inventoried areas is warranted.

4. The Applicant will assemble all variance reports into a second Class III inventory volume for the Undertaking.

B. Reporting and Review of Class III Inventory Results for Variances - Eligibility, Effects and Treatment: The BLM, SHPOs/THPO, and Consulting Parties will make every effort to expedite review of any changes to construction plans after initiation of construction. Results of the Inventory Report will be handled as follows:

1. If the inventory results in **no cultural resources or potential properties of traditional cultural or religious importance to Tribes identified**, the Applicant, through their cultural resources contractor, will submit copies of reports on SHPO Survey Report Summary Form (SRSF) (for Arizona) or in the ARMR format or as an addendum to an existing ARMR technical report (for California) to the lead BLM Office for distribution to the appropriate Federal and State agencies and Tribes. The BLM will provide an expedited review of the variance request, not to exceed two (2) working days following receipt, and will provide the Applicant, through their cultural resources contractor, with written approval/disapproval of the report via email. The report data will also be included in any final report for the Undertaking.

2. If the inventory and eligibility evaluation results in **no historic properties** identified (i.e., the cultural resources identified are not eligible), the Applicant, through their cultural resources contractor, will submit the draft Inventory Report to the lead BLM Office for distribution to the appropriate SHPO/THPO, Tribes and land manager for concurrent review. Reviewers will provide any comments to the lead BLM Office within fifteen (15) calendar days of receipt of the document. The Applicant, through their cultural resources contractor, will revise the Report as necessary, and resubmit it to the BLM within fifteen (15) calendar days. If the SHPO/THPO does not respond to the BLM within fifteen (15) calendar days, the BLM will contact the SHPO/THPO via email or telephone rather than assume concurrence with the contents of the report. After a good faith effort, the BLM will proceed. The BLM may issue the NTP or other applicable authorization to proceed at this point pursuant to **Stipulation XI**.

3. If the inventory results in **historic properties identified**, the Applicant, through their cultural resources contractor, will submit copies of the draft Inventory Report, including the recommendations of eligibility for and assessment of effect on any historic properties, to the lead BLM Office to distribute to the appropriate SHPO/THPO, Tribes and land managers for concurrent review. Reviewers will provide any comments to the lead BLM Office within thirty (30) calendar days. The Applicant, through their cultural resources contractor, will revise the Report as necessary, and resubmit it to the BLM within ten (10) calendar days. If the SHPO/THPO does not respond to the BLM within thirty (30) calendar days, the BLM will contact the SHPO/THPO via email or telephone rather than assume

concurrence with the contents of the report. After no response to a good faith effort, the BLM will proceed.

a. No historic properties will be affected: If the variance is modified to avoid or minimize the effects of the Undertaking on the historic property (or properties), the BLM may issue the NTP or other applicable authorization to proceed pursuant to **Stipulation XI.B**.

b. Historic properties will be adversely affected:

i. A Supplemental Treatment Plan for those properties will be developed and reviewed consistent with **Stipulation VI** of this PA.

ii. The Supplemental Treatment Plan shall be appended to the HPTP, and after the completion of these treatment measures, a Preliminary/End of Fieldwork Report will be prepared and distributed in accordance with **Stipulation IX.A**.

iii. The BLM shall ensure that the results of such treatment efforts are reported in the final Treatment Report for the Undertaking.

iv. Once the BLM determines that the approved treatment has been completed, the BLM may issue the NTP or other application for authorization to proceed pursuant to **Stipulation X.C**.

XII. CONSERVATION MANAGEMENT ACTIONS

A. BLM Internal Third-Party Review Process

1. The Applicant will hire a third-party cultural resources consultant to provide cultural resources technical support to the BLM. This support will include, but not be limited to, assisting the BLM as needed throughout the processes identified in **Stipulations V through XI**. The BLM must review and approve the scope of work for the third-party cultural resources consultant's services. Third-party cultural resources consultants must meet the same permitting requirements as the cultural resources consultant, consistent with **Stipulation IV.A,** and report directly to the BLM lead archaeologist for the project. The purpose of the third-party peer review is to ensure information accuracy and consistency with all BLM requirements and to assist the BLM in meeting its Section 106 compliance requirements.

2. Third-party peer reviews will include, but are not limited to the following activities:

a. Review of Class III Inventory Reports, treatment plans, and other documents required by this PA developed for the Undertaking.

b. Review of all fieldwork conducted by the cultural resources consultants, including on-site check-ins during fieldwork and post-fieldwork field verification assessments.

c. The third-party consultant may also complete other tasks to assist the BLM with meeting its Section 106 compliance requirements including, but not limited to drafting letters, meeting coordination, and Consulting Party coordination.

d. While the third-party consultant may assist the BLM with Section 106 compliance, the third-party consultant cannot conduct government-to-government consultation with the Tribes.

3. The results of the field verification under subsection 2.b and review of the information presented in the technical reports will be documented in a summary report to be submitted to the BLM within sixty (60) calendar days of completion of the peer review of those components. The BLM will review the final third-party peer review report within sixty (60) calendar days of receipt. After acceptance by the BLM, the final third-party peer review report will be made available to Consulting Parties.

4. The BLM will consider the information presented in the third-party peer review when making determinations and findings for the portion of the project consistent with **Stipulation V.**

C. Compensatory Mitigation Fee for Cumulative Effects: Only for the portion of the Undertaking in California, the BLM will impose a compensatory mitigation fee that applies only to the portion of the Undertaking located within the DRECP Land Use Planning Amendment Area to address cumulative and some indirect adverse effects to historic properties.

1. The mitigation fee will be calculated in a manner that is commensurate to the size and regional impacts of the Undertaking, as determined by Appendix G of the DRECP PA.

2. If Appendix G of the DRECP PA has not been completed at the time the PA is executed, the BLM will develop resolution strategies to address cumulative and indirect adverse effects in a manner that is commensurate to the size and regional impacts of the Undertaking, in consultation with the Consulting Parties. The BLM will have final approval of these treatment measures and the BLM will ensure that these treatment measures are described in the HPTP. All types of project-specific treatment may be considered to mitigate the specific cumulative and indirect adverse effects of the Undertaking, as identified in **Stipulation V.B**.

D. Cultural Resources Sensitivity Orientation

1. Prior to conducting environmental orientation, the Applicant will provide their cultural resource orientation materials to BLM for a thirty (30)-calendar-day review. During that review period, BLM shall provide a fifteen (15)-calendar-day review by the Consulting Parties within five (5) calendar days of receipt of the orientation materials.

2. Before any company is authorized to work within the APE, the Applicant shall provide orientation to all personnel (including contractors, inspectors and monitors) involved in construction, operation and maintenance of the Undertaking on site avoidance and protection measures and statutes protecting all cultural resources. Orientation will include sensitivity orientation regarding properties of traditional religious and cultural significance to the Tribes and Tribal issues in general. The BLM shall ensure that information regarding properties of traditional religious and cultural significance to the Tribes presented during orientation is treated with

respect and kept confidential. At a minimum, all personnel shall receive in-person orientation that discusses the importance of cultural resources, including linear resources such as trails; laws and regulations protecting them; penalties for violation; and requirements to avoid damage to historic properties and to report discoveries of cultural resources in accordance with the MDP. The Tribes will be provided opportunities to participate in or provide materials to supplement the orientation program. This orientation program will also apply to personnel hired after the project has started. The Applicant shall maintain records demonstrating that the above described personnel orientation has been carried out and that all on-site workers have received the orientation.

3. If construction occurs outside of the approved ROW, the BLM will determine whether to issue a stop-work order and conduct damage assessment under ARPA, if appropriate, while the Applicant provides additional orientation (and documentation of that orientation) for personnel in the area.

XIII. APPLICANT'S RESPONSIBILITIES

A. The Applicant will post a financial security (such as a surety bond, letter of credit, etc.) with the BLM in an amount sufficient to cover all costs associated with implementing the HPTP, as negotiated by the Applicant where they contract for services in support of this PA. Such costs should cover all aspects of the HPTP implementation and may include, but are not limited to, inventory; treatment; post-field analyses; research and report preparation; interim and summary reports preparation; the curation of Project documentation, samples, and artifact collections in a BLM-approved curation facility; and the repatriation and reburial of any human remains, sacred objects, or objects of cultural patrimony. The Applicant will post a financial security prior to commencing any work to implement the HPTP.

B. The security posted is subject to forfeiture if the Applicant does not complete tasks within the time period established by the treatment selected; provided, however, that the BLM and the Applicant may agree to extend any such time periods. The BLM will notify the Applicant that the security is subject to forfeiture and will allow the Applicant thirty (30) calendar days to respond before action is taken to forfeit the security.

C. The BLM will release the financial security, in whole or in part, as specific tasks are completed and accepted by the BLM.

D. Project Suspension/Termination Plan

1. If the Undertaking is suspended or terminated for any reason, the Applicant shall provide a plan outlining the steps they will take in order to complete any data recovery or other treatment measures that are in progress at the time of project termination.

2. As part of this plan, the Applicant will also outline how they will complete the analysis, interpretation, reporting, and curation of artifacts obtained during the treatment measures at all historic properties up to the time of suspension or termination.

E. The BLM shall actively oversee activities pursuant to this PA. Should the Applicant or its cultural resources contractor fail to comply with any provision of this PA, the BLM may, at its discretion, counsel the Applicant and/or its cultural resources contractor regarding performance requirements or suspend the permits under which this PA is executed. Such suspension could, at the BLM's discretion, result in the issuance of a "stop work" order for the entire Undertaking if the BLM determines that the severity of the failure to comply warrants it. The provisions of the PA are mandatory and can be enforced through any administrative or legal remedies available by law.

F. The BLM will remain responsible to inspect for compliance with the terms and conditions of the BLM ROW grant pertaining to historic properties for the life of the grant, including enforcing provisions of this PA and the required HPMP related to operations and maintenance. The BLM will ensure that the appropriate BLM cultural resources specialist participates in these compliance reviews.

XIV. PA ANNUAL REPORT AND REVIEW: The Consulting Parties shall evaluate the implementation and operation of the PA on an annual basis. There shall be an annual meeting among the Consulting Parties on or near the anniversary date of the execution of this Agreement to review the progress and effectiveness of the PA. The BLM will set up this meeting, in coordination with all the Consulting Parties.

A. Prior to each annual meeting, the BLM will provide Consulting Parties with an annual letter report (Annual Report) to review the progress under the PA and under each approved HPTP. The Annual Report will include an update on project schedule, status, and any ongoing cultural resources monitoring or treatment activities, discovery situations, proposed future actions, or outstanding tasks to be completed under the PA or the HPTP. Consulting Parties will have thirty (30) calendar days to review the Annual Report and provide comments to the BLM, who will then use the comments when developing the agenda for the annual meeting.

B. The Annual Report shall address issues and describe actions and accomplishments over the past year, as well as plans for the coming year, as appropriate, and shall minimally include the following components:

1. Historic property surveys and results;
2. Status of treatment activities;
3. Ongoing and completed public education activities;
4. Any issues that are affecting or may affect the ability of the BLM to continue to meet the terms of the PA;
5. Any disputes and objections received, and how they were resolved;
6. Any additional parties who have become Signatories or Concurring Parties to the PA in the past year; and
7. Proposed plans for next year's activities, per each State's HPTP.

C. Within fourteen (14) calendar days after each annual meeting, the BLM will summarize the meeting, including proposed action items identified during the annual meeting and how they are to be addressed, in a letter to Consulting Parties. Proposed action items must be directly linked with the implementation of the PA and the HPTP. Consulting Parties will have twenty (20) calendar days to review and comment on the meeting

notes and, if necessary, provide the BLM with any changes that need to be considered in revising the meeting notes. If changes are needed, the BLM will produce revised meeting notes within thirty (30) calendar days of receipt of comments and will provide the final notes to the Consulting Parties. The BLM, in consultation with the Consulting Parties, must approve of the proposed action items before they are fully implemented.

D. Evaluation of the implementation of the PA may also include in-person meetings or conference calls among Consulting Parties, and suggestions for possible modifications or amendments to the PA. All Consulting Parties should be included in these consultations.

XV. DISPUTE RESOLUTION

A. Should any Consulting Party to this PA object at any time to any actions proposed or the manner in which the terms of this PA are implemented, that party shall notify the BLM in writing expressing its concern and including a proposed resolution. The BLM shall notify the Signatories of any objection and invite them to participate in resolution of the dispute. The BLM and the Signatories shall consult with such party to resolve the objection. If the BLM determines that such objection cannot be resolved, the BLM will notify all Consulting Parties of the dispute and will:

1. Forward all documentation relevant to the dispute, including the BLM's proposed resolution, to the ACHP, asking that office to provide the BLM with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the BLM shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP and Consulting Parties and provide everyone with a copy of this written response. The BLM will then proceed according to its final decision.

2. If the ACHP does not provide its advice regarding the dispute within the thirty-(30) day period, the BLM may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the BLM shall prepare a written response that takes into account any timely comments regarding the dispute from the Consulting Parties and provide them and the ACHP with a copy of such written response.

3. The BLM will be responsible for carrying out all other actions subject to the terms of this PA that are not the subject of the dispute.

XVI. AMENDMENT: Any Signatory or Invited Signatory to this PA may request that it be amended by informing the BLM in writing of the reason for the request and the proposed amendment language, whereupon the BLM shall inform the other Signatories and request their views concerning the proposed amendment. If there is agreement among all Signatories, the document shall be amended accordingly and the amendment will be effective on the date a copy signed by all of the Signatories is executed by the ACHP. The BLM shall provide all Consulting Parties with a copy of the final amendment.

XVII. TERMINATION

A. Pursuant to 36 C.F.R. § 800.6(c) (8), if any Signatory or Invited Signatory to this PA determines that the terms of the PA cannot be or are not being carried out, then such party must provide written notice to the BLM and the other Signatories and Invited Signatories stating the reasons for the determination and requesting consultation to resolve the stated concerns through amendment of the PA. The Signatories and Invited Signatories shall consult regarding potential amendments to the PA to resolve the stated concerns within thirty (30) calendar days of the written request. If the Signatories and Invited Signatories are unable to amend the PA or agree on other actions to resolve the concerns, the objecting party may terminate the PA by providing written notice to the Signatories and Invited Signatories.

B. Termination of the agreement by an Invited Signatory shall only apply to lands under their respective jurisdiction. In such case, the BLM shall comply with 36 C.F.R. § 800, subpart B, for all undertakings affecting the terminating Signatory's lands within the scope of the PA.

C. In the event that this PA is terminated, the BLM shall have six months after termination, or a longer time period if agreed to in writing by all Signatories, to either (a) have another PA executed by all Signatories, or (b) request, take into account, and respond to ACHP comments in accordance with 36 C.F.R. § 800.7. The BLM shall take reasonable steps to avoid adverse effects to historic properties until either option is carried out. The BLM will notify all parties to this PA as to the course of action it will pursue.

D. If neither option has been carried out within six months after termination (or a longer time period agreed to in writing by all Signatories), BLM shall, within fourteen (14) days thereafter, request ACHP formal comments and, within forty-five (45) days after the ACHP issues them, take into account and respond to them in accordance with 36 C.F.R. § 800.7. The BLM shall continue to take reasonable steps to avoid adverse effects to historic properties until this process is concluded.

XVIII. DURATION OF THE PA

A. Unless otherwise amended pursuant to Stipulation XVI or terminated pursuant to Stipulation XVII of this PA, this PA will be in effect following its execution by the Signatory Parties until the BLM, in consultation with the other parties to this PA, determines that all its terms have been satisfactorily fulfilled, or within five (5) years of execution of this PA, whichever comes first.

B. At least six (6) months prior to the expiration date, the Signatories and Invited Signatories shall consult to determine whether this PA remains satisfactory and whether to extend its duration. If there is agreement, the BLM will amend (revise and update) the PA in accordance with Stipulation XVI, as determined through consultation with the Signatories and Invited Signatories. The amended agreement must be signed and executed by all Signatories prior to the original expiration date. If BLM fails to amend the agreement prior to its expiration, BLM shall follow 36 CFR Part 800 for the remainder of the undertaking.

C. Upon a determination that all terms of this PA have been satisfactorily fulfilled, BLM will immediately notify the other parties to this PA in writing that its terms have been satisfactorily fulfilled and this agreement will have no further force or effect.

D. The BLM will retain responsibility for administering the terms and conditions of the ROW grant pertaining to historic properties for the life of the grant, including enforcing provisions of this PA and the required HPMP related to operations and maintenance.

XIX. NON-ENDORSEMENT CLAUSE: Nothing in this PA should be interpreted to imply that any party endorses the Ten West Link Transmission Project.

XX. COUNTERPART SIGNATURES AND EXECUTION STATEMENT

A. This PA may be executed in counterparts, each separately and together constituting one and the same document. Execution and delivery of this PA by facsimile or email shall be sufficient for all purposes and shall be binding on any party to this PA.

B. Execution of this PA by the BLM, the SHPOs/THPO, and the ACHP and implementation of its terms evidence that the BLM has satisfied its Section 106 responsibilities with regard to the construction, operation and maintenance of the Ten West Link Transmission Project and has afforded the ACHP an opportunity to comment.

Letter 11

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AMONG
THE BUREAU OF LAND MANAGEMENT,
ARIZONA YUMA FIELD OFFICE,
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THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,
THE COLORADO RIVER INDIAN TRIBES,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE
TEN WEST LINK TRANSMISSION PROJECT
BETWEEN TONOPAH, MARICOPA COUNTY, ARIZONA
AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

BUREAU OF LAND MANAGEMENT

Raymond Suazo — Date: 9/17/2019
State Director

SIGNATORY PAGE

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AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

ARIZONA STATE HISTORIC PRESERVATION OFFICER

_____

Kathryn Leonard Date:
State Historic Preservation Officer

SIGNATORY PAGE

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CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

_____

Julianne Polanco Date:
State Historic Preservation Officer

SIGNATORY PAGE

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COLORADO RIVER INDIAN TRIBES

_____

Dennis Patch Date:
Chairman

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ADVISORY COUNCIL ON HISTORIC PRESERVATION

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John M. Fowler Date:
Executive Director

INVITED SIGNATORY PAGE

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BUREAU OF INDIAN AFFAIRS

_____

Bryan Bowker Date:
Regional Director

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DCR Transmission, L.L.C.

30 Sep, 2019

Himanshu Saxena
Chief Executive Officer

Date:

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AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

Bureau of Reclamation

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Terrance J. Fulp, Ph.D. Date:
Regional Director

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Department of Defense, Yuma Proving Grounds

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Garrison Manager Date:

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Arizona State Lands Department

_____

Lisa Atkins Date:
Arizona State Land Commissioner

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California Public Utilities Commission

_____

Stephanie Green Date:
CPUC Tribal Liaison

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Western Area Power Administration

_____

Ronald Moulton Date:
Southwest Regional Manager

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Arizona State Museum

_____

Patrick Lyons Date:
Director

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La Paz County

_____

Duce Minor Date:
Chairman

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AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

Town of Quartzsite

_____

Jim Ferguson Date:
Town Manager

CONCURRING PARTY SIGNATORY PAGE

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Ak-Chin Indian Community

_____

Robert Miguel Date:
Chairman

CONCURRING PARTY SIGNATORY PAGE

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Fort Mojave Indian Tribe

_____

Timothy Williams Date:
Chairman

CONCURRING PARTY SIGNATORY PAGE

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Gila River Indian Community

_____

Stephen Roe Lewis Date:
Governor

CONCURRING PARTY SIGNATORY PAGE

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Hopi Tribe

_____

Timothy L. Nuvangyaoma Date:
Chairman

CONCURRING PARTY SIGNATORY PAGE

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Morongo Band of Mission Indians

_____

Robert Martin Date:
Chairman

CONCURRING PARTY SIGNATORY PAGE

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Fort Yuma-Quechan Tribe

_____

Jordan Joaquin Date:
President

CONCURRING PARTY SIGNATORY PAGE

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Salt River Pima-Maricopa Indian Community

_____

Martin Harvier Date:
President

CONCURRING PARTY SIGNATORY PAGE

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Soboba Band of Luiseno Indians

_____

Scott Cozart Date:
Chairman

CONCURRING PARTY SIGNATORY PAGE

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TEN WEST LINK TRANSMISSION PROJECT
BETWEEN TONOPAH, MARICOPA COUNTY, ARIZONA
AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

Tohono O'odham

_____

Edward D. Manuel Date:
Chairman

CONCURRING PARTY SIGNATORY PAGE

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THE COLORADO RIVER INDIAN TRIBES,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE
TEN WEST LINK TRANSMISSION PROJECT
BETWEEN TONOPAH, MARICOPA COUNTY, ARIZONA
AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

Torres Martinez Desert Cahuilla Indians

_____

Thomas Tortez Date:
Chairperson

CONCURRING PARTY SIGNATORY PAGE

**PROGRAMMATIC AGREEMENT
AMONG
THE BUREAU OF LAND MANAGEMENT,
ARIZONA YUMA FIELD OFFICE,
THE ARIZONA STATE HISTORIC PRESERVATION OFFICER,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,
THE COLORADO RIVER INDIAN TRIBES,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE
TEN WEST LINK TRANSMISSION PROJECT
BETWEEN TONOPAH, MARICOPA COUNTY, ARIZONA
AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

Twenty-Nine Palms Band of Mission Indians

_____

Darrell Mike Date:
Chairman

CONCURRING PARTY SIGNATORY PAGE

**PROGRAMMATIC AGREEMENT
AMONG
THE BUREAU OF LAND MANAGEMENT,
ARIZONA YUMA FIELD OFFICE,
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THE COLORADO RIVER INDIAN TRIBES,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE
TEN WEST LINK TRANSMISSION PROJECT
BETWEEN TONOPAH, MARICOPA COUNTY, ARIZONA
AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

Yavapai-Apache Nation

_____

Jane Russell-Winiecki Date:
Chairwoman

CONCURRING PARTY SIGNATORY PAGE

**PROGRAMMATIC AGREEMENT
AMONG
THE BUREAU OF LAND MANAGEMENT,
ARIZONA YUMA FIELD OFFICE,
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REGARDING THE
TEN WEST LINK TRANSMISSION PROJECT
BETWEEN TONOPAH, MARICOPA COUNTY, ARIZONA
AND BLYTHE, RIVERSIDE COUNTY, CALIFORNIA**

Yavapai-Prescott Indian Tribe

_____

Robert Ogo Date:
Vice President

ATTACHMENT 1: PROJECT DESCRIPTION AND MAP

Project Description

The Applicant filed a ROW application (SF-299) with the BLM on September 14, 2015 to construct, operate, maintain, and decommission an electric transmission line project in western Arizona and eastern California. **(This Undertaking does not consider decommissioning. As per Stipulation II.B, decommissioning will be a separate undertaking.)** The proposed Ten West Link Transmission Line Project (the Project) would consist of a series-compensated, single circuit, 500 kilovolt (kV) transmission line traversing approximately 114 miles.
The Project would be designed with a conductor capacity to transmit 3200 megawatts (MW) and provide interconnection capability for new energy projects located in the region.

The Project would begin at the existing Arizona Public Service Company (APS) Delaney Substation near Tonopah, Arizona, and terminate at the existing Southern California Edison (SCE) Colorado River Substation near Blythe, California. The Project would be located in Maricopa and La Paz counties in Arizona, and Riverside County in California.
The Applicant's proposed Project would be constructed using a combination of guyed V, self-supporting lattice, lattice H-frame and/or monopole structures. The Project would be primarily located within designated utility corridors largely following the existing Devers to Palo Verde (DPV) transmission line and other linear facilities including natural gas pipelines. The Project is designed to be located within a 200-foot wide ROW for the transmission line. In areas of colocation, the Project would maintain a 250-foot separation from the existing DPV 500-kV transmission line in accordance with requirements set forth by the California Independent System Operator (CAISO). To the extent possible, the Applicant proposes to use existing DPV access roads and other existing access roads. Approximately 97 miles of the Project would be in Arizona, and approximately 17 miles would be in California. The Project would cross approximately 83 miles of Federal land, including lands managed by the BLM and Reclamation. The Project would also cross lands administered by the ASLD, the SLC, and private lands. The Project would take approximately two years to construct. Once constructed, the Project would be in operation year-round.

The BLM has identified Alternative 2: BLM Utility Corridor Route (with the inclusion of subalternative 4d) as the Agency Preferred Alternative. This route was developed to emphasize the use of BLM utility corridors along Interstate 10 and parallel to the existing Palo Verde to Devers transmission line; avoid the Kofa National Wildlife Refuge; avoid Johnson Canyon and other high use recreation areas; minimize impacts to the Colorado River Indian Tribes Reservation; avoid residential and other developed areas; and avoid areas of dense cultural resources near the Mule Mountains south of Blythe, California.

MAP OF UNDERTAKING

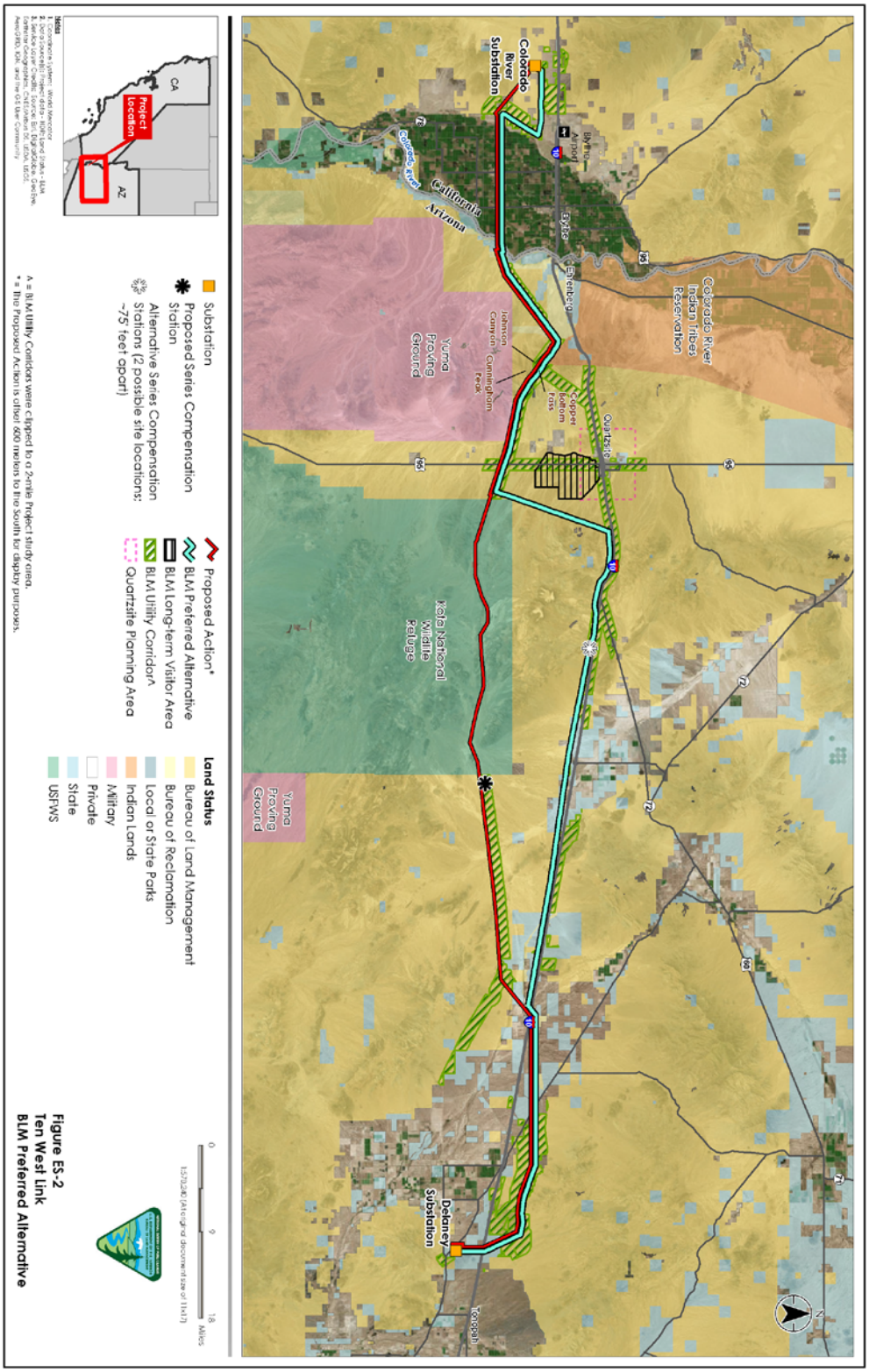

Figure ES-2
Ten West Link
BLM Preferred Alternative

ATTACHMENT 2: DEFINITIONS FOR TERMS USED IN THIS PA

Adverse Effect – Alteration of the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register of Historic Places (NRHP).

Area of Potential Effects (APE) – The geographic area or areas within which an undertaking may directly, indirectly or cumulatively cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking [36 C.F.R. §800.16(d)].

Authorized Officer – The Authorized Officer for this Undertaking is the BLM Yuma Field Office Manager and/or his or her delegated representative.

Consultation – The process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters that arise during the Section 106 process. The Secretary of Interior's "Standards and Guidelines for Federal Agency Preservation Programs pursuant to the National Historic Preservation Act" provide further guidance on consultation.

Consulting Party – Any party (including Tribes) that has participated in the development of this PA and has indicated intent to participate in consultations during its implementation either by signing in concurrence or by written notification to the Agency Official. The refusal of any party invited to sign the PA, other than the Signatories, does not invalidate the PA. Consulting Parties include:

Signatories – Parties who have legal responsibilities for completion of the stipulations in the PA. The Signatories have sole authority to execute the PA, and together with the Invited Signatories, to amend or terminate the PA.

Invited Signatories – The authorized official may invite additional parties to sign the PA and upon signing, they have the same rights with regard to amendments and termination as the Signatories. These parties have legal or financial responsibility in terms of the Undertaking, such as the issuance of a permit, license or ROW, and they have a compliance responsibility under the NHPA or a state cultural resource statute.

Concurring Parties – A party who signs this PA but is not legally or financially responsible for completion of stipulations set forth in the PA.

Construction and Reclamation– The construction phase begins when the BLM has issued a ROW grant to the Applicant for the Undertaking. It includes all activities related to construction of the Undertaking, including activities required to be completed in advance of construction, as well as all activities completed in order to reclaim lands disturbed during construction for two years after construction is completed or until cost recovery agreements related to construction expire.

Cultural Resource – Any location of human activity, occupation, or use identifiable through field inventory, historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, landscapes, buildings, structures, objects, and places that possess historic and/or cultural significance as well as places with important public and scientific uses and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups. Cultural resources may be but are not necessarily eligible for the NRHP.

Cultural Resource Consultant/Contractor (CRC) – A qualified and permitted professional consultant in cultural resources (archaeologist, historian, ethnographer, historic architect, architectural historian, or anthropologist) who is responsible for implementing cultural resource inventories and who prepares cultural resource documents, reports, analysis, records, and professional literature. CRCs must meet the Secretary of the Interior's Professional Qualification Standards and hold appropriate permits from land managing agencies and/or the Arizona State Museum for lands in Arizona.

Cultural Resource Inventory (from H-8100-1) –

Class I – Existing data inventory: Large-scale review of known cultural resource data

Class II – Sampling field inventory: Sample oriented field inventory

Class III – Intensive field survey: A complete surface inventory of a specific area involving a systematic field examination of an area to gather information regarding the number, location, condition, distribution, and significance of cultural resources present, typically requiring a systematic pedestrian review of an area with transect intervals that shall not exceed 15 meters.

Day – Refers to calendar day unless otherwise stated.

Decommissioning – The action in which the transmission line and/or related facilities such as substations are taken out of commission (cease to operate) and are physically dismantled.

Effects – Alterations to the characteristics of a historic property qualifying it for inclusion in or eligibility for the NRHP:

Direct effects are caused by the Undertaking and occur at the same time and place as the undertaking.

Indirect effects are also caused by the Undertaking and are effects that may be visual, atmospheric, or audible that could diminish the integrity of the historic properties. Indirect effects may include increased vandalism and looting resulting from increased access.

Cumulative effects are the impacts on cultural resources which result from the incremental impact of the Undertaking when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (per 40.C.F.R. § 1508.7). Cumulative effects may be direct or indirect and result from incremental effects related to the Undertaking over time (e.g., increased access because

of new roads, future transmission lines along the same corridor, new projects feeding into the Undertaking, etc.). Additional roads and visitors to the area (construction personnel, recreationists, etc.) also increase opportunities for impacts from pot hunting, vandalism of historic properties, and disruption of spiritually important sites.

Eligible (for Inclusion in the NRHP) – Includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties not formally determined or listed, but that meet the NRHP criteria as determined by the Federal Agency in consultation with the SHPO/THPO, Tribes, and other parties.

Historic Property – Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria (36 C.F.R. § 800.16[l][1]).

Historic Properties Management Plan (HPMP) – A document that details the procedures and protocols to ensure the long-term protection and preservation of historic properties within the ROW for the duration of the ROW grant.

Historic Properties Treatment Plan (HPTP) – A document that details the procedures and techniques for resolving adverse effects to historic properties within the APE through avoidance, minimization, and/or mitigation (treatment) caused by construction.

Indian Tribe – An Indian tribe, band, nation, or other organized group or community, including a native village, regional corporation, or village corporation, as those terms are defined in Section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. § 1602), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians (36 C.F.R. § 800.16[m]).

Integrity – Refers to location, design, setting, materials, workmanship, feeling and association as defined in 36 C.F.R. § 60.

Interested tribal members – Tribal members who have identified themselves either as individuals or a group, through consultations with the BLM, the THPO, or the tribal member designated to participate in consultations concerning this Undertaking, as being interested in attending field inspection visits with the BLM and/or the CRC.

Inventory Report – The (Class III – see above description) Inventory Report documents the results of the cultural resources inventory detailing the areas surveyed; the survey methodologies used; the cultural framework of the project area and its relationship to the evaluation of significance; and the cultural resources discovered and documented. It provides recommendations to the lead Federal agency on NRHP-eligibility of the cultural resources identified within the inventoried area. It includes assessments of direct, indirect, and cumulative effects for historic properties within the APE of the Undertaking.

Monitoring and Discovery Plan – The Monitoring and Discovery Plan (1) provides a detailed plan to monitor compliance with stipulations of the HPTP to avoid, minimize, or mitigate adverse effects of the Undertaking; (2) may include specific plans where monitoring is necessary to help resolve adverse effects to historic properties; (3) establishes procedures to follow in the event that previously undiscovered cultural resources are encountered during the Undertaking; and (4) may include a Native American Graves Protection and Repatriation Act (NAGPRA) Plan of Action developed specifically to address the handling of human remains pursuant to 43 C.F.R. § 10; and (5) describes how the Undertaking will comply with A.R.S. § 41-844 (with respect to State, county, and city lands) and A.R.S. § 41-865 (with respect to private lands) in Arizona; and in California, with the Cal. Pub. Res. Code §§ 5097.98, 5097.991 and the Cal. Health & Safety Code § 7050.5(c). All monitoring plans shall explicitly state the objectives of the monitoring and provide a methodology for attaining these objectives. The Tribal Participation Plan is a component of the MDP.

Monitoring Report – A document that summarizes the results of monitoring activities performed as outlined within the MDP of the HPTP for each state.

NAGPRA Plan of Action (POA) – A written document that establishes procedures for ensuring the proper treatment of Native American remains and related grave goods encountered on Federal lands pursuant to 43 C.F.R. § 10.

National Register of Historic Places (NRHP) – The official list of the Nation's historic places worthy of preservation. Authorized under the National Historic Preservation Act of 1966, it is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. The National Register is administered by the National Park Service under the Secretary of the Interior. Properties listed in the National Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture.

NRHP Criteria – The criteria of significance established by the Secretary of the Interior for use in evaluating the eligibility of properties for inclusion in the NRHP (36 C.F.R. § 60).

Operation and Maintenance – Activities associated with operation and maintenance of the approved ROW over the life of the ROW grant. This includes all activities related to the functioning of the Undertaking after construction and reclamation are completed and prior to any activities related to decommissioning of the Undertaking. Activities during this time are generally infrequent, predictable, and routine. Any actions not specifically approved in the ROW grant, such as changes in equipment used or actions outside the ROW grant area require approval of the BLM.

Plan of Development (POD) – The Final POD is a BLM approved document that will be an enforceable term and condition as part of the BLM approved ROW grant. Contributors in the development of the Final POD prior to construction will include the Arizona State Land Department (ASLD) and the California Land Commission (SLC). The ASLD and the SLC will be responsible for developing and enforcing their respective stipulations, as they deem necessary, to mitigate natural and cultural resource impacts on state administered lands. Should the ASLD

and/or the SLC choose to adopt the terms, conditions, and special stipulations as outlined in the Final POD on their respective state authorized ROWs, responsibility to enforce these Final POD terms, conditions, and stipulations is strictly their sole responsibility. Enforcement will be between the state agency and the applicant.

Post Review Discovery -- A previously unknown cultural resource identified in the APE during construction and after the review of the Class III Inventory Report.

Preliminary/End of Fieldwork Report – A document that summarizes results of the treatment activities undertaken on an individual historic property for the purposes of informing the BLM and Consulting Parties and gaining approval for the Undertaking to proceed prior to the acceptance of the final Treatment Report.

Programmatic Agreement (PA)– A document that records the terms and conditions agreed upon to resolve the potential adverse effects of a Federal agency program, complex Project, or other situations in accordance with 36 C.F.R. § 800.14(b).

Reclamation – The activities necessary to restore lands disturbed by construction to as close to a pre-construction condition as possible. This may include ripping, re-seeding and contouring lands disturbed during construction, such as temporary access roads and staging areas.

Research Design and Work Plan – A document that describes the proposed Area of Potential Effect and the reports that the BLM proposes to fulfill identification efforts for the Project per 36 C.F.R. § 800.4.

Right-of-Way (ROW) – The public lands the BLM authorizes for use or occupation under a ROW grant. The POD is an essential component of the ROW grant, and the PA and the HPTP are appended to the POD.

Section 106 – Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the ACHP ("Protection of Historic Properties," 36 C.F.R. § 800, incorporating amendments effective August 5, 2004).

State Historic Preservation Officer (SHPO) – The official appointed or designated pursuant to Section 101(b)(1) of the NHPA to administer the State Historic Preservation Program or a representative designated to act for the State Historic Preservation Officer.

Traditional Cultural Property (TCP) - A property that is eligible for inclusion in the NRHP because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community (*National Register Bulletin 38*).

Tribal Participation Plan - As used in this PA, a plan that outlines details and protocols for affording tribally designated representatives (tribal cultural consultants) the opportunity to monitor and be on site during all ground disturbing construction activities for facilities, roads or other components associated with the Undertaking. The Tribal Participation Plan is a component of the MDP.

Treatment Report – As used in this PA, a document that presents the complete results of treatment activities performed on all historic properties, addresses the research questions developed in the HPTP, and synthesizes the results into regional context.

Tribal Historic Preservation Officer (THPO) – The tribal official appointed by the Tribe's chief governing authority or designated by a tribal ordinance who has assumed the responsibilities of the SHPO for purposes of Section 106 compliance on tribal lands in accordance with 54 U.S.C. 302702.

Undertaking – A project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license, or approval (36 C.F.R. § 800.16[y]). The Undertaking may include surveys, geotechnical testing, engineering, mitigation planning and design, or other activities initiated prior to construction of project facilities.

Unevaluated cultural resources -- As used in this PA, unevaluated cultural resources are those that require additional test excavations, archival or ethnographic research in order for a determination of National Register eligibility to be made.

Variance – A relatively minor change in construction activities (for example, a modification in the route of an access road) requiring the approval of the BLM, including compliance with Section 106 of the NHPA, prior to the issuance of a Notice to Proceed with construction.

ATTACHMENT 3. REFERENCES CITED

Brodbeck, Mark and Wayne Glenny
2017 Ten West Link 500Kv Transmission Line Project Cultural Resources Baseline Technical Report. Submitted to the Bureau of Land Management (BLM) Arizona State Office February 2017. HDR, Inc. Phoenix, AZ.

Brodbeck, Mark, Wayne Glenny, Jeanne Barnes, Beniamino Volta, and Daniel Leonard
2017 Ten West Link 500kV Transmission Line Project Research Design and Work Plan for Cultural Resources Identification Efforts. Submitted to the BLM Arizona State Office October 2017. HDR, Inc. Phoenix, AZ.

Leard, Dan and Mark Brodbeck
2017 Ten West Link 500kV Transmission Line Project Ethnographic Overview Report. Submitted to the BLM Arizona State Office March 2017. HDR, Inc. Phoenix, AZ.

Letter 11

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Colorado River District
Yuma Field Office
7341 E. 30th Street Suite A
Yuma, Arizona 85365-6525
www.blm.gov/az/

COPY

In Reply Refer To:

March 27, 2019

AZA 36819 (LLAZ930)
1780

CERTIFIED MAIL – RETURN RECEIPT REQUESTED, 7018 0040 0000 1627 9557

The Honorable Dennis Patch, Chairman
Colorado River Indian Tribes
26600 Mohave Road
Parker, AZ 85344

Re: Ten West Link Transmission Line Project Section 106 Programmatic Agreement

Dear Chairman Patch:

In December 2018, State Director Raymond Suazo, Colorado River District Manager William Mack, Project Manager Lane Cowger, and Deputy Preservation Officer Matt Basham met with the Colorado River Indian Tribal (CRIT) Council to consult on the Ten West Link 500-kilovolt Transmission Line (Project) draft Environmental Impact Statement and Programmatic Agreement. The Bureau of Land Management (BLM) thanks you for meeting with us and sharing your views and perspectives on the Project.

With this letter, we wish to inform you that the BLM *will require* that the Project proponent hire tribal monitors for surveys, construction monitoring, reclamation, and archaeological field work activities. Mr. Cowger and Mr. Basham worked with representatives of the Colorado River Indian Tribes Tribal Historic Preservation Office and Office of the Attorney General to develop language in the Programmatic Agreement (PA) that is agreeable to the Colorado River Indian Tribes. The language developed collaboratively between CRIT and BLM was inserted into the PA and communicated to the other consulting parties, including the Arizona and California State Historic Preservation Officers and the Advisory Council on Historic Preservation on March 14, 2019. None of the consulting parties objected to the revised language.

In addition, the BLM has determined that the CRIT are entitled to full signatory status to the Programmatic Agreement for the following reasons:

- One alternative, still under consideration and included in the FEIS, directly crosses the CRIT Indian Reservation; and
- The Indirect Effect Ape for all alternatives under consideration in the FEIS cross the CRIT Indian Reservation.

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Because of the alternatives under consideration, there is the potential for historic properties located on the CRIT Indian reservation to be both directly and indirectly affected.

Thank you for your time and attention to this project. If you have any questions or require any additional information, please contact Joe Incardine, Project Manager, at 801-560-7135 or by email at jincardi@blm.gov.

Sincerely,

Aron C. King
Field Manager

cc: Mr. Bryan Etsitty
Acting Director, Tribal Historic Preservation Office
Colorado River Indian Tribes
2660 Mohave Road
Parker, AZ 85344

Government-to-Government Consultation Policy
of the Colorado River Indian Tribes

The federally recognized Colorado River Indian Tribes (CRIT or the Tribes) have over 4,000 active members from four distinct tribes – the Mohave, Chemehuevi, Hopi, and Navajo. The Tribes' reservation, which encompasses nearly 300,000 acres, straddles the Colorado River in both Arizona and California. The Tribes' ancestral homelands, however, extend far beyond the current reservation boundaries, into what is now public and private land in Arizona, California, and Nevada. As a result, the Tribes' cultural resources, including sacred sites, trails, and artifacts, are found beyond the reservation boundaries as well. The Tribes are deeply committed to the ongoing protection of such resources located both on- and off-reservation.

Federal law recognizes that CRIT is a sovereign government distinct from the United States. As a result of this status, the United States must engage in government-to-government consultation with the Tribes when actions or decisions of the United States have the potential to impact the Tribes, its government, tribal land, or cultural resources. This consultation must occur before the momentum toward any particular outcome becomes too great. The purpose of this government-to-government consultation must be to obtain CRIT's free, prior, and informed consent for such actions.[1] Desired outcomes include an ongoing, mutually beneficial relationship between federal agencies and the CRIT Tribal Council, deference to tribal sovereignty, and informed decision-making by both the United States and the Tribes. Federal agency staff and decision-makers must view consultation as more than listening and learning sessions with Tribal Council. Instead, there must be an ongoing, dynamic relationship between federal agencies and the Tribes that is built upon the agencies' concerted effort to understand the Tribes' history, culture, and government.

The Tribes have developed this policy paper to guide future government-to-government consultation with the United States and its administrative agencies.[2] This paper outlines CRIT's consultation rights and the specific characteristics that comprise minimally adequate consultation under federal law. This paper also offers additional suggestions to ensure that consultation is effective and mutually respectful.[3] If federal agencies do not follow this policy, CRIT does not consider the communications from the agencies to meet the consultation requirements of tribal or federal law. Acknowledgement of this policy is required before an agency schedules a government-to-government meeting with Tribal Council. CRIT is committed to seeking recourse

[1] United Nations Declaration of the Rights of Indigenous Peoples, Articles 19 and 32; *see also* 36 C.F.R. § 800.1(f) (defining "consultation" as "the process of seeking, discussing, and considering the views of other participants, and where feasible, seeking agreement with them."); BLM Manual Handbook H-8120-1 at I-2 (consultation includes "[t]reating tribal information as a necessary factor in defining the range of acceptable public-land management options.").

[2] 36 C.F.R. § 800.4(c)(2)(ii)(C); 43 C.F.R. § 10.5(d)(3); Improving Tribal Consultation and Tribal Involvement in Federal Infrastructure Decisions (January 2017) ("Improving Tribal Consultation"), Key Principle 8.

[3] Required actions are distinguished from recommended actions by use of the words "must" and "shall" versus "should."

through all available political, legal, and media channels if this request is denied or if the agency fails to comply with this policy.

Why A Formal Process is Needed

Federal agencies (including the Department of the Interior, Bureau of Land Management, and Bureau of Indian Affairs) have consistently failed to engage in adequate government-to-government consultation with CRIT and other tribes. The United States recently recognized this troubled history in suggesting needed modifications to the consultation process.[4] In CRIT's experience, agencies have asked for substantive tribal comments on project and policy documents after those projects and policies have already been approved or implemented. Agency staff and decision-makers have attended meetings with Tribal Council without adequate information or authority to meaningfully respond to the Tribes' concerns. Agencies have repeatedly refused to provide responses to CRIT's comments, including any explanation for why CRIT's requests cannot be accommodated. These failures have resulted in direct harm to CRIT, its members, and cultural resources of great importance to the Tribes.

As one example, BLM authorized construction of the nearly 2,000-acre Genesis Solar Energy Project on land once occupied by the ancestors of CRIT's Mohave members. The project involved significant grading along the shoreline of Ford Dry Lake, resulting in the removal of over 3,000 cultural resources over the vehement objections of the Tribes. These artifacts are now stored at the San Bernardino County Museum with no access for CRIT members. In accordance with cultural, spiritual, and religious practices, CRIT has repeatedly asked BLM to permit reburial of the Genesis artifacts, as well as any other artifacts that are inadvertently disturbed within the ancestral homeland. Yet, BLM has refused to engage in government-to-government consultation on this critical topic. Letters have been left unanswered, harmful agency policies have been issued without advance notice or consultation, and BLM officials have been unprepared to discuss their position when in-person meetings have occurred. These consultation failures have resulted in severe and ongoing harm to CRIT and its members.

Basis of Consultation Right

The fundamental principle underlying CRIT's right to meaningful consultation with the United States is the Indian trust doctrine. Pursuant to this doctrine, the United States has a fiduciary duty over tribal lands and resources as Indian trust assets.[5] As part of this duty, the United States has an obligation to consult with CRIT about federal actions that have the potential to impact these assets or other attributes of tribal sovereignty. For CRIT, tribal sovereignty includes an obligation to protect tribal and cultural resources that are located in the ancestral homelands of CRIT members.

[4] Improving Tribal Consultation, at 1-5.
[5] *Seminole Nation v. United States*, 316 U.S. 286, 296-97 (1942); *Pit River Tribe v. U.S. Forest Service*, 469 F.3d 768, 788 (9th Cir. 2006); *Navajo Tribe of Indians v. United States*, 364 F.2d 320, 322 (Ct. Cl. 1966).

This fundamental consultation right is engendered in federal statutes,[6] executive orders,[7] and agency policies.[8] These laws help implement and explain the consultation right that stems from the Indian trust doctrine, but do not diminish it.[9] Where appropriate, CRIT relies on these laws to support its definition of adequate consultation.

Characteristics of Adequate Consultation

Tribal Sovereignty. Government-to-government consultation must respect tribal sovereignty.[10] The federal government shall not treat consultation as a "box to be checked," but as a meaningful dialogue intended to result in consensus between the United States and the Tribes.

Addressing Tribal Concerns. The federal government shall timely seek and review CRIT's written and oral comments and provide comprehensive responses to Tribal concerns and requests.[11] Responses to written comments should generally be provided before any in-person government-to-government consultation. Prior to reaching its final decision, a federal agency must explain how that decision addresses CRIT's concerns.[12] Where an agency is unable to fully address CRIT's concerns, the agency shall clearly explain its reasoning based on the legal, practical, or policy constraints on its decision-making.[13] If CRIT has articulated its concerns in writing, this explanation should be in writing as well.

Involved Parties. Government-to-government consultation requires an in-person meeting between CRIT Tribal Council and the agency decision-maker with ultimate authority for a proposed project or action.[14] This decision-maker must be prepared with sufficient details about the proposed project or action, the Tribes' history, culture and government, and the Tribes'

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[6] *See, e.g.*, National Historic Preservation Act (NHPA), 54 U.S.C. §§ 302701(e), 302706(b); 36 C.F.R. § 800.5(a); Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. §§ 3002(b)-(c), 3003(b), 3004(b), 3005(a)(3); 43 C.F.R. § 10.5; Archaeological Resources Protection Act (ARPA), 43 C.F.R. §§ 7.7(b)(4), 7.16(b)(2)-(3).

[7] Executive Orders 12875, 13007, 13175; September 23, 2004 "Memorandum on Government-to-Government Relationship with Tribal Governments"; November 9, 2009 "Memorandum for the Heads of Executive Departments and Agencies."

[8] Secretarial Order 3317 § (b); Department of the Interior Policy on Consultation with Indian Tribes; BLM Manual 8210: Tribal Consultation under Cultural Resource Authorities; Bureau of Indian Affairs Government-to-Government Consultation Policy (BIA Consultation Policy) at V.1-3.

[9] 36 C.F.R. § 800.4(c)(2)(ii)(B); Executive Order 13175, § 2.

[10] 36 C.F.R. § 800.4(c)(2)(ii)(B); BLM Manual 8120 at .08(A) ("The special legal status of tribal governments requires that official relations with BLM . . . shall be conducted on a government-to-government basis.").

[11] Executive Order 13175, §§ 5(b)(2)(B), 5(c)(2); Improving Tribal Consultation, Key Principle 6.

[12] BLM Manual 8120, Glossary of Terms ("consultation" defined to include "documenting the manner in which the [tribal] input affected the specific management decision(s) at issue."); BLM Manual Handbook H-8120-1 at I-1; Improving Tribal Consultation, Key Principle 6.

[13] BLM Manual 8120 at .06(E) ("Field Office Managers and staff . . . shall document all consultation efforts."); Improving Tribal Consultation, Key Principle 6.

[14] *See, e.g.*, 36 C.F.R. § 800.2(a); BIA Consultation Policy at VI.A(4); BLM Manual 8210 at .06(A).

anticipated or specific concerns with respect to the proposed project or action.[15] This decision-maker should also have formal training regarding tribal sovereignty, the Indian trust doctrine, and other aspects of federal Indian law. The agency should use its staff to communicate project information to CRIT and its staff and to prepare the agency decision-maker for the government-to-government consultation. For example, prior to meeting with CRIT Tribal Council, it is the Tribes' expectation that agency staff will have provided baseline information about the project and its potential impacts to Tribal staff, such as survey results and ethnographic reports. However, CRIT does not recognize staff-to-staff discussions or communications as fulfilling the federal government's consultation responsibility.[16]

In addition, communications between CRIT and project applicants or proponents (where such applicants or proponents are not federal entities) are not government-to-government consultation. Such communications, however, can help to convey information and reduce conflict. Unless requested by CRIT, federal agencies shall not interfere with such communications. Finally, meetings held with representatives from multiple tribes do not constitute consultation with CRIT unless CRIT expressly agrees that consultation format.[17]

Timing. Government-to-government consultation must occur as early as practicable, so that tribal concerns can be taken into account before the momentum toward a particular project or action is too great.[18] Federal agencies should provide basic information about a project or action and its potential impacts to CRIT as soon as the agency begins initial planning for a project or action or a private entity approaches the agency to submit an application.[19] Federal agencies should keep CRIT apprised of the decision-making timeline so that the Tribes can participate at appropriate junctures. Federal agencies shall continue to consult with Tribes until they make a decision on the proposed project or action, and if requested by the Tribes or required by law, until construction or implementation of the project or action is complete.

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[15] *See also Pueblo of Sandia v. United States*, 50 F.3d 856, 860, 862 (10th Cir. 1995) (Section 106 "mandates an informed consultation."); BLM Manual 8120 at .06(C) ("Field Office Managers shall recognize that traditional tribal practices and beliefs are an important, living part of our Nation's heritage, and shall develop the capability to address their potential disruption . . ."); BLM Manual Handbook H-8120-1 at I-2 ("BLM's representative must be authorized to speak for the BLM and must be adequately knowledgeable about the matter at hand."); Improving Tribal Consultation, Key Principle 5.

[16] *Quechan Tribe of the Fort Yuma Indian Reservation v. U.S. Dep't of Interior*, 755 F. Supp. 2d 1104, 1118-19 (S.D. Cal. 2010).

[17] *Id.*

[18] 16 U.S.C. §§ 470a(d)(6), 470f (requiring consideration of historic resource impacts "*prior to the approval* of . . . the undertaking") (emphasis added); 36 C.F.R. §§ 800.1(c), 800.4(c)(2)(ii)(A); Executive Order 13175, §§ 5(b)(2)(A), 5(c)(1); Secretarial Order 3317, U.S. Dept. of the Interior, § 4(a); Dep't of the Interior Tribal Consultation Policy at 7-8; BIA Consultation Policy at VI.A; BLM Manual 8120 at .02(B) (consultation must "[e]nsure that tribal issues and concerns are given legally adequate consideration *during* decision-making) (emphasis added); BLM Handbook Manual H-8120-1 at V-5 (". . . the BLM manager should initiate appropriate consultation with potentially affected Native Americans, as soon as possible after the general outlines of the land use plan or the proposed land use decision can be described.").

[19] Improving Tribal Consultation, Key Principle 3.

Scope of Consultation. Federal agencies must be willing to engage in consultation on any potential impacts of a proposed project or action to CRIT, its members, its land, or its cultural resources.[20] Consultation shall not be limited to potential impacts to properties eligible for listing on the National Register of Historic Places[21] or equivalent state registers, or protected by the Native American Graves Protection and Repatriation Act. If federal approval is needed for only a portion of a proposed project or action, the agency shall nevertheless consult on potential impacts from the whole of the project or action. Federal agencies should not expect CRIT to provide information about impacts to cultural resources in scientific terms and should weigh the Tribe's cultural, spiritual, historical, and anthropological input with the respect and deference that it is due.[22]

Confidentiality. Information obtained via government-to-government consultation shall be kept confidential, except to the extent that CRIT provides information in a public forum (such as via a letter submitted during a comment period or comments made at a hearing) and to the extent such information must be revealed pursuant to federal or other applicable law.[23] If a federal agency determines that confidential information obtained from CRIT must be revealed, the agency shall inform CRIT prior to the release and make all reasonable attempts to limit its scope. Federal agencies shall acknowledge that confidential information is not limited to the location of sites eligible for listing on the National Register of Historic Places[24] or protected by the Native American Graves Protection and Repatriation Act, but includes any information about sensitive resources, culture, or religious beliefs, obtained through consultation.

Resources. Federal agencies must recognize that government-to-government consultation consumes scarce tribal resources. Agencies should minimize costs to CRIT by conducting government-to-government consultation meetings in Parker, Arizona[25]; providing clear and succinct information about proposed projects or actions and their potential impacts; and ensuring that agency staff document CRIT's interests and concerns. CRIT should not be required to repeatedly provide the same information to an agency because of agency staff turnover. Agencies should explore funding sources to remunerate the Tribes for participating in consultation.

Key Requirements

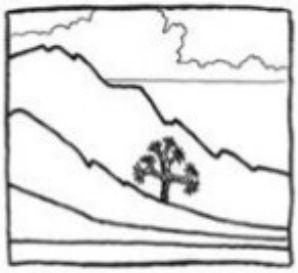
To aid in implementation of this policy, agency officials shall ensure their government-to-government consultation efforts comport with this summary of key requirements:

- Initiate consultation as early as practicable.
- Timely seek and review CRIT's written and oral comments.

[20] Executive Order 13175, § 1(a).
[21] 36 C.F.R. § 800.4(c)(2)(ii).
[22] *See, e.g.*, BLM Manual Handbook B-8120-1 at II-5.
[23] *See* 36 C.F.R. §§ 800.4(a)(4), 800.11(c); *see also* BLM Manual 8120 at .06(G).
[24] 36 C.F.R. § 800.4(c)(2)(ii)(A); *see also* BLM Manual Handbook H-8120-1 at V-1.
[25] Improving Tribal Consultation, Key Principle 4.

- Provide comprehensive responses to Tribal concerns and requests in the same format as such concerns and requests were provided to the agency.
- Explain agency decisions based on legal, practical, and policy constraints on decision-making.
- Involve agency decision-makers with ultimate authority in in-person consultation meetings.
- Sufficiently prepare for in-person consultation meetings with Tribal Council to be able to respond to and address the Tribes' concerns.
- Do not claim that communication with CRIT staff, between CRIT and project applicants, or in the presence of multiple tribes is government-to-government consultation.
- Consult on any potential impacts of a proposed project or action on CRIT, its members, its land, or its cultural resources.
- Keep information obtained via government-to-government consultation confidential.

Letter 12



Basin and Range Watch



Western Watersheds Project

January 30th, 2020

Via email.

To: Crimson Solar Project Attn: Miriam Liberatore, Project Manager Bureau of Land Management 3040 Biddle Road Medford, OR 97504, Email sent to: blm_ca_crimsonsolar@blm.gov

Re: Comments on the Draft Environmental Impact Statement and Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan for the Crimson Solar Project. DOI-BLM-CA-D060-2017-0029-EIS

Basin and Range Watch is a 501(c)(3) non-profit working to conserve the deserts of Nevada and California and to educate the public about the diversity of life, culture, and history of the ecosystems and wild lands of the desert. Federal and many state agencies are seeking to open up millions of acres of unspoiled habitat and public land in our region to energy development. Our goal is to identify the problems of energy sprawl and find solutions that will preserve our natural ecosystems, open spaces, and quality of life for local communities. We support energy efficiency, better rooftop solar policy, and distributed generation/storage alternatives, as well as local, state and national planning for wise energy and land use following the principles of conservation biology. We have visited the site of the proposed Crimson Solar Project.

Western Watersheds Project (WWP) is a non-profit organization with more than 9,500 members and supporters. Our mission is to protect and restore western watersheds and wildlife through education, public policy initiatives and legal advocacy. Western Watersheds Project and its staff and members use and enjoy the public lands and their wildlife, cultural and

natural resources for health, recreational, scientific, spiritual, educational, aesthetic, and other purposes.

1. **Introduction**

The Crimson Solar Project would result in the loss of 2,500 more acres of habitat in the lower Colorado Desert. The region has seen a build-out of several large-scale energy projects and several valuable biological, cultural and visual resources gave already been lost. The BLM is not willing to consider over-generation and community solar alternatives to protect this habitat and justify a No Action Alternative. The BLM has also narrowed the Purpose and Need to suit the developer. 12-1

We are submitting comments on this Draft Proposed Plan Amendment to the California Desert Conservation Area Plan and Environmental Impact Statement/Environmental Impact Report, which analyzes environmental impacts of the proposed Crimson Solar Project for the Bureau of Land Management (BLM) Palm Springs South Coast Field Office and the County of Riverside.

The project location lies in both the Riverside East Solar Energy Zone and a Development Focus Area designated by the Desert Renewable Energy Conservation Plan (DRECP). But the project history predates both of those plans. Because the project would have many significant environmental impacts, the Bureau of Land Management (BLM) can by-pass those plans for better conservation management in this region. Furthermore, the Desert Renewable Energy Conservation Plan only makes recommendations and the BLM is not required to follow the Development Focus recommendation for this region. 12-2 One very major flaw of the DRECP in this region is to recommend that the sand transport corridor be left alone, yet simultaneously the DRECP designated Develop Focus Areas on most of this transport corridor. 12-3

Basin and Range Watch and Western Watersheds Project have the following comments on the subjects reviewed by the BLM Environmental Impact Statement for the BLM and the Environmental Impact Review for Riverside County, California. Basin and Range Watch and Western Watersheds Project can only support a No Action Alternative. 12-4

2. **Proposed Project**

Energy Storage

According to the DEIS, the project would include energy storage systems. What is the type and design? How will storage facilities be cooled in the extreme summer heat? A detailed description of battery storage technologies and cooling strategies needs to be provided in the EIS. There is no information on what kind of batteries would be used and the DEIS even suggests “flywheel storage may be used”. This is all very speculative and the DEIS fails to fully explain how this would be incorporated into the grid. 12-5

Types of PV Panels

The BLM has no idea what kind of PV panels would be used. This could influence avian impacts, visual impacts and project efficiency. 12-6

Concrete Batch Plant

Will the project will be required to have a concrete batch plant for construction? While the goal of the project is to reduce GHG emissions, it should be noted that concrete is very C02 intensive to produce. As much as 10 percent of global CO2 emissions come from the production of concrete. Utilizing solar energy through Distributed Generation as an alternative would eliminate much of this carbon footprint because much if that environment is already built. 12-7

3. <u>Purpose and Need</u>

The draft EIS states, "In accordance with FLPMA, public lands are to be managed for multiple uses that consider the long-term needs of future generations for renewable and non-renewable resources." (DEIS at 1-1) But this is only a partial and selective quote of the Federal Land Policy Management Act (FLPMA) concerning multiple use, where the same mandate to manage public lands must also include wildlife and fish, scenic values, and historic values, as well as recreation:

> *…a combination of balanced and diverse resource uses that takes into account the long term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output. (43 U.S. Code § 1702(c))* 12-8

A 30-year lease to grade, develop, mow, apply herbicides and crush such a large area of public lands in Mojave Desert ecosystems would greatly impair the quality of the environment here, and full restoration of this arid land could take centuries, thus being a virtually permanent impairment. BLM should not simply look at a purpose and need that seeks the greatest economic return on these public lands, but must also consider and balance the watershed, wildlife and fish, natural scenic values, and historic values of the land. BLM's Purpose and Need is faulty for not taking these mandates of FLPMA into account.

The Purpose and Need Statement responds to the applicant's request to build a solar project in the region, but by listing the applicant's objectives directly under the statement, the BLM is self -fulfilling the statement to only reflect on too narrow a scope of alternatives. The statement is 12-9

crafted to make approval of the project easier for the BLM and would accommodate the applicant. The BLM's National Environmental Policy Act handbook states: "[t]he purpose and need statement for an externally generated action must describe the BLM purpose and need, not an applicant's or external proponent's purpose and need (40 CFR 1502.13)."

See 40 C.F.R. §§ 1500.1(b); 1502.13; Envtl. Law & Policy Ctr. v. U.S. Nuclear Reg. Comm., 470 F.3d 676 (7th Cir. 2006); Simmons v. U.S. Army Corps of Eng'rs, 120 F.3d 664 (7th Cir. 1997). "An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative . . . would accomplish the goals of the agency's action, and the EIS would become a foreordained formality. Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt., 606 F.3d 1058, 1070 (9th Cir. 2010). **12-9 cont.**

Moreover, an agency may not allow the economic needs and goals of a private applicant to define the purpose and need, and hence the inevitable outcome, of an EIS. Id. Federal agencies must "'exercise a degree of skepticism in dealing with self-serving statements from a prime beneficiary of the project and to look at the general goal of the project rather than only those alternatives by which a particular applicant can reach its own specific goals." Envtl. Law & Policy Ctr., 470 F.3d at 683 (quoting Simmons, 120 F.3d at 666).

The project would be built in a region that has several valuable resources that have been designated conservation status by the California Desert Conservation Area Plan and the Northern and Easter Colorado (NECO) Desert Resource plan. The BLM would need to amend the CDCA just to be able to legally approve the project. All resources must be officially compromised by the agency for approval. The project would impact valuable, visual, recreational, cultural, biological, hydrologic and socio-economic resources. The BLM could easily craft a Purpose and Need Statement that prioritizes the conservation of these resources. Doing so would allow for a larger and more reasonable range of alternatives. As it stands now, the statement does not provide a broad enough or accurate enough scope to allow better alternatives. **12-10** **12-11**

The BLM Purpose and Need Statement cites Executive and Secretarial Orders that really are not required to be specific to this project and this plan does not fulfill all the requirements in the orders. **12-12**

Equally, BLM has rejected more environmentally acceptable alternatives based on the idea that these alternatives do not meet the scope of the Purpose and Need Statement. BLM is only allowing a specific Purpose and Need that is narrow to the requests of the applicant, but this shows a biased towards a project. A superior Purpose and Need Statement would incorporate better and more responsible environmental protections. The BLM has intentionally left environmental conservation out of the Purpose and Need Statement and this eliminates many major concerns from stakeholders. A broader purpose and need statement can be written for this project that will consider the environmental concerns of many public land owners. **12-13**

The Purpose and Need Statement should examine the actual NEED for this project based on current technology.

The Over-generation Problem in California Due to Utility-scale Solar Projects

The BLM can justify a No Action Alternative simply by examining the need by utilities for additional utility-scale solar projects on public lands. The BLM should also examine the feasibility and problems with a plan to integrate 350 megawatts of battery storage on site. The Draft Environmental Impact Statement should consider an alternative that utilizes degraded brownfields and distributed generation. Under the National Environmental Policy Act, agencies are required to consider alternatives outside of their jurisdiction. A no large-scale energy alternative can be justified with the California Energy Efficiency Strategic Plan (CEESP). This plan already exists as California state law and it can be fully implemented now. This is a state plan that prioritizes implementing rooftop solar and energy efficiency prior to developing largescale, remote solar and wind projects. The Draft EIS should also include and analyze an alternative that maximizes wildlife protection by avoiding, minimizing, and fully mitigating all direct, indirect, and cumulative impacts to wildlife and wildlife habitat to at least a no-net loss standard. 12-14

12-15

How will BLM fully mitigate significant impacts when recent Interior directives order off-sire compensatory mitigation to be halted? 12-16

The Need for this project is questionable, as it adds a large cumulative impact to grid congestion in California. The state is currently experiencing a worsening glut of solar power at peak times on the transmission grid system, as measured by the California Independent System Operator. This has been shown as the Duck Curve, where renewable energy generation exceeds demand in the middle of the day, then causes the need to ramp up generation at the end of the day after the sun sets with inefficient natural gas peaker plants. At times, as much as 13,000 MW is needed in 3 hours in the evening hours, as solar projects go offline at night.

The National Renewable Energy Laboratory (NREL) examined the problem (Denholm et al. 2015, p. 8): “NREL has also examined higher renewable penetration scenarios in California using PLEXOS with a Western Interconnection database derived from the Western Electricity Coordinating Council (WECC) Transmission Expansion Policy Planning Committee (TEPPC), with additional modification based on the LTPP database (Brinkman et al. 2015). The NREL study examined cases where California achieves greater than 50% reduction in electric sector carbon dioxide emissions by 2030 with a variety of renewable energy technologies and flexibility assumptions, such as increased export limits and reduced minimum local generation requirements. Total annual curtailment estimates range from 0.2% (with a balanced portfolio in a more flexible grid) to almost 10% (with a high-solar portfolio in a less flexible grid).” 12-17

In other words, increased curtailment of solar projects (shutting them off during peak times) is likely under higher penetration of photovoltaics onto the California grid, despite storage options.

With increasing penetration of photovoltaic solar energy onto the grid, will instability problems be alleviated with battery storage?

Can an on-site battery storage project alleviate this problem? How many megawatt-hours of storage will these batteries provide?

12-17 cont.

Would the battery facility need to be cooled? How much energy would be required to do so? This is a hot desert with summer temperatures reaching 118 degrees F at times. How will this heat affect battery efficiency? Will air-conditioning be used to cool battery bank buildings? How much electricity for air-conditioning will be parasitized off the grid? Or will liquid-cooling containers be used for batteries? All eyes will be watching to track the efficiency loss of battery storage in hot desert lowlands, compared with coastal urban load center alternatives.

12-18

To conserve habitat, the BLM should consider a No Action Alternative based on local small-scale distributed battery technology in urban centers. Battery storage is making advances for smaller scale solar energy and would not require such a large facility that would need cooling. Batteries will create a waste/recycling issue as well and the BLM should be asking if batteries will be recycled.

12-19

12-20

California's Renewable Energy Standards and Goal

California's RPS can be met in the built environment:

The California Public Utilities Commission (CPUC) is driving energy policy in California, and the California Energy Efficiency Strategic Plan (CEESP) is current regulatory policy dating back to 2007. California's utilities developed the CEESP cooperatively with the CPUC. The current version is available online at:
http://www.energy.ca.gov/ab758/documents/CAEnergyEfficiencyStrategicPlan_Jan2011.pdf

12-21

Competitive Processes, Terms and Conditions for Leasing Public Lands for Solar and Wind Energy Development

While this is for all public lands, it was really designed for Solar Energy Zones (Designated Leasing Areas) and similar designations. The Crimson Solar Project application predates the Western Solar Plan and there are no requirements for the BLM to approve a project based on these orders.

Transmission Limitations

We learned from the group, Defenders of Wildlife, that the California Energy Commission's Renewable Energy Transmission Initiative project in California reported that the existing spare capacity for energy only on the East Riverside and Palm Springs transmission system is 4,754

12-22

MW. When several planned projects are fully on line, the spare capacity will be reduced to approximately 584 MW. This assumes that the 800 MW from the Desert Sunlight and Genesis facilities have not been accounted for in determining existing spare capacity on the line.

12-22 cont.

California Desert Conservation Area Plan

The California Desert Conservation Area (CDCA) Plan has several guidelines that should be followed in the Purpose and Need. All land on the project site are Class M (Moderate Use) is based upon a controlled balance between higher intensity use and protection of public lands. This class provides for a wide variety or present and future uses such as mining, livestock grazing, recreation, energy, and utility development. Class M management is also designed to conserve desert resources and to mitigate damage to those resources which permitted uses may cause.

While energy is part of the Class M designation, it should not be the dominant use. In the case of the Crimson Solar Project, about 3 square miles of public land would be geoengineered to accommodate a large-scale energy project. No other Multiple Use activities

would be permitted and it would be inconsistent with the Class M (Moderate Use designation) under the CDCA Plan.

12-23

The Crimson Solar Project would conflict with 11 of the 12 Plan elements in the CDCA. Those would be: Cultural Resources, Native American Values, Wildlife, Vegetation, Wilderness, Wild Horses and Burros, Livestock Grazing, Recreation, Motorized-Vehicle Access, Geology Energy, Minerals and Land Tenure Adjustment.

The Crimson Solar Project fails to meet the following Decision Criteria for the Energy Productions and Utility Corridors Elements:

(1) Minimize the number of separate rights-of-way by utilizing existing rights-of-way as a basis for planning corridors –

An alternative that builds energy storage on an existing project in the region would minimize the need for a huge build-out that would impact resources.

12-24

(2) Avoid sensitive resources wherever possible –

This project will conflict with Cultural, hydrologic, visual, air quality and biological resources

12-25

(3) Conform to local plans whenever possible –

The project would be inconsistent with the conservation guidelines of the Northeast Colorado Resource Plan (NECO) and the California Desert Conservation Area (CDCA) Plan.

12-26

(4) Consider wilderness values and be consistent with final wilderness recommendations

12-27

A 4- square mile project would be visible form all adjacent wilderness and conservation areas. The project will absolutely degrade wilderness values.

12-27 cont.

Relationship of the Proposed Action to the Desert Renewable Energy Conservation Plan

"Pursuant to Section II.3.2.4 of the DRECP LUPA, the DRECP does not apply to "[a] project that is proposed in a BLM SEZ and that is considered a 'pending project' under the Western Solar Plan (the project application was filed before June 30, 2009)." As discussed above, the initial project application was filed before June 30, 2009, the Project is located within a SEZ, and the amendments contemplated by the Crimson Solar PV proposal either do not affect the project boundaries (e.g., change in project developer) or are related to avoiding resource or land use conflicts or adapting the Project to third-party-owned infrastructure constraints. Therefore, the Crimson Solar PV proposal is being processed under the CDCA land use plan decisions in place prior to the adoption of the DRECP LUPA and Western Solar Plan. "

12-28

Since this project application predates both the Western Solar Plan and the DRECP, the BLM does not need to prioritize this project approval over the DRECP Development Focus or the Western Solar Plan.

We request that the Purpose and Need statement be rewritten to emphasize BLM's commitments to protect valuable resources. A solar project of this size cannot avoid impacts to important resources.

12-29

The project is home to **BLM Sensitive Species.** The Mojave fringe-toed lizard, California leaf-nose bat and the Harwood's milkvetch are three BLM Sensitive Species that occur on the site. The BLM is required to protect BLM Sensitive Species as defined in BLM Manual 6840 (Special Status Species Management)

The objectives of the BLM sensitive species policy are twofold, as follows:

1. To conserve or recover species listed under the Endangered Species Act of 1973 (ESA; 16 USC, Section 1531 et seq.), as amended, and the ecosystems on which they depend so that ESA protections are no longer needed for these species

2. To initiate proactive conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for listing of these species under the ESA

12-30

Resources on the site are also protected by the Archeological Resources Protection Act of 1979. This statute (16 U.S.C. 470aa-470mm; Public Law 96-95 and amendments to it) was enacted

"...to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals."

12-31

The Migratory Bird Treaty Act of 1918 was an Establishment of a Federal prohibition, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird." (16 U.S.C. 703) Numerous Neotropical songbirds and other migratory birds will be negatively impacted by this solar project. 12-32

Land Use Plan/ The California Desert Conservation Area: The lands lie under the FLPMA approved California Desert Conservation Area. The region is designated as Class M which is designated for a "controlled balance between higher intensity use and protection." A variety of uses are listed in this class and the problem is that designating up to 6 square miles as a Right of Way for ONLY solar energy is inconsistent with Class M (Moderate Use) designation. The solar project would be more appropriate on lands with Class I (Intensive Use) designation – that is "lands managed for concentrated use to meet human needs". We request that the Purpose and Need Statement for the DEIS analyze the above conservation policies. The statement now is biased towards approval of renewable energy which does not reflect the wishes of all of the involved stakeholders in this project. 12-33

The Endangered Species Act protects species that would occur on the site including the Desert tortoise, Yuma clapper rail, Yellow billed cuckoo and Southwest willow flycatcher. Lake-effects of a large-scale solar project could attract these species to an artificial lake and wetland effect. 12-34

California Endangered Species include Gila woodpecker, Yellow billed cuckoo, Elf owl and the state Threatened Swainson's hawk and Arizona bell's vireo. These species could be impacted by the solar project next to the Colorado River riparian habitats and microphyll woodlands. 12-35

The Bald and Golden Eagle Protection Act protects both golden and bald eagles, both of which could fly over the project site. 12-36

5. **<u>Proposed Action, Alternatives and Environmental Consequences</u>**

We have reviewed the proposed action and all alternatives. We have concluded that the No Action Alternative is the most sensible for this project due to the great impacts it would cause. The continuing changes to this project and converting the high-value desert ecosystem to photovoltaic have not eliminated major conflicts involving hydrology, biological resources, cultural resources, visual resources, and air quality. The cumulative impacts with the adjacent Desert Quartzite Project will create a huge disturbance to the region's resources. 12-37

What will the photovoltaic panels be made from? Thin-film, Cadmium-Telluride? Crystalline silicon? Copper Indium Gallium Selenide? 12-38

It would be helpful to know this during the review process because the texture of the panels could be instrumental in attracting birds to the lake effect produced by solar panels.

12-38 cont.

Alternatives

BLM failed to consider a full range of alternatives. There is no off-site, Private Land Alternative. Because California is a big state, several areas in places like the Central Valley provide opportunities to develop renewable energy in degraded agricultural lands. There are tens of thousands of acres of land that now has too much salinity to be productive for agriculture that are in proximity to transmission . There are no requirements for BLM to approve a solar project in this specific region. Under the National Environmental Policy Act, BLM is required to consider alternatives outside of the jurisdiction of their lead agency. While the BLM cannot direct a private land owner to use their land for energy, BLM can justify a No Action Alternative since less environmental impacts would occur to important resources in these locations. In other words, BLM has adequate justification to reject this application based on resource conflicts and other available lands in California for energy development.

12-39

Existing Project Storage Alternative: Several large-scale solar projects have been built in the East Riverside Area in California. The Desert Sunlight Project, the Blythe Project and the McCoy Project are very large – almost ten thousand acres collectively, and none of these projects use battery storage and must be curtailed during times of over-generation. So far, no battery storage has been incorporated in any of the existing projects. The BLM could easily select a No Action Alternative for Crimson Solar based on existing projects that would only have to add five to ten acres to incorporate storage. The batteries will have to be cooled in the summer on the Crimson site. Temperatures can easily top 115 degrees out there and batteries will need to be cooled long after sunset. This would be a parasitic load and partially defeats the reason for the project. Storage facilities would not even have to be on the site and could easily be put closer to the point of use.

12-40

Rejected Distributed Generation Alternative:

We have provided several justifications to reconsider this alternative as justification for a No Action Alternative. Please see the Distributed Generation section in this letter under Purpose and Need for this.

12-41

The **proposed and preferred alternatives** do not even seem to know what energy storage systems would be used. There is no decision on what kind of batteries that would be used and little information about how much energy would be needed to cool the batteries and power the flywheel. If the batteries are lithium ion, they will need to be recycled.

12-42

Lithium ion batteries can be very dangerous when the explode. The fires are extremely difficult to extinguish and they can cause issues with hazardous materials. Placing so many lithium ion or lead acid batteries on the site is a **Hazardous Materials** issue.

https://www.thoughtco.com/why-lithium-batteries-catch-fire-606814

12-42

The Flywheel idea is interesting, but that technology has some problems as well. The drawbacks of **flywheels** are the small capacity and high power loss, ranging from 3% to 20% per hour.[1]

The scoping report said that this project would store up to 1,400 MW of electricity, but does not really detail this much further. During scoping, the number was just over 400 MW. It is highly speculative to claim that any project could store up to 1,400 MW. In fact, this is not likely.

As of 2018, the largest battery storage power station is the Australian Hornsdale Power Reserve,[2] adjacent to the Hornsdale wind farm, built by Tesla. Its 100 **MW** output capacity is contractually divided into two sections: 70 MW running for 10 minutes and 30 MW with a 3-hour capacity. Samsung 21–70-size cells are used.

12-43

It appears that this DEIS and NEPA review is premature. The DEIS is saying that the applicant has not fully developed this idea yet. We would appreciate it if the BLM would at least have a more developed plan before taking this review this far. The BLM has crafted a Purpose and Need Statement around a highly speculative proposal. It is not feasible for the Crimson Solar Project to store 1,400 MW of electricity.

Access Roads

What dust palliative may be used? How would access roads effect surface hydrology?

12-44

New Transmission, Inverters, Transformers, Energy Storage Systems, Substation, and Electrical Collector System

All of these can have impacts on wildlife. While BLM talks about collision potential for transmission lines, there is little talk about potential effects include noise effects and associated avoidance behavior, and electric and magnetic fields.[3]

12-45

[1] https://www.sciencedirect.com/topics/engineering/flywheel-energy-storage

[2] https://hornsdalepowerreserve.com.au/

[3] https://www.hydro.mb.ca/environment/pdf/fur_feathers_fins_and_transmission_lines.pdf

And the DEIS does not talk much about the impacts of magnetic fields and this is an oversight. See discussion below:

> *J Toxicol Environ Health B Crit Rev. 2005 Mar-Apr;8(2):127-40.*
>
> ***The effects of electromagnetic fields from power lines on avian reproductive biology and physiology: a review.***
>
> *Fernie KJ[1], Reynolds SJ.*
>
> ***Abstract***
>
> *Electrical power lines are ubiquitous in the developed world and in urban areas of the developing world. All electrical currents, including those running through power lines, generate electric and magnetic fields (EMFs). Electrical power lines, towers,and distribution poles are used by birds for perching, hunting, and nesting. Therefore, many bird species, like humans, are exposed to EMFs throughout their lives. EMFs have been implicated in adversely affecting multiple facets of human health,including increasing the risks of life-threatening illnesses such as leukemia, brain cancer, amyotrophic lateral sclerosis, clinical depression, suicide, and Alzheimer's disease. A great deal of research and controversy exists as to whether or not exposure to EMFs affects the cellular, endocrine, immune, and reproductive systems of vertebrates. Laboratory work has used mice, rats, and chickens as models for this EMF research in an effort to understand better the possible implications of EMF exposure for humans. However, EMF exposure of wild birds may also provide insight into the impacts of EMFs on human health. This review focuses on research examining the effects of EMFs on birds; most studies indicate that EMF exposure of birds generally changes, but not always consistently in effect or in direction, their behavior, reproductive success, growth and development, physiology and endocrinology, and oxidative stress under EMF conditions. Some of this work has involved birds under aviary conditions, while other research has focused on free-ranging birds exposed to EMFs. Finally, a number of future research directions are discussed that may help to provide a better understanding of EMF effects on vertebrate health and conservation.*

12-45 cont.

6. **Vegetation Mowing**

For the proposed action and preferred alternative, vegetation mowing would be used to minimize impacts. This method is proposed for many projects and the BLM is premature choosing this as a justification for project approval.

12-46

It would require that vegetation on the site be shredded by heavy duty mulchers which can weigh over 20,000 pounds.

This has been used on an 80-acre project on Nevada called the Pahrump Solar Project as well as the 780-acre Sunshine Valley Solar Project and it has created a series of its own impacts including:

Fugitive Dust: No dust palliatives are used on these two projects and in the case of Sunshine Valley Solar, the panels are too close together to allow water trucks to fit. This has resulted in soil disturbance and dust plumes whenever the wind blows. The situation is so bad that complaints were filed to the Nevada Division of Environmental Protection.[4]



^Vegetation mowing – Sunshine Valley Solar

12-46 cont.

[4] https://pvtimes.com/tonopah/complaint-filed-over-dust-at-solar-project-in-amargosa-valley-75678/



^Dust from Sunshine Valley Solar

12-46

The Pahrump Solar Project is an 80-acre photovoltaic facility and used vegetation grubbing and has a Habitat Conservation Plan. Crimson Solar would be roughly 30 times larger than the Pahrump Solar Project.

Four desert tortoises were found on the project site. Small doors were installed in the parameter fence so tortoises can re-enter. While all 4 tortoises did return to the site, only 2 are still accounted for and just about all of the new annual vegetation that returned is not native. Red brome, split grass, Erodium and Russian thistle are all abundant on the site. These are also less nutritious for desert tortoises. For the Crimson site, there would be all of these invasive weeds as well as Sahara mustard. Invasive weeds would impact rare plants such as Harwood milkvetch and create other obstacles for wildlife.



^Non-native annual vegetation on Pahrump Solar Project

Vegetation mowing will also directly crush animal in their burrows and potentially deafen others.

12-46 cont.

7. **<u>Air Quality/Fugitive Dust</u>**

We are also particularly concerned about the compromised air quality that will most likely result from the construction of this project.

The land rush of large solar projects all over the southwestern US has resulted in expedited approval of many of these projects. In most of the cases, the developers have not adequately mitigated the fugitive dust that has resulted in the removal of large acreages of vegetated desert lands. We are concerned that industrial construction in the region will compromise the air quality to the point where not only visual resources, but public health will be impacted.

12-47

We are also concerned that the applicant will have no choice but to use more water in an already over-drafted aquifer to control the large disturbance they intend to create.

Large solar projects in desert areas are very bad for air quality. Removal of stabilized soils and biological soil crust creates a destructive cycle of airborne particulates and erosion. As more

stabilized soils are removed, blowing particulates from recently eroded areas act as abrasive catalysts that erode the remaining crusts thus resulting in more airborne particulates.

The Right of Way for the Desert Sunlight Project to the west guaranteed that mitigation would control fugitive dust emissions, but photos taken of the Desert Sunlight Project during initial construction show "dust blackouts" that have occurred when there are strong wind events. These dust blackouts were reported to be rare in the area before First Solar disturbed so much of the ground with large earth moving machines.

12-47 cont.

Valley Fever has been blamed for 62 deaths among California prison inmates statewide, most at the Avenal and Pleasant Valley facilities, but also two at Blythe, California.[5]

Epidemiologists investigated an outbreak of valley fever that had sickened 28 workers at two large solar power construction sites in San Luis Obispo County.[6] One of these projects was called Topaz, built by First Solar.

We are also concerned that this will add to the cumulative impacts of several constructed solar projects in the region.

12-48

CEQA Environmentally Superior Alternative

Quote from the EIS:

> *"CEQA Guidelines Section 15126.6(e)(2) requires an EIR to identify an environmentally superior alternative. If the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives. In general, the environmentally superior alternative is defined as the alternative with the least adverse impacts to the environment. As a general matter, a "no project" alternative frequently is identified as the environmentally superior alternative because such an alternative typically avoids all impacts of the proposal and would not create any new significant impacts of its own. However, as noted in Section 2.7, the No Plan Amendment/No Action/No Project Alternative in this analysis is reasonably likely to result in solar development of some kind and in some configuration on the proposed site consistent with the property's land use designations*

12-49

[5] http://www.pe.com/local-news/riverside-county/corona/corona-headlines-index/20130806valleyfever-inland-inmates-may-replace-transferred-prisoners.ece
[6] http://articles.latimes.com/2013/may/01/local/lame-ln-valley-fever-solar-sites-20130501

under the DRECP and Western Solar Plan. Because the specific environmental impacts of any future solar development proposed cannot be known with sufficient certainty at this time to provide a meaningful point of comparison, it would be speculative to identify the No Plan Amendment/No Action/No Project Alternative as the environmentally superior alternative."

Response: The BLM does not have to approve solar development on this site. In fact, the BLM is only using recommendations from the DRECP. The BLM even amended the DRECP so they could allow the Ten West Transmission Project to be built on top of a rare plant population.

12-49 cont.

It is also a weak argument to suggest that there is no way to know if a No Action/No Project alternative would be environmentally superior to a solar project. The BLM has a few projects already built out in the region including Genesis, Blythe, McCoy, Desert Harvest and Desert Sunlight. Does the BLM really believe that the Genesis Project did not degrade the environmental quality of the area?

8. **Avian Impacts/Polarized Glare**

Lying close to the project area are two globally Important Bird Areas: Cibola National Wildlife Refuge lies to the east of the project, and Important Bird Area another 10 miles to the north, north of the town of Blythe.

Four National Wildlife Refuges are in the area: Havasu (70 miles away), Bill Williams (65 miles to the northeast), Imperial (18 miles to the south), and Cibola 6 miles from the project).

Some of the northern part of Cibola National Wildlife Refuge adjacent to the project is currently grown in alfalfa and corn to feed thousands of wintering waterfowl, and there is much riparian restoration happening now and planned for the future. This would include encouraging native willows, cottonwoods, and mesquite. Hundreds of acres of riparian tree restoration are planned here.

12-50

The Crimson Solar project would be located in the Pacific Flyway, which is a migration corridor for diverse waterfowl reaching from the Sea of Cortez in Mexico, to the Salton Sea in Imperial Valley, California, northwards to the Central Valley marshlands, and eventually to Oregon wetlands where ducks and geese nest in summer. An offshoot of the flyway follows the Colorado River.

This has been a big problem for the renewable energy projects located in the Chuckwalla Valley. Two of the solar projects in particular, Desert Sunlight and Genesis have reported high numbers

of avian mortality. In fact, Wally Erickson of West Biological Consulting made a presentation at the Technical Symposium on Avian-Solar Interactions called Regional Observations and Trends in Avian Monitoring and Mortality. In the presentation, he said that the Desert Sunlight Project has reported some of the larger avian mortality numbers.

Both the Desert Sunlight and Genesis Project have reported a diversity of birds that have become avian mortalities and many of the birds were detected to have collision injuries. The Palen Solar Project would be located in between the two in the Chuckwalla Valley.

The Solar Industry and some agency representatives have suggested that many of the birds would have died in these locations even if no solar project had been built there. But the Bureau of Land Management conducted a study on this subject and it was presented at the Technical Symposium.

Amy Fesnock of BLM gave a very interesting talk on her background avian mortality study. BLM decided to piggy-back avian mortality surveys onto desert tortoise line distance sampling, which has a long history of annually counting tortoises for recovery estimates, across the desert in a rigorous scientific fashion.

12-50 cont.

Fesnock came up with a brilliant way to have surveyors also look for any dead birds along these transects, to estimate background avian mortality in more natural areas of the desert, not disturbed by solar development.

Surveyors were trained to find carcasses placed out in the desert, and 97% of detections were within 10 meters of the line. So 10 meters was used as the effective sampling width.

Carcasses were placed out on desert sites to see how long they lasted. USGS Mathematician Manuela Husto applied statistical sampling techniques to the data and applied detection curves for large, medium, and small birds, and was able to estimate when carcasses would no longer be observable.

453 transects were walked by biologists from March to May in 2015, in the Fremont-Kramer Area of Critical Environmental Concern (ACEC), Superior-Cronese ACEC, Ord-Rodman ACEC, Joshua Tree National Park, the Pinto Mountains, Chuckwalla ACEC, and Chocolate Mountains. So these surveys covered a huge swath of the California Desert with intensive surveys walking

the ground searching the ground. Surveyors covered 37 square miles of relatively natural desert.

In all this survey effort, only 6 avian mortalities were found: one adult red-tailed hawk, apparently killed by a great-horned owl as it lay below an owl nest; one juvenile red-tailed hawk; one rock wren that was apparently predated by a loggerhead shrike, as it was preserved on a shrike perch impaled on a cactus; and three feather spots of unknown species. This is far less than the avian mortality rate on solar projects. Some solar companies have implied that their bird mortality rate is not much greater than the natural background mortality rate in the desert, as before a project broke ground. But Fesnock's study refutes this strongly.

12-50 cont.

The desert background mortality rate determined from line distance sampling in 2015 was 0.024 birds/acre/year. This could be broken down further to 0.004 large birds/acre/year, 0.0026 medium-sized birds/acre/year, and 0.0214 small birds/acre/year.

But on three unnamed solar projects, Fesnock explained that the avian mortality rate increased to 1.7 birds/acre/year, 0.4 birds/acre/year, and 0.6 birds/acre/year.

Fesnock concluded, "When compared to mortality rates from solar projects, background mortality does not appear to be a significant factor and could easily be accounted in the sampling design error rates."

Accuracy of Reporting on Biological Monitoring

While we believe that the biologists hired to survey these projects are highly qualified individuals, we question the accuracy of the reporting because we have been told some biologists have lost jobs over reporting information. Interestingly, this was backed up at the last Desert Tortoise Council Symposium in 2016. Kathryn Simon of Ironwood Consulting told everybody that the politics of management from the solar companies often get in the way of accurate reporting. In the Symposium Abstracts, she reported “the political backing that supports energy development in the western part of the country has also resulted in the neglect or abuse of natural resources. While a great deal of effort is placed on properly siting and permitting a project, little or no oversight happens once the project enters construction and continues into operations and maintenance. This has led to a “power vacuum,” often filled by the project proponent's "environmental" staff who often ensure the least amount of information leaves the project and is reported to wildlife agencies and the public. Specific

12-51

examples of such behavior are provided and suggestions made for biologists on the ground in achieving their goals of proper monitoring oversight."

Are we getting the entire story?

12-51 cont.

Focused vs. Incidental Surveys

The mortality numbers reported on the Genesis Solar Project to the east were much higher when the mortality finds were incidental (workers randomly finding bird mortality). Now that surveys are focused, the numbers appear to be about half of what they were. This raises the questions: Is mitigation working? And are mortalities not being reported?

12-52

The Numbers and Alarming Lack of Mitigation Ideas

For photovoltaic projects, avian mortality is caused by collision and possibly dehydration as birds are unable to fly away. A study on 7 California large-scale solar projects found that from 2012 to 2016, 3545 mortalities from 183 species were detected. A diversity of species have been found including many water birds such as grebes, pelicans, ducks, coots and gulls to name a few. Special Status and Endangered Species include Yellowbilled Cuckoo, Yuma's Ridgeway (clapper) rail and Willow flycatcher. The impacts of large-scale solar projects and collisions in the desert to federally listed species have not been fully analyzed.

A dead Blue-footed booby was even found on one of the solar projects south of the Salton Sea in Imperial Valley.

The Lake Effect and Polarized Glare

One main theory is that the polarized light from solar panels may attract birds and insects to solar projects in the Mojave Desert (Horvath et al. 2009).

Does the light have to be polarized to attract birds? Could other factors such a texture, color and topographic features play a part?

We request that this important impact be studied more before any more of these giant projects are approved. Specifically:

12-53

What is the mechanism of lake-effect, high polarized light pollution, chromatic, achromatic, glare, etc.?

When the mechanism is identified, predictions of specific species can be tested in the field by altering the solar configuration.

After that, data could be collected in the field to identify factors that may attract birds to solar projects.

12-53 cont.

It is also possible that BLM's preferred Reduced Footprint Alternative that leaves a major wash with microphyll undeveloped may actually bait birds that would eventually hit solar panels. Only a No Action Alternative would avoid this possibility.

12-54

Because the proposed Desert Quartzite Solar Project would be situated in a significant location for migrating birds in the Pacific Flyway, we believe that the cumulative impacts that the project will cause along with other solar projects in the region would not be worth the approval of the project.

12-55

We are very concerned that the DEIS fails to adequately inform the public on the environmental impacts to birds of these large-scale solar projects and potential lake-effect impacts to mortality in flyways.

From Page 146 of the DEIS:

> *"Data from other photovoltaic solar projects in Southern California (Desert Sunlight and California Valley Solar Ranch) indicate that birds are also susceptible to collisions with solar panels (Watson et al. 2016; Ironwood Consulting, Inc. 2014). The causal mechanism for bird collisions with panels is not clear. While the causal mechanism is not known and is under investigation at other facilities, what is known is there is some kind of attractant or risk at solar facilities that results in avian mortalities at a higher rate at solar facilities as compared to background mortality rates on non-developed desert lands. Presently, one hypothesis regarding why birds may collide with panels is the idea that birds, particularly water-dependent species, may be attracted to solar panels, mistaking them for water features. These occurrences could lead to collision or other harm (e.g., strandings of water birds). However, this hypothesis has not yet been tested. Therefore, the causal mechanism for bird collisions with solar panels is presently*

12-56

unknown and it is not possible to determine if the conditions present at the Project site would facilitate an attraction by water-dependent birds and/or what level of impacts may occur. While the causes of avian injuries and fatalities at commercial-scale solar projects are being evaluated, uncertainty remains because: (1) mortality data has been collected over a relatively short period and still is being evaluated; (2) in many cases, the cause of death is not clear; and (3) mortality information from one project location is not necessarily indicative of the mortality information that might be found at another project location."

As we have been pointing out, no matter what the cause, more dead birds are found on the solar sites than off the sites. The fact that more research is needed on avian impacts is not relevant here. The problem of higher mortality has not been addressed. A more responsible solution would be to study this impact further before approving so many of these projects.

12-56 cont.

The collision hazard mitigation only consists of compensatory mitigation for bird habitat, yet this will not reduce or avoid collision hazards of the lake-effect, and is untested as to how much buying habitat elsewhere will actually help bird populations which are at risk.

BIO-33 **CDFW Special-Status Bird Collision Compensatory Mitigation.** The Project Owner shall provide compensatory mitigation to offset impacts on species affected by the Project's creation of a hazard that may result in the direct loss of individual birds and their future offspring. The type of mitigation is based on the three main groups of birds present on the project site: raptors, passerines, and riparian/water-associated birds, to ensure that the categories of bird species anticipated to be impacted by the Project will benefit from the enhanced and conserved habitat. (draft EIS at ES-33)

9. Biological Resources

Vegetation Communities and Rare Plants

Microphyll woodland consists of trees with deep taproots to reach groundwater: desert ironwood (*Olneya tesota*), palo verde (*Parkinsonia florida*), catclaw acacia (*Senegalia greggii*), smoke tree (*Psorothamnus spinosus*), ocotillo (*Fouquieria splendens*), and mesquite (*Prosopis* spp.). The Mule Mountain foothills are adjacent to the project. Also present are wolfberry (*Lycium* sp.), big galleta grass (*Hilaria rigida*), and creosote (*Larrea tridentata*), as part of the CDFW vulnerable Senstive Vegetation Community—how will the project mitigate the loss of 289.4 acres of this community? The project proposes to grade, crush, grub, and trim during operations.

12-57

The draft EIS says (at 3.3-13):

The direct and permanent loss of up to 289.4 acres of Creosote Bush—White Bursage/Big Galleta Grass Association, a sensitive natural community, would be mitigated by Mitigation Measure BIO-18 through restoration or compensation.

This mitigation measure reads in part:

Sensitive Vegetation Community Restoration or Compensation: Permanent impacts on Creosote Bush–White Bursage/Big Galleta Grass Association (estimated at 289.4 acres) shall be compensated through a combination of compensation and restoration at a minimum 1:1 ratio. Habitat compensation shall be accomplished through Resource Agency-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting comparable habitats to those lands impacted by the Project. Restoration may be appropriate as mitigation for permanent impacts provided that restoration is demonstrated to be feasible and the restoration effort is implemented pursuant to the restoration plan described above. (draft EIS at ES-19)

12-57 cont.

This is completely unacceptable mitigation and compensation, and is being planned outside of the public scrutiny. Will a land trust be given money to try to find and buy private parcels in the area, which may or may not have high quality habitat? We may never know. These sensitive vegetation communities should be avoided and protected. These same comments apply to compensations lands proposed for Harwood's Eriastrum.

The "rare plant corrals" used at Ivanpah Solar Electric Generating System, now labeled as "Environmentally Sensitive Areas" (ESAs), where the ground surface will be crushed and driven on but not graded, when populations of rare plants are found. Yet the mitigation measure BIO-20 is unclear whether ESAs will be avoided in the solar field, or whether the solar panels will be constructed on top of the rare plants, and the vegetation simply trimmed. This is unacceptable, and all rare plant populations should be avoided—no driving, no construction. Yet indirect effects as as important as direct effects, and since weed prevention may not stop invasive plants from entering the construction site, this could be a significant impact.

Trimming rare plants is a mitigation measure as part of BIO-20 (at ES-19).

Vegetation Trimming: During O&M, staff shall be trained to identify rare plant species known to occur on site as part of the WEAP (BIO-17), and vegetation trimming shall be conducted to allow special-status species to set seed prior to trimming.

12-58

Trained botanists need to be present to identify difficult species, not "staff." Plus, this will prove to be a very difficult mitigation to carry out, to have staff trained to identify tricky rare plants, observe them enough to watch them set seed, then trim the stems.

Plus, seedbanks may shift in different years, and some may not germinate in dry years. So the actual locations of rare plant populations are likely unknown, and many could be graded. A No Action alternative would be the least environmentally harmful to these sensitive vegetation communities and rare plants.

Biological Soil Crust

We found extensive biological soil crusts on desert flats around the Mule Mountains, which sequester carbon. How will this loss of carbon be addressed as the solar project disturbs these delicate ground surfaces?

Mitigation measures are vague and unclear:

> For all temporarily disturbed areas, the Restoration Plan shall include a description of proposed methods for topsoil salvage and replacement, plant/seed salvage including salvage of succulents, seeding techniques, inoculation of native microbial organisms for plant mycorrhizae and for biotic soil crust formation, methods to stabilize and shape soil surface to reduce soil erosivity, and techniques to increase soil fertility and water holding capacity. Plant salvage measures shall follow applicable state and federal regulations and policies for salvage. (BIO-18, at ES-18 and 19).

12-59

Will spores of mosses and liverworts be collected in order to inoculate disturbed soils later? Will lichens be carefully collected and transplanted? The species making up these local living crusts are biodiverse, and not any inoculation would be appropriate. Plus, no mitigation measure makes up for the thousands of acres of biological soil crusts that will be permanently destroyed. A Restoration Plan should be written now and analyzed during the public process.

Couch's spadefoot

A single Couch's spadefoot (*Scaphiopus couchii*) was found in a wash which will be avoided, but which will be surrounded by solar project construction. Spadefoots could be crushed by heavy equipment, as they seek cover of burrows built by rodents or other species. Habitat removal and edge disturbance will have large impacts on this population. Yet the mitigation measures are being pushed to the future, and deferred until after the public process. This is unacceptable.

> BIO-27 **Couch's Spadefoot Protection Plan.** Prior to issuance of the Notice to Proceed, the Project proponent shall prepare a Couch's Spadefoot Protection Plan (see Appendix I) to be approved by the BLM and CDFW. The plan shall include the following:
>
> 1. ***Habitat Survey Protocol and Results*:** Figures showing the areas surveyed and the location of potential breeding habitat in relation to proposed Project features. The plan shall also include a survey protocol to locate potential future breeding ponds.
>
> 2. ***Avoidance and Minimization Measures*:** A description of measures that would be implemented to avoid impacts to potential breeding ponds, such as buffers, protective fencing or other barriers, worker's education, minimizing construction traffic within the vicinity of breeding ponds, and biological monitoring.
>
> 3. ***Monitoring and reporting requirements*:** Any observations of live or dead Couch's spadefoots shall be reported to BLM. If a live toad is observed, the DB or BM shall monitor the toad to ensure it is safely out of harm from construction activities.

12-60

Please delay this EIS until these plans and all other deferred mitigation plans are made.

How will flood runoff problems impact spadefoot toads, desert tortoise, and other species? Problems have occurred at other solar projects in Chuckwalla valley, and see also a flood

12-61

coming off a Virginia solar project.[7] Toxic materials may impact toads if a flash flood destroys solar panels. This hazard needs to be addressed.

12-61 cont.

Desert Tortoise

Mojave desert tortoise sign was more common than would be expected for a low arid area. Tortoises appear to be doing well here and could be recovering from a drought. The area should be protected as an Area of Critical Environmental Concern, since the Mojave desert tortoise populations are declining rangewide. Disturbing, fragmenting, grading, and reducing high-quality habitat such as this will only contribute to the species' continuing decline, and the need to uplist it from federally threatened to endangered.

Comprehensive, rangewide surveys to estimate total desert tortoise numbers have been ongoing since 2001. The latest sampling data from surveys analyzed by US Fish and Wildlife Service (2019) indicates all Recovery Units have declined drastically from 2004 to 2014 except one (the Northeastern Mojave Recovery Unit). We emphasize the factors below that lead to the declines, which include vehicle driving across desert habitats, habitat fragmentation, invasive weeds, predation, and renewable energy. Crimson Solar Project would degrade habitat and disturb a population that has an apparently good population.

Table 2. Tortoise estimates within recovery units and change in abundance (Allison and McLuckie 2018)

Recovery Unit	Modeled Habitat (km^2)	2004 Abundance	2014 Abundance	Change in Abundance
Western Mojave	23,139	131,540	64,871	-66,668
Colorado Desert	18,024	103,675	66,097	-37,578
Northeastern Mojave	10,664	12,610	46,701	+34,091
Eastern Mojave	16,061	75,342	24,664	-50,679
Upper Virgin River	613	13,226	10,010	-3,216
Total	68,501	336,393	212,343	-124,050

12-62

Chart listing the latest Mojave desert tortoise population estimates across Recovery Units—all are in severe decline except one (USFWS 2019 at 15).

By 2014, three of the five Recovery Units fells below the minimum viable density to avoid extinction, of 3.9 adult tortoises per square kilometer. Historically, many plots in the West Mojave during the 1970s and early 1980s supported as high as 58 adult tortoises per square kilometer (ibid. at 16).

[7] https://wtvr.com/2018/02/08/green-solar-farm-is-turning-an-essex-county-watershed-brown/?fbclid=IwAR0dNe8TqkGl3NEMnQudgqzzD58X02B3jEEIn2RFa0OzOiCB1XWgitIZySo

Mitigation that buys land or in-lieu payments to funds have been ongoing across the California Desert for other solar projects, yet tortoises continue to decline. These compensatory mitigation measures are not successful.

Permanent tortoise exclusion fences will be placed around the project. Why is an alternative that allows tortoises back into the solar field during operation not analyzed?

12-62 cont.

Mojave Fringe-toed Lizard

Mojave fringe-toed lizards (*Uma scoparia*) are documented on dune and non-dune habitat on the proposed project site. Genetic studies in the past were not fine-grained enough to clarify the taxonomic status of this species, and cryptic taxa may be present. This Chuckwalla Valley/Palo Verde Mesa populations could be a distinct genetic lineage and separate from other populations of fringe-toed lizard. This needs more study before the project moves forward.

Desert Dune habitat will have to be mitigated at an estimated 1,636.8 acres (draft EIS at ES-30). But the BLM and CDFW have no idea whether enough compensatory land can be found locally, what condition the land is in, and how sand connectivity relates to dune habitat lost on the project. This has become a very questionable practice. Avoidance of rare sand habitats would reduce significant impacts to none. Lands should help build linkages, according to the draft EIS, but with the large cumulative solar build-out in the Riverside East Solar Energy Zone/Development Focus Area, this will be increasingly difficult. The draft EIS gives no recommendation about a larger plan to stop the extinction of the Mojave fringe-toed lizard regionally. Palen Solar Project, Genesis, Desert Harvest, Desert Sunlight, and Desert Quartzite, Blythe and McCoy Solar Projects all have cumulative direct and indirect impacts to Mojave fringe-toed lizard populations in the Chuckwalla Valley and McCoy Valley.

12-63

Bats

Bats are found in the nearby Roosevelt Mine area, and winter influxes of migrating bats occurs in the area. A Bird and Bat Conservation Strategy is deferred, and this is improper. The public needs to be able to review these plans during the NEPA process, and not after project approval.

12-64

Mule Deer

We found scat of the burro deer (*Odocoileus hemionus eremicus*) in ironwood thickets at the base of the Mule Mountains. How will BLM mitigate movements corridor loss and habitat fragmentation for these arid-adapted deer?

12-65

Desert Bighorn Sheep

Bighorn sheep may use the proposed project site as connectivity habitat to access surrounding mountain ranges. How will the blockage and fragmentation of habitat impact desert bighorn sheep?

12-66

Desert Kit Fox

We found sign and burrows of kit fox (*Vulpes macrotis*) on the proposed project site. How will the developer ensure that a disease outbreak does not occur when kit foxes are displaced from their home territories, and the population comes into contact with human development and potential dogs?

Mitigation is again deferred and gives no clarification of how disease outbreaks will be prevented.

> BIO-30 **Desert Kit Fox and American Badger Management Plan.** Prior to issuance of the Notice to Proceed, the Project proponent shall prepare a Desert Kit Fox and American Badger Management Plan (Appendix I) that defines the strategy for management of kit foxes and badgers, subject to the BLM and CDFW approval. The plan shall include methodologies for pre-construction clearance surveys, den monitoring, passive relocation, and burrow excavation and closure.

12-67

Yuma Mountain Lion

Special surveys should be undertaken for Yuma mountain lion (*Puma concolor browni*), which inhabit the area. Large solar projects are increasingly fragmenting habitat and blocking connectivity corridors. More information is needed.

12-68

Birds

A large influx of burrowing owls migrate in to the region during the winter, from as far away as Canada, to the California desert. So a winter survey is needed. The burrowing owl is a California state sensitive species. When burrows are found, it should be determined if they are occupied by family units or wintering individuals.

12-69

The Gila Woodpecker (*Melanerpes uropygialis*) was found on surveys for the former withdrawn Rio Mesa Solar Project just to the southeast of the proposed Crimson Solar Project, next to the Mule Mountains. This Sonoran Desert woodpecker was added to the California State Endangered List in 1988. Previous surveys have placed the California population between 200 individuals and less than 30 pairs. This species needs more study, as it was detected on the project site.

12-70

The Elf owl (*Micrathene whitneyi*) is found in very similar habitat to the Gila woodpecker, and they use the woodpecker's tree cavities. We note that in a 1978 survey, California Department of Fish and Wildlife speculated that as few as 20 pairs could occupy California. After this the owl was determined to be declining in California where, in its limited range, it is state-listed as endangered. No birds were detected in California on surveys conducted in 1999. More current surveys are needed.

12-71

On the Riop Mesa Solar Project area, for Golden eagles, two helicopter surveys were done in spring 2011 following BLM protocol. No active eagle nests were found, but 4 inactive nests within 10 miles of the project; 2 inactive nests were found at 6.25 miles, one nest at 6.5, and one at 8.5 miles. In addition, non-breeding surveys should be carried out to look for resident adults, "floaters," and juveniles.

12-72

10. <u>Cultural Resources</u>

Page 3.5.7 of the Draft EIS states that *between July 24 and November 21, 2017, Applied Earthworks and Aspen Environmental conducted a Class III field survey covering a total of 3,485 acres and encompassing the 3,090-acre direct effects APE (Kidwell et al. 2018). As a result of the survey, 122 newly discovered archaeological sites and 161 newly discovered isolates were identified within the direct effects APE.*

Page 3.5.11 of the DEIS states*: A total of 167 sites (82 prehistoric, 58 historic-period, and 27 multicomponent) and 183 isolates (177 prehistoric, 5 historic-period, and 1 multicomponent), have been identified within the direct effects APE and could be directly and adversely affected by the Project.*

Basin and Range Watch has been meeting with Native Americans from the Lower Colorado River region for over 10 years. We have concluded that there is no possible mitigation or partial avoidance management that BLM could deploy that would make them happy or preserve their cultural values. The BLM constantly attempts to rank these cultural sites in terms of importance, but once BLM approves the ROW for any of these large impacts, the site is culturally ruined. On a cumulative level, the BLM has drastically allowed developers to compromise the cultural integrity of the region. The BLM has prioritized this energy development over the values of the native people of the region. The BLM has time and again refused to consider alternatives in different location and the built environment to preserve these cultural resources. It is obvious that pleasing the developer takes precedent over the requests of the Native Americans in the region.

12-73

The impacts to cultural, tribal and historic resources are described on ES-37 as "**significant and unavoidable"**.

All the mitigation listed for culture resources really is after the fact. Even if sites eligible for the National Historic Register are avoided, the entire "Cultural Landscape" would be compromised by the industrialization of the area and would still be impacted by the project. Other mitigation measures would require "monitoring of construction", placing artifacts in a curatorial museum

of collection, record on Department of Parks and Recreation (DPR) 523 forms, to map, and to photograph all encountered cultural resources over 50 years of age, etc.

Other mitigation measures include:

> *A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed;*
>
> *A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits;*
>
> *Instruction that only the Project Archaeologist, alternate Project Archaeologist, and supervisory cultural resource field staff have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the Project Archaeologist;*
>
> *Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the Project Archaeologist or supervisory cultural resource field staff, and that redirection of work would be determined by the construction supervisor and the Project Archaeologist;*
>
> *An informational brochure that identifies reporting procedures in the event of a discovery;*
>
> *An acknowledgement form signed by each worker indicating that they have received the training; and*
>
> *A sticker that shall be placed on hard hats indicating that environmental training has been completed*

12-73 cont.

All of these mitigations are an apology for the complete obliteration of these cultural sites and values. Again, the BLM has made a choice to sacrifice this area over choosing alternatives that would preserve Cultural Values. This alone justifies a No Action Alternative.

While it is not a substantive comment to say this, we feel that the BLM has chosen the most insensitive and uncaring way to treat these Native American values and don't mind including this in the DEIS comments. BLM has years of experience choosing these locations for development and has consistently placed Native American values last. In fact, the Bureau of Land Management has never halted or chose a No Action Alternative on ONE of the projects proposed for the Blythe and Chuckwalla Valley area based on Native American Values.

11. <u>Surface Hydrology</u>

Several washes drain the area where the project would be built. These washes have the potential to have some major flooding during the monsoon season. The DEIS fails to say what photovoltaic technology will be used but several photovoltaic modules contain toxic rare earth minerals. Some flooding could transport toxic materials. A tornado caused ten million dollars dollars worth of damage on the Desert Sunlight Solar Project about 5 years ago. Thousands of solar panels were broken and contain Cadmium telluride. Down facing solar panels can cause different flash flood scenarios depending on which way the single axis tracked panels are facing. This could transport several toxins and pollutants downstream and potentially to the Colorado River. The following video shows a sediment transporting flood caused by a small PV project in the Eastern USA:

https://wtvr.com/2018/02/08/green-solar-farm-is-turning-an-essex-county-watershed-brown/?fbclid=IwAR0dNe8TqkGl3NEMnQudgqzzD58X02B3jEEIn2RFa0OzOiCB1XWgitIZySo

12-74

12. Visual Resources

The BLM has determined that the project site meets VRM Class II standards which are very high standards. Would this require a downgrade of a plan amendment to accommodate such a large visual disturbance.

This is the **VRM Class II Objective:** *To retain the existing character of the landscape. Allowed Level of Change: The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.*

It is impossible for a 4-square-mile photovoltaic project with associated transmission lines and substations to meet this VRM Class Objective. It would be impossible for the project to not attract the attention of the casual user.

Equally, a 4-square-mile project would be visible from adjacent wilderness areas or other regions that have been designated as **VRM Class I Objectives** which are *to preserve the existing character of the landscape. Allowed Level of Change: This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.*

12-75

Distance Zone Delineation

Within the Visual Resource Inventory process, distance zones are assigned based on the distance of lands from places where people are known to be present on a regular basis, such as highways, waterways, trails, or other key locations. They include the following:

12-76

Foreground-middle ground – This zone includes visible areas from 0 to 5 mi.
Background – This zone includes visible areas from 5 to 15 mi.
Seldom seen – This zone includes lands visible beyond 15 mi or lands hidden from view from key locations.

The effects of distance are highly dependent on the size and other characteristics of the facility and the landscape, and must be incorporated into the contrast and impact analyses and mitigation efforts on a case-by-case basis.

Many of the distance zones within the Chuckwalla Valley and Palo Verde Mesa would be impacted by the proposed solar project and plan amendment.

12-76 cont.

The Visual analysis is incomplete due to the fact that the proponent has not chosen which photovoltaic technology would be used. Would they be Monocrystalline, Polycrystalline, Bi-facial or Thin-film? How reflective will the panels be?

12-77

Of the 5 Key Observation Point simulations, inly KOP 4 actually comes close to showing what the project may look like.

We believe that the KOP simulations could and should use existing solar projects as references. If that were done, BLM would have far more accurate simulations of the actual impacts to the project site. All but one of the photos are taken by Basin and Range Watch. These photos would be great examples:



^Silver State South Project near Primm, Nevada

12-78



^Silver State South Project near Primm, Nevada



^Silver State South Project near Primm, Nevada

12-78 cont.



^Silver State South Project near Primm, Nevada



^Mowing and grubbing vegetation on the Ivanpah Solar Project, California

Other KOP simulations should include:

12-78 cont.

12-79

Fugitive dust simulation for construction phase and a night lighting construction phase simulation.

12-79 cont.

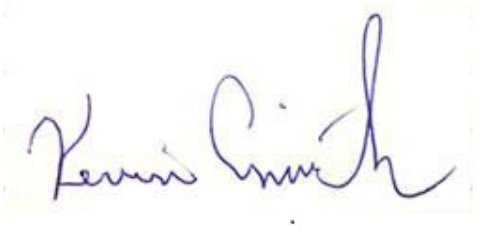
13. <u>Conclusion</u>

The BLM should select the No Action Alternative for the Crimson Solar Project.

The project is not complete in planning. The BLM has not chosen or decided on adequate mitigation yet. The project's storage plan is full of flaws. California is over-generating large-scale solar energy. It is not worth the risk to special status species, and to degrade so many resources on lands considered so sacred to Native American – especially when the project technology is so speculative.

12-80

Thank you,



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References:

USFWS. 2019. Status of the Desert Tortoise. Desert Tortoise Recovery Office. December 4, 2019.

Letter 13





VIA EMAIL AND USPS

January 30, 2020

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Re: Comments on the Proposed Draft Environmental Impact Statement and Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan, November 1, 2019. DOI-BLM-CA-D060-2017-0029-EIS State Clearinghouse No. 2018031027

Dear Ms. Liberatore and Ms. Rodriguez:

These comments are submitted on behalf of the Center for Biological Diversity and the Mojave Desert Land Trust regarding the Draft Environmental Impact Statement and Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan dated November 1, 2019 and issued by the Bureau of Land Management ("BLM") and the California Department of Fish and Wildlife ("CDFW").

The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and to assist California in meeting its ambitious emission reductions goals. The Center for Biological Diversity (the "Center") strongly support the development of renewable energy production, and the generation of electricity from solar power, in particular. However, like any project, proposed solar power projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy projects should avoid impacts to sensitive species and habitats and should be sited in proximity to the areas of electricity end-use in order to reduce the need for extensive new transmission corridors and the efficiency loss associated with extended energy transmission. Only by maintaining the highest environmental standards with regard to local impacts, and effects on species and habitat, can renewable energy production be truly sustainable.

As proposed (Alternative A), the project includes an approximately 350-megawatt (MW) photovoltaic (PV) solar energy generating facility and related infrastructure and is proposed to permanently disturb approximately 2,500 acres of BLM-managed public land in the Colorado Desert that currently provides habitat for many species including the threatened desert tortoise and the imperiled Mojave fringe-toed lizard (at DEIS/R Table ES-1). The proposed project, which would use photovoltaic panels, would also provide up to 350 MW of storage capacity, and includes up to a 6,000 feet long gen-tie line that would run from the project site to the Colorado River Substation. In addition to the Proposed Action (Alternative A) and the No Action alternative (Alternative D) which is the CEQA environmentally superior alternative, the DEIS/R also includes an "Alternative Design" alternative (Alternative B) and a Reduced Acreage alternative (Alternative C). The "Alternative Design" alternative includes the 2,500-acre footprint for the 350 MW PV project, but would reduce surface impacts by minimizing site grading, avoid or limit trenching by placing wires above ground, and placing transformer, inverter, and energy storage systems on elevated support structures in lieu of solid foundations. The "Reduced Acreage" alternative, which is BLM's preliminary preferred alternative, (at ES-3) is still proposed as a 350 MW project but on 2,200 acres on public lands managed by the BLM land. It would not contain any of the design features of Alternative B, but it would avoid sensitive vegetation, sand dune habitat, and cultural resources. The DEIR/S fails to inform the public of the status of any power purchase agreements (PPA) for this proposed project. 13-1

The original application for the Right-Of-Way was filed over ten years ago in June 2009 (DEIS/R at pg. ES-1). Since that time, there have been many changes in technology and circumstances, including the adoption of the Final Programmatic Environmental Impact Statement (PEIS) for Solar Energy Development in Six Southwestern States (Solar PEIS) in 2012 and the Desert Renewable Energy Conservation Plan (DRECP) in 2016. Additional information on resources and technologies have been obtained. The new land use plans coupled with the data procured from environmental analysis of proposals near the proposed right-of-way show that this right-of-way application is ill-placed on the landscape and should be significantly reduced in size to avoid sensitive resources or denied. 13-2

This DEIS/R for the proposed plan amendment and right-of-way application does not meet the NEPA or CEQA requirements because it: fails to provide adequate identification and analysis of all of the potentially significant impacts of the proposed project on the desert tortoise, the Mojave fringe-toed lizard, rare plants and other biological resources; fails to adequately address the significant cumulative impacts of the project; and lacks consideration of a reasonable range of alternatives. 13-3

Of particular concern is the document's failure to include adequate information regarding the impacts to resources and BLM's failure to fully examine the impact of the proposed plan amendment to the California Desert Conservation Act Plan ("CDCA Plan") along with the plan amendments that were adopted after 2009, when the application for this project was filed. Failing to subject the proposed project to the updated plan amendment requirements will result in an unnecessarily impactful project that is the anathema of smart planning. The Mule Mountain area in particular had little planning guidance in the Northern and Eastern Colorado (NECO) regional plan for this area of the CDCA when the original application was filed. And under the fast-track process and because of the adjacent transmission, several industrial scale projects moved forward within habitat that should have been protected to achieve the goals of the NECO and the CDCA Plan overall. Unfortunately, this has resulted in unforeseen impacts to resources including 13-4

unanticipated take of federally and state endangered species without the required permits and significant impacts to cultural resources. The Solar PEIS and DRECP provide essential planning guidance which should be applied to all projects in the area by BLM but were not, likely because BLM considers this project "grandfathered". Nonetheless, under CEQA, at a minimum, the requirements of the Solar PEIS and the DRECP for avoidance, minimization and mitigation must be considered in the DEIS/R in order to avoid significant impacts, minimize unavoidable impacts, and fully mitigate impacts of the project on the environment.

Although the area of the proposed project is currently part of the solar PEIS' East Riverside Solar Energy Zone (SEZ) and the DRECP's East Riverside Development Focus Area (DFA), the DEIS/R fails to fully identify and discuss the NECO plan guidance to which this project is still subject. Regarding the DRECP, which is now in place and was crafted to minimize impacts in the Riverside East Development Focus Area (DFA) where this project is proposed, Appendix F provides an analysis of how the proposed project complies or does not comply with the DRECP Conservation Management Actions (CMAs). Of the CMAs that are applicable, the proposed project is wholly inconsistent with twenty-three of the CMAs – either the LUPA-wide or resource specific CMAs for activities in the DFAs. The proposed project is partially inconsistent with and additional nine CMAs that are applicable. These identified inconsistencies undermine the strategic efforts to minimize impacts within the California Desert Conservation Area while still allowing development of renewable energy.

13-4 cont.

The DEIS/R fails to consider any potential alternative plan amendment that would protect the most sensitive lands from future development. Alternative siting and alternative technologies should have been included in the alternatives analysis, including a further reduced project alternative that would accommodate fewer MWs. In addition, an alternative for 350 MW of distributed PV developed in the built environment close to load centers should be fully considered in the DEIS/R, because this alternative could significantly reduce the impacts to many species, soils, and other resources in the Colorado desert.

13-5

13-6

In the sections that follow, the Center provides detailed comments on the ways in which the DEIS/R fails to adequately identify and analyze many of the impacts that could result from the proposed project, including but not limited to: impacts to biological resources, impacts to water resources, impacts to soils, direct and indirect impacts from the gen-tie line, and cumulative impacts.

I. The BLM's Analysis of the Proposed Plan Amendment and Proposed Project Fail to Comply with FLPMA.

As part of FLPMA, Congress designated 25 million acres of southern California as the California Desert Conservation Area ("CDCA"). 43 U.S.C. § 1781(c). Congress declared in FLPMA that the CDCA is a rich and unique environment teeming with "historical, scenic, archaeological, environmental, biological, cultural, scientific, educational, recreational, and economic resources." 43 U.S.C. § 1781(a)(2). Congress found that this desert and its resources are "extremely fragile, easily scarred, and slowly healed." *Id.* For the CDCA and other public lands, Congress mandated that the BLM "shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." 43 U.S.C § 1732(b).

The sum total of the proposed plan amendment to the CDCA plan is: "The BLM's purpose and need for the Project is to respond to the Applicant's application under Title V of the Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC §1761(a)(4)) for a ROW grant to construct, operate, maintain, and decommission a solar photovoltaic (PV) facility on public lands in compliance with FLPMA, BLM ROW regulations, and other applicable Federal laws, policies and plans… The CDCA Plan, while recognizing the potential compatibility of solar generation facilities on public lands, requires that all sites associated with power generation or transmission that are not identified in the CDCA Plan be added to it through the land use plan amendment process." (DEIS/R at 1-3). Given the impact of the proposed project on other multiple uses of these public lands at the proposed site as well as other aspects of the bioregional planning, it is clear that BLM may also need to amend other parts of the plan as well and should have looked at additional and/or different amendments as part of the alternatives analysis. **13-7**

While the Center understands the this project was arguably "grandfathered" and may not be subject to the Solar PEIS and DRECP, there remain several concerns with the proposed land use amendment not the least of which is the BLM's failure to accurately address the governing regulatory framework from 2009 under the CDCA plan and NECO plan amendment. Even if BLM believed it could not require a new application that would comply with the PEIS and DRECP and avoid the numerous impactful issues that have been documented in detail through the environmental review process on the outdated application, it is certainly required to fully address the CDCA plan and NECO plan amendment.

Even after the DRECP was adopted some aspects of the CDCA/NECO plan remain in effect overall including ORV route designations. The Center has repeatedly sought stronger protections for desert tortoise and tortoise critical habitat in the DWMAs within the CDCA as a whole and particularly within the NECO planning area from ORV impacts. Despite the fact that desert tortoise populations in the NECO DWMAs continue to decline, BLM continues to allow activities that significantly impact tortoise and critical habitat within the DWMAs. For example, the BLM's NECO plan amendment adopted ORV "open wash zones" on 218,711 acres (25%) in the Chemehuevi DWMA and 352,633 acres (43%) in the Chuckwalla DWMA, and in an additional 1,042 square miles (666,880 acres) of desert tortoise habitat outside of both the DWMAs and critical habitat. As a result, the NECO plan which is still in effect regarding ORV routes allows virtually unlimited ORV use in large parts of the DWMAs and allows significant damage to desert tortoises and their critical habitat to occur and these cumulative impacts have not been adequately considered in the DEIS/R. **13-8**

As part of reviewing the proposed plan amendment BLM should also consider an alternative that would include amending the NECO plan routes to remove all "open wash zones" from all critical habitat and DWMAs in the planning area to mitigate impacts from the project. The BLM should also provide ongoing monitoring of critical habitat and the DWMAs (and make all reports publicly available) to ensure that all *existing* route closures and other protections in the DWMAs are implemented and any *new* protective measures have the intended effect.

BLM has failed to take a *comprehensive* look at the proposed plan amendment for the ROW to determine if the proposed project interferes with the goals and objectives of the CDCA Plan as amended by the NECO, the Solar PEIS and the DRECP to the point where it would undermine the goals and objectives and make them ultimately unattainable—although the DEIS/R notes that this may be the case for some resources. For example, the DEIS/R recognizes that the **13-9**

NECO mitigation for impacts to Mojave fringe-toed lizards and their habitat needs to be mitigated at 3:1 – estimated to be 1,636.8 acres of mitigation acquisition for Alternative A. However, the DEIS/R does not address the feasibility of that mitigation. The adjacent Desert Quartzite EIS/R noted that mitigation requirements for that project may be unattainable: "It is uncertain whether sufficient private lands meeting the habitat criteria may be available for purchase." (Desert Quartzite DEIS/Rat pg. 4.4-7). It also noted that "it is also uncertain whether off-site enhancement and restoration can feasibly and effectively restore natural sand transport function and aeolian sand habitat values. Therefore, with implementation of Mitigation Measure WIL-10 to the extent it is feasible, the Proposed Action's direct effects on sand transport may remain only partially mitigated." (Desert Quartzite DEIS/Rat pg. 4.4-7). Approving a project that will further imperil the Mojave fringe-toed lizard such that it will require the protections of the ESA, undermines the BLM's sensitive species mandates.

13-9 cont.

First, the Center remains concerned that the significant impacts to these resources and others would doom the protections put in place under the Solar PEIS and the DRECP. Even if this site-specific project approval can be "grandfathered" it cannot be made based on outdated information; to do so could undermine the "bioregional" approach in the CDCA Plan as a whole (including the NECO amendment) as well as violate the fundamental planning principles of FLPMA.

13-10

Secondly, the DEIS/R also fails to address the temporal impact to the fringe-toed lizard and dune habitat. Instead the DEIR states:

> "Compensation shall be initiated or completed within 188 months from the time the resource impact occurs. Extensions must be approved by the BLM AO and CDFW."

At ES-30. Initiating compensation for impacts after over 15 years (188 months) alone is completely inappropriate due to the temporal impacts to the species. Impacts from the proposed project ideally should be mitigated *prior to* the commencement of habitat impacts in order to assure that mitigation is actually feasible.

13-11

Third, despite implementing avoidance measures including monitoring and relocation, speed limits and other measures, significant mortalities of Mojave fringe-toed lizards occurring during construction of the Colorado River Substation[1]. Additional avoidance measures need to be included to minimize road access to the Colorado River Substation via the gen-tie alignment. Access to the solar field also needs minimize intrusion into Mojave fringe-toed lizard habitat.

13-12

A. The DEIS/R Fails to Adequately Address the Plan Amendment in the Context of the CDCA Plan.

Unfortunately, the DEIS/R fails to adequately consider the impacts of the proposed project and plan amendment and reasonable alternatives in the context of FLPMA and the CDCA Plan as amended by NECO. FLPMA requires that in developing and revising land use plans, the BLM consider many factors and "use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences . . . consider the relative

13-13

1 Helix 2013

scarcity of the values involved and the availability of alternative means (including recycling) and sites for realization of those values." 43 U.S.C. § 1712(c). As stated clearly in the CDCA Plan:

> The goal of the Plan is to provide for the use of the public lands, and resources of the California Desert Conservation Area, including economic, educational, scientific, and recreational uses, in a manner which enhances wherever possible—and which does not diminish, on balance—the environmental, cultural, and aesthetic values of the Desert and its productivity.

CDCA Plan at 5-6. The CDCA Plan also provides several overarching management principles:

> MANAGEMENT PRINCIPLES
>
> The management principles contained in the law (FLPMA)—*multiple use, sustained yield, and the maintenance of environmental quality*—are not simple guides. Resolution of conflicts in the California Desert Plan requires innovative management approaches for everything from wilderness and wildlife to grazing and mineral development. These approaches include:
>
> —Seeking simplicity for management direction and public understanding, avoiding complication and confusing in detail which would make the Plan in comprehensive and unworkable.
>
> —Development of decision-making processes using appropriate guidelines and criteria which provide for public review and understanding. These processes are designed to help in allowing for the use of desert lands and resources while preventing their undue degradation or impairment.
>
> *—Responding to national priority needs for resource use and development, both today and in the future, including such paramount priorities as energy development and transmission, without compromising the basic desert resources of soil, air, water, and vegetation, or public values such as wildlife, cultural resources, or magnificent desert scenery. This means, in the face of unknowns, erring on the side of conservation in order not to risk today what we cannot replace tomorrow*.
>
> *—Recognizing that the natural patterns of the California Desert, its geological and biological systems, are the basis for planning*, and that human use patterns, from freeways to fence lines, define its boundaries. Only in this way can the public resources can be understood and protected by the Plan that can be publicly comprehended, accepted, and followed.

CDCA Plan 1980 at 6 (first emphasis in original, second emphasis added).

13-13 cont.

The CDCA Plan anticipated that there would be multiple plan amendments over the life of the plan and provides specific requirements for analysis of Plan amendments. Those requirements include determining "if alternative locations within the CDCA are available which would meet the applicant's needs without requiring a change in the Plan's classification, or an amendment to any Plan element" and evaluating "the effect of the proposed amendment on BLM management's desert-wide obligation to achieve and maintain a balance between resource use and resource protection." CDCA Plan at 121. BLM reads this portion of the CDCA plan extremely narrowly

and attempts to divorce it from the required NEPA analysis and alternatives. Looking at the CDCA Plan requirement in context with the NEPA review it is clear that the BLM was required to analyze not only whether alternative locations were available that would not require a plan amendment, but also how the proposed amendment would affect desert-wide resource protection and whether alternative locations and alternative plan amendments would avoid or lessen those impacts—BLM fails to address the latter issue and did not look at any site alternatives. The inclusion of a "no action" alternatives, a reduced acreage alternative, and an avoidance alternative as part of the NEPA analysis failed to cure this omission.

13-13 cont.

The CDCA Plan includes the Energy Production and Utility Corridors Element which is focused primarily on utility corridors with brief discussion of powerplant siting. Even in 1980 the CDCA Plan contemplated that alternative energy projects would likely be developed in the future but did not expressly provide planning direction for solar energy production. Nonetheless, the overarching principles expressed in the Decision Criteria are also applicable to the proposed project here including minimizing the number of separate rights-of-way, providing alternatives for consideration during the processing of applications, and "avoid[ing] sensitive resources wherever possible." CDCA Plan at 93. Because avoiding resources, including the sensitive sand habitats is clearly possible, it should be required. Unfortunately, the DEIS/R does not show that BLM fully considered the landscape level issues and management objectives or alternatives to the proposed plan amendment in the DEIS/R.

13-14

In addition, BLM should have considered the impacts to resources and existing land use plans for these public lands across several scales including, for example: in the Mule Mountain area in the Colorado Desert in California; and in the CDCA as a whole.

Under the NECO plan, Wildlife Habitat Management Areas (WHMAs) "address other special status species and habitat management" (NECO at 2-2). NECO also states that "The existing restricted areas, DWMAs, and WHMAs form the Multi-species Conservation Zone" (NECO at 2-2) which is the conservation basis of the NECO plan. The proposed project area overlaps one of the multi-species WHMA that includes the Mule Mountains. Management emphasis for the Mule Mountain WHMA is on active management of specific species and habitats mitigation, and restoration from authorized allowable uses. The overlap of the proposed project is not addressed in the DEIS/R. The NECO Plan goals and objectives for "Other Special Status Animal and Plant Species, Natural Communities, and Ecological Processes" are very specific and focus on conservation:

13-15

> Goals for special status animal and plant species, natural communities, and ecological processes are as follows:
>
> • Plants and Animals. Maintain the naturally occurring distribution of 28 special status animal species and 30 special status plant species in the planning area. For bats, the term "naturally occurring" includes those populations that might occupy man-made mine shafts and adits.
> • Natural Communities. Maintain proper functioning condition in all natural communities with special emphasis on communities that a) are present in small quantity, b) have a high species richness, and c) support many special status species.
> • Ecological Processes. Maintain naturally occurring interrelationships among various biotic and abiotic elements of the environment.

The objectives are to

a. protect and enhance habitat
b. protect connectivity between protected communities

(NECO Plan at 2-52.) Further, the NECO Plan adopted action items to promote the objectives to "Protect and enhance habitat" (NECO Plan at 2-55), and "Protect connectivity between protected communities" (NECO Plan at 2-58). *See also* NECO Plan ROD at D-1, D-3.

> For the first objective, to protect and enhance habitat, the first "action" is to:
>
> Designate seventeen multi-species WHMAs (totaling 555,523 acres) such that approximately 80 percent of the distribution of all special status species and all natural community types would be included in the Multi-species Conservation Zone (Map 2-21 Appendix A). See Appendix H for a description of the process used to define the WHMA and the concept of conservation zones.

(NECO Plan at 2-55.) For the second objective, to protect connectivity, one of the actions states that: "The fragmenting affects of projects should be considered in the placement, design, and permitting of new projects." (NECO Plan at 2-58.) Other relevant "actions" include:

> Require mitigation of impacts of proposed projects in suitable habitat within the range of a special status species and within natural community types using commonly applied mitigation measures and conduct surveys in the proposed project area for special status species as follows (also see range maps 3-6a-f and 3-7a-f Appendix A):

(NECO Plan at 2-55.)

Thus under the NECO plan, the impacts to multiple species WHMA and to sand and playa areas and Mojave fringe-toed lizard should be avoided. As detailed below, the DEIS/R does not consider any alternative that would completely avoid these important areas, or adequately consider the impacts, or minimization and mitigation as required by the NECO plan (as well as NEPA and CEQA).

13-15 cont.

B. The DEIS/R Fails to Adequately Address Impacts to Multiple Use Class M Lands and Loss of Multiple Use in Favor of a Single Use for Industrial Purposes.

As FLPMA declares, public lands are to be managed for multiple uses "in a manner that will protect the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values." 43 U.S.C.§ 1701(a)(7) & (8). The CDCA Plan as amended (prior to the recent DRECP amendments) provided for four distinct multiple use classes (MUC) based on the sensitivity of resources in each area. Although the use of the MUC classes were eliminated by the DRECP, because this proposed project was "grandfathered" it is still subject to these MUC classes. The proposed project site is in MUC class M lands (DEIS/R at 3.9-1). Under the CDCA Plan, Multiple-use Class M (Moderate Use) "protects sensitive, natural,

13-16

scenic, ecological, and cultural resources values. For public lands designated as Class M the CDCA Plan intends a "*controlled balance* between higher intensity use and protection of public lands. This class provides for a wide variety o[f] present and future uses such as mining, livestock grazing, recreation, energy, and utility development. Class M management is *also* designed to conserve desert resources and to mitigate damage to those resources which permitted uses may cause." CDCA Plan at 13 (emphasis added). The proposed project is a high-intensity, single use of resources that will displace all other uses and that will significantly diminish (indeed, highly modify) approximately 2,500 acres of habitat including impacting aeolian transport in the dunes ecosystem and stabilized sand habitat, directly impacting habitat for desert tortoise and nibbling away a BLM-designated WHMA established to protect multiple species. While the DEIS/R does consider alternative configurations that would avoid some impacts to some resources, the proposed project creates the greatest impact to the sensitive resources of all the alternatives. Therefore, its consideration of reaching the "controlled balance" between multiple uses or the goals and objectives identified in the CDCA plan is clearly inadequate. Moreover, BLM does not address how the loss of multiple uses in such a large area might affect other nearby public lands in the CDCA such as creating greater pressures on those land for the remaining multiple uses.

13-16 cont.

The DEIS/R does not consider whether and how new access roads created for the proposed project may increase off-road vehicle use in this area and thereby significantly increase impacts from ORVs on species and habitats surrounding the proposed project. There is no evidence that recreational off-road vehicle users will be content to drive for miles along a fence adjoining an industrial site rather than striking off cross-country to connect with more scenic routes. Past experience shows that the latter is a much more likely outcome and BLM should recognize it by analyzing the impacts of this project on the existing route network and include a proposal to amend that network for new roads created by the proposed project.

13-17

C. Fails to Adequately Address Other Adopted Plan Amendments

As noted above, the DEIS/R fails to adequately address the proposed project in the context of other connected projects (including multiple renewable energy projects, substations and additional transmission lines), which to some extent the Solar PEIS for solar development in six western states undertaken by BLM and DOE and the DRECP undertaken in the California Desert District and parts of the Bishop and Bakersfield Field Areas did address. While both the Solar PEIS and the DRECP identify the Riverside-East SEZ and DFA as an area appropriate for solar development, both also identified avoidance areas for solar energy and strategies to minimize impacts from projects within the SEZ and DFA including minimization strategies that this proposed project should have adopted. The DRECP also put in place Conservation Management Actions (CMAs) to be applied in the DFA. While the DEIS/R applies some of these sensible management actions from the DRECP and PEIS, it fails to require the necessary avoidance and minimization measure in order to minimize impacts and not undermine goals and objective in currently adopted plan amendments.

13-18

D. The DEIS/R Fails to Provide Adequate Avoidance and Minimization Measures to Ensure that the BLM will Prevent Unnecessary and Undue Degradation of Public Lands and Fails to Show that CDFW has Complied with CEQA

FLPMA requires BLM to "take any action necessary to prevent unnecessary or undue degradation of the lands" and "minimize adverse impacts on the natural, environmental, scientific,

13-19

cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved." 43 U.S.C. §§ 1732(b), 1732(d)(2)(a). Without clear analysis of the impacts to the goals of the more recent plan amendments and their requirements, the BLM cannot fulfill its duty to prevent unnecessary or undue degradation of the public lands and resources. Thus, the failure to fully address and implement the avoidance and minimization measures identified in the Solar PEIS and the DRECP, which was based on more recent data than the NECO plan, undermines BLM's ability to protect and manage these lands in accordance with the statutory directive. In addition, by failing to adequately consider the avoidance, minimization and mitigation measures of the PEIS and DRECP, the CDFW has failed to comply with CEQA.

13-19 cont.

As detailed below, the BLM's analysis of the impact of this proposal on the goals of the more recent land use plan amendments indicates that the proposed alternatives do not comply with and therefore approving the proposed project would be counter to the BLM's mandate to ensure that the proposal does not cause unnecessary and undue degradation of public lands.

II. The DEIS/R Fails to Comply with NEPA.

NEPA is the "basic charter for protection of the environment." 40 C.F.R. § 1500.1(a). In NEPA, Congress declared a national policy of "creat[ing] and maintain[ing] conditions under which man and nature can exist in productive harmony." *Or. Natural Desert Ass'n v. Bureau of Land Mgmt.,* 531 F.3d 1114, 1120 (9th Cir. 2008) (quoting 42 U.S.C. § 4331(a)). NEPA is intended to "ensure that [federal agencies] … will have detailed information concerning significant environmental impacts" and "guarantee[] that the relevant information will be made available to the larger [public] audience." *Blue Mountains Biodiversity Project v. Blackwood,* 161 F.3d 1208, 1212 (9th Cir. 1998).

Under NEPA, before a federal agency takes a "'major [f]ederal action[] significantly affecting the quality' of the environment," the agency must prepare an environmental impact statement (EIS). *Kern v. U.S. Bureau of Land Mgmt.,* 284 F.3d 1062, 1067 (9th Cir. 2002) (quoting 43 U.S.C. § 4332(2)(C)). "An EIS is a thorough analysis of the potential environmental impact that 'provide[s] full and fair discussion of significant environmental impacts and … inform[s] decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.'" *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.,* 387 F.3d 989, 993 (9th Cir. 2004) (citing 40 C.F.R. § 1502.1). An EIS is NEPA's "chief tool" and is "designed as an 'action-forcing device to [e]nsure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government.'" *Or. Natural Desert Ass'n,* 531 F.3d at 1121 (quoting 40 C.F.R. § 1502.1).

An EIS must identify and analyze the direct, indirect, and cumulative effects of the proposed action. This requires more than "general statements about possible effects and some risk" or simply conclusory statements regarding the impacts of a project. *Klamath Siskiyou Wildlands Center v. BLM,* 387 F.3d 989, 995 (9th Cir. 2004) (citation omitted); *Oregon Natural Resources Council v. BLM,* 470 F.3d 818, 822-23 (9th Cir. 2006). Conclusory statements alone "do not equip a decisionmaker to make an informed decision about alternative courses of action or a court to review the Secretary's reasoning." *NRDC v. Hodel*, 865 F.2d 288, 298 (D.C. Cir. 1988).

NEPA also requires BLM to ensure the scientific integrity and accuracy of the information used in its decision-making. 40 CFR § 1502.24. The regulations specify that the agency "must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential." 40 C.F.R. § 1500.1(b).

A. Purpose and Need and Project Description are Too Narrowly Construed and Unlawfully Segment the Analysis

1. Purpose and Need:

Agencies cannot narrow the purpose and need statement to fit only the proposed project and then shape their findings to approve that project without a "hard look" at the environmental consequences. To do so would allow an agency to circumvent environmental laws by simply "going-through-the-motions." It is well established that NEPA review cannot be "used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5; *Metcalf v. Daley*, 214 F.3d 1135, 1141-42 (9th Cir. 2000) ("the comprehensive 'hard look' mandated by Congress and required by the statute must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.") As Ninth Circuit noted an "agency cannot define its objectives in unreasonably narrow terms." *City of Carmel-by-the-Sea v. U.S. Dept. of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997); *Muckleshot Indian Tribe v. U.S. Forest Service*, 177 F. 3d 900, 812 (9th Cir. 1999). The statement of purpose and alternatives are closely linked since "the stated goal of a project necessarily dictates the range of 'reasonable' alternatives." *City of Carmel*, 123 F.3d at 1155. The Ninth Circuit recently reaffirmed this point in *National Parks Conservation Assn v. BLM*, 586 F.3d 735, 746-48 (9th Cir. 2009) (holding that "[a]s a result of [an] unreasonably narrow purpose and need statement, the BLM necessarily considered an unreasonably narrow range of alternatives" in violation of NEPA).

The purpose behind the requirement that the purpose and need statement not be unreasonably narrow, and NEPA in general is, in large part, to "guarantee[ ] that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). The agency cannot camouflage its analysis or avoid robust public input, because "the very purpose of a draft and the ensuing comment period is to elicit suggestions and criticisms to enhance the proposed project." *City of Carmel-by-the-Sea*, 123 F.3d at 1156. The agency cannot circumvent relevant public input by narrowing the purpose and need so that no alternatives can be meaningfully explored or by failing to review a reasonable range of alternatives.

The BLM's purpose and need for the proposed Crimson project is "to respond to the Applicant's application under Title V of the Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC §1761(a)(4)) for a ROW grant to construct, operate, maintain, and decommission a solar photovoltaic (PV) facility on public lands in compliance with FLPMA, BLM ROW regulations, and other applicable Federal laws, policies and plans.." (DEIS/R at 1-3). BLM's purpose and need is very narrowly construed to the proposed project itself and an amendment to the Plan *for the project only*. The purpose and need provided in the DEIS/R retains the flaw of impermissibly narrow purpose under NEPA for several reasons, most importantly

13-20

because it foreclosed meaningful alternatives review in the DEIS/R. Because the purpose and need and the alternatives analysis are at the "heart" of NEPA review and affect nearly all other aspects of the EIS, on this basis and others, BLM must revise and re-circulate the DEIS/R.

13-20 cont.

Similarly, for CEQA review, the project objectives frame the alternatives analysis, the purpose of which is to enable the agency or commission to fulfill the statutory requirement that feasible alternatives that avoid significant impacts of a project must be implemented.

> [I]t is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

(Public Res. Code § 21002.) The statutory language and case law make it quite clear that the Legislature intended public agencies to utilize CEQA's environmental review process and procedures to make determinations regarding feasible alternatives and mitigation measures based on a robust analysis. Nothing in CEQA states that the project objectives utilized by the agency must meet all of the applicant's proffered objectives. The statutory definition of "feasible" does not even mention the applicant's objectives. (Pub. Res. Code § 21061.1.) Nothing in CEQA states that an alternative may be found infeasible solely due to a conflict with one or more of the applicant's objectives. In fact, the CEQA Guidelines expressly provide that a feasible alternative may impede achievement of the project objectives to some degree. (See 14 C.C.R (CEQA Guidelines) § 15126.6(a), (b).) Framing project objectives too narrowly or too specifically would artificially limit the range of reasonable, feasible alternatives and could preclude consideration of a reasonable range of alternatives. *See City of Santee v. County of San Diego* (1989) 214 Cal. App. 3d 1438, 1455.

CDFW identifies the project objectives are to:

> 1. Generate 350 MW of renewable electricity to assist the State of California in achieving its 50 percent renewable portfolio standard for 2030 by providing a significant new source of wholesale renewable energy.
> 2. Assist California utilities in meeting their obligations under the California Public Utilities Commission's (CPUC's) Energy Storage Framework and Design Program, including the procurement target of 1,325 MW by 2020, by providing up to 350 MW of storage capacity.
> 3. Facilitate grid interconnection of intermittent and variable PV generation and minimize line losses associated with off-site storage by collocating substantial electrical storage capacity at the PV facility site.
> 4. Realize economies of scale inherent in constructing a utility-scale solar facility on contiguous lands in the immediate vicinity of a high-voltage interconnection to the California Independent System Operator (CAISO)-controlled grid.
> 5. Bring living-wage skilled jobs to Riverside County through Project development, construction, and operation.

13-21

For purposes of CEQA the following objectives are also included:
1. Protect and conserve wildlife resources and to minimize environmental impacts and land disturbance by, among other things, siting the facility on relatively flat lands with high solar insolation, in close proximity to established utility corridors, existing substation with available capacity to facilitate interconnection, and accessible roads.
2. Promote environmentally responsible development that minimizes incidental take by implementing species-specific minimization and avoidance measures.
3. Protect and conserve the resources of the State of California and mitigate any impacts on these resources.

At 1-3

CDFW's objectives are, in part, identical to the Project Applicant's purpose and need, which further limits the range of alternatives. There is no clear reason why 350 MW should be considered as an objective—CDFW must address feasible alternatives that would be smaller and avoid significant impacts to resources including the Resource Avoidance Alternative in the DEIS/R and others such as a Reduced Project Alternative only.

13-21 cont.

The Center is well aware that the original application was focused on permitting a project to take advantage of subsidies, tax credits and other funding, particularly for the American Recovery and Reinvestment Act ("ARRA") funds that drove projects to be placed in inappropriate areas, as this proposed project site is. The subsidies may or may not be available in the future and that must also be taken into account in the DEIS/R if the CDFW chooses to consider financial feasibility and commercial financing as part of the objectives.

13-22

Moreover, in its discussion of the need for renewable energy production the DEIS/R fails to fully address risks associated with global climate change in context of including both the need for climate change mitigation strategies (e.g., reducing greenhouse gas emissions) and the need for climate change adaptation strategies (e.g., conserving intact wild lands and the corridors that connect them). All climate change adaptation strategies underline the importance of protecting intact wild lands and associated wildlife corridors as a priority adaptation strategy measure.

The habitat fragmentation, loss of connectivity for terrestrial wildlife, destruction of carbon sequestration of soils and introduction of predators and invasive weed species associated with the proposed project in the proposed location may run contrary to an effective climate change adaptation strategy. Siting the proposed project in the proposed location impacting the sand transport corridor, dune ecosystems, occupied habitat, important habitat linkage areas, major washes, and other fragile desert resources could undermine a meaningful climate change adaptation strategy by ignoring the need for significant avoidance, minimization and mitigation from any project built on any part of the proposed site. The way to maintain healthy, vibrant ecosystems is not to fragment them and reduce their biodiversity.

13-23

B. Failure to Identify and Analyze Direct and Indirect Impacts to Biological Resources

The DEIS/R fails to adequately analyze the direct, indirect, and cumulative impacts of the proposed project on the environment. The Ninth Circuit has made clear that NEPA requires agencies to take a "hard look" at the effects of proposed actions; a cursory review of environmental impacts will not stand. *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150-52, 1154 (9th Cir. 1998). Where the BLM has incomplete or insufficient information, NEPA requires the agency

to do the necessary work to obtain it where possible. 40 C.F.R. §1502.22; *see National Parks & Conservation Ass'n v. Babbitt,* 241 F.3d 722, 733 (9th Cir. 2001) ("lack of knowledge does not excuse the preparation of an EIS; rather it requires [the agency] to do the necessary work to obtain it.")

Moreover, BLM must look at reasonable mitigation measures to avoid impacts in the DEIS/R but failed to do so here. Even in those cases where the extent of impacts may be somewhat uncertain due to the complexity of the issues, BLM is not relieved of its responsibility under NEPA to discuss mitigation of reasonably likely impacts at the outset. Even if the discussion may of necessity be tentative or contingent, NEPA requires that the BLM provide some information regarding whether significant impacts could be avoided. *South Fork Band Council of Western Shoshone v. DOI*, 588 F.3d 718 , 727 (9th Cir. 2009).

The DEIS/R fails to identify that the proposed project overlaps with the Mule Mountain Wildlife Habitat Management Area (WHMA) as established under NECO. If the project is truly a "grandfathered" project, then the NEPA and CEQA analysis must address the existing land use as the CDCA Plan as amended by NECO. The DEIS/R must to analyze the impacts to this important WHMA. While the DRECP and PEIS can and must be considered in determining whether there are additional reasonable, feasible avoidance, minimization and mitigation measures (and the DEIS/R must address the impacts of the proposed project on the subsequent goals and objectives of these later-adopted land use plan amendments), BLM and CDFW must first ensure conformance with the NECO plan amendment requirements. **13-24**

1. Desert Tortoise

The desert tortoise has lived in the western deserts for tens of thousands of years. In the 1970's their populations were noted to decline. Subsequently, the species was listed as threatened by the State of California in 1989 and by the U.S. Fish and Wildlife Service in 1990, which then issued a Recovery Plan for the tortoise in 1994. The U.S. Fish and Wildlife Service issued an Updated Recovery Plan in 2011. Current data indicate a continued decline across the range of the listed species[2] despite its protected status and recovery actions.

The original and Updated Recovery Plans both recognize uniqueness in desert tortoise populations in California. This particular subpopulation of tortoise at the proposed project site is part of the Eastern Colorado Recovery unit[3]. Population genetics studies[4] have further confirmed the 1994 Recovery Plan's conclusions the Eastern Colorado Recovery unit is one of the most genetically unique recovery units. Appendix I-1 provides the status population status for on-site and site-adjacent desert tortoise. While two live adult desert tortoises were located on the proposed project site (Appendix I-1 at xii), U.S. Fish and Wildlife Service estimates that within the permitting area, there are five adult desert tortoises on the project site and 27 small tortoises/eggs (Appendix I-1 at 78) . The latest publicly available data on this particular recovery unit documents it to have a continuing declining trend[5]. The DEIS/R fails to identify and consider the localized impact to this recovery unit that is already in decline from eliminating approximately 2,500 acres **13-25**

2 Allison and McLuckie 2018
3 USFWS 1994
4 Murphy et al. 2007
5 USFWS 2019.

of tortoise habitat from being occupied in the future, particularly when cumulatively considered with the numerous other industrial-scale projects in the DFA

13-25 cont.

The Desert Tortoise Translocation Plan (Appendix I-12) analyzes the recipient site desert tortoise density and with the addition of the estimated five desert tortoises, determines that the recipient site density "equals the post-translocation threshold for the Colorado Desert Recovery Unit per USFWS (2017) guidance." (Appendix I-12 at 17). If more than five desert tortoises require translocation, the DEIS/R is unclear about the disposition of additional animals and instead relies on "continued coordination" (Appendix I-12 at 17)

13-26

While translocation remains a popular strategy for moving desert tortoise out of immediate harm's way, desert tortoise translocations still typically result in significant short-term mortality up to 45%[6]. The long-term survivorship is unknown. Many mitigation-driven translocations fail due to poorly planned translocations[7]. Studies on the short-term integration of the translocated male desert tortoises into the recipient populations indicates that they are not being genetically integrated into the population[8].

13-27

Mechanisms need to be included to assure that any and all mitigation acquisitions (ex. Mitigation Measure Bio-26 [Desert Tortoise Compensatory Mitigation] at ES-26) will be conserved in perpetuity for the conservation of the desert tortoise and other wildlife as required by CDFW for mitigation for state listed species. Even if those acquisitions are within protected areas under the DRECP, additional assurances need to be put in place to achieve in-perpetuity conservation.

13-28

NEPA mandates consideration of the relevant environmental factors and environmental review of "[b]oth *short- and long-term* effects" in order to determine the significance of the project's impacts. 40 C.F.R. § 1508.27(a) (emphasis added). BLM has clearly failed to do so in this instance with respect to the impact to the desert tortoise.

13-29

The 1:1 mitigation ratio of desert tortoise habitat outside of critical habitat as proposed in Mitigation Measure Bio-26 (Desert Tortoise Compensatory Mitigation) is inadequate to mitigate for the destruction of habitat because it does not really fully mitigate as required by CDFW in California. Mitigation presumes that acquisition will be appropriate tortoise habitat (occupied or unoccupied) which is currently existing and providing benefits to the species, to offset the elimination of the proposed project site. However, this strategy is still *a net loss of habitat* to the desert tortoise, because currently, tortoises are using or could use both the mitigation site and the proposed project site. Therefore, in order to aid in recovery of this declining and federally and state threatened species, at a minimum a 2:1 mitigation ratio should be required as mitigation for the total and likely permanent elimination of desert tortoise habitat on the proposed project site. A requirement for adequate acquisition lands needs to be included that identifies that the acquisition must provide connectivity to this population.

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As part of the plan amendment, the tortoise translocation areas need to be secured for tortoise conservation in perpetuity in order to preclude moving the animals a second time if

13-31

6 Gowan and Berry 2010.
7 Germano et al. 2015
8 Mulder et al. 2017

additional projects are proposed and move forward on the translocation site(s). This situation has already occurred with other solar projects, to the detriment of the tortoises.

13-31 cont.

2. Mojave fringe-toed lizard/Sand dunes/Sand Transport System

The sand dune and partially stabilized sand dune habitat is crucial for the Mojave fringe-toed lizard (MFTL), which is the most southerly population of the Mojave fringe-toed lizard and likely the population most adapted to the increasing temperatures due to climate change. As proposed in the DEIS/R the proposed project site has the potential to impact four Sand Migration Zones (SMZs) – Wiley's Well Basin, Mule, Western Mule, and Northern Mule SMZs. While most of the proposed project is proposed on Zone C (low sand migration), some of the site, particularly in the northern part of the site and along the gen-tie to the Colorado River Substation, is proposed in areas ranging from low to moderate sand migration (Appendix I-3 – Plate 3A). In addition, some areas along the base of the Mule Mountains include areas identified as moderate to weak sand migration (Appendix I-3 – Plate 3A). While "the windblown sand deposits on and adjacent to the Project site are primarily locally sourced from alluvial fans draining the Mule Mountains, as opposed to regional sand transport corridors" (DEIS/R at 3.3-3), these areas are still important habitat for the MFTL and other sand/dune plants and animals. Despite the fact that the dunes/sand areas are relatively stable here and do not rely on contemporary deposition, we are still concerned about the DEIS/R's determination that there will be "no substantial effects" after mitigation. It is unclear how many acres of dunes/sand is present within the project boundaries. The DEIS/R identifies 29.2 acres of impact to "Desert Dunes" (at 3.3-2) that all appear associated with the gen-tie line. While Alternatives 2 and 3 would reduce impact to the sand/dune areas, the DEIS/R does not quantify the decrease, so the public is left wondering how much onsite dune habitat is present and how impacting 29.2 acres of it will affect sand/dune species. The DEIS/R fails to provide an alternative that completely avoids impacts to the sand/dune habitat or explains why such an alternative is infeasible.

13-32

Other solar energy projects proposed to impact Mojave fringe-toed lizard habitat have identified mitigation ratios of 5:1 and 3:1 for direct impacts to all occupied Mojave fringe-toed lizard habitat and lesser ratios for indirect impacts. For example, Desert Sunlight project was required to mitigate any unavoidable impacts to the Mojave fringe-toed lizard habitat up to 5:1 for direct impacts to all occupied Mojave fringe-toed lizard habitat and lesser ratios for indirect impacts (Desert Sunlight FEIS at 4.4-40). The Desert Sunlight project (Desert Harvest FEIS at Wil-4) was also required to produce a Mojave Fringe-toed Lizard Protection Plan. The DEIS/R provides no explanation for failing to require a Mojave Fringe-toed Lizard Protection Plan for this proposed project which clearly is sited in more Mojave fringe-toed lizard habitat than the Desert Sunlight and will have significantly more impacts to the species if approved. The DEIS/R fails to identify why only a 3:1 mitigation ratio is being required for direct impacts. The DEIS/R fails to evaluate or propose mitigation for indirect impacts which is wholly inadequate because indirect impacts will impact Mojave fringe-toed lizard habitat. As Barrows et al. (2006)[9] found, edge effects are significant for fringe-toed lizards and, in addition, the increase in predators associated with developed edges may also have a significant adverse effect on fringe-toed lizards and other species, therefore additional mitigation is warranted.

13-33

9 Barrows et al. 2006

Despite the inadequacy of the proposed mitigation and as discussed above, the DEIS/R also needs to evaluate whether sufficient private lands meeting the habitat criteria may be available for acquisition. Other DEIS/Rs (ex. Desert Quartzite) have done and determined, for that project, it may not be feasible. The potential lack of adequate mitigation land and the infeasibility of restoration of habitat elsewhere is a key reason to consider alternatives that will avoid impacts to the sand/dune habitat. 13-34

3. Migratory and Other Birds and Burrowing Owls

Large-scale renewable energy facilities in California are having direct and indirect impacts on migratory birds[10]. The scale of the impacts and the significance to the overall population abundance and ecology of migratory bird species is potentially significant, yet due to a lack of standardized monitoring and analysis, the scale of the impacts remains unknown. It is essential that standardized before-after-control-impact surveys of migratory birds are conducted when developing projects, including the proposed project, in order to understand how renewable energy projects are affecting our migratory bird populations and to ensure that projects are developed in accordance with federal law and international treaties.

At this time, there are numerous large-scale solar energy projects operational in the California desert with others moving forward. The land being developed for renewable energy is habitat used by migratory bird species as they migrate and periodically stopover at various sites. These areas are crucial for the viability of the migratory populations. At solar facilities in California that are either under construction or operational, individuals of over 40 species of migratory birds have been found injured or dead[11] and this is far above the background mortality found during control surveys. Avifauna impacted by these facilities includes multiple species of raptors, passerines, and water birds, including the endangered Ridgway's clapper rail (*Rallus longirostris yumanensis*), and the federally threatened Yellow-billed cuckoo (*Coccyzus americanus*). 13-35

Recent studies indicate that desert bird communities in the Mojave are collapsing due to climate change.[12] Additional pressures through development of their habitat further threatens these species that are already near the edge of their physiological limits.

In addition, we remain seriously concerned that birds of multiple species may perceive some solar PV facilities as large bodies of standing water (often called the "lake effect") or as reflected airspace through which to fly. The DEIS/R recognizes that the project is located along the Colorado River migration route (at 3.3-12). The DEIS/R only mentions the "lake effect" in Appendix I-1 (at pg.130) and appears to downplay this ongoing source of avian mortality, which, at the least, requires consistent standardized monitoring in order to fill the data gap that is needed in order to scientifically determine the significance of the impact.

Pursuant to Executive Order 13186, federal agencies taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations are responsible for promoting the conservation of migratory birds. Per the Migratory Bird Treaty Act, and related regulations, the USFWS has no framework to accept compensation to help mitigate a project's impact on

10 Kagan et al. 2014
11 IBID
12 Iknayan and Beissinger 2018

migratory bird populations and habitats; however, the BLM and the CDFW may accept mitigation in collaboration with USFWS. At this time, it is essential that the agencies focus on identification of the source of mortality and likely extent so that it can be analyzed, avoided completely, or minimized and mitigated. Because the project may actually create an attractive nuisance for migratory birds, mitigation for migratory bird impacts should be separate from, and in addition to, mitigation for the loss of habitat for terrestrial species. As is well documented, this mitigation, to be effective, needs to involve riparian areas, additions to wildlife reserves and/or conservation and restoration of lands adjacent to riparian corridors or wildlife reserves. Consultation with the USFWS will provide a ratio, which we suggest should be a minimum of 3:1 due to the cumulative impacts of this project and other existing projects in the same area that have already "taken" birds.

With regard to the proposed project, the BLM and the CDFW must require the project proponent to survey and accumulate accurate and reliable information on the background mortality rate of migratory birds at the project site and to establish protocols for mandatory standardized monitoring during and post-construction and commit to avoidance and mitigation measures. The project design should take into account this risk and adopt measures that could protect avian species if possible, such as measures to change the "look" of panels so that birds do not mistake them for water. If the project is approved and constructed, then consistent monitoring must be put in place so that the agencies can assess the impacts to migratory birds and develop strategies to avoid, minimize and mitigate these impacts at this facility and use any information gleaned to help improve avoidance and minimization at other projects in the future.

13-35 cont.

Because every large-scale solar project approved by BLM and CDFW also has indirect impacts through loss of habitat for migratory birds, and since this loss is potentially significant, the DEIS/R must provide for mitigation lands for the indirect loss of migratory bird habitat in addition to other mitigation lands.

a. Ridgway's Clapper Rail (formerly Yuma clapper rail)

The Ridgway's clapper rail is protected under both the California and federal Endangered Species Acts, as endangered. Indeed, USFWS' Draft Yuma (Ridgway's) Clapper Rail Recovery Plan, First Revision[13] states that the Yuma clapper rail has a "high degree of threat and low recovery potential from loss of habitat due to lack of natural river processes that create and maintain marshes, and lack of security relative to the protection of existing habitats in the U.S. and Mexico". The USFWS identifies the population along the Colorado River and at the Salton Sea as non-migratory[14], however one key action identified in the 2010 Draft Recovery Plan is "Identify migration pathways between the three core populations to assess metapopulation status and contribute to determinations on minimum population size and habitat necessary to support that population."[15] While the definition of "migratory" and "non-migratory" are not clearly defined in the Draft Recovery Plan, the rails (and other birds) do move between the lower Colorado River and the Salton Sea as well as along the Colorado River flyway. The proposed project site lies *between* the Lower Colorado River core population and the Salton Sea core population as well as along the Colorado River flyway. One dead Ridgway's rail was found at the nearby Desert Sunlight

13-36

13 USFWS 2010. Draft Yuma Clapper Rail Recovery Plan, 1st Revision
14 USFWS 2006. Five year review – Yuma clapper rail.
15 USFWS 2009. Draft Yuma Clapper Rail Recovery Plan, 1st Revision

PV project in 2013[16]. Considering the landscape topography and the number of other waterfowl mortalities at adjacent solar projects, two migratory pathways may increase the potential for impacts, particularly to migratory waterfowl from the proposed project.

The DEIS/R fails to identify much less analyze the proposed project's potential for impacts to the highly imperiled and federally and state listed endangered Ridgway's (Yuma) clapper rail despite the fact that we requested a full analysis in our scoping comments on this project (dated 4-9-18). Core populations could be impacted by the proposed project when making movements between the Salton Sea to the Colorado River as well as when they transit the Colorado River. To date, two Yuma clapper rails that we know of have been found dead at industrial-scale photovoltaic projects. Because of already low and now declining population numbers, additional impacts and mortalities, will drive the Yuma clapper rail closer to the brink of extinction.

13-36 cont.

b. Failure to Fully Evaluate At-Risk Avian Species

While the DEIS/R includes a discussion of the "lake effect" it appears to downplay the mortalities documented on the existing projects, the Avian and Bat Post-Construction Fatality Monitoring Plan for the Crimson Solar Project (Appendix A of Appendix I-5 of the DEIS/R) is proposed to be only be implemented for two years. This timeframe is wholly inadequate because it basically provides only two data points based on the two years. Clearly direct impacts[17] have occurred to at-risk avian species. It is likely that pre-construction on-site avian surveys are inadequate to evaluate the potential impacts of the proposed project to avian species due to the potential for attraction. Therefore, the DEIS/R should have looked at nearby water features to evaluate the number and types of species that could be attracted to the thousands of acres of PV panels. Review of just one ebird local hotspot[18] indicates that numerous special status species occur at locations very close to the proposed project site including:

Common Name	**Scientific Name**	**Status***
White-faced ibis	*Plegadis chichi*	SSC
Northern harrier	*Circus cyaneus*	SSC (breeding)(BP)
Ferruginous hawk	*Buteo regalis*	SSC(BP)
Swainsons hawk	*Buteo swainsoni*	ST
Sandhill crane	*Grus canadensis*	SSC (wintering)
Vermillion flycatcher	*Pyrocephalus rubinus*	SSC (breeding)
Vaux's swift	*Chaetura vauxi*	SSC (breeding)
willow flycatcher	*Empidonax traillii*	SE/FE(SWWF)
loggerhead shrike	*Lanius ludovicianus*	SSC (breeding)
yellow breasted chat	*Icteria virens*	SSC (breeding)

FE = Federally Endangered
SE = State Endangered
ST = State Threatened
SFP = State Fully Protected
SSC = Species of Special Concern
SSC (BP) = Species of Special Concern – Bird of Prey

13-37

16 Kagan et al. 2014
17 IBID
18 https://ebird.org/hotspot/L1842425

Other resources to help analyze the potential impacts to migratory birds include the article[19] written by Pat Flanagan, which used the existing data from e-Bird "hotspots" to evaluate potential migration pathways over the Mojave Desert using the following assumptions:

- "birds migrate toward breeding or wintering locations;
- Birds fly at an elevation allowing visibility over a wide area;
- Birds utilize great amounts of energy when flying and look for areas to rest, drink and eat;
- Over millennia birds have seen the Pleistocene lakes and Holocene wetlands come and go – they know how to recognize and take advantage of a water source from even the briefest glint;
- Birds will veer off their route to access the promise from the glint;
- Birds ignore what has no immediate value."[20]

13-37 cont.

Comparing species at hotspots along a 380-mile migratory corridor from the Salton Sea to Death Valley National Park, shows a vast overlap in species along the transect, indicating the ubiquity of migratory birds on the landscape. The article also points to the problem with point-count bird surveys as are typically executed on proposed projects:

> "Point-count surveys focus on undeveloped project sites and provide scant understanding of the attractions to birds created by vertically-oriented mirrors or other smooth reflective panels; water-like reflective or polarizing panes; actively fluxing towers, open bodies of water; aggregations of insects that attract insectivorous birds."[21]

c. Western Burrowing Owl

While the DEIS/R did not identify and breeding occurring on the project site, it did document at least six active burrowing owl burrows in the proposed array fields that were "selected for surveys" (Appendix A, Figure 3.3-7). Numerous other active burrowing owl burrows were documented nearby but outside of the project footprint during surveys performed in 2012 and 2016 (Appendix A, Figure 3.3-7). While burrowing owls are declining in California, the remaining stronghold for burrowing owls in California – the Imperial Valley – has had declines documented. For example, 2011-2012 surveys conducted in Imperial Valley documented an 18% decline in the local population. [22] Because burrowing owls are in decline throughout California, the burrowing owls on this proposed project site (and on other projects sites) become even more important to species conservation efforts. The Final RE Crimson Solar Project Burrowing Owl Management Plan (Appendix I.6) is the typical inadequate plan where the goal is to exclude and passively relocate the birds with relocation occurring nearby where, if not enough burrows are present, artificial burrows will be installed. While we support moving burrowing owls out of harm's way of construction, we have yet to see any data on the effectiveness over the long-term of "passive relocation". Until those data are produced through

13-38

19 Flanagan, P. 2014
20 Id. at 17.
21 Id. at 19.
22 IID 2012

rigorous scientific monitoring protocols being implemented, it is unclear how effective this Plan and others like it actually are for preventing loss of burrowing owls.

Bio-29 requires habitat acquisition for burrowing owl pairs if present on site prior to construction, but at a very low ratio. Appropriate acres of burrowing owl habitat will need to be acquired to off-set impacts from the construction and operation of the solar project and transmission line. Mean burrowing owl foraging territories are 242 hectares in size, although foraging territories for owl in heavily cultivated areas is only 35 hectares[23]. While the DEIS/R relies on guidance from CDFW from 2012, that guidance still does not fully incorporate current population declines[24] and additional research on the species habitat[25]. Lastly, because the carrying capacity is tied to habitat quality, mitigation lands that are acquired for burrowing owl that cannot be avoided, need to be native habitat on undisturbed lands, not cultivated lands, which are subject to the whims of land use changes. The long-term persistence of burrowing owls lies in their ability to utilize natural landscapes, not human-created ones.

13-38 cont.

4. Badger and Desert Kit Foxes

The desert kit fox and badgers are experiencing unprecedented impacts from development of renewable energy projects in their habitat. In our review of the earlier permitted projects, very few of them evaluate the impacts to desert kit fox populations and badgers or require any mitigation other than "passive relocation". This DEIS/R documents that a total of 117 kit fox burrows, 22 kit fox burrow complexes and five badger burrows cumulatively occurred within the array fields based on the 2012 and 2016 surveys (Appendix A, Figure 3.3-9). The American Badger and Desert Kit Fox Monitoring and Management Plan relies on passive relocation to move the animals out of harm's way. We remain concerned about the use of "passive relocation" of the desert kit fox for many reasons including 1) their great site fidelity to their burrow complexes where they generally go to great effort to return to their on-site territories, 2) the potential for outbreaks of canine distemper which swept through the desert kit fox population when the Genesis solar power project commenced construction. We share all of the State veterinarians' concerns about passive relocation as stated in a CEC proceeding[26]:

13-39

- "canine distemper virus (CDV) can cause repeated (cyclical) outbreaks. The time when this is most likely to happen is when susceptible young of the year are growing up and dispersing because density is high and animals are moving, therefore there is more opportunity to transmit the virus and more naïve animals present on the landscape to be infected. This time of year also corresponds to the time when projects are permitted to passively relocate foxes whose dens are within the project construction area
- Passive relocation or hazing activities conducted in an area experiencing or adjacent to distemper cases may enhance disease transmission and spread by multiple mechanisms.
    - First, animals stressed by disturbance or relocation may be more susceptible to illness and death because CDV infection decreases immune function (ref).

23 USFWS 2003
24 IID 2012
25 USFWS 2003
26 http://docketpublic.energy.ca.gov/PublicDocuments/09-AFC-07C/TN200995_20131022T141658_Exhibit_2005__CDFW_Outline_for_Proposed_Desert_Kit_Fox_Health_M.pdf

- Second, passive relocation activities in an area experiencing clinical CDV cases may result in increased movement of animals shedding virus, thereby increasing the number of new cases or enhancing the spread of disease into new areas.

- Little to nothing is known about the potential impacts of passive relocation on foxes from solar sites nor have alternative techniques been explored to determine best practices. Important unanswered questions include:
- Do passively relocated animals re-establish territories adjacent to the solar site? Or might this depend on the density or spatial distribution of foxes around a site.
- Do relocated foxes experience lower survival or different causes of mortality that might need to be addressed through mitigation efforts?
- Recursion rate – how likely are relocated foxes going to try to get back on site and return to former den areas?
- Demographic shifts of neighbors
- Reproductive impact (n=1 relocated pair this year had den failure; most other dens were successful this year in producing pups).
- Rapid vs. slow relocation etc.
- Utilization of artificial dens
- Longer term translocation decisions
- Current monitoring limited in scope and inadequate to address needs (underfunded).
- Methods and outcomes for relocation are not evaluated systematically or reported."

13-39 cont.

We are surprised that these issues are not included and required in the American Badger and Desert Kit Fox Monitoring and Management Plan particularly because they arose from CDFW and would help to inform many of the unanswered questions that would benefit conservation of the species. We are also concerned because this project is located very near the distemper outbreak first documented at the Genesis solar project.[27]

Literature on the highly territorial badger indicates that badger home territories range from 340 to 1,230 hectares[28]. Therefore, the proposed project could displace *at least* one badger territory. While surveys prior to construction are clearly essential, even passive relocation of badgers into suitable habitat may result in "take" because excluding a badger from the site is likely to cause it to move into existing badger's territory, likely to its detriment.

5. Cryptobiotic Soil Crusts and Desert Pavement and Air Quality

The proposed project is located in the Mojave Desert Air Quality Management District area, which is already in non-attainment for PM-10 particulate matter[29]. The construction of the proposed project further increases emissions of these types of particles because of the disruption and elimination of potentially thousands of acres of cryptobiotic soil crusts particularly in Zone C of the SMZ. Cryptobiotic soil crusts are an essential ecological component in arid lands. They are the "glue" that holds surface soil particles together precluding erosion, provide "safe sites" for seed germination, trap and slowly release soil moisture, and provide CO_2 uptake through photosynthesis[30].

13-40

27 http://articles.latimes.com/2012/apr/18/local/la-me-0418-foxes-distemper-20120418
28 Long 1973, Goodrich and Buskirk 1998
29 http://www.mdaqmd.ca.gov/index.aspx?page=214
30 Belnap 2003, Belnap et al 2003, Belnap 2006, Belnap et al. 2007

The DEIS/R does not describe the on-site cryptobiotic soil crusts. The proposed project will disturb an unidentified portion of these soil crusts and cause them to lose their capacity to stabilize soils, trap soil moisture and uptake CO_2. The DEIS/R fails but needs to provide a map of the soil crusts over the project site, and to present avoidance or minimization measures. It is unclear how many acres of cryptobiotics soils will be affected by the project. The DEIS/R must identify the extent of the cryptobiotic soils on site and analyze the potential impacts to these diminutive, but essential desert ecosystem components as a result of this project.

13-40 cont.

While the DEIS/R discusses "that roughly 10 percent of the Project APE appears to consist of relict Pleistocene landforms with well-developed desert pavements" (at 3.5-10). The DEIS/R needs to identify analyze the impacts to these pavements, which are key to reducing PM_{10} and $PM_{2.5}$ emissions.

13-41

6. Insects

The DEIS/R fails to address insects on the proposed project site. We could not locate any surveys or evaluation of rare or common insects are included in the DEIS/R. Sand/dune habitats are notorious for supporting endemic insects, typically narrow habitat specialists[31] and BLM's has previously identified dunes as important for these species.[32] The DEIS/R fails to provide an adequate baseline on the insect fauna in order to evaluate impact from the proposed project, this baseline data is needed to ensure adequate environmental review.

13-42

7. Decommissioning and Reclamation Plan

Desert lands are notoriously hard to revegetate or rehabilitate[33] and revegetation never supports the same diversity that originally occurred in the plant community prior to disturbance[34]. The task of revegetating up to four square miles will be a Herculean effort that will require significant financial resources. In order to assure that the ambitious goals of the revegetation effort are met post project closure, it will be necessary to bond the project, so that all revegetation obligations will be met and assured. The bond needs to be structured so that it is tied to meeting the specific revegetation criteria.

13-43

The project will cause permanent impacts to the on-site plant communities and habitat for wildlife despite "revegetation", because the agency's regulations based on the Northern and Eastern Colorado Plan's rehabilitation strategies[35] only requires 40% of the original density of the "dominant" perennials, only 30% of the original cover. Dominant perennials are further defined as "any combination of perennial plants that originally accounted cumulatively for at least 80 percent of relative density".[36] These requirements fail to truly "revegetate" the plant communities to their former diversity and cover even over the long term. BLM's own regulations 43 CFR 3809.550 et seq. require a detailed reclamation plan and a cost estimate for decommissioning and

13-44

31 Dunn 2005.
32 Andrews et al. 1979, Tinkham 1975
33 Lovich and Bainbridge 1999
34 Longcore et al. 1997
35 http://www.blm.gov/ca/st/en/fo/cdd/neco.html
36 Ibid

it needs to be included in the revised DEIS/R. A comprehensive decommissioning plan must be developed for the whole project site.

13-44 cont.

8. Failure to Identify Appropriate Mitigation

Because the DEIS/R fails to provide adequate identification and analysis of impacts, inevitably, it also fails to identify adequate mitigation measures for the project's environmental impacts. "Implicit in NEPA's demand that an agency prepare a detailed statement on 'any adverse environmental effects which cannot be avoided should the proposal be implemented,' 42 U.S.C. § 4332(C)(ii), is an understanding that an EIS will discuss the extent to which adverse effects can be avoided." *Methow Valley*, 490 U.S. at 351-52. Because the DEIS/R does not adequately assess the project's direct, indirect, and cumulative impacts, its analysis of mitigation measures for those impacts is necessarily flawed. The DEIS/R must discuss mitigation in sufficient detail to ensure that environmental consequences have been fairly evaluated." *Methow Valley*, 490 U.S. at 352; *see also Idaho Sporting Congress*, 137 F.3d at 1151 ("[w]ithout analytical detail to support the proposed mitigation measures, we are not persuaded that they amount to anything more than a 'mere listing' of good management practices"). As the Supreme Court clarified in *Robertson*, 490 U.S. at 352, the "requirement that an EIS contain a detailed discussion of possible mitigation measures flows both from the language of [NEPA] and, more expressly, from CEQ's implementing regulations" and the "omission of a reasonably complete discussion of possible mitigation measures would undermine the 'action forcing' function of NEPA."

Although NEPA does not require that the harms identified actually be mitigated, NEPA does require that an EIS discuss mitigation measures, with "sufficient detail to ensure that environmental consequences have been fairly evaluated" and the purpose of the mitigation discussion is to evaluate whether anticipated environmental impacts *can be avoided*. *Methow Valley*, 490 U.S. at 351-52. As the Ninth Circuit recently noted: "[a] mitigation discussion without at least *some* evaluation of effectiveness is useless in making that determination." *South Fork Band Council of Western Shoshone v. DOI* , 588 F.3d 718 , 727 (9th Cir. 2009) (emphasis in original).

13-45

In contrast, CEQA requires even more--that mitigation be considered for unavoidable impacts and be adopted. The purpose of alternatives analysis in an environmental review document under CEQA is to enable the agency to fulfill the statutory requirement that feasible alternatives that avoid significant impacts of a project must be implemented.

> "[I]t is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects."

(Public Res. Code § 21002.) The statutory language and case law are quite clear that the Legislature intended public agencies to utilize CEQA's environmental review process and procedures to make determinations regarding feasible alternatives and mitigation measures based on a robust analysis.

CEQA's mandates are not purely procedural. It also contains an important substantive mandate: public agencies are required "to deny approval of a project with significant adverse effects when feasible alternatives or feasible mitigation measures can substantially lessen such effects." (*Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41; *see also* Pub. Res. Code § 21002.) Thus, a thorough review of mitigation measures is needed, CDFW cannot rely on vague or unformulated measures to find that impacts have been mitigated.

Here, the DEIS/R does not provide a full analysis of possible mitigation measures to avoid or lessen the impacts of the proposed project and therefore the BLM cannot properly assess the likelihood that such measures would actually avoid the impacts of the proposed project.

13-45 cont.

9. Riparian Vegetation Communities and Ephemeral Washes

Riparian Vegetation Communities are a rare resource in the desert, which the DEIS/R recognizes. However, the DEIS/R is confusing by stating that "Approximately 90.6 acres of unvegetated ephemeral streams and washes occur within the mapped vegetation communities on-site" (at pg. 3.3-1) but Table 3.3-1 identifies 290.6 acres of "riparian" including Creosote Bush – White Bursage/Big Galleta Grass Association (*Larrea tridentata – Ambrosia dumosa* / *Pleuraphis rigida* Shrubland Alliance) and Blue Palo Verde – Ironwood Woodland (*Parkinsonia florida – Olneya tesota* Woodland Alliance), both of which are considered sensitive natural communities. The confusion continues in section 3.3.2.2 State and Federal Wetlands, which states "As discussed under vegetation communities, there are 91.8 acres of ephemeral washes on the Project site, including 1.2 acres of riparian woodland (blue palo verde – ironwood woodland) and 90.6 acres of unvegetated streambed" (at 3.3-3). Adequate impact analysis requires accurate baseline data, and the acreages for these sensitive riparian resources are unclear. A revised DEIR/S is required to accurately represent the on-site resources.

13-46

C. Impacts to Water Resources— Surface and Groundwater Water Impacts

As the DEIS notes, the proposed project will impact some washes and ephemeral streams and is partially on an alluvial fan. These areas provide important habitat values that will be impacted by the proposed project. Moreover, the loss of natural surface water flows and the re-direction of surface waters may have significant impacts to the dunes/sand habitats. Periodic flooding which is common in these desert areas and caused significant unanticipated erosion at the Genesis site (particularly during construction) and the Desert Sunlight facility has not been addressed adequately here. Therefore, the impacts on surface hydrology and soils from the proposed project have not been adequately addressed in the DEIS/R.

13-47

In this arid area, the proposed project will use a significant amount of water. During construction, water use is estimated to be 1000 AF over a 2-year construction period (DEIS/R at 3.18-3). During operations the project would require 22 AFY, which would include water for washing panels (DEIS/R at 3.18-5). The DEIS/R identifies several potential sources of water including on-site or off-site groundwater wells or trucked from PVID. The DEIS/R fails to provide sufficient information to show that surface resources on other public lands will not be affected by the drawdown of the water table during construction and *over the life of the project*. Moreover, the cumulative impacts to groundwater resources from this project and others in the area could be significant annually and over the life of the project.

13-48

Reserved Water Rights: As BLM is well aware, the California Desert Protection Act ("CDPA") expressly reserved water rights for wilderness areas that were created under the act including the Palen-McCoy, Little Chuckwalla and Palo Verde designated Wilderness Areas. 16 U.S.C. §410aaa-76.37 The CDPA reserved sufficient water to fulfill the purposes of the Act which include to "preserve unrivaled scenic, geologic, and wildlife values associated with these unique natural landscapes," "perpetuate in their natural state significant and diverse ecosystems of the California desert," and "retain and enhance opportunities for scientific research in undisturbed ecosystems." 103 P.L. 433, Sec. 2. The priority date of such reserved water rights is 1994 when the CDPA was enacted. Therefore, at minimum, the BLM must ensure that use of water for the proposed project (and cumulative projects) *over the life of the proposed projects* will not impair those values in the wilderness that depend on water resources (including perennial, seasonal, and ephemeral creeks, springs and seeps as well as any riparian dependent plants and wildlife).

For other public lands, even where no *express* reservation of rights has been made for other public lands in the CDCA, the DEIS/R should have addressed the federal reserved water rights afforded to the public to protect surface water sources on all public lands affected by the proposed project. Pursuant to Public Water Reserve 107 ("PWR 107"), established by Executive Order in 1926, government agencies cannot authorize activities that will impair the public use of federal reserved water rights.

13-49

PWR 107 creates a federal reserved water right in water flows that must be maintained to protect public water uses. *U.S. v. Idaho*, 959 P.2d 449,453 (Idaho, 1998) *cert. denied; Idaho v. U.S.* 526 U.S. 1012 (1999); *Cappaert v. U.S.*, 426 U.S. 128, 145 (1976). PWR 107 applies to reserve water that supports riparian areas, reserve water that provides flow to adjacent creeks and isolated springs that are "nontributary" or which form the headwaters of streams. *U.S. v. City & County of Denver*, 656 P.2d 1, 32 (Colo., 1982). Accordingly, BLM cannot authorize activities that will impair the public use of reserved waters covered by PWR 107.

BLM must examine the federal reserved water rights within the area affected by the proposed project and other proposed projects in this area that will use significant amounts of groundwater. This examination must include a survey of the any water sources potentially affected by the proposed project. The BLM must ensure that any springs, seeps, creeks or other water sources on public land and particularly within the wilderness areas are not degraded by the proposed projects' use of water and continue meet the needs of the existing wildlife and native vegetation that depend on those water resources.

PWR 107 also protects the public lands on which protected water sources exist. Accordingly, BLM should not only consider the impact of projects on water sources present on public lands, but also the direct and indirect impacts of the proposed project on the surrounding lands as well as impacts to the ecosystem as a whole.

37 The reservation excluded two wilderness areas with regard to Colorado River water. See 103 P.L. 433; 108 Stat. 4471; 1994 Enacted S. 21; 103 Enacted S. 21, SEC. 204. COLORADO RIVER. ("With respect to the Havasu and Imperial wilderness areas designated by subsection 201(a) of this title, no rights to water of the Colorado River are reserved, either expressly, impliedly, or otherwise.")

The DEIS/R identifies that the project may overlay groundwater that is part of the Colorado River basin managed to maintain specific accounting surface levels. The DEIS/R needs to more conclusively address how and whether groundwater pumping could affect water rights in the Colorado River basin.

A recent comprehensive study of the impacts of climate change and persistent drought in the Colorado River basin found:

> Between 2000 and 2014, annual Colorado River flows averaged 19% below the 1906–1999 average, the worst 15-year drought on record. Approximately one-third of the flow loss is due to high temperatures now common in the basin, a result of human caused climate change. Previous comparable droughts were caused by a lack of precipitation, not high temperatures. As temperatures increase in the 21st century due to continued human emissions of greenhouse gasses, additional temperature-induced flow losses will occur. These losses may exceed 20% at mid-century and 35% at end-century. Additional precipitation may reduce these temperature-induced losses somewhat, but to date no precipitation increases have been noted and climate models do not agree that such increases will occur. These results suggest that future climate change impacts on the Colorado River will be greater than currently assumed.

13-50

Udall and Overpeck (2017) (abstract). The causes of increased "flow losses" from high temperatures include increased evaporation. "Higher temperatures increase atmospheric moisture demand, evaporation from water bodies and soil . . .". *Id.* These higher temperatures will also cause decreased precipitation, and other climate change related threats that were not addressed in the DEIS/R and will likely affect the recharge rates for the CVGB and the PVMGB.

The Center is also concerned that the discussion in the DEIS/R is also incomplete because it fails to address any potential water rights that could arguably be created from use of groundwater by the proposed project on these public lands. While the Center recognizes that this issue may involve somewhat complex legal issues, at minimum, the BLM must address this question and to ensure that any water rights that could *arguably* be created will be conveyed back to the BLM owner and run with the land at the end of the proposed project ROW term. The BLM must provide a mechanism to ensure that in no case will the use of water for the proposed project on these public lands result in water rights accruing to the project applicant that it could arguably convey to any third party. Therefore, any water rights *arguably* created by groundwater pumping on these public lands for the proposed project must not ultimately accrue to any third party for use *off-site or on-site* in the future for any other project. Moreover, BLM should ensure that the applicant will not use the groundwater associated with the project off-site for any purpose.

If on-site wells fail to provide the water necessary for construction and/or operation, water is proposed to be trucked on site as follows but the analysis of that action is not analyzed including the impacts from the truck trips

13-51

This approach fails to comply with NEPA or CEQA which both require that impacts be assessed before the project is approved.

E. The DEIS Fails to Adequately Identify, Analyze and Offset Impacts to Air Quality

As noted above, disturbing intact desert pavement or stabilized sands and cryptobiotic soil crusts can increase PM 10 emissions and degrade air quality. The DEIS/R does not adequately address these issues as required under NEPA and CEQA either for direct, indirect or cumulative impacts. Other commenters have submitted evidence of recent dust storms in the area including photos that help show the importance of this issue for the Mule Mountain area.

13-52

F. The Analysis of Cumulative Impacts in the DEIS/R Is Inadequate

A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. The Ninth Circuit requires federal agencies to "catalogue" and provide useful analysis of past, present, and future projects. *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.*, 123 F.3d 1142, 1160 (9th Cir. 1997); *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 809-810 (9th Cir. 1999).

"In determining whether a proposed action will significantly impact the human environment, the agency must consider '[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.' 40 C.F.R. § 1508.27(b)(7)." *Oregon Natural Resources Council v. BLM,* 470 F.3d 818, 822-823 (9th Cir. 2006). NEPA requires that cumulative impacts analysis provide "some quantified or detailed information," because "[w]ithout such information, neither courts nor the public . . . can be assured that the Forest Service provided the hard look that it is required to provide." *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1988); *see also id*. ("very general" cumulative impacts information was not hard look required by NEPA). The discussion of future foreseeable actions requires more than a list of the number of acres affected, which is a necessary but not sufficient component of a NEPA analysis; the agency must also consider the actual environmental effects that can be expected from the projects on those acres. *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004) (finding that the environmental review documents "do not sufficiently identify or discuss the incremental impact that can be expected from each [project], or how those individual impacts might combine or synergistically interact with each other to affect the [] environment. As a result, they do not satisfy the requirements of the NEPA.") Finally, cumulative analysis must be done as early in the environmental review process as possible, it is not appropriate to "defer consideration of cumulative impacts to a future date. 'NEPA requires consideration of the potential impacts of an action *before* the action takes place.'" *Neighbors*, 137 F.3d at 1380 *quoting City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1313 (9th Cir. 1990) (emphasis in original).

Cumulative impacts analysis is also a critical part of any CEQA analysis.

> [t]he cumulative impact analysis must be substantively meaningful. "'A cumulative impact analysis which understates information concerning the severity and significance of cumulative impacts impedes meaningful public discussion and skews the decisionmaker's perspective concerning the environmental consequences

of the project, the necessity for mitigation measures, and the appropriateness of project approval.

(*Joy Road Area Forest and Watershed Assoc. v. Cal. Dept. of Forestry* (2006) 142 Cal. App. 4th 656, 676.) Where, as here, the impacts of a project are "cumulatively considerable" the agency must also examine alternatives that would avoid those impacts and mitigation measures for those impacts. (CEQA Guidelines §15130(b)(3).)

The DEIS/R identifies many of the cumulative projects but does not meaningfully analyze the cumulative impacts to resources in the California desert from the many proposed projects (including renewable energy projects and others). Moreover, because the initial identification and analysis of impacts is incomplete, the cumulative impacts analysis cannot be completed. For example, because the identification of insects on site is incomplete, the cumulative impacts are also therefore inadequate.

The DEIS/R also fails to consider all reasonably foreseeable impacts in the context of the cumulative impacts analysis. *See Native Ecosystems Council v. Dombek, et al,* 304 F.3d 886 (9th Cir. 2002) (finding future timber sales and related forest road restriction amendments were "reasonably foreseeable cumulative impacts"). The DEIS/R also fails to provide the needed analysis of how the impacts might combine or synergistically interact to affect the environment in this valley or region. *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004). 13-53

Among the cumulative impacts to resources that have not been fully analyzed are impacts to desert tortoise, impacts to Mojave fringe-toed lizard and sand dunes ecosystems, impacts to golden eagles, and impacts to surface hydrology, water resources and air quality. The cumulative impacts to the resources of the California deserts has not been fully identified or analyzed, and mitigation measures have not been fully analyzed as well.

G. The EIS' Alternatives Analysis is Inadequate

NEPA requires that an EIS contain a discussion of the "alternatives to the proposed action." 42 U.S.C. §§ 4332(C)(iii),(E). The discussion of alternatives is at "the heart" of the NEPA process and is intended to provide a "clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. §1502.14; *Idaho Sporting Congress*, 222 F.3d at 567 (compliance with NEPA's procedures "is not an end in itself . . . [but] it is through NEPA's action forcing procedures that the sweeping policy goals announced in § 101 of NEPA are realized.") (internal citations omitted). NEPA's regulations and Ninth Circuit case law require the agency to "rigorously explore" and objectively evaluate "all reasonable alternatives." 40 C.F.R. § 1502.14(a) (emphasis added); *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 234 Fed. Appx. 440, 442 (9th Cir. 2007). "The purpose of NEPA's alternatives requirement is to ensure agencies do not undertake projects "without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." *Envtl. Defense Fund, Inc. v. U.S. Army Corps of Engrs.*, 492 F.2d 1123, 1135 (5th Cir. 1974). An agency will be found in compliance with NEPA only when "all reasonable alternatives have been considered and an appropriate explanation is provided as to why an alternative was eliminated." *Native Ecosystems Council v. U.S. Forest Serv.,* 428 F.3d 1233, 1246 (9th Cir. 2005); *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228-1229 (9th Cir. 1988). The courts, in the Ninth Circuit as elsewhere, have

consistently held that an agency's failure to consider a reasonable alternative is fatal to an agency's NEPA analysis. *See, e.g., Idaho Conserv. League v. Mumma*, 956 F.2d 1508, 1519-20 (9th Cir. 1992) ("The existence of a viable, but unexamined alternative renders an environmental impact statement inadequate.").

If BLM rejects an alternative from consideration, it must explain why a particular option is not feasible and was therefore eliminated from further consideration. 40 C.F.R. § 1502.14(a). The courts will scrutinize this explanation to ensure that the reasons given are adequately supported by the record. *See Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 813-15 (9th Cir. 1999); *Idaho Conserv. League*, 956 F.2d at 1522 (while agencies can use criteria to determine which options to fully evaluate, those criteria are subject to judicial review); *Citizens for a Better Henderson*, 768 F.2d at 1057.

CEQA also requires a robust alternatives analysis as noted above. Here, BLM and the County too narrowly construed the project purpose and need and project objectives such that the DEIS/R did not consider an adequate range of alternatives to the proposed project.

13-54

The alternatives analysis is inadequate even with the inclusion of the Alternative Design (Alternative B) and the Reduced Acreage Alternative (Alternative C). Additional feasible alternatives should be considered which would avoid all of the sand/dune habitat and alternative siting including a distributed PV alternative to avoid impacts to resources and vastly reduce line losses and siting on degraded lands such as nearby farmlands.

13-55

In addition a phased alternative should have been included which would allow the portions of the project that have the fewest impacts to move forward while also affording the project proponent time to find and acquire permits for more appropriate sites for one or more additional phases of the project reconfigured on other BLM lands or on previously degraded disturbed lands in this area and also to explore other off-site alternatives.

13-56

The BLM failed to consider any off-site alternative that would significantly reduce the impacts to biological resources including sand/dune areas that are habitat for Mojave fringe-toed lizard, and habitat for desert tortoise, burrowing owls, and others. Because such alternatives are feasible, on this basis and others the range of alternatives is inadequate. The Center urges the BLM and the CDFW to revise the DEIS/R to adequately address a range of feasible alternatives and other issues detailed above and then to re-circulate a revised or supplemental DEIS/R for public comment.

13-57

In addition, alternatives that included alternative measures to reduce energy use could help meet the overarching goals of reducing GHGs. For example, funding community projects for training and implementation of energy conservation measures such as increased insulation, sealing and caulking, and new windows for older buildings and new or improved technologies for accomplishing these important goals. For example, air conditioning creates the largest demand for energy during peak times and there already exist methods to reduce the energy use from air conditioning, but implementation has lagged well behind technology. Conservation and efficiency measures are an excellent and quick way of reducing demand in both the short- and long-term and reduce the need for additional power sources. In addition, many of the existing conservation and efficiency

measures can provide immediate jobs and training in high population areas with significant unemployment (particularly among low skilled workers and youth).

The existence of these and other feasible but unexplored alternatives shows that the analysis of alternatives in the DEIS/R is inadequate.

13-57 cont.

III. Project Potentially Undermines the Goals of NECO and the DRECP

The proposed project is proceeding under the "grandfathered" application, but the DEIS/R analysis clearly shows how it undermines the goals and is inconsistent with both the NECO plan and the DRECP. One of many examples is DRECP LUPA-BIO-DUNE 2 and 3 that were put in place LUPA-wide to protect sand transport corridors including those within DFAs. The DEIS/R's analysis finds them to be inconsistent (Appendix F). Because the proposed project may not be required to abide by these CMAs, the integrity of the sand transport corridor could be compromised and the goal of the DRECP for this sand transport corridor could also be compromised. The proposed project will also compromise LUPA-BIO-PLANT 2 and despite the analysis indicating that LUPA-BIO-PLANT 3 does not apply, we disagree. The revised EIS/R must clarify its conclusion otherwise. Importantly, the impacts to other existing planning amendments must be fully addressed, avoided where possible, and minimized and mitigated in order for the project to comply with NEPA or CEQA.

13-58

IV. Compliance with S.47 (Dingell Act)

The project must comply with recently passed law including S.47 John D. Dingell, Jr. Conservation, Management, and Recreation Act (Dingell Act). The Act requires:

> "(4) Donated land. The term "donated land" means any private land donated to the United States for conservation purposes in the Conservation Area."

16 USCS § 410aaa-81c (a)(4). Where

> "(2) Conservation Area. The term "Conservation Area" means the California Desert Conservation Area."

16 USCS § 410aaa-81c (a)(2).

One of the screens to evaluate projects must look to see if there are any "donated lands" now managed by BLM within the boundaries of projects. For this project, according to the Plat Map detail, CACA# 35027 is land that was donated to the BLM in the past. We will be attempting to get additional information on this donated land to submit, but the revised DEIS/R must address this issue as well.

13-59

V. Conclusion

Thank you for your consideration of these comments. In light of the overly narrow range of alternatives, and the many omissions in the environmental review to date, we urge the BLM and CDFW to revise and re-circulate the DEIS/R before making any decision regarding the proposed plan amendment and right-of-way application. In the event BLM and CDFW choose not to revise the DEIS/R and provide adequate analysis, the BLM and CDFW should reject the right-of-way

13-60

application and the plan amendment. Please feel free to contact us if you have any questions about these comments or the documents provided.

13-60 cont.

Sincerely,



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Letter 14

Colorado River Board of California

January 30, 2020

Ms. Miriam Liberatore
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Ms. Magdalena Rodriguez
Project Manager
California Department of Fish and Wildlife, Region 6
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Regarding: Draft Environmental Impact Statement/Environmental Impact Report and Draft California Conservation Area Plan Amendment for the Proposed Recurrent Energy's (RE) Crimson Solar Project, Riverside County, CA (NEPA Tracking # DOI-BLM-CA-D060-2017-0029-EIS and CA State Clearinghouse No. 2018031027)

To Whom It May Concern:

The Colorado River Board of California (Board) appreciates the opportunity to submit comments regarding the Draft Environmental Impact Statement/Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan (EIS/EIR/PA) for the Proposed Recurrent Energy Crimson Solar Project, Riverside County, California.

The Board understands that Sonoran West Solar Holdings, a wholly owned subsidiary of Recurrent Energy, proposes to construct, operate, and decommission a 350-megawatt utility-scale solar photovoltaic project on approximately 2,500 acres of public lands administered by the U.S. Bureau of Land Management (BLM). The proposed project is located 13 miles west of Blythe in Riverside County within the California Desert Conservation Area planning area. It is also located within the Riverside East Solar Energy Zone and within a Desert Renewable Energy Conservation Plan Development Focus Area.

As the Board emphasized in its prior comment letter dated April 9, 2018 (attached for reference), the project site is located within the delineation of the "Accounting Surface" area as defined by the U.S. Geological Survey (USGS) Scientific Investigations Report 2008-5113. The Chuckwalla Valley Groundwater Basin (CVGB) aquifer beneath the project site is considered by the USGS to be hydraulically connected to the Colorado River and any groundwater withdrawn

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would be replaced by Colorado River water in total or in part. If it is determined that the wells are pumping Colorado River water, then a legally authorized and reliable long-term water supply for the project must be obtained to offset this use of Colorado River water.

If the Project's water supply needs will be met with on-site groundwater wells, the Board supports the development and implementation of a Groundwater Monitoring, Reporting, and Mitigation Plan of Mitigation Measure WAT-1 and a Colorado River Water Supply Plan (Plan) as identified in Mitigation Measure WAT-2 of the EIS/EIR/PA prior to project construction to avoid or offset any potential impacts to Colorado River water resources. In addition, the Project proponent must collaborate with BLM, the Colorado River Regional Water Quality Control Board, and The Metropolitan Water District of Southern California (MWD), in order to identify acceptable water conservation/offset activities for the purposes of the Plan, with acceptable activities being those that are considered environmentally, physically, and economically feasible, while also effectively resulting in the replacement of Colorado River water. Water conservation/offset activities that have been considered and determined not viable and therefore may not be identified in the Plan include the following:

- Irrigation improvements in the Palo Verde Irrigation District (water unused by the PVID becomes available to MWD per the 2003 Colorado River Water Delivery Agreement executed by MWD, the Secretary of the Interior, Imperial Irrigation District, Coachella Valley Water District, and San Diego County Water Authority);

- Purchase of water allotments allocated by the Department of the Interior (all Colorado River water available to California in shortage, normal, or Intentionally Created Surplus conditions is already allocated and its use is limited to each entity's service area under executed water delivery contracts);

- Implementation of conservation programs in floodplain communities (all water unused by holders of higher priorities becomes available to MWD per the water delivery contracts executed by the Department of the Interior); and

- Participation in the BLM's Tamarisk Removal Program (use of Colorado River water by phreatophytes such as tamarisk is not charged as a use of water for U.S. Supreme Court Decree accounting purposes by the U.S. Bureau of Reclamation).

14-1 cont.

If the project does not result in diversion of Colorado River water (via pumping from near [within +/-0.84 feet at the 95-percent confidence], equal to, or below level of the accounting surface), implementation of water conservation/offset activities identified in the Plan will not be necessary. However, groundwater pumping below the Colorado River Accounting Surface is prohibited without an approved Plan in place.

In addition to the Colorado River Water Supply Plan, the Board requests to be notified and provided an opportunity to review and comment on any future water supply investigation

associated with the proposed Crimson Solar Project. If you have any questions or require further information, please feel free to contact Ms. Lindia Liu at (818) 500-1625, or via e-mail at lliu@crb.ca.gov.

14-1 cont.

Sincerely,

Christopher S. Harris
Executive Director

cc: *via email only*
Dr. Terrence J. Fulp, Regional Director
Lower Colorado Region, U.S. Bureau of Reclamation
Mr. William Hasencamp, Manager of Colorado River Resources
The Metropolitan Water District of Southern California
Mr. Ned Hyduke, General Manager
Palo Verde Irrigation District

Letter 14

Colorado River Board of California

April 9, 2018

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Regarding: Notice of Intent to Prepare a Joint Environmental Impact Statement/Environmental Impact Report and Possible Land Use Plan Amendment for the Proposed Recurrent Energy (RE) Crimson Solar Project, Riverside County, CA and Notice of Preparation (NOP) of a Joint Draft Environmental Impact Statement/Environmental Impact Report for the Recurrent Energy Crimson Solar Project and Notice of Public Scoping meetings (NEPA Tracking # DOI-BLM-CA-D060-2017-0029-EIS and CA State Clearinghouse No. 2018031027)

To Whom It May Concern:

The Colorado River Board of California (Board) appreciates the opportunity to submit comments for consideration on the Notice of Intent to Prepare a Joint Environmental Impact Statement/Environmental Impact Report and Possible Land Use Plan Amendment for the Proposed Recurrent Energy Crimson Solar Project, Riverside County, California, and on the Notice of Preparation (NOP) of a Joint Draft Environmental Impact Statement/Environmental Impact Report for the Recurrent Energy Crimson Solar Project and Notice of Public Scoping meetings.

Sonoran West Solar Holdings, a wholly owned subsidiary of Recurrent Energy, proposes to construct, operate, and decommission a 350-megawatt utility-scale solar photovoltaic project on approximately 2,500 acres of public lands administered by the Bureau of Land Management (BLM). The proposed project is located 13 miles west of Blythe in Riverside County within the California Desert Conservation Area planning area. It is also located within the Riverside East Solar Energy Zone and within a Desert Renewable Energy Conservation Plan Development Focus Area.

According to the Consolidated Decree of the Supreme Court of the United States in the case of *Arizona v. California, et al.* entered March 27, 2006, (547 U.S. 150 (2006)), the consumptive use of water means "diversion from the stream less such return flow thereto as is

available for consumptive use in the United States or in satisfaction of the Mexican treaty obligation" and consumptive use "includes all consumptive uses of water of the mainstream, including water drawn from the mainstream by underground pumping." Also, pursuant to the 1928 Boulder Canyon Project Act (BCPA) and the Consolidated Decree, no water shall be delivered from storage or used by any water user without a valid contract between the Secretary of the Interior and the water user for such use, i.e., through a BCPA Section 5 contract.

Within California, BCPA Section 5 contracts have previously been entered into between users of Colorado River mainstream water and the Secretary of the Interior for water from the Colorado River that exceeds California's basic entitlement to use Colorado River water as set forth in the Consolidated Decree. Thus, no additional Colorado River water is available for use by new project proponents along the Colorado River, except through the contract of an existing BCPA Section 5 contract holder, either by direct service or through an exchange of non-Colorado River water for Colorado River water.

Based on the description of the project location provided in the NOP, the proposed Crimson Solar Energy project site is located within the delineation of the Accounting Surface area as designated by the U.S. Geological Survey (USGS) Water Investigation Report No. 2008-5113. The Chuckwalla Valley Groundwater Basin groundwater aquifer beneath the project site is considered by the USGS report to be hydraulically connected to the Colorado River and groundwater withdrawn from lands underlying the Accounting Surface would be replaced by Colorado River water, in total or in part. This means that if it is determined that any wells on or near the project site intended to supply water for the project are, in fact, pumping groundwater that would be replaced by Colorado River water, a contract with the Secretary of Interior is required before such a use is deemed to be a legally authorized use of this groundwater.

The Board requests that the EIS/EIR must address and analyze proposed water uses as well as the potential impact to Colorado River water resources as a result of construction, operations, maintenance, and decommissioning activities for the project. If it is determined that groundwater pumping would yield water that would be replaced by water from the Colorado River, a legally authorized and reliable water supply for the project can be obtained through the project owner contracting with an existing BCPA Section 5 contractor holder – The Metropolitan Water District of Southern California.

The Board requests that the mitigation measures for the Crimson Solar Project be consistent with those of the Desert Harvest Solar Project, for which BLM published a Record of Decision (ROD) in March 2013 (see https://eplanning.blm.gov/epl-front-office/projects/nepa/65699/79579/92204/Desert_Harvest_ROD.pdf). The Board supports the proposed implementation of mitigation measures to avoid or offset any potential impacts to Colorado River water resources as outlined in Appendix 3 of the ROD, which includes the requirement that prior to the onset of water-consuming construction activities, the project owner shall prepare a "Colorado River Water Supply Plan" to identify measures that will be taken to replace water on an acre-foot to acre-foot basis, if the project results in consumption of any water from below the Accounting Surface, towards the purpose of ensuring that no allocated water from the Colorado River is consumed without an entitlement to that water.

Letter 14

The Board requests to be notified and provided an opportunity to review and comment on the Colorado River Water Supply Plan and any future water supply investigation associated with the proposed Crimson Solar Project. If you have any questions or require further information, please feel free to contact Mr. Vic Nguyen at (818) 500-1625.

Sincerely,

Christopher S. Harris
Executive Director

cc: Dr. Terrence J. Fulp, Regional Director
Lower Colorado Region, U.S. Bureau of Reclamation
Mr. William Hasencamp, Manager of Colorado River Resources
The Metropolitan Water District of Southern California
Mr. Ned Hyduke, General Manager
Palo Verde Irrigation District

Letter 15

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

January 30, 2020

VIA EMAIL AND USPS

Ms. Miriam Liberatore
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Dear Ms. Liberatore:

Notice of Availability of the Crimson Solar Project Draft Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) and Draft Land Use Plan Amendment

The Metropolitan Water District of Southern California (Metropolitan) has reviewed the Bureau of Land Management's (BLM) Crimson Solar Project (proposed Project) Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR). Metropolitan is pleased to submit comments for consideration to the BLM. Metropolitan provides these comments to ensure that any potential impacts on its facilities in the vicinity of the proposed Project and on Colorado River water resources are adequately addressed.

Background

Metropolitan is a public agency and regional water wholesaler. It is comprised of 26 member public agencies serving approximately 19 million people in six counties in southern California. One of Metropolitan's major water supplies is the Colorado River via Metropolitan's Colorado River Aqueduct (CRA). Metropolitan holds an entitlement to water from the Colorado River. The CRA consists of tunnels, open canals and buried pipelines. CRA-related facilities also include above and below ground reservoirs and aquifers, access and patrol roads, communication facilities, and residential housing sites. The CRA, which can deliver up to 1.25 million acre-feet of water annually, extends 242 miles from the Colorado River, through the Mojave Desert and into Lake Mathews. Metropolitan has five pumping plants located along the CRA, which consume approximately 2,400 gigawatt-hours of energy when the CRA is operating at full capacity.

Concurrent with its construction of the CRA in the mid-1930s, Metropolitan constructed 305 miles of 230 kilovolt (kV) transmission lines that run from the Mead Substation in southern

Nevada, head south, then branch east to Parker, California, and then west along Metropolitan's CRA. Metropolitan's CRA transmission line easements lie on federally-owned land, managed by BLM. The transmission lines were built for the sole and exclusive purpose of supplying power from the Hoover and Parker projects to the five pumping plants along the CRA.

Metropolitan's ownership and operation of the CRA and its 230 kV transmission system is vital to its mission to provide Metropolitan's 5,200-square-mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Project Understanding

Sonoran West Solar Holdings, LLC, a wholly owned subsidiary of Recurrent Energy, LLC proposes to construct, operate, maintain, and decommission the proposed solar Project near the city of Blythe, California. The proposed Project would interconnect to the regional electrical grid at the existing Southern California Edison Colorado River Substation and would include up to 1,400 megawatt-hours (MWh) of integrated energy storage capacity. The Applicant has a large generator interconnection agreement for 350 MW with the California Independent System Operator (CAISO).

The proposed Project site consists of approximately 2,500 acres of BLM-administered land located in unincorporated eastern Riverside County, approximately 13 miles west of Blythe, just north of Mule Mountain and just south of Interstate 10. The proposed Project is comprised of the following components/facilities: photovoltaic modules and support structures, inverters, transformers, and electrical collection system, project substations and gen-tie line, and an operations and maintenance building. Other features/components of the proposed facility include a supervisory control and data acquisition system, an optional battery or flywheel storage system capable of storing up to 350 MW of electricity, a meteorological data collection system, and telecommunications facilities.

Land Use Issues: Potential Impacts on Metropolitan Facilities

Metropolitan has not identified any direct impacts to its facilities. Metropolitan appreciates that the proposed Project would increase solar power to California's grid and provide a new source of flexible supply with the addition of battery storage capabilities. However, in response to the Notice of Preparation for the proposed Project, Metropolitan requested that the Project proponent review documents, and analyze and assess any potential impacts to Metropolitan's transmission system. Metropolitan also requested that the proposed Project proponent ensure that the California Independent System Operator (CAISO) includes Metropolitan as a Potentially Affected System for this proposed Project in accordance with the CAISO Tariff and Business

15-1

Practice Manuals for the Generation Interconnection Procedures allowing Metropolitan's Power System Operations and Planning Section the opportunity to participate in scoping meetings and study result meetings with SCE and CAISO for any related technical generation interconnection studies. However, potential impacts to Metropolitan's transmission system were not discussed in the Draft EIR/EIS.

15-1 cont.

Water Resources: Potential Impacts on Colorado River and Local Water Supplies

Metropolitan remains concerned about the proposed Project's potential direct and cumulative impacts on water supplies, specifically potential impacts on Colorado River and local groundwater supplies. As noted above, Metropolitan holds an entitlement to imported water supplies from the Colorado River. Water from the Colorado River is allocated pursuant to federal law and is managed by the Department of the Interior, Bureau of Reclamation (USBR). In order to lawfully use Colorado River water, a party must have an entitlement to do so. See Boulder Canyon Project Act of 1928, 43 U.S.C. §§ 617, et seq.; Arizona v. California, 547 U.S. 150 (2006).

> On page 3.16-3: Water Supply
>
> Project water would be supplied from either a new on-site well that would be constructed as part of the Project or an existing off-site well located approximately 4 miles northeast of the Project in the PVMGB, or would be trucked in via an off-site water purveyor, or by some combination of these sources.

15-2

Metropolitan appreciates the recognition that the proposed Project may have an impact on groundwater and that the implementation of Mitigation Measures WAT-1 and WAT-2 will ensure that no allocated water from the Colorado River is consumed without entitlement to that water, but the Draft EIS/EIR does not address the impacts of construction of a new, on-site well or the impacts associated with obtaining water from an existing off-site well located approximately 4 miles from the proposed Project site.

The Draft EIR/EIS recognizes the potential for cumulative impacts from the use of the scarce Colorado River and local groundwater supplies in light of the many other pending renewable energy projects within the Colorado River Basin and the local groundwater regions. However, a thorough analysis of the potential direct or cumulative impacts from this use was not provided. While Metropolitan realizes that the implementation of Mitigation Measures WAT-1 and WAT-2 will reduce or eliminate cumulative impacts, analysis to determine how the cumulative impacts may affect the Colorado River Basin and the local groundwater regions should be completed.

We appreciate the opportunity to provide input to your planning process and we look forward to receiving and reviewing any further review documents in the future. If we can be of further assistance, please contact Ms. Malinda Stalvey at (213) 217-5545.

Very truly yours,

Jennifer Harriger
Interim Manager, Environmental Planning Section

JAH:mks
SharePoint\Bureau of Land Management – Crimson Solar Project Draft DEIS EIR_Comment Letter

cc: Mr. Christopher S. Harris
Executive Director
Colorado River Board of California
770 Fairmont Avenue, Suite 100
Glendale, CA 91203-1068

MBCA
morongo basin conservation association

January 30th, 2020
Via email.

To: Crimson Solar Project Attn: Miriam Liberatore, Project Manager Bureau of Land Management 3040 Biddle Road Medford, OR 97504, Email sent to: blm_ca_crimsonsolar@blm.gov

Re: Comments on the Draft Environmental Impact Statement and Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan for the Crimson Solar Project. DOI-BLM-CA-D060-2017-0029-EIS

Basin and Range Watch is a 501(c)(3) non-profit working to conserve the deserts of Nevada and California and to educate the public about the diversity of life, culture, and history of the ecosystems and wild lands of the desert. Federal and many state agencies are seeking to open up millions of acres of unspoiled habitat and public land in our region to energy development. Our goal is to identify the problems of energy sprawl and find solutions that will preserve our natural ecosystems, open spaces, and quality of life for local communities. We support energy efficiency, better rooftop solar policy, and distributed generation/storage alternatives, as well as local, state and national planning for wise energy and land use following the principles of conservation biology. We have visited the site of the proposed Crimson Solar Project.
Western Watersheds Project (WWP) is a non-profit organization with more than 9,500 members and supporters. Our mission is to protect and restore western watersheds and wildlife through education, public policy initiatives and legal advocacy. Western Watersheds Project and its staff and members use and enjoy the public lands and their wildlife, cultural and natural resources for health, recreational, scientific, spiritual, educational, aesthetic, and other purposes.

1. **Introduction**

The Crimson Solar Project would result in the loss of 2,500 more acres of habitat in the lower Colorado Desert. The region has seen a build-out of several large-scale energy projects and several valuable biological, cultural and visual resources gave already been lost. The BLM is not willing to consider over-generation and community solar alternatives to protect this habitat and justify a No Action Alternative. The BLM has also narrowed the Purpose and Need to suit the developer.

16-1

We are submitting comments on this Draft Proposed Plan Amendment to the California Desert Conservation Area Plan and Environmental Impact Statement/Environmental Impact Report, which analyzes environmental impacts of the proposed Crimson Solar Project for the Bureau of Land Management (BLM) Palm Springs South Coast Field Office and the County of Riverside.
The project location lies in both the Riverside East Solar Energy Zone and a Development Focus Area designated by the Desert Renewable Energy Conservation Plan (DRECP). But the project history predates both of those plans. Because the project would have many significant environmental impacts, the Bureau of Land Management (BLM) can by-pass those plans for better conservation management in this region. Furthermore, the Desert Renewable Energy Conservation Plan only makes recommendations and the BLM is not required to follow the Development Focus recommendation for this region. One very major flaw of the DRECP in this region is to recommend that the sand transport corridor be left alone, yet simultaneously the DRECP designated Develop Focus Areas on most of this transport corridor.
Basin and Range Watch and Western Watersheds Project have the following comments on the subjects reviewed by the BLM Environmental Impact Statement for the BLM and the Environmental Impact Review for Riverside County, California. Basin and Range Watch and Western Watersheds Project can only support a No Action Alternative.

16-2

16-3

16-4

2. **Proposed Project**

Energy Storage
According to the DEIS, the project would include energy storage systems. What is the type and design? How will storage facilities be cooled in the extreme summer heat? A detailed description of battery storage technologies and cooling strategies needs to be provided in the EIS. There is no information on what kind of batteries would be used and the DEIS even suggests "flywheel storage may be used". This is all very speculative and the DEIS fails to fully explain how this would be incorporated into the grid.

16-5

Types of PV Panels
The BLM has no idea what kind of PV panels would be used. This could influence avian impacts, visual impacts and project efficiency.

16-6

Concrete Batch Plant
Will the project will be required to have a concrete batch plant for construction? While the goal of the project is to reduce GHG emissions, it should be noted that concrete is very C02 intensive to produce. As much as 10 percent of global CO2 emissions come from the production of concrete. Utilizing solar energy through Distributed Generation as an alternative would eliminate much of this carbon footprint because much if that environment is already built.

16-7

3. **Purpose and Need**

The draft EIS states, "In accordance with FLPMA, public lands are to be managed for multiple uses that consider the long-term needs of future generations for renewable and non-renewable resources." (DEIS at 1-1) But this is only a partial and selective quote of the Federal Land Policy Management Act (FLPMA) concerning multiple use, where the same mandate to manage public lands must also include wildlife and fish, scenic values, and historic values, as well as recreation:

> *…a combination of balanced and diverse resource uses that takes into account the long term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output. (43 U.S. Code § 1702(c))*

16-8

A 30-year lease to grade, develop, mow, apply herbicides and crush such a large area of public lands in Mojave Desert ecosystems would greatly impair the quality of the environment here, and full restoration of this arid land could take centuries, thus being a virtually permanent impairment. BLM should not simply look at a purpose and need that seeks the greatest economic return on these public lands, but must also consider and balance the watershed, wildlife and fish, natural scenic values, and historic values of the land. BLM's Purpose and Need is faulty for not taking these mandates of FLPMA into account.

The Purpose and Need Statement responds to the applicant's request to build a solar project in the region, but by listing the applicant's objectives directly under the statement, the BLM is self -fulfilling the statement to only reflect on too narrow a scope of alternatives. The statement is crafted to make approval of the project easier for the BLM and would accommodate the applicant. The BLM's National Environmental Policy Act handbook states: "[t]he purpose and need statement for an externally generated action must describe the BLM purpose and need, not an applicant's or external proponent's purpose and need (40 CFR 1502.13)."

See 40 C.F.R. §§ 1500.1(b); 1502.13; Envtl. Law & Policy Ctr. v. U.S. Nuclear Reg. Comm., 470 F.3d 676 (7th Cir. 2006); Simmons v. U.S. Army Corps of Eng'rs, 120 F.3d 664 (7th Cir. 1997). "An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative . . . would accomplish the goals of the agency's action, and the EIS would become a foreordained formality. Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt., 606 F.3d 1058, 1070 (9th Cir. 2010).

16-9

Moreover, an agency may not allow the economic needs and goals of a private applicant to define the purpose and need, and hence the inevitable outcome, of an EIS. Id. Federal agencies must "'exercise a degree of skepticism in dealing with self-serving statements from a prime beneficiary of the project and to look at the general goal of the project rather than only those alternatives by which a particular

applicant can reach its own specific goals." Envtl. Law & Policy Ctr., 470 F.3d at 683 (quoting Simmons, 120 F.3d at 666). 16-9 cont.

The project would be built in a region that has several valuable resources that have been designated conservation status by the California Desert Conservation Area Plan and the Northern and Easter Colorado (NECO) Desert Resource plan. The BLM would need to amend the CDCA just to be able to legally approve the project. All resources must be officially compromised by the agency for approval. The project would impact valuable, visual, recreational, cultural, biological, hydrologic and socio-economic resources. The BLM could easily craft a Purpose and Need Statement that prioritizes the conservation of these resources. Doing so would allow for a larger and more reasonable range of alternatives. As it stands now, the statement does not provide a broad enough or accurate enough scope to allow better alternatives. 16-10 16-11

The BLM Purpose and Need Statement cites Executive and Secretarial Orders that really are not required to be specific to this project and this plan does not fulfill all the requirements in the orders. 16-12

Equally, BLM has rejected more environmentally acceptable alternatives based on the idea that these alternatives do not meet the scope of the Purpose and Need Statement. BLM is only allowing a specific Purpose and Need that is narrow to the requests of the applicant, but this shows a biased towards a project. A superior Purpose and Need Statement would incorporate better and more responsible environmental protections. The BLM has intentionally left environmental conservation out of the Purpose and Need Statement and this eliminates many major concerns from stakeholders. A broader purpose and need statement can be written for this project that will consider the environmental concerns of many public land owners. 16-13

The Purpose and Need Statement should examine the actual NEED for this project based on current technology.

The Over-generation Problem in California Due to Utility-scale Solar Projects

The BLM can justify a No Action Alternative simply by examining the need by utilities for additional utility-scale solar projects on public lands. The BLM should also examine the feasibility and problems with a plan to integrate 350 megawatts of battery storage on site. The Draft Environmental Impact Statement should consider an alternative that utilizes degraded brownfields and distributed generation. Under the National Environmental Policy Act, agencies are required to consider alternatives outside of their jurisdiction. A no large-scale energy alternative can be justified with the California Energy Efficiency Strategic Plan (CEESP). This plan already exists as California state law and it can be fully implemented now. This is a state plan that prioritizes implementing rooftop solar and energy efficiency prior to developing largescale, remote solar and wind projects. The Draft EIS should also include and analyze an alternative that maximizes wildlife protection by avoiding, minimizing, and fully mitigating all direct, indirect, and cumulative impacts to wildlife and wildlife habitat to at least a no-net loss standard. 16-14 16-15

How will BLM fully mitigate significant impacts when recent Interior directives order off-sire compensatory mitigation to be halted? 16-16

The Need for this project is questionable, as it adds a large cumulative impact to grid congestion in California. The state is currently experiencing a worsening glut of solar power at peak times on the transmission grid system, as measured by the California Independent System Operator. This has been shown as the Duck Curve, where renewable energy generation exceeds demand in the middle of the day, then causes the need to ramp up generation at the end of the day after the sun sets with inefficient natural gas peaker plants. At times, as much as 13,000 MW is needed in 3 hours in the evening hours, as solar projects go offline at night.

The National Renewable Energy Laboratory (NREL) examined the problem (Denholm et al. 2015, p. 8): "NREL has also examined higher renewable penetration scenarios in California using PLEXOS with a Western Interconnection database derived from the Western Electricity Coordinating Council (WECC) Transmission Expansion Policy Planning Committee (TEPPC), with additional modification based on the LTPP database (Brinkman et al. 2015). The NREL study examined cases where California achieves greater than 50% reduction in electric sector carbon dioxide emissions by 2030 with a variety of renewable energy technologies and flexibility assumptions, such as increased export limits and reduced minimum local generation requirements. Total annual curtailment estimates range from 0.2% (with a balanced portfolio in a more flexible grid) to almost 10% (with a high-solar portfolio in a less flexible grid)." 16-17

In other words, increased curtailment of solar projects (shutting them off during peak times) is likely under higher penetration of photovoltaics onto the California grid, despite storage options.

With increasing penetration of photovoltaic solar energy onto the grid, will instability problems be alleviated with battery storage?

Can an on-site battery storage project alleviate this problem? How many megawatt-hours of storage will these batteries provide?

Would the battery facility need to be cooled? How much energy would be required to do so? This is a hot desert with summer temperatures reaching 118 degrees F at times. How will this heat affect battery efficiency? Will air-conditioning be used to cool battery bank buildings? How much electricity for air-conditioning will be parasitized off the grid? Or will liquid-cooling containers be used for batteries? All eyes will be watching to track the efficiency loss of battery storage in hot desert lowlands, compared with coastal urban load center alternatives. 16-18

To conserve habitat, the BLM should consider a No Action Alternative based on local small-scale distributed battery technology in urban centers. Battery storage is making advances for smaller scale solar energy and would not require such a large facility that would need cooling. Batteries will create a waste/recycling issue as well and the BLM should be asking if batteries will be recycled. 16-19 16-20

California's Renewable Energy Standards and Goal

California's RPS can be met in the built environment:

The California Public Utilities Commission (CPUC) is driving energy policy in California, and the California Energy Efficiency Strategic Plan (CEESP) is current regulatory policy dating back to 2007. California's utilities developed the CEESP cooperatively with the CPUC. The current version is available online at: 16-21

http://www.energy.ca.gov/ab758/documents/CAEnergyEfficiencyStrategicPlan_Jan2011.pdf
Competitive Processes, Terms and Conditions for Leasing Public Lands for Solar and Wind Energy Development
While this is for all public lands, it was really designed for Solar Energy Zones (Designated Leasing Areas) and similar designations. The Crimson Solar Project application predates the Western Solar Plan and there are no requirements for the BLM to approve a project based on these orders.

16-21 cont.

Transmission Limitations

We learned from the group, Defenders of Wildlife, that the California Energy Commission's Renewable Energy Transmission Initiative project in California reported that the existing spare capacity for energy only on the East Riverside and Palm Springs transmission system is 4,754 MW. When several planned projects are fully on line, the spare capacity will be reduced to approximately 584 MW. This assumes that the 800 MW from the Desert Sunlight and Genesis facilities have not been accounted for in determining existing spare capacity on the line.

16-22

California Desert Conservation Area Plan

The California Desert Conservation Area (CDCA) Plan has several guidelines that should be followed in the Purpose and Need. All land on the project site are Class M (Moderate Use) is based upon a controlled balance between higher intensity use and protection of public lands. This class provides for a wide variety or present and future uses such as mining, livestock grazing, recreation, energy, and utility development. Class M management is also designed to conserve desert resources and to mitigate damage to those resources which permitted uses may cause.
While energy is part of the Class M designation, it should not be the dominant use. In the case of the Crimson Solar Project, about 3 square miles of public land would be geoengineered to accommodate a large-scale energy project. No other Multiple Use activities
would be permitted and it would be inconsistent with the Class M (Moderate Use designation) under the CDCA Plan.

16-23

The Crimson Solar Project would conflict with 11 of the 12 Plan elements in the CDCA. Those would be: Cultural Resources, Native American Values, Wildlife, Vegetation, Wilderness, Wild Horses and Burros, Livestock Grazing, Recreation, Motorized-Vehicle Access, Geology Energy, Minerals and Land Tenure Adjustment.

16-24

The Crimson Solar Project fails to meet the following Decision Criteria for the Energy Productions and Utility Corridors Elements:
(1) Minimize the number of separate rights-of-way by utilizing existing rights-of-way as a basis for planning corridors –
An alternative that builds energy storage on an existing project in the region would minimize the need for a huge build-out that would impact resources.

16-25

(2) Avoid sensitive resources wherever possible –
This project will conflict with Cultural, hydrologic, visual, air quality and biological resources

16-26

(3) Conform to local plans whenever possible –

16-27

The project would be inconsistent with the conservation guidelines of the Northeast Colorado Resource Plan (NECO) and the California Desert Conservation Area (CDCA) Plan.

16-27 cont.

(4) Consider wilderness values and be consistent with final wilderness recommendations

A 4- square mile project would be visible form all adjacent wilderness and conservation areas. The project will absolutely degrade wilderness values.

16-28

Relationship of the Proposed Action to the Desert Renewable Energy Conservation Plan

"Pursuant to Section II.3.2.4 of the DRECP LUPA, the DRECP does not apply to "[a] project that is proposed in a BLM SEZ and that is considered a 'pending project' under the Western Solar Plan (the project application was filed before June 30, 2009)." As discussed above, the initial project application was filed before June 30, 2009, the Project is located within a SEZ, and the amendments contemplated by the Crimson Solar PV proposal either do not affect the project boundaries (e.g., change in project developer) or are related to avoiding resource or land use conflicts or adapting the Project to third-party-owned infrastructure constraints. Therefore, the Crimson Solar PV proposal is being processed under the CDCA land use plan decisions in place prior to the adoption of the DRECP LUPA and Western Solar Plan. "

Since this project application predates both the Western Solar Plan and the DRECP, the BLM does not need to prioritize this project approval over the DRECP Development Focus or the Western Solar Plan.

16-29

We request that the Purpose and Need statement be rewritten to emphasize BLM's commitments to protect valuable resources. A solar project of this size cannot avoid impacts to important resources.

16-30

The project is home to **BLM Sensitive Species.** The Mojave fringe-toed lizard, California leaf-nose bat and the Harwood's milkvetch are three BLM Sensitive Species that occur on the site. The BLM is required to protect BLM Sensitive Species as defined in BLM Manual 6840 (Special Status Species Management)

The objectives of the BLM sensitive species policy are twofold, as follows:

1. To conserve or recover species listed under the Endangered Species Act of 1973 (ESA; 16 USC, Section 1531 et seq.), as amended, and the ecosystems on which they depend so that ESA protections are no longer needed for these species
2. To initiate proactive conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for listing of these species under the ESA

Resources on the site are also protected by the Archeological Resources Protection Act of 1979. This statute (16 U.S.C. 470aa-470mm; Public Law 96-95 and amendments to it) was enacted

"...to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals."

16-31

The Migratory Bird Treaty Act of 1918 was an Establishment of a Federal prohibition, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird." (16 U.S.C. 703) Numerous Neotropical songbirds and other migratory birds will be negatively impacted by this solar project. 16-32

Land Use Plan/ The California Desert Conservation Area: The lands lie under the FLPMA approved California Desert Conservation Area. The region is designated as Class M which is designated for a "controlled balance between higher intensity use and protection." A variety of uses are listed in this class and the problem is that designating up to 6 square miles as a Right of Way for ONLY solar energy is inconsistent with Class M (Moderate Use) designation. The solar project would be more appropriate on lands with Class I (Intensive Use) designation – that is "lands managed for concentrated use to meet human needs". We request that the Purpose and Need Statement for the DEIS analyze the above conservation policies. The statement now is biased towards approval of renewable energy which does not reflect the wishes of all of the involved stakeholders in this project. 16-33

The Endangered Species Act protects species that would occur on the site including the Desert tortoise, Yuma clapper rail, Yellow billed cuckoo and Southwest willow flycatcher. Lake-effects of a large-scale solar project could attract these species to an artificial lake and wetland effect. 16-34

California Endangered Species include Gila woodpecker, Yellow billed cuckoo, Elf owl and the state Threatened Swainson's hawk and Arizona bell's vireo. These species could be impacted by the solar project next to the Colorado River riparian habitats and microphyll woodlands. 16-35

The Bald and Golden Eagle Protection Act protects both golden and bald eagles, both of which could fly over the project site. 16-36

5. Proposed Action, Alternatives and Environmental Consequences

We have reviewed the proposed action and all alternatives. We have concluded that the No Action Alternative is the most sensible for this project due to the great impacts it would cause. The continuing changes to this project and converting the high-value desert ecosystem to photovoltaic have not eliminated major conflicts involving hydrology, biological resources, cultural resources, visual resources, and air quality. The cumulative impacts with the adjacent Desert Quartzite Project will create a huge disturbance to the region's resources. 16-37

What will the photovoltaic panels be made from? Thin-film, Cadmium-Telluride? Crystalline silicon? Copper Indium Gallium Selenide? 16-38

It would be helpful to know this during the review process because the texture of the panels could be instrumental in attracting birds to the lake effect produced by solar panels.

16-38 cont.

Alternatives

BLM failed to consider a full range of alternatives. There is no off-site, Private Land Alternative. Because California is a big state, several areas in places like the Central Valley provide opportunities to develop renewable energy in degraded agricultural lands. There are tens of thousands of acres of land that now has too much salinity to be productive for agriculture that are in proximity to transmission . There are no requirements for BLM to approve a solar project in this specific region. Under the National Environmental Policy Act, BLM is required to consider alternatives outside of the jurisdiction of their lead agency. While the BLM cannot direct a private land owner to use their land for energy, BLM can justify a No Action Alternative since less environmental impacts would occur to important resources in these locations. In other words, BLM has adequate justification to reject this application based on resource conflicts and other available lands in California for energy development.

16-39

Existing Project Storage Alternative: Several large-scale solar projects have been built in the East Riverside Area in California. The Desert Sunlight Project, the Blythe Project and the McCoy Project are very large – almost ten thousand acres collectively, and none of these projects use battery storage and must be curtailed during times of over-generation. So far, no battery storage has been incorporated in any of the existing projects. The BLM could easily select a No Action Alternative for Crimson Solar based on existing projects that would only have to add five to ten acres to incorporate storage. The batteries will have to be cooled in the summer on the Crimson site. Temperatures can easily top 115 degrees out there and batteries will need to be cooled long after sunset. This would be a parasitic load and partially defeats the reason for the project. Storage facilities would not even have to be on the site and could easily be put closer to the point of use.

16-40

Rejected Distributed Generation Alternative:

We have provided several justifications to reconsider this alternative as justification for a No Action Alternative. Please see the Distributed Generation section in this letter under Purpose and Need for this.

16-41

The **proposed and preferred alternatives** do not even seem to know what energy storage systems would be used. There is no decision on what kind of batteries that would be used and little information about how much energy would be needed to cool the batteries and power the flywheel. If the batteries are lithium ion, they will need to be recycled.

Lithium ion batteries can be very dangerous when the explode. The fires are extremely difficult to extinguish and they can cause issues with hazardous materials. Placing so many lithium ion or lead acid batteries on the site is a **Hazardous Materials** issue.

https://www.thoughtco.com/why-lithium-batteries-catch-fire-606814

16-42

The Flywheel idea is interesting, but that technology has some problems as well. The drawbacks of **flywheels** are the small capacity and high power loss, ranging from 3% to 20% per hour.[1]
The scoping report said that this project would store up to 1,400 MW of electricity, but does not really detail this much further. During scoping, the number was just over 400 MW. It is highly speculative to claim that any project could store up to 1,400 MW. In fact, this is not likely.

As of 2018, the largest battery storage power station is the Australian Hornsdale Power Reserve,[2] adjacent to the Hornsdale wind farm, built by Tesla. Its 100 **MW** output capacity is contractually divided into two sections: 70 MW running for 10 minutes and 30 MW with a 3-hour capacity. Samsung 21–70-size cells are used.

16-43

It appears that this DEIS and NEPA review is premature. The DEIS is saying that the applicant has not fully developed this idea yet. We would appreciate it if the BLM would at least have a more developed plan before taking this review this far. The BLM has crafted a Purpose and Need Statement around a highly speculative proposal. It is not feasible for the Crimson Solar Project to store 1,400 MW of electricity.

Access Roads

What dust palliative may be used? How would access roads effect surface hydrology?

16-44

New Transmission, Inverters, Transformers, Energy Storage Systems, Substation, and Electrical Collector System

All of these can have impacts on wildlife. While BLM talks about collision potential for transmission lines, there is little talk about potential effects include noise effects and associated avoidance behavior, and electric and magnetic fields.[3]
And the DEIS does not talk much about the impacts of magnetic fields and this is an oversight. See discussion below:

16-45

> *J Toxicol Environ Health B Crit Rev. 2005 Mar-Apr;8(2):127-40.*
>
> ***The effects of electromagnetic fields from power lines on avian reproductive biology and physiology: a review.***
>
> *Fernie KJ[1], Reynolds SJ.*
> ***Abstract***

[1] https://www.sciencedirect.com/topics/engineering/flywheel-energy-storage
[2] https://hornsdalepowerreserve.com.au/

[3] https://www.hydro.mb.ca/environment/pdf/fur_feathers_fins_and_transmission_lines.pdf

Electrical power lines are ubiquitous in the developed world and in urban areas of the developing world. All electrical currents, including those running through power lines, generate electric and magnetic fields (EMFs). Electrical power lines, towers,and distribution poles are used by birds for perching, hunting, and nesting. Therefore, many bird species, like humans, are exposed to EMFs throughout their lives. EMFs have been implicated in adversely affecting multiple facets of human health,including increasing the risks of life-threatening illnesses such as leukemia, brain cancer, amyotrophic lateral sclerosis, clinical depression, suicide, and Alzheimer's disease. A great deal of research and controversy exists as to whether or not exposure to EMFs affects the cellular, endocrine, immune, and reproductive systems of vertebrates. Laboratory work has used mice, rats, and chickens as models for this EMF research in an effort to understand better the possible implications of EMF exposure for humans. However, EMF exposure of wild birds may also provide insight into the impacts of EMFs on human health. This review focuses on research examining the effects of EMFs on birds; most studies indicate that EMF exposure of birds generally changes, but not always consistently in effect or in direction, their behavior, reproductive success, growth and development, physiology and endocrinology, and oxidative stress under EMF conditions. Some of this work has involved birds under aviary conditions, while other research has focused on free-ranging birds exposed to EMFs. Finally, a number of future research directions are discussed that may help to provide a better understanding of EMF effects on vertebrate health and conservation.

16-45 cont.

6. **<u>Vegetation Mowing</u>**

For the proposed action and preferred alternative, vegetation mowing would be used to minimize impacts. This method is proposed for many projects and the BLM is premature choosing this as a justification for project approval.

It would require that vegetation on the site be shredded by heavy duty mulchers which can weigh over 20,000 pounds.

16-46

This has been used on an 80-acre project on Nevada called the Pahrump Solar Project as well as the 780-acre Sunshine Valley Solar Project and it has created a series of its own impacts including:

Fugitive Dust: No dust palliatives are used on these two projects and in the case of Sunshine Valley Solar, the panels are too close together to allow water trucks to fit. This has resulted in soil disturbance and dust plumes whenever the wind blows. The situation is so bad that complaints were filed to the Nevada Division of Environmental Protection.[4]



^Vegetation mowing – Sunshine Valley Solar

16-46 cont.

[4] https://pvtimes.com/tonopah/complaint-filed-over-dust-at-solar-project-in-amargosa-valley-75678/



^Dust from Sunshine Valley Solar

16-46 cont.

The Pahrump Solar Project is an 80-acre photovoltaic facility and used vegetation grubbing and has a Habitat Conservation Plan. Crimson Solar would be roughly 30 times larger than the Pahrump Solar Project.

Four desert tortoises were found on the project site. Small doors were installed in the parameter fence so tortoises can re-enter. While all 4 tortoises did return to the site, only 2 are still accounted for and just about all of the new annual vegetation that returned is not native. Red brome, split grass, Erodium and Russian thistle are all abundant on the site. These are also less nutritious for desert tortoises. For the Crimson site, there would be all of these invasive weeds as well as Sahara mustard. Invasive weeds would impact rare plants such as Harwood milkvetch and create other obstacles for wildlife.



^Non-native annual vegetation on Pahrump Solar Project

Vegetation mowing will also directly crush animal in their burrows and potentially deafen others.

16-46 cont.

7. **<u>Air Quality/Fugitive Dust</u>**

We are also particularly concerned about the compromised air quality that will most likely result from the construction of this project.

The land rush of large solar projects all over the southwestern US has resulted in expedited approval of many of these projects. In most of the cases, the developers have not adequately mitigated the fugitive dust that has resulted in the removal of large acreages of vegetated desert lands. We are concerned that industrial construction in the region will compromise the air quality to the point where not only visual resources, but public health will be impacted.

16-47

We are also concerned that the applicant will have no choice but to use more water in an already over-drafted aquifer to control the large disturbance they intend to create.

Large solar projects in desert areas are very bad for air quality. Removal of stabilized soils and biological soil crust creates a destructive cycle of airborne particulates and erosion. As more stabilized soils are removed, blowing particulates from recently eroded areas act as abrasive catalysts that erode the remaining crusts thus resulting in more airborne particulates.

The Right of Way for the Desert Sunlight Project to the west guaranteed that mitigation would control fugitive dust emissions, but photos taken of the Desert Sunlight Project during initial construction show "dust blackouts" that have occurred when there are strong wind events. These dust blackouts were reported to be rare in the area before First Solar disturbed so much of the ground with large earth moving machines.

16-47 cont.

Valley Fever has been blamed for 62 deaths among California prison inmates statewide, most at the Avenal and Pleasant Valley facilities, but also two at Blythe, California.[5]

Epidemiologists investigated an outbreak of valley fever that had sickened 28 workers at two large solar power construction sites in San Luis Obispo County.[6] One of these projects was called Topaz, built by First Solar.

We are also concerned that this will add to the cumulative impacts of several constructed solar projects in the region.

16-48

CEQA Environmentally Superior Alternative

Quote from the EIS:

> *"CEQA Guidelines Section 15126.6(e)(2) requires an EIR to identify an environmentally superior alternative. If the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives. In general, the environmentally superior alternative is defined as the alternative*

[5] http://www.pe.com/local-news/riverside-county/corona/corona-headlines-index/20130806valleyfever-inland-inmates-may-replace-transferred-prisoners.ece
[6] http://articles.latimes.com/2013/may/01/local/lame-ln-valley-fever-solar-sites-20130501

with the least adverse impacts to the environment. As a general matter, a "no project" alternative frequently is identified as the environmentally superior alternative because such an alternative typically avoids all impacts of the proposal and would not create any new significant impacts of its own. However, as noted in Section 2.7, the No Plan Amendment/No Action/No Project Alternative in this analysis is reasonably likely to result in solar development of some kind and in some configuration on the proposed site consistent with the property's land use designations under the DRECP and Western Solar Plan. Because the specific environmental impacts of any future solar development proposed cannot be known with sufficient certainty at this time to provide a meaningful point of comparison, it would be speculative to identify the No Plan Amendment/No Action/No Project Alternative as the environmentally superior alternative."

Response: The BLM does not have to approve solar development on this site. In fact, the BLM is only using recommendations from the DRECP. The BLM even amended the DRECP so they could allow the Ten West Transmission Project to be built on top of a rare plant population.

It is also a weak argument to suggest that there is no way to know if a No Action/No Project alternative would be environmentally superior to a solar project. The BLM has a few projects already built out in the region including Genesis, Blythe, McCoy, Desert Harvest and Desert Sunlight. Does the BLM really believe that the Genesis Project did not degrade the environmental quality of the area?

16-49

8. **Avian Impacts/Polarized Glare**

Lying close to the project area are two globally Important Bird Areas: Cibola National Wildlife Refuge lies to the east of the project, and Important Bird Area another 10 miles to the north, north of the town of Blythe.

Four National Wildlife Refuges are in the area: Havasu (70 miles away), Bill Williams (65 miles to the northeast), Imperial (18 miles to the south), and Cibola 6 miles from the project).

16-50

Some of the northern part of Cibola National Wildlife Refuge adjacent to the project is currently grown in alfalfa and corn to feed thousands of wintering waterfowl, and

there is much riparian restoration happening now and planned for the future. This would include encouraging native willows, cottonwoods, and mesquite. Hundreds of acres of riparian tree restoration are planned here.

The Crimson Solar project would be located in the Pacific Flyway, which is a migration corridor for diverse waterfowl reaching from the Sea of Cortez in Mexico, to the Salton Sea in Imperial Valley, California, northwards to the Central Valley marshlands, and eventually to Oregon wetlands where ducks and geese nest in summer. An offshoot of the flyway follows the Colorado River.

This has been a big problem for the renewable energy projects located in the Chuckwalla Valley. Two of the solar projects in particular, Desert Sunlight and Genesis have reported high numbers of avian mortality. In fact, Wally Erickson of West Biological Consulting made a presentation at the Technical Symposium on Avian-Solar Interactions called Regional Observations and Trends in Avian Monitoring and Mortality. In the presentation, he said that the Desert Sunlight Project has reported some of the larger avian mortality numbers.

Both the Desert Sunlight and Genesis Project have reported a diversity of birds that have become avian mortalities and many of the birds were detected to have collision injuries. The Palen Solar Project would be located in between the two in the Chuckwalla Valley.

16-50 cont.

The Solar Industry and some agency representatives have suggested that many of the birds would have died in these locations even if no solar project had been built there. But the Bureau of Land Management conducted a study on this subject and it was presented at the Technical Symposium.

Amy Fesnock of BLM gave a very interesting talk on her background avian mortality study. BLM decided to piggy-back avian mortality surveys onto desert tortoise line distance sampling, which has a long history of annually counting tortoises for recovery estimates, across the desert in a rigorous scientific fashion.

Fesnock came up with a brilliant way to have surveyors also look for any dead birds along these transects, to estimate background avian mortality in more natural areas of the desert, not disturbed by solar development.

Surveyors were trained to find carcasses placed out in the desert, and 97% of detections were within 10 meters of the line. So 10 meters was used as the effective sampling width.

Carcasses were placed out on desert sites to see how long they lasted. USGS Mathematician Manuela Husto applied statistical sampling techniques to the data and applied detection curves for large, medium, and small birds, and was able to estimate when carcasses would no longer be observable.

453 transects were walked by biologists from March to May in 2015, in the Fremont-Kramer Area of Critical Environmental Concern (ACEC), Superior-Cronese ACEC, Ord-Rodman ACEC, Joshua Tree National Park, the Pinto Mountains, Chuckwalla ACEC, and Chocolate Mountains. So these surveys covered a huge swath of the California Desert with intensive surveys walking the ground searching the ground. Surveyors covered 37 square miles of relatively natural desert.

In all this survey effort, only 6 avian mortalities were found: one adult red-tailed hawk, apparently killed by a great-horned owl as it lay below an owl nest; one juvenile red-tailed hawk; one rock wren that was apparently predated by a loggerhead shrike, as it was preserved on a shrike perch impaled on a cactus; and three feather spots of unknown species. This is far less than the avian mortality rate on solar projects. Some solar companies have implied that their bird mortality rate is not much greater than the natural background mortality rate in the desert, as before a project broke ground. But Fesnock's study refutes this strongly.

16-50 cont.

The desert background mortality rate determined from line distance sampling in 2015 was 0.024 birds/acre/year. This could be broken down further to 0.004 large birds/acre/year, 0.0026 medium-sized birds/acre/year, and 0.0214 small birds/acre/year.

But on three unnamed solar projects, Fesnock explained that the avian mortality rate increased to 1.7 birds/acre/year, 0.4 birds/acre/year, and 0.6 birds/acre/year.

Fesnock concluded, "When compared to mortality rates from solar projects, background mortality does not appear to be a significant factor and could easily be accounted in the sampling design error rates."

Accuracy of Reporting on Biological Monitoring

While we believe that the biologists hired to survey these projects are highly qualified individuals, we question the accuracy of the reporting because we have been told some biologists have lost jobs over reporting information. Interestingly, this was backed up at the last Desert Tortoise Council Symposium in 2016. Kathryn Simon of Ironwood Consulting told everybody that the politics of management from the solar companies often get in the way of accurate reporting. In the Symposium Abstracts, she reported "the political backing that supports energy development in the western part of the country has also resulted in the neglect or abuse of natural resources. While a great deal of effort is placed on properly siting and permitting a project, little or no oversight happens once the project enters construction and continues into operations and maintenance. This has led to a "power vacuum," often filled by the project proponent's "environmental" staff who often ensure the least amount of information leaves the project and is reported to wildlife agencies and the public. Specific examples of such behavior are provided and suggestions made for biologists on the ground in achieving their goals of proper monitoring oversight." 16-51

Are we getting the entire story?

Focused vs. Incidental Surveys

The mortality numbers reported on the Genesis Solar Project to the east were much higher when the mortality finds were incidental (workers randomly finding bird mortality). Now that surveys are focused, the numbers appear to be about half of what they were. This raises the questions: Is mitigation working? And are mortalities not being reported? 16-52

The Numbers and Alarming Lack of Mitigation Ideas

For photovoltaic projects, avian mortality is caused by collision and possibly dehydration as birds are unable to fly away. A study on 7 California large-scale solar projects found that from 2012 to 2016, 3545 mortalities from 183 species were detected. A diversity of species have been found including many water birds such as grebes, pelicans, ducks, coots and gulls to name a few. Special Status and Endangered Species include Yellowbilled Cuckoo, Yuma's Ridgeway (clapper) rail 16-53

and Willow flycatcher. The impacts of large-scale solar projects and collisions in the desert to federally listed species have not been fully analyzed.

A dead Blue-footed booby was even found on one of the solar projects south of the Salton Sea in Imperial Valley.

The Lake Effect and Polarized Glare

One main theory is that the polarized light from solar panels may attract birds and insects to solar projects in the Mojave Desert (Horvath et al. 2009).

Does the light have to be polarized to attract birds? Could other factors such a texture, color and topographic features play a part?

We request that this important impact be studied more before any more of these giant projects are approved. Specifically:

What is the mechanism of lake-effect, high polarized light pollution, chromatic, achromatic, glare, etc.?

When the mechanism is identified, predictions of specific species can be tested in the field by altering the solar configuration.

After that, data could be collected in the field to identify factors that may attract birds to solar projects.

16-53 cont.

It is also possible that BLM's preferred Reduced Footprint Alternative that leaves a major wash with microphyll undeveloped may actually bait birds that would eventually hit solar panels. Only a No Action Alternative would avoid this possibility.

16-54

Because the proposed Desert Quartzite Solar Project would be situated in a significant location for migrating birds in the Pacific Flyway, we believe that the cumulative impacts that the project will cause along with other solar projects in the region would not be worth the approval of the project.

16-55

We are very concerned that the DEIS fails to adequately inform the public on the environmental impacts to birds of these large-scale solar projects and potential lake-effect impacts to mortality in flyways.

From Page 146 of the DEIS:

> *"Data from other photovoltaic solar projects in Southern California (Desert Sunlight and California Valley Solar Ranch) indicate that birds are also susceptible to collisions with solar panels (Watson et al. 2016; Ironwood Consulting, Inc. 2014). The causal mechanism for bird collisions with panels is not clear. While the causal mechanism is not known and is under investigation at other facilities, what is known is there is some kind of attractant or risk at solar facilities that results in avian mortalities at a higher rate at solar facilities as compared to background mortality rates on non-developed desert lands. Presently, one hypothesis regarding why birds may collide with panels is the idea that birds, particularly water-dependent species, may be attracted to solar panels, mistaking them for water features. These occurrences could lead to collision or other harm (e.g., strandings of water birds). However, this hypothesis has not yet been tested. Therefore, the causal mechanism for bird collisions with solar panels is presently unknown and it is not possible to determine if the conditions present at the Project site would facilitate an attraction by water-dependent birds and/or what level of impacts may occur. While the causes of avian injuries and fatalities at commercial-scale solar projects are being evaluated, uncertainty remains because: (1) mortality data has been collected over a relatively short period and still is being evaluated; (2) in many cases, the cause of death is not clear; and (3) mortality information from one project location is not necessarily indicative of the mortality information that might be found at another project location."*

16-56

As we have been pointing out, no matter what the cause, more dead birds are found on the solar sites than off the sites. The fact that more research is needed on avian impacts is not relevant here. The problem of higher mortality has not been addressed. A more responsible solution would be to study this impact further before approving so many of these projects.

The collision hazard mitigation only consists of compensatory mitigation for bird habitat, yet this will not reduce or avoid collision hazards of the lake-effect, and is untested as to how much buying habitat elsewhere will actually help bird populations which are at risk.

16-56 cont.

> BIO-33 **CDFW Special-Status Bird Collision Compensatory Mitigation.** The Project Owner shall provide compensatory mitigation to offset impacts on species affected by the Project's creation of a hazard that may result in the direct loss of individual birds and their future offspring. The type of mitigation is based on the three main groups of birds present on the project site: raptors, passerines, and riparian/water-associated birds, to ensure that the categories of bird species anticipated to be impacted by the Project will benefit from the enhanced and conserved habitat. (draft EIS at ES-33)

9. Biological Resources

Vegetation Communities and Rare Plants

Microphyll woodland consists of trees with deep taproots to reach groundwater: desert ironwood (*Olneya tesota*), palo verde (*Parkinsonia florida*), catclaw acacia (*Senegalia greggii*), smoke tree (*Psorothamnus spinosus*), ocotillo (*Fouquieria splendens*), and mesquite (*Prosopis* spp.). The Mule Mountain foothills are adjacent to the project. Also present are wolfberry (*Lycium* sp.), big galleta grass (*Hilaria rigida*), and creosote (*Larrea tridentata*), as part of the CDFW vulnerable Senstive Vegetation Community—how will the project mitigate the loss of 289.4 acres of this community? The project proposes to grade, crush, grub, and trim during operations. The draft EIS says (at 3.3-13):

> The direct and permanent loss of up to 289.4 acres of Creosote Bush—White Bursage/Big Galleta Grass Association, a sensitive natural community, would be mitigated by Mitigation Measure BIO-18 through restoration or compensation.
>
> This mitigation measure reads in part:
>
> ***Sensitive Vegetation Community Restoration or Compensation*:** Permanent impacts on Creosote Bush–White Bursage/Big Galleta Grass Association (estimated at 289.4 acres) shall be compensated through a combination of compensation and restoration at a minimum 1:1 ratio. Habitat compensation shall be accomplished through Resource Agency-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting comparable habitats to those lands impacted by the Project. Restoration may be appropriate as mitigation for permanent impacts provided that restoration is demonstrated to be feasible and the restoration effort is implemented pursuant to the restoration plan described above. (draft EIS at ES-19)

16-57

This is completely unacceptable mitigation and compensation, and is being planned outside of the public scrutiny. Will a land trust be given money to try to find and buy private parcels in the area, which may or may not have high quality habitat? We may

never know. These sensitive vegetation communities should be avoided and protected. These same comments apply to compensations lands proposed for Harwood's Eriastrum. 16-57 cont.

The "rare plant corrals" used at Ivanpah Solar Electric Generating System, now labeled as "Environmentally Sensitive Areas" (ESAs), where the ground surface will be crushed and driven on but not graded, when populations of rare plants are found. Yet the mitigation measure BIO-20 is unclear whether ESAs will be avoided in the solar field, or whether the solar panels will be constructed on top of the rare plants, and the vegetation simply trimmed. This is unacceptable, and all rare plant populations should be avoided—no driving, no construction. Yet indirect effects as as important as direct effects, and since weed prevention may not stop invasive plants from entering the construction site, this could be a significant impact. Trimming rare plants is a mitigation measure as part of BIO-20 (at ES-19).

Vegetation Trimming: During O&M, staff shall be trained to identify rare plant species known to occur on site as part of the WEAP (BIO-17), and vegetation trimming shall be conducted to allow special-status species to set seed prior to trimming. 16-58

Trained botanists need to be present to identify difficult species, not "staff." Plus, this will prove to be a very difficult mitigation to carry out, to have staff trained to identify tricky rare plants, observe them enough to watch them set seed, then trim the stems.

Plus, seedbanks may shift in different years, and some may not germinate in dry years. So the actual locations of rare plant populations are likely unknown, and many could be graded. A No Action alternative would be the least environmentally harmful to these sensitive vegetation communities and rare plants.

Biological Soil Crust

We found extensive biological soil crusts on desert flats around the Mule Mountains, which sequester carbon. How will this loss of carbon be addressed as the solar project disturbs these delicate ground surfaces?

Mitigation measures are vague and unclear:

> For all temporarily disturbed areas, the Restoration Plan shall include a description of proposed methods for topsoil salvage and replacement, plant/seed salvage including salvage of succulents, seeding techniques, inoculation of native microbial organisms for plant mycorrhizae and for biotic soil crust formation, methods to stabilize and shape soil surface to reduce soil erosivity, and techniques to increase soil fertility and water holding capacity. Plant salvage measures shall follow applicable state and federal regulations and policies for salvage. (BIO-18, at ES-18 and 19). 16-59

Will spores of mosses and liverworts be collected in order to inoculate disturbed soils later? Will lichens be carefully collected and transplanted? The species making up these local living crusts are biodiverse, and not any inoculation would be appropriate. Plus, no mitigation measure makes up for the thousands of acres of biological soil crusts that will be permanently destroyed. A Restoration Plan should be written now and analyzed during the public process.

Couch's spadefoot

A single Couch's spadefoot (*Scaphiopus couchii*) was found in a wash which will be avoided, but which will be surrounded by solar project construction. Spadefoots could be crushed by heavy equipment, as they seek cover of burrows built by rodents or other species. Habitat removal and edge disturbance will have large impacts on this population. Yet the mitigation measures are being pushed to the future, and deferred until after the public process. This is unacceptable.

> BIO-27 **Couch's Spadefoot Protection Plan.** Prior to issuance of the Notice to Proceed, the Project proponent shall prepare a Couch's Spadefoot Protection Plan (see Appendix I) to be approved by the BLM and CDFW. The plan shall include the following:
>
> 1. ***Habitat Survey Protocol and Results*:** Figures showing the areas surveyed and the location of potential breeding habitat in relation to proposed Project features. The plan shall also include a survey protocol to locate potential future breeding ponds.
>
> 2. ***Avoidance and Minimization Measures*:** A description of measures that would be implemented to avoid impacts to potential breeding ponds, such as buffers, protective fencing or other barriers, worker's education, minimizing construction traffic within the vicinity of breeding ponds, and biological monitoring.
>
> 3. ***Monitoring and reporting requirements*:** Any observations of live or dead Couch's spadefoots shall be reported to BLM. If a live toad is observed, the DB or BM shall monitor the toad to ensure it is safely out of harm from construction activities.

16-60

Please delay this EIS until these plans and all other deferred mitigation plans are made.

How will flood runoff problems impact spadefoot toads, desert tortoise, and other species? Problems have occurred at other solar projects in Chuckwalla valley, and see also a flood coming off a Virginia solar project.[7] Toxic materials may impact toads if a flash flood destroys solar panels. This hazard needs to be addressed.

16-61

Desert Tortoise

Mojave desert tortoise sign was more common than would be expected for a low arid area. Tortoises appear to be doing well here and could be recovering from a drought. The area should be protected as an Area of Critical Environmental Concern, since the Mojave desert tortoise populations are declining rangewide. Disturbing, fragmenting, grading, and reducing high-quality habitat such as this will only contribute to the species' continuing decline, and the need to uplist it from federally threatened to endangered.

16-62

Comprehensive, rangewide surveys to estimate total desert tortoise numbers have been ongoing since 2001. The latest sampling data from surveys analyzed by US Fish and Wildlife Service (2019) indicates all Recovery Units have declined drastically

[7] https://wtvr.com/2018/02/08/green-solar-farm-is-turning-an-essex-county-watershed-brown/?fbclid=IwAR0dNe8TqkGl3NEMnQudgqzzD58X02B3jEEIn2RFa0OzOiCB1XWgitIZySo

from 2004 to 2014 except one (the Northeastern Mojave Recovery Unit). We emphasize the factors below that lead to the declines, which include vehicle driving across desert habitats, habitat fragmentation, invasive weeds, predation, and renewable energy. Crimson Solar Project would degrade habitat and disturb a population that has an apparently good population.

Table 2. Tortoise estimates within recovery units and change in abundance (Allison and McLuckie 2018)

Recovery Unit	Modeled Habitat (km^2)	2004 Abundance	2014 Abundance	Change in Abundance
Western Mojave	23,139	131,540	64,871	-66,668
Colorado Desert	18,024	103,675	66,097	-37,578
Northeastern Mojave	10,664	12,610	46,701	+34,091
Eastern Mojave	16,061	75,342	24,664	-50,679
Upper Virgin River	613	13,226	10,010	-3,216
Total	68,501	336,393	212,343	-124,050

16-62 cont.

Chart listing the latest Mojave desert tortoise population estimates across Recovery Units—all are in severe decline except one (USFWS 2019 at 15).
By 2014, three of the five Recovery Units fells below the minimum viable density to avoid extinction, of 3.9 adult tortoises per square kilometer. Historically, many plots in the West Mojave during the 1970s and early 1980s supported as high as 58 adult tortoises per square kilometer (ibid. at 16).
Mitigation that buys land or in-lieu payments to funds have been ongoing across the California Desert for other solar projects, yet tortoises continue to decline. These compensatory mitigation measures are not successful.

Permanent tortoise exclusion fences will be placed around the project. Why is an alternative that allows tortoises back into the solar field during operation not analyzed?

Mojave Fringe-toed Lizard

Mojave fringe-toed lizards (*Uma scoparia*) are documented on dune and non-dune habitat on the proposed project site. Genetic studies in the past were not fine-grained enough to clarify the taxonomic status of this species, and cryptic taxa may be present. This Chuckwalla Valley/Palo Verde Mesa populations could be a distinct genetic lineage and separate from other populations of fringe-toed lizard. This needs more study before the project moves forward.

16-63

Desert Dune habitat will have to be mitigated at an estimated 1,636.8 acres (draft EIS at ES-30). But the BLM and CDFW have no idea whether enough compensatory land can be found locally, what condition the land is in, and how sand connectivity relates to dune habitat lost on the project. This has become a very questionable practice.

Avoidance of rare sand habitats would reduce significant impacts to none. Lands should help build linkages, according to the draft EIS, but with the large cumulative solar build-out in the Riverside East Solar Energy Zone/Development Focus Area, this will be increasingly difficult. The draft EIS gives no recommendation about a larger plan to stop the extinction of the Mojave fringe-toed lizard regionally. Palen Solar Project, Genesis, Desert Harvest, Desert Sunlight, and Desert Quartzite, Blythe and McCoy Solar Projects all have cumulative direct and indirect impacts to Mojave fringe-toed lizard populations in the Chuckwalla Valley and McCoy Valley.

16-63 cont.

Bats

Bats are found in the nearby Roosevelt Mine area, and winter influxes of migrating bats occurs in the area. A Bird and Bat Conservation Strategy is deferred, and this is improper. The public needs to be able to review these plans during the NEPA process, and not after project approval.

16-64

Mule Deer

We found scat of the burro deer (*Odocoileus hemionus eremicus*) in ironwood thickets at the base of the Mule Mountains. How will BLM mitigate movements corridor loss and habitat fragmentation for these arid-adapted deer?

16-65

Desert Bighorn Sheep

Bighorn sheep may use the proposed project site as connectivity habitat to access surrounding mountain ranges. How will the blockage and fragmentation of habitat impact desert bighorn sheep?

16-66

Desert Kit Fox

We found sign and burrows of kit fox (*Vulpes macrotis*) on the proposed project site. How will the developer ensure that a disease outbreak does not occur when kit foxes are displaced from their home territories, and the population comes into contact with human development and potential dogs?

Mitigation is again deferred and gives no clarification of how disease outbreaks will be prevented.

16-67

> BIO-30 **Desert Kit Fox and American Badger Management Plan.** Prior to issuance of the Notice to Proceed, the Project proponent shall prepare a Desert Kit Fox and American Badger Management Plan (Appendix I) that defines the strategy for management of kit foxes and badgers, subject to the BLM and CDFW approval. The plan shall include methodologies for pre-construction clearance surveys, den monitoring, passive relocation, and burrow excavation and closure.

Yuma Mountain Lion

Special surveys should be undertaken for Yuma mountain lion (*Puma concolor browni*), which inhabit the area. Large solar projects are increasingly fragmenting habitat and blocking connectivity corridors. More information is needed. 16-68

Birds

A large influx of burrowing owls migrate in to the region during the winter, from as far away as Canada, to the California desert. So a winter survey is needed. The burrowing owl is a California state sensitive species. When burrows are found, it should be determined if they are occupied by family units or wintering individuals. 16-69

The Gila Woodpecker (*Melanerpes uropygialis*) was found on surveys for the former withdrawn Rio Mesa Solar Project just to the southeast of the proposed Crimson Solar Project, next to the Mule Mountains. This Sonoran Desert woodpecker was added to the California State Endangered List in 1988. Previous surveys have placed the California population between 200 individuals and less than 30 pairs. This species needs more study, as it was detected on the project site. 16-70

The Elf owl (*Micrathene whitneyi*) is found in very similar habitat to the Gila woodpecker, and they use the woodpecker's tree cavities. We note that in a 1978 survey, California Department of Fish and Wildlife speculated that as few as 20 pairs could occupy California. After this the owl was determined to be declining in California where, in its limited range, it is state-listed as endangered. No birds were detected in California on surveys conducted in 1999. More current surveys are needed. 16-71

On the Riop Mesa Solar Project area, for Golden eagles, two helicopter surveys were done in spring 2011 following BLM protocol. No active eagle nests were found, but 4 inactive nests within 10 miles of the project; 2 inactive nests were found at 6.25 miles, one nest at 6.5, and one at 8.5 miles. In addition, non-breeding surveys should be carried out to look for resident adults, "floaters," and juveniles. 16-72

10. Cultural Resources

Page 3.5.7 of the Draft EIS states that *between July 24 and November 21, 2017, Applied Earthworks and Aspen Environmental conducted a Class III field survey covering a total of 3,485 acres and encompassing the 3,090-acre direct effects APE (Kidwell et al. 2018). As a result of the survey, 122 newly discovered archaeological sites and 161 newly discovered isolates were identified within the direct effects APE.* 16-73

Page 3.5.11 of the DEIS states*: A total of 167 sites (82 prehistoric, 58 historic-period, and 27 multicomponent) and 183 isolates (177 prehistoric, 5 historic-period, and 1*

multicomponent), have been identified within the direct effects APE and could be directly and adversely affected by the Project.

Basin and Range Watch has been meeting with Native Americans from the Lower Colorado River region for over 10 years. We have concluded that there is no possible mitigation or partial avoidance management that BLM could deploy that would make them happy or preserve their cultural values. The BLM constantly attempts to rank these cultural sites in terms of importance, but once BLM approves the ROW for any of these large impacts, the site is culturally ruined. On a cumulative level, the BLM has drastically allowed developers to compromise the cultural integrity of the region. The BLM has prioritized this energy development over the values of the native people of the region. The BLM has time and again refused to consider alternatives in different location and the built environment to preserve these cultural resources. It is obvious that pleasing the developer takes precedent over the requests of the Native Americans in the region.

The impacts to cultural, tribal and historic resources are described on ES-37 as "**significant and unavoidable"**.

16-73 cont.

All the mitigation listed for culture resources really is after the fact. Even if sites eligible for the National Historic Register are avoided, the entire "Cultural Landscape" would be compromised by the industrialization of the area and would still be impacted by the project. Other mitigation measures would require "monitoring of construction", placing artifacts in a curatorial museum of collection, record on Department of Parks and Recreation (DPR) 523 forms, to map, and to photograph all encountered cultural resources over 50 years of age, etc.
Other mitigation measures include:

> *A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed;*
> *A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits;*
> *Instruction that only the Project Archaeologist, alternate Project Archaeologist, and supervisory cultural resource field staff have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the Project Archaeologist;*
> *Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the Project Archaeologist or supervisory cultural resource field staff, and that*

redirection of work would be determined by the construction supervisor and the Project Archaeologist;
An informational brochure that identifies reporting procedures in the event of a discovery;
An acknowledgement form signed by each worker indicating that they have received the training; and
A sticker that shall be placed on hard hats indicating that environmental training has been completed

All of these mitigations are an apology for the complete obliteration of these cultural sites and values. Again, the BLM has made a choice to sacrifice this area over choosing alternatives that would preserve Cultural Values. This alone justifies a No Action Alternative.

While it is not a substantive comment to say this, we feel that the BLM has chosen the most insensitive and uncaring way to treat these Native American values and don't mind including this in the DEIS comments. BLM has years of experience choosing these locations for development and has consistently placed Native American values last. In fact, the Bureau of Land Management has never halted or chose a No Action Alternative on ONE of the projects proposed for the Blythe and Chuckwalla Valley area based on Native American Values.

16-73 cont.

11. Surface Hydrology

Several washes drain the area where the project would be built. These washes have the potential to have some major flooding during the monsoon season. The DEIS fails to say what photovoltaic technology will be used but several photovoltaic modules contain toxic rare earth minerals. Some flooding could transport toxic materials. A tornado caused ten million dollars dollars worth of damage on the Desert Sunlight Solar Project about 5 years ago. Thousands of solar panels were broken and contain Cadmium telluride. Down facing solar panels can cause different flash flood scenarios depending on which way the single axis tracked panels are facing. This could transport several toxins and pollutants downstream and potentially to the Colorado River. The following video shows a sediment transporting flood caused by a small PV project in the Eastern USA:
https://wtvr.com/2018/02/08/green-solar-farm-is-turning-an-essex-county-watershed-brown/?fbclid=IwAR0dNe8TqkGl3NEMnQudgqzzD58X02B3jEEIn2RFa0OzOiCB1XWgitIZySo

16-74

12. Visual Resources

The BLM has determined that the project site meets VRM Class II standards which are very high standards. Would this require a downgrade of a plan amendment to accommodate such a large visual disturbance.

16-75

This is the **VRM Class II Objective:** *To retain the existing character of the landscape. Allowed Level of Change: The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.*
It is impossible for a 4-square-mile photovoltaic project with associated transmission lines and substations to meet this VRM Class Objective. It would be impossible for the project to not attract the attention of the casual user.
Equally, a 4-square-mile project would be visible from adjacent wilderness areas or other regions that have been designated as **VRM Class I Objectives** which are *to preserve the existing character of the landscape. Allowed Level of Change: This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.*

16-75 cont.

Distance Zone Delineation

Within the Visual Resource Inventory process, distance zones are assigned based on the distance of lands from places where people are known to be present on a regular basis, such as highways, waterways, trails, or other key locations. They include the following:

Foreground-middle ground – This zone includes visible areas from 0 to 5 mi.
Background – This zone includes visible areas from 5 to 15 mi.
Seldom seen – This zone includes lands visible beyond 15 mi or lands hidden from view from key locations.

16-76

The effects of distance are highly dependent on the size and other characteristics of the facility and the landscape, and must be incorporated into the contrast and impact analyses and mitigation efforts on a case-by-case basis.

Many of the distance zones within the Chuckwalla Valley and Palo Verde Mesa would be impacted by the proposed solar project and plan amendment.

The Visual analysis is incomplete due to the fact that the proponent has not chosen which photovoltaic technology would be used. Would they be Monocrystalline, Polycrystalline, Bi-facial or Thin-film? How reflective will the panels be?

16-77

Of the 5 Key Observation Point simulations, inly KOP 4 actually comes close to showing what the project may look like.

We believe that the KOP simulations could and should use existing solar projects as references. If that were done, BLM would have far more accurate simulations of the actual impacts to the project site. All but one of the photos are taken by Basin and Range Watch. These photos would be great examples:

16-78



^Silver State South Project near Primm, Nevada



^Silver State South Project near Primm, Nevada

16-78 cont.



^Silver State South Project near Primm, Nevada



^Silver State South Project near Primm, Nevada

16-78 cont.



^Mowing and grubbing vegetation on the Ivanpah Solar Project, California

16-78 cont.

Other KOP simulations should include:
Fugitive dust simulation for construction phase and a night lighting construction phase simulation.

16-79

13. <u>Conclusion</u>

The BLM should select the No Action Alternative for the Crimson Solar Project. The project is not complete in planning. The BLM has not chosen or decided on adequate mitigation yet. The project's storage plan is full of flaws. California is over-generating large-scale solar energy. It is not worth the risk to special status species, and to degrade so many resources on lands considered so sacred to Native American – especially when the project technology is so speculative.

16-80

Thank you,

Steve Bardwell,
president MBCA

Steve Bardwell

Letter 17

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

January 30, 2020

Miriam Liberatore
Project Manager
Bureau of Land Management
3040 Biddle Road
Medford, Oregon 97504

Subject: Draft Environmental Impact Statement/Report for the Crimson Solar Project, California (EIS No. 20190266)

Dear Ms. Liberatore:

The U.S. Environmental Protection Agency has reviewed the above-referenced document pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The EPA appreciates the Bureau of Land Management's commitment to coordination throughout the NEPA process. As a cooperating agency under NEPA during the development of the Environmental Impact Statement, the EPA participated in pre-application meetings and regular cooperating agency conference calls, attended site visits, and reviewed and commented on the administrative draft of the Draft EIS. We value collaboration with the BLM and fellow cooperating agencies, and the time and resources devoted by the BLM to identifying and addressing potential impacts from construction and operation of the Crimson Solar Project.

We appreciate the responsiveness of the BLM to much of our input and feedback during development of the Draft EIS. We commend the BLM for limiting air, aquatic and biological impacts from the proposed project through site modifications reducing potential impacts to sensitive resources from 7,600 to 2,500 acres (Figure 1-3 - Project Evolution). We note the tailored footprint of the solar arrays in the latest site design that allows for the avoidance of the four major washes that transect the project site. We continue to support the lower impact Design Elements proposed in Alternative B to reduce site disturbance, preserve the site's natural hydrology and decrease water use. Alternative C does not include these Design Elements but avoids an additional 300 acres of sensitive resources, which reduces water use and fugitive dust emissions, while still achieving the same 350-megawatt power objective. With this in mind, we support the BLM's identified preferred alternative to combine elements of Alternative B with Alternative C's additional acreage avoidance (p. 2-17). **17-1**

Notwithstanding these positive aspects of the proposed project, the EPA has remaining concerns about potential direct and indirect impacts to air quality, site hydrology, groundwater, sensitive species and cultural resources as well as cumulative impacts associated with the influx of the multitude of large-scale solar energy projects in the project's vicinity. Additional analysis may be required to better assess and quantify these impacts and design appropriate mitigation measures to minimize them. Please see the **17-2**

enclosed comments for a description of these and other concerns and our recommendations for the Final EIS. 17-2 cont.

Effective October 22, 2018, the EPA no longer includes ratings in our comment letters. Information about this change and the EPA's continued roles and responsibilities in the review of federal actions can be found on our website at: https://www.epa.gov/nepa/epa-review-process-under-section-309-clean-air-act.

The EPA appreciates the opportunity to review this Draft EIS and we are available to discuss our comments. When the Final EIS is released for public review, please send one copy to the address above (mail code: TIP-2). If you have any questions, please contact me at (415) 947-4167 or Tom Plenys, the lead reviewer, at 415-972-3238 or plenys.thomas@epa.gov.

Sincerely,

Jean Prijatel, Manager
Environmental Review Branch

Enclosures: EPA's Detailed Comments

Cc: Brad Poiriez, Mojave Desert Air Quality Management District
Lijin Sun, South Coast Air Quality Management District
Peter Sanzenbacher, US Fish and Wildlife Service
Magdalena Rodriguez, California Department of Fish and Wildlife
Suhas Chakraborty, Colorado River Basin Regional Water Quality Control Board
Michael Hornick, Federal Emergency Management Agency

EPA DETAILED COMMENTS ON THE CRIMSON SOLAR PROJECT, DRAFT ENVIRONMENTAL IMPACT STATEMENT/REPORT, CALIFORNIA – JANUARY 30, 2020

Air Quality

The proposed Crimson Solar Project is located in the Mojave Desert Air Basin which is currently out of attainment for California ozone and particulate matter standards (p. 3.2-1). Estimates show that project construction would exceed Mojave Desert Air Quality Management District's daily thresholds for PM_{10} and nitrogen oxides (NO_x) even after incorporating proposed mitigation measures (p. 3.2-8). The Draft EIS also indicates that on-site workers are at risk for contracting Valley Fever from fugitive dust and the potential for exposure would be substantial (p. 3.2-9).

Due to these potential air quality impacts, which may be intensified by the concurrent construction of other reasonably foreseeable solar projects within the Riverside East Solar Energy Zone (e.g. Desert Quartzite, Palen, Blythe, McCoy), the EPA supports incorporating stringent mitigation strategies to reduce vehicular and equipment emissions as well as fugitive dust. The EPA notes the BLM conducted research to confirm the availability of Tier 4 engines for future project construction (85% of off-road equipment) and supports the recommended usage of Tier 4 engines (mitigation measure AQ-2). We also commend the commitment to limit idling on site to two minutes for off-road equipment, further reducing emissions beyond California's five-minute maximum idling requirement. We recommend that these measures are included as conditions of certification in the Final EIS and Record of Decision. 17-3

The EPA also recommends minimizing disturbance to vegetation and soils to the greatest extent feasible, so that the need for measures to reduce fugitive dust emissions is minimized or eliminated. To help achieve this goal, we support Alternative 2's Design Element-1 to minimize site disturbance as well as Alternative 3's avoidance of an additional 300 acres. 17-4

Recommendations:

- Quantify, in the Final EIS, the estimated vehicular and fugitive dust emission reductions (or increase) expected from implementation of Design Elements 1, 2 and 3 to help demonstrate their potential effectiveness as mitigation strategies under Alternative 2. Update Tables 3.2-7 and 3.2-8 to include these estimates and any remaining exceedances of local, state and federal air quality standards, as applicable. Clarify, in the Final EIS, why the daily and annual construction emissions under Alternatives A and B are nearly identical. 17-5
- Provide a breakdown, in Section 3.2's emission estimate tables, for fugitive dust expected from on -site disturbance versus fugitive dust from usage of access roads leading to the project site. 17-6
- While we note that a Dust Control Plan under AQ-1 will be developed by the applicant in the future, consider requiring the installation of real-time PM_{10} dust monitoring equipment, like that installed at nearby solar facilities (e.g. Desert Sunlight), to monitor dust during both the construction and operational phases of the project. If a decision is made not to install such equipment, discuss, in the Final EIS, what type of field monitoring (e.g. mitigation measure for the Palen project) would be conducted and clarify how the BLM would ensure that performance standards are met. 17-7

Indirect and Cumulative Air Emissions

The EPA commends the BLM for incorporating quantified emissions estimates for reasonably foreseeable projects as part of the cumulative air quality analysis. We note that should concurrent construction occur for these projects, MDAQMD daily and annual thresholds would be far exceeded for NOx, PM and carbon monoxide. Additionally, indirect emissions associated with truck trips for the Crimson project would occur in Federal non-attainment areas for NOx and PM (Salton Sea Air Basin 17-8

and South Coast Air Basin) and result in daily exceedances of NOx in the South Coast Air Quality Management District (p. 3.2-8). 17-8 cont.

Recommendations:

- We continue to recommend that on-highway vehicles used for this project should meet, or exceed, the US EPA exhaust emissions standards for model year 2010 and newer heavy-duty on-highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, shuttle buses, etc.).[1] The Draft EIS indicates that the BLM does not know whether such trucks would be under direct control of the applicant or the construction contractor or if project-related hauling would be conducted by third party haulers. The EPA encourages the BLM to include in the Final EIS contractor selection criteria that would give preference to contractors using fleets meeting the above standards. 17-9
- We were pleased to note the addition of AQ-5 which would require notifying the MDAQMD on the expected timing of phases of construction to apprise the agency of overlapping project construction schedules. Consider adding, in the Final EIS, a commitment to consult with the SCAQMD, as well, prior to commencement of construction due to the expected indirect and cumulative air impacts to that air basin. 17-10
- Based on the evaluation of cumulative emissions, if additional mitigation measures or reductions in acreages of soil disturbance would be needed, or if the project would affect the ability of other foreseeable projects to be permitted, discuss this in the Final EIS. 17-11

Site Hydrology, Ephemeral Drainages and Site Preparation

The EPA commends the BLM and the applicant for avoiding the four main drainages that transect the project site. Additionally, we support the intent of Alternative 2's Design Elements-1 and 3 to reduce soil disturbance and preserve the site's natural hydrology. Specifically, we support: DE-1's proposed use of a track-mounted pile driver for solar array support structure installation which would limit soil disturbance to the areas under the two 12- to 18-inch wide tracks with a 4-foot space between the tracks; DE-1's approach to only trim using hand techniques vegetation greater than 18 inches (p. 2-14); and DE-3's proposal to mount inverters and transformers on steel skids and piers to allow for soils underneath to remain pervious. We also support BIO-19's requirement to ensure 200-foot buffers around microphyll woodlands which will help alleviate erosion and scour across the site. The EPA recommends that these measures be adopted under the preferred alternative and be included as conditions of certification in the Final EIS and ROD. 17-12

The EPA remains concerned that mowing and rolling or grubbing and grading could disrupt natural flows on site and result in impacts to site drainage, vegetation and ephemeral washes without commensurate benefit to soil stability. It is unclear from the Draft EIS the extent to which Design Element 1 and 3 could eliminate or reduce the need for mowing and rolling on the non-graded portions of the site. The Draft EIS estimates that the pile drivers would crush existing vegetation on up to roughly 50% of the site acreage (p. 2-15), but the document does not confirm whether the remaining 50% would be left undisturbed (p. 3.3-24). 17-13

Recommendations: We recommend clarifying information, as discussed below, be included in the Final EIS:

- Quantify the extent mowing and rolling can be avoided through implementation of DE-1 and DE-3. We recommend use of pile driving equipment and trimming to the greatest extent feasible to preserve site hydrology, minimize soil disruption, and limit fugitive dust. Discuss whether the

[1] http://www.epa.gov/otaq/standards/heavy-duty/hdci-exhaust.htm

extensive animal burrowing networks found under the surface on-site would impact the use of the pile driver or require mowing and rolling. 17-13 cont.

- Clarify how vegetation will be maintained at a 6-inch height underneath inverters and transformers during operations (p. 3.18-11). 17-14
- Describe whether the 200-ft buffers around desert dry wash woodlands would protect against a 100-year as well as a 500-year storm event. 17-15
- Discuss in further detail whether and where check dams, retention basins, fabrics, sediment basins or traps would be used to direct surface flow, control peak run off conditions, and how such features would affect upstream and downstream hydrological conditions. 17-16
- Discuss the efficacy of decompaction versus compaction of soils based on experiences at neighboring solar sites in the Riverside East area. Clarify the rationale for selecting one approach over the other for this project to minimize the disruption of natural flows, sedimentation, scour and fugitive dust, as needed. 17-17
- Include an update on consultation with California Department of Fish and Wildlife, and the extent to which the 90 acres of state waters could be further avoided under each Design Element. The EPA supports the 10-acre reduction of impacts to ephemeral washes under Alternative C. 17-18
- Confirm the use of at-grade or Arizona crossings wherever possible, to maximize avoidance and minimization of impacts to the washes. Discuss how "permanent low water crossings" described in Appendix U.5 would be constructed and maintained. 17-19
- Consider whether the 16 foot-wide "permanent" lanes described in Appendix U.5 could be reduced in width. Describe how they will be constructed and maintained. Update site disturbance calculations, as necessary. 17-20
- Describe how adaptive management would be used to manage erosion within the project area. Identify the criteria that would be used to evaluate the effectiveness of erosion and sedimentation control measures. 17-21

The Draft EIS indicates that the applicant has a 350-megawatt generator interconnection agreement for this project, however it does not mention whether a current power purchase agreement has been secured.

Recommendations: 17-22

- Discuss, in the Final EIS, the application of the BLM's Instructional Memorandum 2017-099 and clarify whether there are any implications if an applicant does or does not have a PPA at this stage of NEPA. Separately, clarify whether a project can commence full construction without PPAs in place for the full build-out of 350MW.
- Consider including a condition of certification in the Final EIS and ROD that requires that soil disturbance be contingent upon, and proportional to, an existing PPA. Prematurely grading portions of the site can result in excessive dust problems and unnecessary impacts to habitat, vegetation, soils and other resources in the event the project is not constructed in its entirety or further advances in technology occur requiring less acreage. 17-23

Flood Hazards

The project is in an 'Area of undetermined Flood Hazard' according to the Federal Emergency Management Agency (p. 3.18-2). Based on modeling conducted, a 100-year flood event would result in depths of 1.5 feet just outside the boundary of the project (Appendix U.5, Sheet C100). Planning based on the 100-year flood event may not be sufficient to both protect the project and avoid environmental impacts. FEMA, in its guidance document "Further Advice on Executive Order 11988 – Floodplain Management", states that "in light of increasing flood damages occurring outside of the designated 100-year floodplain, it may be appropriate to consider using a higher flood standard for proposed activities 17-24

which are funded, either directly or indirectly, by the federal government."[2] FEMA also identifies Power Generating Stations as possible critical facilities.[3] We note that on-site structures such as the O&M building, energy storage systems, and switchyard would be elevated 1-foot above the 100-year peak flood depth (p. 3.18-10).

Recommendations:

- Consider, in the Final EIS, the impacts of changing precipitation patterns on the project, as part of its analysis of impacts to water resources. Discuss the anticipated extent and depth of overland flows through the development areas given a 500-year flood event, as compared to a 100-year event. Identify design considerations needed to accommodate future anticipated effects (e.g. increased intensity and severity of storms) such as upsizing the stormwater management system.
- Confirm, in the Final EIS, whether all substations, switchyards, and buildings areas are outside of the 500-year floodplain, consistent with FEMA guidance and describe how essential equipment would be protected from flooding. Identify if battery systems and inverters will be elevated in areas with overland flows and if solar panels can be elevated above the 100-year flood depth.

17-24 cont.

Fencing

The Draft EIS indicates that a security fence will be collocated with a permanent desert tortoise exclusion fence (p. 2-6). In consultation with the US Fish and Wildlife Service, discuss, in the Final EIS, the option of removing desert tortoise exclusion fencing post-construction. It is our understanding that this may be preferable to desert tortoise translocation and is an approach under consideration at the BLM's Gemini solar project. Also, discuss the use of break-away fencing in strategic locations to allow for adequate flows during storm events, and incorporate such designs, as appropriate. If break-away fencing is not incorporated into the project design, discuss the implications of sediment accumulation along the fence boundary and explain how downstream flows would not be affected.

17-25

Groundwater and Water Supply

Construction of the proposed project would require 1,000 acre-feet of water over 24 months. Water would be sourced from an on-site groundwater well, off-site wells, or trucked in by an off-site water purveyor (p. 3.18-3). During operations, solar panel washing would require roughly 22-AF spread out over the 75 days each year washing would take place (p. 3.2-4 and 3.18-9).

If groundwater is used for project needs, the wells could draw from the Chuckwalla Valley Groundwater Basin and the Palo Verde Mesa Groundwater Basin. The Draft EIS provides an updated water budget, clarifies that neither basin is in overdraft and estimates that water use would utilize between 11 and 13% of the groundwater basin recharge during construction (p. 3.18-3). The EPA has concerns regarding the potential cumulative impacts to groundwater basins should multiple projects draw from the underlying basins and the potential hydrologic connectivity between the PVMGB and the Colorado River. For these reasons, we support a preferred alternative which combines reduced construction groundwater use from Alternatives B and C, 400 AF and 120 AF, respectively.

17-26

[2] Federal Emergency Management Agency, 1987, *Further Advice on Executive Order 11988 Floodplain Management.* Available: https://www.fema.gov/media-library/assets/documents/3430, https://www.gsa.gov/cdnstatic/Advice_EO11988.pdf

[3] FEMA Fact Sheet "Critical Facilities and Higher Standards". Available: https://www.fema.gov/media-library-data/1436818953164-4f8f6fc191d26a924f67911c5eaa6848/FPM_1_Page_CriticalFacilities.pdf

Recommendations:

- Quantify the combined water use, by year, from reasonably foreseeable projects projected to draw from the underlying groundwater basins (including the neighboring Desert Quartzite Solar Project). The Desert Quartzite EIS contains an example of such an analysis. **17-27**
- Clarify, in the Final EIS and in WAT-2, how an individual solar project's responsibility will be determined if multiple projects are drawing from the CVGB and PVMGB and groundwater resources in the basins become overextended to the point that curtailment is necessary. **17-28**
- Confirm, in the Final EIS, whether water would be used for dust suppression during operations at the solar facility or on access roads. Page 2-13 only indicates operational water use for restrooms and panel washing, however, the footnotes for Tables 3.2-4 and 5 indicate watering will take place twice per day during operations. If water will not be used for dust suppression during operations, update the Final EIS, as needed, and clarify the methods that will be used to eliminate fugitive dust. **17-29**
- Consider eliminating or reducing panel washing in the Final EIS. Our understanding is that some solar operators have found minimal efficiency losses by not washing the panels which are outweighed by the significant financial savings from not having to purchase water. **17-30**

Biological Resources

Consultation with the USFWS and CDFW is expected to play an important role in informing the BLM's decision about which alternative to approve and the commitments, terms, and conditions that must accompany that approval. We understand that the Biological Opinion for this project has not yet been finalized. While we defer to the BLM's coordination with the USFWS and CDFW on matters pertaining to species and habitat projection, we offer the following suggestions based on our experience with multiple solar projects and to help clarify potential impacts to biological resources. **17-31**

Recommendations:

- Provide, in the Final EIS, an update on the consultation process with the USFWS and CDFW. Summarize and append any relevant documents associated with the ESA Section 7 consultation process, including the Biological Assessment and Biological Opinion.
- Include any additional mitigation and monitoring measures that result from consultation to protect sensitive biological resources, including desert tortoise, golden eagles and the Mohave fringe-toed lizard. **17-32**
- Incorporate USFWS views on Design Element-2 that would introduce 1,000 wooden poles to avoid on-site trenching of cables, how such an approach may impact other biological resources including increased predation on avian species and how best to weigh these trade-offs. **17-33**
- Incorporate, in the Final EIS, results of discussions with the USFWS on whether adequate desert tortoise movement corridors between the project site and the Mule Mountains would exist under each alternative. We note that a 1.5-mile corridor width for desert tortoise habitat connectivity was prescribed for the Silver State solar project (between the project boundary and the Lucy Gray Mountains) after a much narrower corridor was initially proposed. Discuss, in the Final EIS, the basis for any difference in the necessary corridor width for the proposed project. **17-34**
- Provide, in the Final EIS, an update on whether suitable lands are available that would provide sufficient compensatory lands for impacts to desert dry wash woodlands, sand migration zones and sensitive species, including desert tortoise. **17-35**
- Include, in the Final EIS, the acres of disturbance for biocrust and desert pavement for each of the alternatives. **17-36**

Cultural Resources and Tribal Consultation

According to the Draft EIS, the project will result in unavoidable impacts to cultural resources and area tribes have raised concerns. We recommend including, in the Final EIS, any further updates on consultation between the BLM and the tribal governments contacted to date. Discuss issues that were raised, how those issues were addressed in relation to the proposed project, and how impacts to tribal or cultural resources will be avoided or mitigated, consistent with Executive Order 13175 *Consultation and Coordination with Indian Tribal Governments,* Section 106 of the National Historic Preservation Act, and Executive Order 13007 *Indian Sacred Sites.* 17-37

Battery Storage

The Draft EIS indicates that the project would include energy storage systems (ESSs), however a determination has not been made as to whether batteries or flywheel EESs will be utilized. We recommend including an analysis of the potential energy needs of the ESS (e.g. for HVAC), discuss to what extent such needs can be met by energy generated on site by the solar facility, and update air emission estimates for the project, as needed. 17-38

January 30, 2020

Submitted via email to blm_ca_crimsonsolar@blm.gov

Miriam Liberatore
Project Manager
Bureau of Land Management

Re: Comments on the Draft Environmental Impact Statement and Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan for Crimson Solar (DOI-BLM-CA-D060-2017-0029-EIS)

Dear Ms. Liberatore,

Please accept and fully consider these comments from The Wilderness Society and California Wilderness Coalition. Crimson Solar is a 350 MW photovoltaic solar energy project proposed in the eastern portion of the Chuckwalla Valley near the city of Blythe, California. The Draft Environmental Impact Statement and Draft Environmental Impact Report and Draft Land Use Plan Amendment (DEIS) identifies Alternative C, the Reduced Acreage Alternative, as the BLM-preferred alternative. Alternative C would allow construction of Crimson Solar on approximately 2,200 acres of BLM lands.

We submitted scoping comments (attached and incorporated by reference, see Attachment 2) that focused on requirements the BLM has under federal laws for inventory and management of lands with wilderness characteristics, including appropriate requirements for compensatory mitigation. Unfortunately, most of the Crimson Solar project area overlaps with the Mule Mountains BLM and Citizen lands with wilderness characteristics (LWC) unit, as shown in the attached map (Attachment 1). In general, energy development is not appropriate in LWC because of the sensitive and important resources and values found in LWC, and we recommend that BLM and energy developers avoid development in LWC. **18-1**

However, because Crimson Solar is within the boundary of the Riverside East DFA which was designated as part of the balanced DRECP, BLM may be able to approve the project in an acceptable way so long as mitigation for impacts to LWC is required (and other resource impacts are appropriately addressed). **18-2**

Unfortunately, the DEIS does not adequately address these issues. These comments on the DEIS recommend ways that BLM can address these issues appropriately in the Final EIS and Record of Decision.

Background on the importance of responsible renewable energy development:

The Wilderness Society and California Wilderness Coalition support responsible, well-planned and sited renewable energy development, including on appropriate public lands, as part of a strategy for addressing climate change, along with aggressive efforts to increase energy efficiency, build distributed generation such as rooftop solar, and reduce demand with demand- **18-3**

side management. Areas with important and sensitive resources and values are inappropriate for development, and disturbed and degraded lands, including both public and private lands, will best serve as areas for focusing renewable energy development away from areas of greatest importance or sensitivity for ecological and other resources and values.

We support the guided development approach established in BLM's Solar Programmatic Environmental Impact Statement (Western Solar Plan), including the focus on development in appropriate areas and with appropriate mitigation within Solar Energy Zones (SEZs). The Desert Renewable Energy Conservation Plan (DRECP) built on the Western Solar Plan by establishing a balanced plan for the California Desert, protecting areas of high conservation importance and facilitating development in Development Focus Areas (DFA). While the application for the proposed Crimson Solar Project (Crimson Solar) was submitted before the DRECP was finalized and thus is not required to comply with the DRECP, the project footprint is within the physical boundary of the Riverside East DFA. We understand that the developer has already significantly modified the project boundary to limit impacts to some important wildlife and habitat resources and values, which we appreciate.

18-3 cont.

All energy development should follow the mitigation hierarchy of avoiding, minimizing and mitigating impacts through compensatory, off-site mitigation. Implementation of the mitigation hierarchy is a fundamental requirement under the Federal Lands Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA) to protect the diverse resources of our public lands.

I. BLM must ensure the lands with wilderness characteristics inventory is up to date for the Crimson Solar project area

a. LWC inventory requirements

LWC are one of the resources of the public lands that must be inventoried under FLPMA. 43 U.S.C. § 1711(a); *see also Ore. Natural Desert Ass'n v. BLM*, 625 F.3d 1092, 1122 (9th Cir. 2008) (holding that "wilderness characteristics are among the 'resource and other values' of the public lands to be inventoried under § 1711"). Instruction Memorandum 2011-154 provides direction to the agency on implementing this requirement of FLPMA and promulgates agency policy for considering the wilderness characteristics on public lands as part of its multiple-use mandate in developing and revising land use plans *and when making subsequent project level decisions*, consistent with FLPMA. The IM directs BLM to "conduct and maintain inventories regarding the presence or absence of wilderness characteristics, and to consider identified LWC in land use plans and when analyzing projects under [NEPA]." Lands with wilderness characteristics are identified as roadlessness, naturalness, and having outstanding opportunities for solitude or outstanding opportunities for a primitive and unconfined type of recreation. See, BLM Manual 6320, pp. 5-9.

18-4

BLM's guidance for implementing this requirement of FLPMA is set forth in BLM Manual 6310. BLM must ensure that all LWC inventories are conducted compliant with this manual, including the documentation of the inventory findings. Manual 6310 reiterates that, "[r]egardless

of past inventory, the BLM must maintain and update as necessary, its inventory of wilderness resources on public lands." BLM Manual 6310 at .06(A).

In addition to FLPMA requiring the agency to maintain an inventory of lands with wilderness characteristics, an accurate and comprehensive inventory of lands with wilderness characteristics is necessary to inform management alternatives, impact analysis and decision-making under the National Environmental Policy Act (NEPA). NEPA, 42 U.S.C. § 4321 *et seq*., requires agencies to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 C.F.R. § 1502.15; *see also Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988) ("without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA").

As stated above, FLPMA requires BLM to inventory and consider LWC in the planning process, and IM 2011-154 and subsequent Manuals 6310 and 6320 contain the mandatory guidance for implementing that requirement. Although BLM has conducted wilderness inventories for decades, IM 2011-154 and Manual 6310 clarify when and how lands with wilderness inventories should occur while providing detailed instructions in both delineating wilderness inventory units and assessing the presence or absence of wilderness characteristics present therein. These updated policies were issued in 2011-2012 (IM 2011-154 was published in July 2011 with detailed instructions for inventory and management of LWC similar to Manuals 6310 and 6320, and Manuals 6310 and 6320 were released in March 2012).

We have identified errors in several of BLM's LWC inventory reports for the DRECP area that, when corrected, require acknowledgment of additional areas as lands with wilderness characteristics. 18-4

b. BLM is required to respond to wilderness inventory information submitted by the public.

We appreciate that BLM has inventoried many lands with wilderness characteristics (LWC) units through development of the DRECP, as required by FLPMA. We also appreciate that BLM found wilderness characteristics in the majority of the Crimson Solar project area, as documented in the agency's inventory reports for inventory units CDCA WIU 351 and 351A and shown in the attached map (Attachment 1). While many of the LWC inventories conducted as part of the DRECP planning effort occurred after the issuance of Manual 6310, many of the policies and procedures for identifying lands with wilderness characteristics that are described in that Manual are not adhered to in the subsequent inventories. These include factors such as polygon size for units adjacent to existing protected areas, drawing unit boundaries based on arbitrary features such as section lines, and disqualification of units based on the appearance of linear features in satellite imagery that are not actually disqualifying development or impacts on the ground. Therefore, BLM must ensure it has an accurate inventory for the project area by reviewing and considering the inventory information submitted by the California Wilderness Coalition.

The California Wilderness Coalition has submitted LWC inventory information for the project area that found additional lands with wilderness characteristics, which BLM has not yet

responded to as far as we are aware. As shown in the detailed LWC inventory report for the Mule Mountains unit completed by the California Wilderness Coalition (included in Attachment 2), additional areas outside the BLM inventory do in fact have wilderness characteristics – meeting the minimum size requirement, being primarily affected by the forces of nature, and providing outstanding opportunities for solitude and primitive recreation. The unit also has supplemental values, including hosting several species of plants and animals such as the endangered desert tortoise and a plethora of others, as well as extensive woodlands along its washes that are a haven for songbirds and other creatures. Primarily due to the abundance and importance of cultural resources in the area, BLM designated the adjacent lands to the south of the proposed project as California Desert National Conservation Lands and the Mule Mountains Area of Critical Environmental Concern.

The California Wilderness Coalition inventory information meets the minimum standards for review of new information set forth in BLM Manual 6310:

i. a map of sufficient detail to determine specific boundaries of the area in question;
ii. a detailed narrative that describes the wilderness characteristics of the area and documents how that information substantially differs from the information in the BLM inventory of the area's wilderness characteristics; and
iii. photographic documentation.

BLM Manual 6310 at .06(B)(1)(b). When BLM receives information that meets these minimum standards, the agency is directed to review the information "as soon as practicable," "make the findings available to the public," and "retain a record of the evaluation and the findings as evidence of the BLM's consideration." *Id.* At .06(B)(2). As stated above, BLM has not yet responded to the California Wilderness Coalition inventory information as far as we are aware. If BLM took these steps, the agency did not make California Wilderness Coalition aware that it had reviewed the citizen inventory or shared its findings. Our April 18, 2018 scoping comments that included this citizen inventory data was not considered or even acknowledged in the November 1, 2019 DEIS.

18-4

BLM must respond to public input on affected wilderness resources in order to meet the "hard look" requirement of NEPA. *See* 42 U.S.C. § 4332(2)(C). Numerous courts have applied the hard look mandate to overturn agency decisions that ignored substantive, relevant wilderness information provided by the public, including citizen-submitted wilderness inventories. *See, e.g.*, *Or. Natural Desert Ass'n v. Rasmussen,* 451 F. Supp. 2d 1202, 1211-13 (D. Ore. 2006) (holding that BLM violated the hard-look requirement of NEPA when it dismissed a citizen-submitted inventory "[w]ith a broad brush"); *SUWA v. Norton*, 457 Supp. 2d 1253, 1263-65 (D. Utah 2006) ("…Utah BLM ignored significant new information…information provided by the Southern Utah Wilderness Alliance…presented a textbook example of significant new information about the affected environment (the wilderness attributes and characteristics…)").

BLM must therefore reevaluate and update its LWC inventory for the Mule Mountains unit to take into account the additional lands that were found to have wilderness character in the California Wilderness Coalition's inventory of the unit. We expect that when BLM does so, the agency will update its findings to confirm that those additional portions of the unit do have wilderness character.

II. BLM must analyze impacts to lands with wilderness characteristics as part of the Crimson Solar EIS

NEPA is our "basic national charter for the protection of the environment." 40 C.F.R. § 1500.1 NEPA achieves its purpose through "action forcing procedures. . . requir[ing] that agencies take a hard look at environmental consequences." Id.; *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (citations omitted). This includes the consideration of best available information and data, as well as disclosure of any inconsistencies with federal policies and plans.

BLM has identified lands with wilderness characteristics in the project area, documented in the agency's inventory reports for inventory units CDCA WIU 351 and 351A. We appreciate that BLM acknowledged that Crimson Solar overlaps with these lands with wilderness characteristics in the DEIS and that development would have serious impacts to them:

> The lands in the vicinity of the Project site include lands that possess wilderness characteristics, as defined by the FLPMA of 1979. Approximately 2,108 acres of lands with wilderness characteristics are within the boundary proposed under Alternative A, as these lands are generally roadless, natural (open desert) available for solitude or recreation. However, the Project site's proximity within one mile of the I-10 transportation corridor and its location adjacent to existing high intensity industrial use (i.e., the Colorado River Substation) decrease those characteristics to some extent under existing conditions. Although the BLM does not manage the site for wilderness characteristics, the Project would include direct effects on wilderness characteristics such as road construction, the presence of energy infrastructure, and fencing; thus approval of the Project under Alternative A would effectively remove approximately 2,108 acres of lands with wilderness characteristics from public use for the 30-year duration of the solar facility ROW. DEIS Section 3.14.4.1, Page 270.

18-4 cont.

However, as stated above, there are additional lands in the project area that meet the criteria for lands with wilderness characteristics which the agency must also consider. All areas found to possess wilderness characteristics must be analyzed in the impact analysis in the FEIS.

NEPA requires federal agencies to consider "any adverse environmental effects which cannot be avoided." 42 U.S.C. § 4332(C)(ii). Effects that must be considered include "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." 40 C.F.R. § 1508.8.

Therefore, BLM must analyze the potential impacts to *all* lands with wilderness characteristics from Crimson Solar, as well as the beneficial impacts that avoiding lands with wilderness characteristics would have on other resources, including scenic viewsheds, cultural resources, wildlife habitat, recreation opportunities and nonmarket economic values.

III. BLM is required to consider ways to avoid, minimize and offset impacts to lands with wilderness characteristics

Unfortunately, most of the Crimson Solar project area overlaps with the Mule Mountains BLM and Citizen lands with wilderness characteristics (LWC) unit, as shown in the attached map (Attachment 1). In general, energy development is not appropriate in LWC because of the sensitive and important resources and values found in LWC, and we recommend that BLM and energy developers avoid development in LWC. However, because Crimson Solar is within the boundary of the Riverside East DFA which was designated as part of the balanced DRECP, BLM may be able to approve the project in an acceptable way so long as mitigation for impacts to LWC is required (and other resource impacts are appropriately addressed).

The DEIS fails to avoid, minimize and offset impacts to lands with wilderness characteristics Our comments submitted on April 18, 2019 that stated "BLM is required to consider ways to avoid, minimize, and offset impacts to lands with wilderness characteristics," were not adequately addressed in the DEIS. The DEIS simply stated that the lands with wilderness characteristics are not being managed for protection; though this is the case, it does not relieve BLM of the responsibility to analyze ways to avoid, minimize and offset impacts to lands with wilderness characteristics. DEIS at 3.14-2. 18-5

The BLM is subject to a broad range of authorities supporting mitigation measures to avoid and minimize impacts, and to offset unavoidable impacts. FLPMA requires the BLM to manage for multiple use and sustained yield, and to avoid unnecessary or undue degradation of resources and values. NEPA and associated Council on Environmental Quality (CEQ) regulations require the BLM to analyze potential impacts and consider ways to avoid, minimize and mitigate impacts – in accordance with the mitigation hierarchy. BLM has identified lands with wilderness characteristics in the project area which must be considered in the context of the mitigation hierarchy, in additional to the citizen LWC inventory previously submitted.

a. BLM should consider ways to avoid and minimize impacts to lands with wilderness characteristics

We understand that the project developer has already significantly adjusted the project footprint to limit impacts to sensitive ecological resources, which we appreciate. We recommend that the BLM and the project developer consider ways to avoid impacts to LWC as much as possible by further adjusting the project footprint to limit the overlap with LWC. As shown in Attachment 1, the land north and east of the current project boundary does not include LWC. In our previous scoping comments we recommend that the BLM consider expanding the project area into this region to allow constricting the project area in the areas where it overlaps with LWC. The DEIS did not address this suggestion as an alternative. The alternatives considered all stayed within the original footprint and did not consider nearby or adjacent locations. 18-6

We recognize that adjusting the project footprint to reduce impacts to one resource (LWC) may result in increased impacts to other resources and values (e.g. wildlife habitat). We also recognize that the Desert Quartzite solar project covers some of the land north and east of Crimson Solar, which affects project siting flexibility. Because we are not familiar with the other

resources and values present in the land north and east of the existing project application, we underscore that BLM should ensure that any project footprint adjustments balance reduction of LWC impacts with potential increases in impacts to other resources and values, and recommend that BLM ultimately select a project footprint that provides the best balance with regards to limiting impacts across important resources and values.

18-6 cont.

BLM should also require on-site minimization of impacts through use of Best Management Practices for construction, operation and maintenance. We appreciate the BLMs inclusion of best management practices for the project such as, the implementation of a stormwater pollution prevention plan, watering for dust control, construction of perimeter silt fences among others.

b. BLM and the project developer should commit to compensatory mitigation to offset any unavoidable impacts to lands with wilderness characteristics

While the DEIS includes some requirements for compensatory mitigation for impacts to biological resources, which we appreciate, BLM should also require the project developer to commit to compensatory mitigation for LWC impacts. As described in the DEIS, development of Crimson Solar will result in the loss of 2,103 acres of BLM LWC; as detailed in these comments, the project will also result in the loss of citizen LWC acreage.

FLPMA requires BLM to manage for multiple use and sustained yield, and to avoid unnecessary or undue degradation of resources and values.[1] NEPA and associated CEQ regulations require BLM to analyze potential impacts and consider ways to avoid, minimize and mitigate impacts – in accordance with the mitigation hierarchy.[2] The mitigation hierarchy aims to minimize environmental harms associated with agency actions. First and foremost, BLM must seek to avoid impacts; then minimize impacts (e.g., through project modifications, permit conditions, interim and final reclamation, etc.); and, generally, only if those approaches are insufficient to fully mitigate the impacts, will BLM seek to require compensation for some or all of the remaining impacts (i.e., residual effects). BLM must apply the mitigation hierarchy, including appropriate requirements for compensatory mitigation, to evaluation of LWC impacts from Crimson Solar.

18-7

Despite guidance from BLM in Instruction Memorandum 2019-18, there is a strong legal framework, beyond the NEPA and CEQ regulations cited above, supporting the authority of BLM to require mitigation and in some cases compelling it to do so.

i. Legal framework supporting the authority of DOI and BLM to require mitigation and in some cases compelling it to do so

FLPMA provides for the administration of the public lands by the Secretary of the Interior through the BLM.[3] BLM has broad authority and obligations under FLPMA to require

[1] *See* 43 C.F.R. §§ 1701, 1732(b).
[2] 40 C.F.R. §§ 1508.8, 1502.14, 1502.16.
[3] 43 U.S.C. § I 702(e).

mitigation[4] when exercising its authority to engage in land use planning, approve site-specific projects, or engage in other management activities. BLM's specific obligations for mitigation stem from the following:

Multiple use/sustained yield – The basis for BLM's broad authority is centered on the manner in which the FLPMA principles of multiple use and sustained yield require consideration of the interests of current and future generations, as well as the requirement that BLM avoid unnecessary or undue degradation of resources and values.[5] While these principles do not elevate certain uses over others, they do delegate discretion to the BLM to determine whether and how to develop or conserve resources, as well as whether to require enhancement of resources and values to offset impacts through compensatory mitigation.[6]

BLM as manager and proprietor – BLM's authority under FLPMA is broader than that exercised by purely land use or regulatory agencies such as EPA or zoning boards because BLM is both a regulator and as a proprietor. Accordingly, BLM can require mitigation through all the tools provided by FLPMA for managing the public lands, including issuing regulations, developing land use plans, implementing land use plans or in permitting decisions.[7]

Mitigation authority from obligation to prevent unnecessary or undue degradation – BLM's obligation under FLPMA to "take any action to prevent unnecessary or undue degradation of the lands" is an independent source of authority for requiring mitigation, in addition to BLM's broad authority to manage the public lands under FLPMA's multiple use and sustained yield principles.[8] Imposing mitigation measures can prevent unnecessary or undue degradation, and this is another source of BLM's authority to require mitigation.

18-7 cont.

Mitigation authority from Title V and Title III of FLPMA – Since Title V, regarding issuing rights-of-way, and Title III, regarding issuing easements and other permits, require BLM to determine appropriate measures to protect public interests in the affected lands, these can also be seen as empowering and even requiring BLM to require mitigation of impacts as part of granting these rights.[9]

Interaction with other laws – BLM also has authority to require mitigation under other laws. BLM has authority and/or obligations to ensure all operations protect natural resources and environmental quality, including by imposing mitigation requirements, under NEPA, the Endangered Species Act, the National Historic Preservation Act, the Paleontological Resources Preservation Act, and the National Landscape Conservation System Act.

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[4] 40 C.F.R. § 1508.20.

[5] *See* 43 C.F.R. §§ 1701, 1732(b).

[6] P. L. 94-579 (Oct. 21, 1976) (stating an intent "[t]o establishes public land policy; to establish guidelines for its administration; to provide for the management, protection, development, *and enhancement of the public lands;* and for other purposes." (emphasis added)).

[7] 43 U.S.C. §§ 1712(a), 1732(a), 1732(b)

[8] 43 U.S.C. § 1701(a).

[9] 43 U.S.C. §§ l 765(a)(i), (ii), l 765(b)(i), (iv), (vi).

Under these authorities and requirements, BLM and the project developer should commit to offsetting impacts to LWC through compensatory mitigation.

ii. Methods to Mitigate Unavoidable impacts on LWC

The Western Solar Plan established several measures for avoiding, minimizing and mitigating impacts to LWC which BLM and the project developer should use to address potential impacts from Crimson Solar.

- Acquiring wilderness inholdings from willing sellers
- Acquiring private lands from willing sellers adjacent to designated wilderness
- Acquiring private lands from willing sellers within proposed wilderness or Wilderness Study Areas
- Acquiring other lands containing important wilderness or related values, such as opportunities for solitude or a primitive, unconfined (type of) recreation
- Restoring wilderness, for example, modifying routes or other structures that detract from wilderness character
- Contributing mitigation monies to a "wilderness mitigation bank," if one exists, to fund activities such as the ones described above
- Enacting management to protect lands with wilderness characteristics in the same field office or region that are not currently being managed to protect wilderness character. Areas that are to be managed to protect wilderness characteristics under ROD Solar PEIS 55 October 2012 this approach must be of sufficient size to be manageable, which could also include areas adjacent to current WSAs or adjacent to areas currently being managed to protect wilderness characteristics

18-7 cont.

Western Solar Plan Record of Decision pp. 54-56.[10].

iii. Examples of compensatory mitigation for LWC impacts from energy development

Two examples of compensatory mitigation for impacts to LWC from other energy development on public lands illustrate how compensatory mitigation can address impacts to LWC. For the McCoy Solar Project, the construction of Unit 2 would cause the loss of 1,089 acres of LWC. To address these impacts, the final decision documents required that the Notice to Proceed for Unit 2 will provide that, before any ground disturbance occurs in the area inventoried to have wilderness characteristics, McCoy Solar shall pay BLM to fund work to mitigate these impacts and that the work shall be completed no later than 18 months from the commencement of construction for the relevant portion of Unit 2. McCoy Solar Project Protest Resolution Agreement pp. 2-3. The mitigation shall be focused in the Big Maria Mountains Wilderness Area, Palen-McCoy Wilderness Area or other designated wilderness areas in general proximity to the project, as identified with BLM. Mitigation will be implemented by:

- Removal and restoration of approximately 15 miles of unauthorized vehicle routes;

[10] *See* http://blmsolar.anl.gov/documents/docs/peis/Solar_PEIS_ROD.pdf

- Conversion of approximately 3 miles of vehicle route into a hiking trail; and
- Installation of vehicle barriers and signing along publicly accessible portions of the wilderness boundaries.

The final decision documents further required that McCoy Solar shall make a not-to-exceed payment of $251,000 to fund the mitigation. Such payment shall be made prior to any ground disturbance in the area inventoried to have wilderness characteristics and will complete McCoy Solar's obligations regarding this mitigation measure.

In a second example, BLM's Record of Decision for the TransWest Express Transmission Project required that unavoidable impacts to LWC be offset by either 1) purchasing and protectively managing private land inholdings from willing sellers in existing Wilderness Areas and Wilderness Study Areas (WSAs); or 2) completing restoration projects inside existing Wilderness Areas and WSAs. TransWest Express ROD pp. F-20-F-21.

We look forward to working with BLM and the project developer to offset any unavoidable impacts to LWC through compensatory mitigation.

18-7 cont.

IV. Addressing impacts to Native American Tribes and cultural resources

We understand that the entire Colorado River region, including the proposed project site, has religious and cultural importance for local Native American Tribes, such as the Colorado River Indian Tribes, Fort Mojave Indian Tribe, Chemehuevi Indian Tribe, Quechan Indian Tribe, and Cocopah Indian Tribe. As detailed in the FEIS, Crimson Solar would impact cultural and historic resources with tribal values. For example, the DEIS states that the agency preferred alternative would cause "Reduced impacts on cultural and historic resources with tribal values; could still result in a disproportionately high and adverse impact on Native Americans but reduced compared to Alternative A." DEIS at Table ES-1, p. ES-9. Alternative C could impact 37 prehistoric, 48 historic-period, and 10 multicomponent sites, as well as 97 isolates (all prehistoric). DEIS at 3.5-13. The DEIS states that "The BLM is in the process of reviewing the testing results, inventory data, and NRHP eligibility recommendations made by Applied Earthworks, and has not made formal determinations of eligibility or findings of effect under Section 106 of the NHPA." DEIS at 3.5-8. The DEIS also states that the Crimson Solar "project has the potential to result in a cumulatively significant cultural resources impact due to the damage or destruction of historical and archaeological resources unique to the region." DEIS at 3.5-19.

18-8

It is crucially important that BLM ensures that it is fully complying with relevant laws, regulations and policies that require consultation with the affected Native American Tribes, and that BLM requires that development appropriately avoids, minimizes, and offsets impacts to cultural resources and areas of importance for Native American Tribes.

Conclusion

We appreciate the opportunity to comment and look forward to working with you.

Sincerely,

Alex Daue
Assistant Director, Energy & Climate
The Wilderness Society – BLM Action Center
alex_daue@tws.org

Linda Castro
Assistant Policy Director
California Wilderness Coalition (CalWild)
lcastro@calwild.org

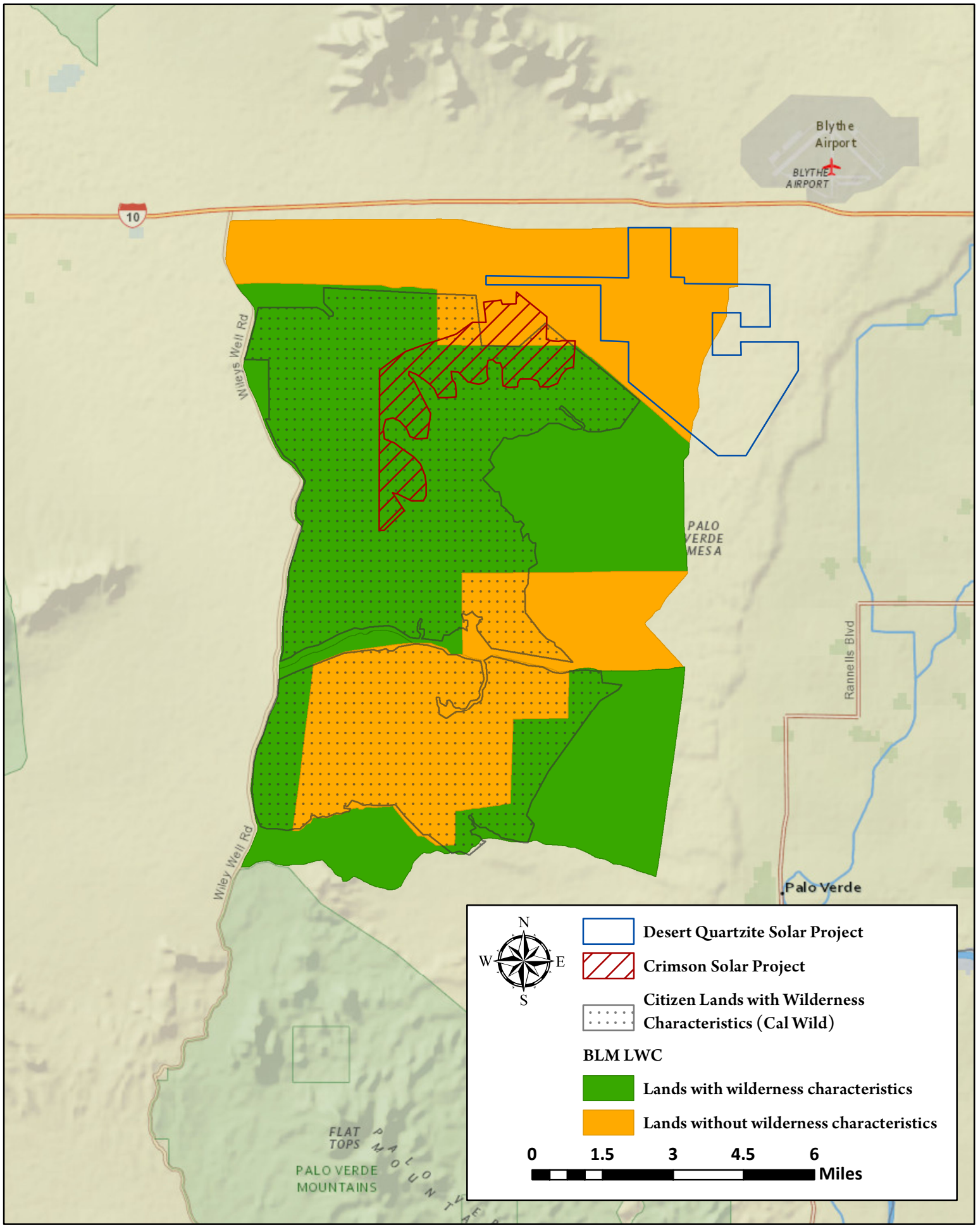
Attachments:

- Attachment 1: Map of overlap of Crimson Solar with Mule Mountains LWC unit
- Attachment 2: Crimson Solar scoping comments from The Wilderness Society and California Wilderness Coalition (4/18/18)

Attachment 1

Lands with Wilderness Characteristics overlap with California Desert Projects

Letter 18



Attachment 2

April 18, 2018

Submitted via email to (blm_ca_crimsonsolar@blm.gov)

Miriam Liberatore
Project Manager
Bureau of Land Management

Re: Crimson Solar Scoping Comments

Dear Ms. Liberatore,

The Wilderness Society and California Wilderness Coalition support responsible, well-planned and sited renewable energy development, including on appropriate public lands, as part of a strategy for addressing climate change, along with aggressive efforts to increase energy efficiency, build distributed generation such as rooftop solar, and reduce demand with demand-side management. Areas with important and sensitive resources and values are inappropriate for development, and disturbed and degraded lands, including both public and private lands, will best serve as areas for focusing renewable energy development away from areas of greatest importance or sensitivity for ecological and other resources and values.

We support the guided development approach established in BLM's Solar Programmatic Environmental Impact Statement (Western Solar Plan), including the focus on development in appropriate areas and with appropriate mitigation within Solar Energy Zones (SEZs). The Desert Renewable Energy Conservation Plan (DRECP) built on the Western Solar Plan by establishing a balanced plan for the California Desert, protecting areas of high conservation importance and facilitating development in Development Focus Areas (DFA). While the application for the proposed Crimson Solar Project (Crimson Solar) was submitted before the DRECP was finalized and thus is not required to comply with the DRECP, the project footprint is within the physical boundary of the Riverside East DFA. We understand that the developer has already significantly modified the project boundary to limit impacts to some important wildlife and habitat resources and values, which we appreciate.

All energy development should follow the mitigation hierarchy of avoiding, minimizing and mitigating impacts through compensatory, off-site mitigation. Implementation of the mitigation hierarchy is a fundamental requirement under the Federal Lands Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA) to protect the diverse resources of our public lands.

These scoping comments focus on requirements the BLM has under federal laws for inventory and management of lands with wilderness characteristics; we also recommend that BLM develop an alternative that analyzes Crimson Solar under the DRECP. Other groups are submitting comments that address potential impacts wildlife and other resources and values, and we strongly recommend that the BLM address those important issues as well.

Unfortunately, most of the Crimson Solar project area overlaps with the Mule Mountains BLM and Citizen lands with wilderness characteristics (LWC) unit, as shown in the attached map (Attachment 1). In general, energy development is not appropriate in LWC because of the sensitive and important resources and values found in LWC, and we recommend that BLM and energy developers avoid development in LWC.

However, because Crimson Solar is within the boundary of the Riverside East DFA which was designated as part of the balanced DRECP, BLM may be able to approve the project in an acceptable way so long as mitigation for impacts to LWC is required (and other resource impacts are appropriately addressed).

I. BLM must ensure the lands with wilderness characteristics inventory is up to date for the Crimson Solar project area and analyze potential impacts

a. LWC inventory requirements

FLPMA requires BLM to inventory and consider lands with wilderness characteristics during the land use planning process. 43 U.S.C. § 1711(a); s*ee also Ore. Natural Desert Ass'n v. BLM,* 625 F.3d 1092, 1122 (9th Cir. 2008) (holding that "wilderness characteristics are among the values the FLPMA specifically assigns to the BLM to manage in land use plans"). Lands with wilderness characteristics are identified as roadlessness, naturalness, and having outstanding opportunities for solitude or outstanding opportunities for a primitive and unconfined type of recreation. See, BLM Manual 6320, pp. 5-9.

BLM's guidance for implementing this requirement of FLPMA is currently set forth in BLM Manual 6310. BLM must ensure that all LWC inventories are conducted compliant with this manual, including the documentation of the inventory findings. Manual 6310 reiterates that, "[r]egardless of past inventory, the BLM must maintain and update as necessary, its inventory of wilderness resources on public lands." BLM Manual 6310 at .06(A).

In addition to FLPMA requiring the agency to maintain an inventory of lands with wilderness characteristics, an accurate and comprehensive inventory of lands with wilderness characteristics is necessary to inform management alternatives, impact analysis and decision-making under the National Environmental Policy Act (NEPA). NEPA, 42 U.S.C. § 4321 *et seq*., requires agencies to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 C.F.R. § 1502.15; *see also Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988) ("without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA").

b. BLM is required to respond to wilderness inventory information submitted by the public.

We appreciate that BLM has inventoried many lands with wilderness characteristics (LWC) units through development of the DRECP, as required by FLPMA. We also appreciate that BLM found wilderness characteristics in the majority of the Crimson Solar project area, as documented in the agency's inventory reports for inventory units CDCA WIU 351 and 351A and shown in the attached map (Attachment 1). However, the California Wilderness Coalition has submitted LWC inventory information for the project area that found additional lands with wilderness characteristics, which BLM has not yet responded to as far as we're aware. As shown in the detailed LWC inventory report for the Mule Mountains unit completed by the California Wilderness Coalition (Attachment 2), additional areas outside the BLM inventory do in fact have wilderness characteristics – meeting the minimum size requirement, being primarily affected by the forces of nature, and providing outstanding opportunities for solitude and primitive recreation. The unit also has supplemental values, including hosting several species of plants and animals such as the endangered desert tortoise and a plethora of others. The area also has an abundance of cultural resources and extensive woodlands along its washes that are a haven for songbirds and other creatures.

The California Wilderness Coalition inventory information meets the minimum standards for review of new information set forth in BLM Manual 6310:

i. a map of sufficient detail to determine specific boundaries of the area in question;

ii. a detailed narrative that describes the wilderness characteristics of the area and documents how that information substantially differs from the information in the BLM inventory of the area's wilderness characteristics; and

iii. photographic documentation.

BLM Manual 6310 at .06(B)(1)(b). When BLM receives information that meets these minimum standards, the agency is directed to review the information "as soon as practicable," "make the findings available to the public," and "retain a record of the evaluation and the findings as evidence of the BLM's consideration." *Id.* at .06(B)(2). If BLM took these steps, the agency did not make California Wilderness Coalition aware that it had reviewed the citizen inventory or shared its findings.

BLM must respond to public input on affected wilderness resources in order to meet the "hard look" requirement of NEPA. *See* 42 U.S.C. § 4332(2)(C). Numerous courts have applied the hard look mandate to overturn agency decisions that ignored substantive, relevant wilderness information provided by the public, including citizen-submitted wilderness inventories. *See, e.g.*, *Or. Natural Desert Ass'n v. Rasmussen,* 451 F. Supp. 2d 1202, 1211-13 (D. Ore. 2006) (holding that BLM violated the hard-look requirement of NEPA when it dismissed a citizen-submitted inventory "[w]ith a broad brush"); *SUWA v. Norton*, 457 Supp. 2d 1253, 1263-65 (D. Utah 2006) ("…Utah BLM ignored significant new information…information provided by the Southern Utah Wilderness Alliance…presented a textbook example of significant new information about the affected environment (the wilderness attributes and characteristics…)"). BLM must therefore update its LWC inventory for the Mule Mountains unit to take into account the California Wilderness Coalition's inventory of the unit; we expect that when BLM does so, the agency will update its findings to confirm that those additional portions of the unit do have wilderness character.

We have identified errors in several of BLM's LWC inventory reports for the DRECP area that, when corrected, require acknowledgment of additional areas as lands with wilderness characteristics. As stated above, FLPMA requires BLM to inventory and consider LWC in the planning process, and IM 2011-154 and subsequent Manuals 6310 and 6320 contain the mandatory guidance for implementing that requirement. Although BLM has conducted wilderness inventories for decades, IM 2011-154 and Manual 6310 clarify when and how lands with wilderness inventories should occur while providing detailed instructions in both delineating wilderness inventory units and assessing the presence or absence of wilderness characteristics present therein. These updated policies were issued in 2011-2012 (IM 2011-154 was published in July 2011 with detailed instructions for inventory and management of LWC similar to Manuals 6310 and 6320, and Manuals 6310 and 6320 were released in March 2012).

While many of the LWC inventories conducted as part of the DRECP planning effort occurred after the issuance of Manual 6310, many of the policies and procedures for identifying lands with wilderness characteristics that are described in that Manual are not adhered to in the subsequent inventories. These include factors such as polygon size for units adjacent to existing protected areas, drawing unit boundaries based on arbitrary features such as section lines, and disqualification of units based on the appearance of linear features in satellite imagery that are not actually disqualifying development or impacts on the ground. Therefore, BLM must ensure it has an accurate inventory for the project area by reviewing and considering the inventory information submitted by the California Wilderness Coalition.

c. BLM must analyze impacts to lands with wilderness characteristics as part of the Crimson Solar EIS

NEPA is our "basic national charter for the protection of the environment." 40 C.F.R. § 1500.1 NEPA achieves its purpose through "action forcing procedures. . . requir[ing] that agencies take a hard look at environmental consequences." Id.; Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989) (citations omitted). This includes the consideration of best available information and data, as well as disclosure of any inconsistencies with federal policies and plans.

BLM has identified lands with wilderness characteristics in the project area, documented in the agency's inventory reports for inventory units CDCA WIU 351 and 351A. As stated above, we believe there are additional lands in the project area that meet the criteria for lands with wilderness characteristics which the agency must also consider. All areas found to possess wilderness characteristics must be analyzed in the impact analysis in the EIS.

NEPA requires federal agencies to consider "any adverse environmental effects which cannot be avoided." 42 U.S.C. § 4332(C)(ii). Effects that must be considered include "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." 40 C.F.R. § 1508.8.

Therefore, BLM must analyze the potential impacts to lands with wilderness characteristics from Crimson Solar, as well as the beneficial impacts that avoiding lands with wilderness characteristics would have on other resources, including scenic viewsheds, cultural resources, wildlife habitat, recreation opportunities and nonmarket economic values.

II. BLM is required to consider ways to avoid, minimize and offset impacts to lands with wilderness characteristics

The BLM is subject to a broad range of authorities supporting mitigation measures to avoid and minimize impacts, and to offset unavoidable impacts. FLPMA requires the BLM to manage for multiple use and sustained yield, and to avoid unnecessary or undue degradation of resources and values.[1] NEPA and associated Council on Environmental Quality (CEQ) regulations require the BLM to analyze potential impacts and consider ways to avoid, minimize and mitigate impacts – in accordance with the mitigation hierarchy.[2] BLM has identified lands with wilderness characteristics in the project area which must be considered in the context of the mitigation hierarchy.

a. BLM should consider ways to avoid and minimize impacts to lands with wilderness characteristics

We understand that the project developer has already significantly adjusted the project footprint to limit impacts to sensitive ecological resources, which we appreciate. We recommend that the BLM and the project developer consider ways to avoid impacts to LWC as much as possible by further adjusting the project footprint to limit the overlap with LWC. As shown in Attachment 1, the land north and east of the current project boundary does not include LWC, and we recommend that the BLM consider expanding the project area into this region to allow constricting the project area in the areas where it overlaps with LWC.

[1] *See* 43 C.F.R. §§ 1701, 1732(b).
[2] 40 C.F.R. §§ 1508.8, 1502.14, 1502.16.

We recognize that adjusting the project footprint to reduce impacts to one resource (LWC) may result in increased impacts to other resources and values (e.g. wildlife habitat). We also recognize that the Desert Quartzite solar project covers some of the land north and east of Crimson Solar, which affects project siting flexibility. Because we are not familiar with the other resources and values present in the land north and east of the existing project application, we underscore that BLM should ensure that any project footprint adjustments balance reduction of LWC impacts with potential increases in impacts to other resources and values, and recommend that BLM ultimately select a project footprint that provides the best balance with regards to limiting impacts across important resources and values.

BLM should also require on-site minimization of impacts through use of Best Management Practices for construction, operation and maintenance.

b. BLM and the project developer should commit to compensatory mitigation to offset any unavoidable impacts to lands with wilderness characteristics

Given that the agency's current inventory of lands with wilderness characteristics encompasses much of the project area, it seems inevitable that there will be unavoidable impacts to LWC from Crimson Solar. Therefore, BLM and the project developer should commit to offsetting them through compensatory mitigation. The Western Solar Plan established several measures for avoiding, minimizing and mitigating impacts to LWC which BLM and the project developer should use to address potential impacts from Crimson Solar. Western Solar Plan Record of Decision pp. 54-56; excerpt included as Attachment 3.

Two examples of compensatory mitigation for impacts to LWC from other energy development on public lands illustrate how compensatory mitigation can address impacts to LWC. For the McCoy Solar Project, the construction of Unit 2 would cause the loss of 1,089 acres of LWC. To address these impacts, the final decision documents required that the Notice to Proceed for Unit 2 will provide that, before any ground disturbance occurs in the area inventoried to have wilderness characteristics, McCoy Solar shall pay BLM to fund work to mitigate these impacts and that the work shall be completed no later than 18 months from the commencement of construction for the relevant portion of Unit 2. McCoy Solar Project Protest Resolution Agreement pp. 2-3. The mitigation shall be focused in the Big Maria Mountains Wilderness Area, Palen-McCoy Wilderness Area or other designated wilderness areas in general proximity to the project, as identified with BLM. Mitigation will be implemented by:

- Removal and restoration of approximately 15 miles of unauthorized vehicle routes;
- Conversion of approximately 3 miles of vehicle route into a hiking trail; and
- Installation of vehicle barriers and signing along publicly accessible portions of the wilderness boundaries.

The final decision documents further required that McCoy Solar shall make a not-to-exceed payment of $251,000 to fund the mitigation. Such payment shall be made prior to any ground disturbance in the area inventoried to have wilderness characteristics and will complete McCoy Solar's obligations regarding this mitigation measure.

In a second example, BLM's Record of Decision for the TransWest Express Transmission Project required that unavoidable impacts to LWC be offset by either 1) purchasing and protectively managing private land inholdings from willing sellers in existing Wilderness Areas and Wilderness Study Areas (WSAs); or 2) completing restoration projects inside existing Wilderness Areas and WSAs. TransWest Express ROD pp. F-20-F-21.

We look forward to working with BLM and the project developer to offset any unavoidable impacts to LWC through compensatory mitigation.

III. BLM should develop an alternative that analyzes Crimson Solar under the DRECP

Although Crimson Solar is a "grandfathered" project and thus is not required to comply with the DRECP decisions and policies, we strongly recommend that BLM develop an alternative that analyzes Crimson Solar under the DRECP and compares the impacts to resources and values to the impacts under other action alternatives.

The DRECP was designed to facilitate responsible development in DFAs by focusing agency resources on permitting projects in DFAs, tiering to the DRECP NEPA analysis to increase permitting efficiency, and ensuring that potential impacts are addressed through use of Conservation Management Actions and the mitigation hierarchy.

By developing an alternative that analyzes Crimson Solar under the DRECP, BLM can determine whether permitting the project using the DRECP decisions and policies would provide improved outcomes for both resource impacts and efficient project permitting. If BLM finds that permitting Crimson Solar under the DRECP decisions and policies would on balance lead to improved outcomes, we recommend that BLM select this alternative as the agency-preferred alternative.

We appreciate the opportunity to comment and look forward to working with you.

Sincerely,

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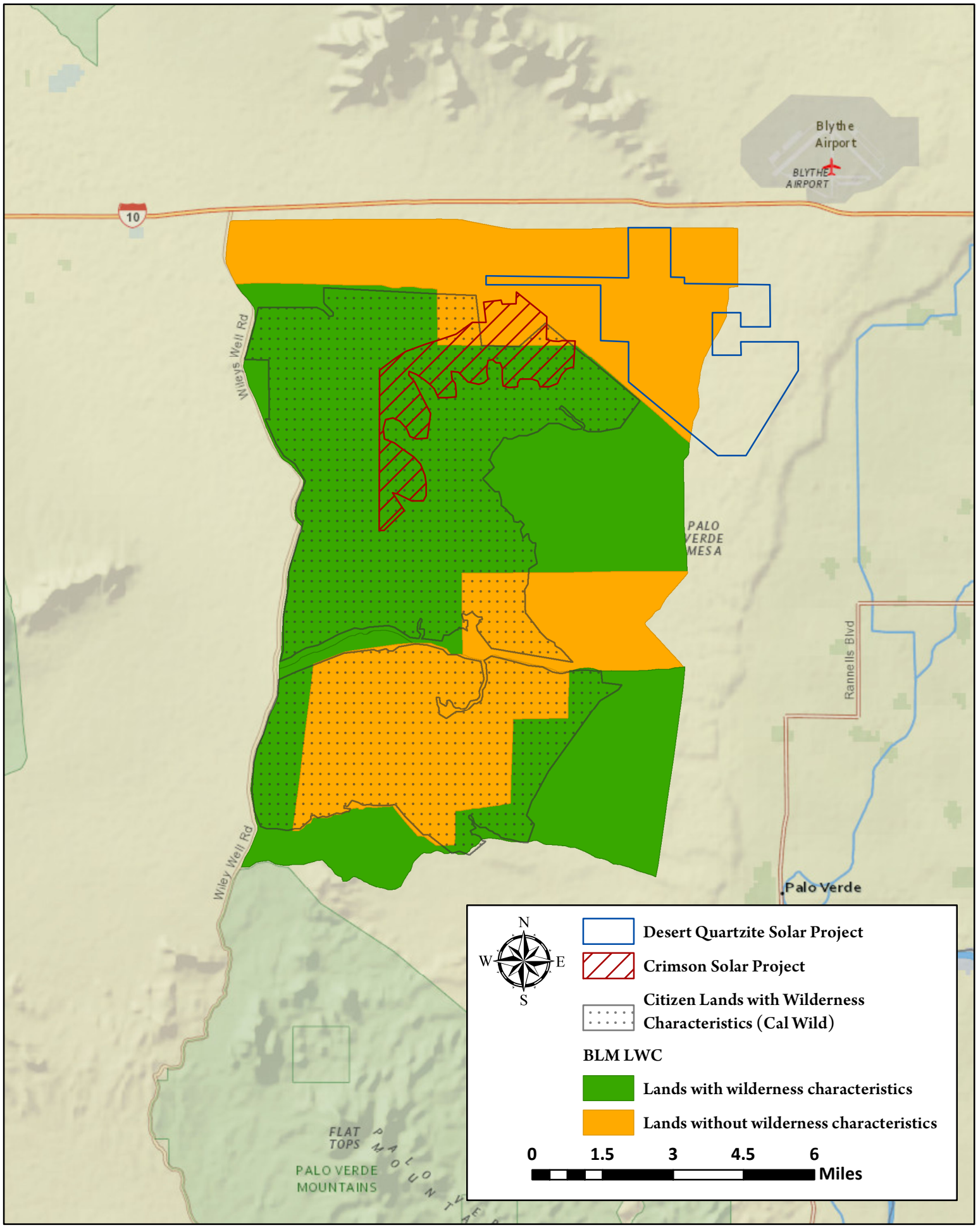
Attachments:

- Attachment 1: Map of overlap of Crimson Solar with Mule Mountains LWC unit
- Attachment 2: California Wilderness Coalition inventory report for Mule Mountains LWC unit
- Attachment 3: Excerpt from Western Solar Plan ROD – mitigation for impacts to LWC

Attachment 1

Lands with Wilderness Characteristics overlap with California Desert Projects

Letter 18



Attachment 2

CALIFORNIA WILDERNESS COALITION
The Voice for Wild California

Lands with Wilderness Characteristics Recommendations for the Desert Renewable Energy Conservation Plan Process: Mule Mountains Lands with Wilderness Characteristics



Mule Mountains LWC, Photo by Cameron McLeod

Lands with Wilderness Characteristics Recommendations for the Desert Renewable Energy Conservation Plan Process: Mule Mountains Lands with Wilderness Characteristics

Prepared by Ryan Henson, California Wilderness Coalition, 3313 Nathan Drive, Anderson, CA 96007, 530-365-1455, rhenson@calwild.org

The purpose of this report is to document that the area in question meets the criteria laid out in BLM Manual's 6310 and 6320 as Lands with Wilderness Characteristics (LWC). This information should be considered new information, as the BLM has yet to conduct and/or publish a full field inventory of this unit to document the wilderness characteristics of the unit and/or to assess whether boundary adjustments need to be made to better meet the intent of the BLM's LWC policies.

Methodology

The Mule Mountains LWC was initially selected by Ryan Henson for on-the-ground surveys after being deemed sufficiently primitive through the careful review of high-resolution aerial photographs provided by the Terrain Navigator Pro and Google Earth pro subscription services. The area was then surveyed in the field to determine if it met the definition of LWC using the criteria detailed in BLM Manual 6310 and 6320. The survey was conducted by Cameron McLeod. After a careful field review using BLM protocols, it was determined that the area met the definition of LWC.

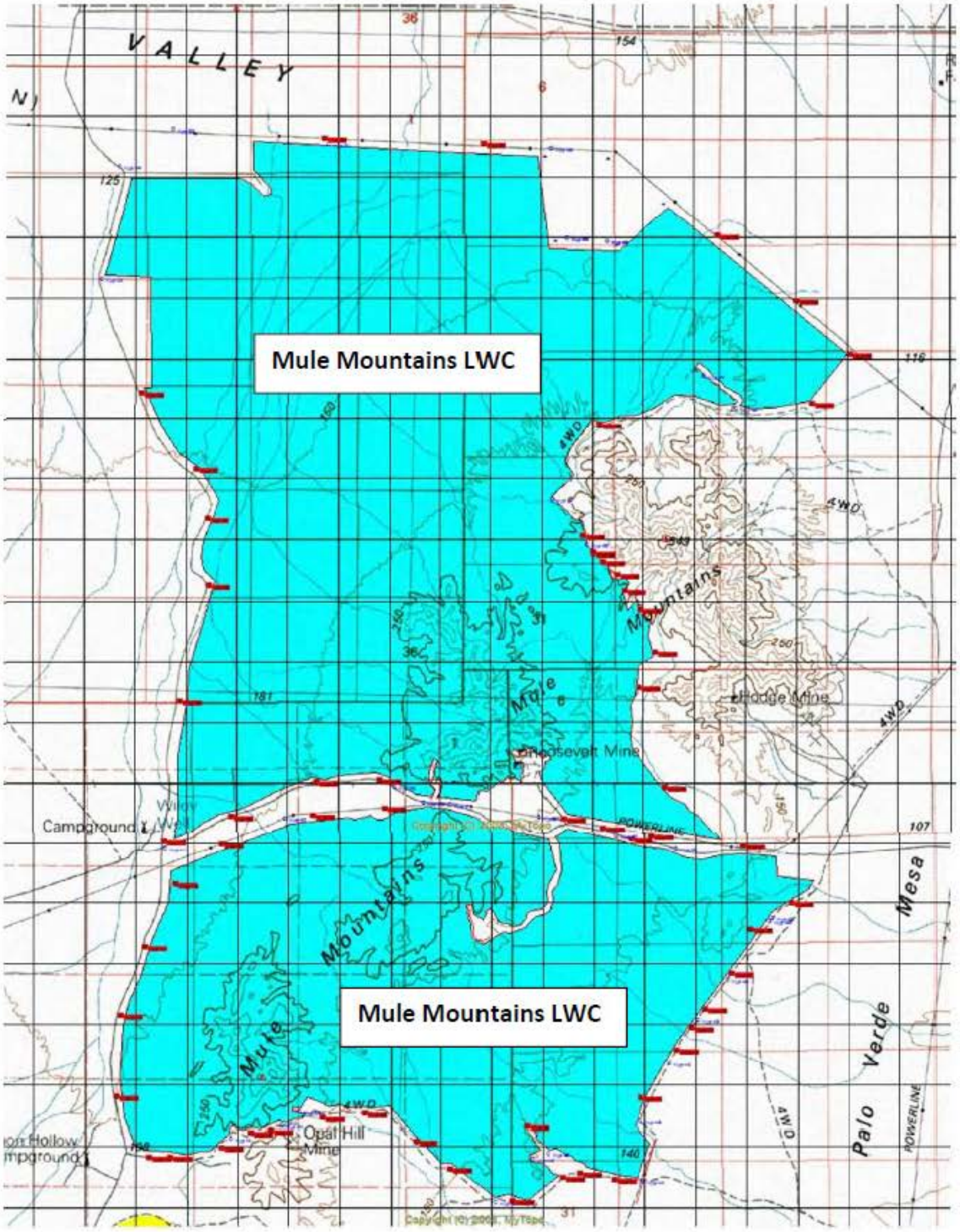
Overview and boundary delineation

As is shown on the maps included in this narrative, the Mule Mountains LWC is:

- Approximately 24,577 acres in size in two units (Northern unit at 16,186 acres and the Southern unit at 8,391 acres);
- Less than a mile north of the Palo Verde Mountains Wilderness and 2.4 miles east of LWC lands adjacent to the Little Chuckwalla Mountains Wilderness that the BLM found eligible;
- Located in Riverside County; and
- Managed by the Palm Springs-South Coast Field Office.

The Northern LWC unit is bounded on the north and east by unnamed four-wheel drive routes and mining scars, while the western boundary is defined by Wiley Well Road. The southern boundary is defined by a powerline and the Bradshaw Trail. Mining damage has been cherrystemmed.

The boundaries of the Southern LWC unit are defined on the north by a powerline and the Bradshaw Trail, on the east and south by unnamed four-wheel drive routes, and on the west by Wiley Well Road. As with the northern unit, mining damage has been cherrystemmed.



The units are dominated by the Mule Mountains and the bajadas and washes flowing down from it. Elevations in the units range from 885 to 613 feet, with an average of 718 feet.[1]

According to the California Department of Fish and Wildlife's (CDFW) Natural Diversity Database, the following species of interest have been either been recorded or have suitable habitat in the area: Abrams' spurge, American badger (a state species of special concern), bitter hymenoxys, black-tailed gnatcatcher, burrowing owl (a state species of special concern), California leaf-nosed bat, California mellitid bee, cave myotis, Colorado River cotton rat (a state species of special concern), Colorado Valley woodrat, Couch's spadefoot (a state species of special concern), Crissal thrasher (a state species of special concern), desert beardtongue, desert tortoise (a state and federal threatened species), dwarf germander, Emory's crucifixion-thorn, Gila woodpecker (a state endangered species), gravel milk-vetch, Harwood's eriastrum, Harwood's milk-vetch, hoary bat, Le Conte's thrasher (a state species of special concern), loggerhead shrike (a state species of special concern), merlin (a state watch list species), Mojave fringe-toed lizard (a state species of special concern), pallid bat (a state species of special concern), pallid San Diego pocket mouse (a state species of special concern), pink fairy-duster, prairie falcon, Riverside cuckoo wasp, roughstalk witch grass, Townsend's big-eared bat (a state candidate threatened and species of special concern) and vermilion flycatcher (a state species of special concern).[2] Both units are also designated critical habitat for the desert tortoise, and they contain eight distinct plant communities.[3] The area also has extensive woodlands along its washes. These woodland thickets are a haven for songbirds and other creatures. There is also some evidence that bighorn sheep use the mountains.[4] A remarkable 44% of the LWC is composed of north-facing slopes.[5] In the Northern Hemisphere, north-facing slopes tend to be cooler and to hold moisture longer than other aspects. This is especially important in arid landscapes.

Description of wilderness characteristics

I. Mule Mountains LWC meets the minimum size criteria for roadless lands

The Mule Mountains LWC is composed of two single, contiguous blocks of roadless BLM land. BLM's Manual 6310 states that a "way" maintained solely by the passage of vehicles does not constitute a "road" for purposes of inventorying wilderness characteristics. Further, the fact that a "way" is used on a regular and continuous basis does not make it a road. A vehicle route that was constructed by mechanical means but is no longer being maintained by mechanical methods

[1] GIS analysis completed by Kurt Menke of Bird's Eye View GIS on 12/10/13.
[2] http://imaps.dfg.ca.gov/viewers/cnddb_quickviewer/app.asp
[3] Menke, 12/10/13.
[4] Clinton W Epps, "Population Processes in a Changing Climate: Extinction, Dispersal, and Metapopulation, Dynamics of Desert Bighorn Sheep in California" (Ph.D. diss., University of California, Berkeley, 2004), page 19.
[5] Ibid.

is not a road. A road, by comparison, is a vehicle route that has "been improved and maintained by mechanical means to ensure relatively regular and continuous use" (Manual 6310, p. 11). All significant disturbances have been cherrystemmed out of the boundaries. As the California Wilderness Coalition's (CWC) survey, described below, reveals, the Mule Mountains LWC only contains ways. All photo points referred to in the narrative below can be seen in the attached photo points sheet for the Mule Mountains.

II. Mule Mountains LWC is primarily affected by the forces of nature

The Mule Mountains LWC has been affected primarily by the forces of nature and all human impacts within the unit are substantially unnoticeable. We offer several photographs, below, of the natural landscape. There are several old vehicle tracks and other minor disturbances that are recovering to a natural state through erosion, revegetation and a lack of subsequent disturbance.

III. Mule Mountains LWC provides outstanding opportunities for solitude and primitive recreation

The most subjective and frequently abused definition of "wilderness" involves the question of whether or not a roadless area provides "outstanding opportunities for solitude or a primitive and unconfined type of recreation." America—including its public lands—is a nation dominated by roads. Roadless areas of sufficient size to meet the definition of wilderness therefore provide the best, most outstanding opportunities still available in this country for both solitude and primitive recreation.

In our view, nothing destroys the wilderness character of an area like development within that area. Mere noises or views of development elsewhere, outside of a wild area's boundaries, while admittedly unpleasant to some, has no bearing whatsoever on the wild character of a stretch of land. Congress has proven this point many times over by designating countless wilderness areas near highways, mines and other major external developments. In the 1990 Statewide Wilderness Study Report the BLM placed an inordinate emphasis on the sights and sounds originating from roads, mines, railroads, military bases, etc.–all outside of the WSAs in question of course--that allegedly affected the WSAs' wilderness character. The actual undeveloped character of the land itself within a WSA's boundaries, and the capability of undeveloped land to provide for solitude and recreation, appeared to be an afterthought for the agency.

BLM Manual 6310 provides clear direction on the inappropriateness of considering outside impacts, such as external sights and sounds, to discount the wilderness characteristics inside an area. Unless developments are "pervasive and omnipresent," BLM is obligated to ignore outside impacts when assessing wilderness characteristics for an area. The BLM training module for 6310 provides good context – it shows a photograph of a designated wilderness in southern

California and notes that it was taken from an interstate highway, several feet away from the boundary. The point BLM is making is that to disqualify an area based on adjacent/outside impacts, "it has to be more pervasive and omnipresent than that." (See slide 8 of BLM LWC training module IIE). A wilderness area in every state includes boundaries that are adjacent to well-used roads–evidence to reinforce why the BLM may not employ a higher bar in LWC inventories.

Relevant 6310 policy excerpts include:

> 6310.2(B)(iii)–Naturalness -
> Outside Human Impacts. Human impacts outside the area will not normally be considered in assessing naturalness of an area. If, however, a major outside impact exists, it should be noted in the overall inventory area description and evaluated for its direct effects on the area.
>
> 6310.2(c)(i)(1)–Solitude -
> Only consider the impacts of sights and sounds from outside the inventory area on the opportunity for solitude if these impacts are pervasive and omnipresent.
>
> 6310.3(b)–Boundary Delineation -
> When establishing the boundary, do not create a setback or buffer from the physical edge of the imprint of man.
>
> 6310.2(e)–Boundary Delineation -
> An area can have wilderness characteristics even though every acre within the area may not meet all the criteria. The boundary should be determined largely on the basis of wilderness inventory roads and naturalness rather than being constricted on the basis of opportunity for solitude or primitive and unconfined recreation. The location of boundaries should primarily be set to exclude the unnatural portions of the area.

Since roads are the norm in America today, roadlessness is a rare treasure indeed. While the average road density for non-wilderness BLM lands in the CDCA is 3.09 miles of roads and ways per square-mile, the roadless area, by definition, has a road density of 0 miles within its boundaries.[3] By contrast, the average road density for BLM non-wilderness lands within 5 miles of the LWC is 0.72 miles of roads and ways per square-mile.[4] This roadlessness is obviously good for solitude, primitive recreation and species of plants and wildlife that are sensitive to human disturbance. Visitors to the LWC have over 38.4 square-miles of roadless

[3] Ibid.
[4] Ibid.

land to explore. Such a landscape can provide outstanding opportunities for solitude for any reasonable person who seeks it out.

IV. Mule Mountains LWC has supplemental values that would enhance the wilderness experience and should be recognized and protected

As is stated above, the Mule Mountains LWC hosts several species of plants and animals, including the desert tortoise and a plethora of others. The area also has extensive woodlands along its washes. These woodland thickets are a haven for songbirds and other creatures.

These supplemental natural values should be preserved along with the rest of the area's wilderness characteristics.

Summary Conclusion

The forgoing narrative provides new information, including maps and photographs, documenting the fact that the Mule Mountains LWC unit meet wilderness criteria. Our on-the-ground inventory of the roadless lands shows that the area clearly possesses wilderness characteristics. For example, it is:

- Composed of federal public land;
- Near two other large roadless areas;
- Primarily affected by the forces of nature;
- Capable of providing solitude and opportunities for primitive recreation; and
- In possession of supplemental values, including recreational, scientific, cultural and wildlife values.

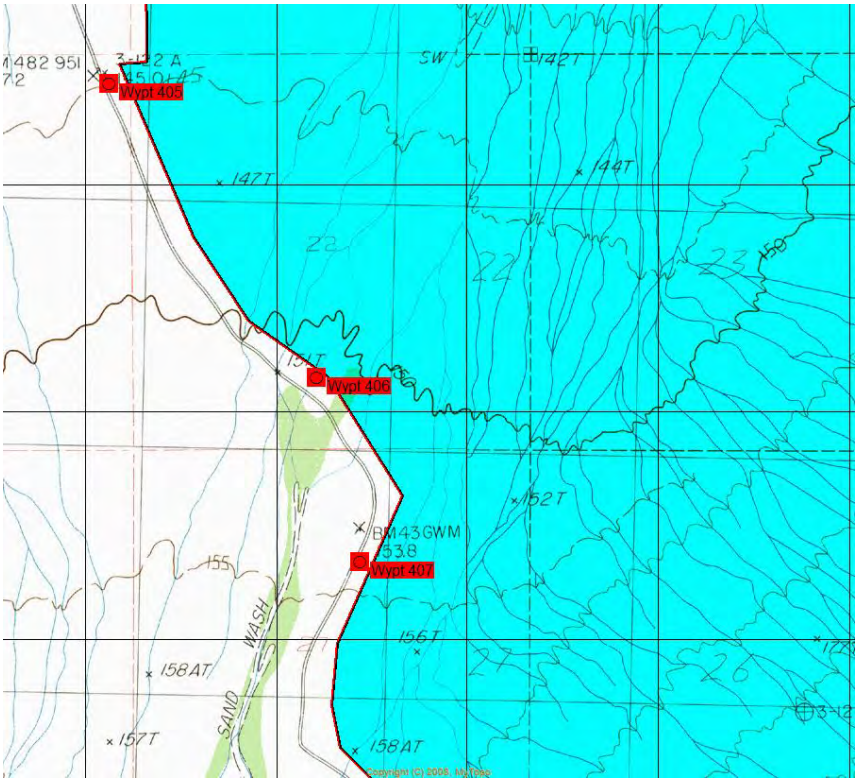
Taken in the context of the larger California desert landscape that is experiencing pressure from energy development, urbanization, off-road vehicle use and a host of other activities, protecting the LWC will not only provide people with the opportunity to experience this naturally beautiful landscape on its own terms, but it would also help to maintain the ecological integrity of the entire region. The staff and supporters of the CWC believe that the area deserves to be recognized as having WC by the BLM, and we hope that the agency will manage it in such a way as to protect and restore those values.

Photo points

Note: Duplicative photographs or those of extremely poor quality are not shown

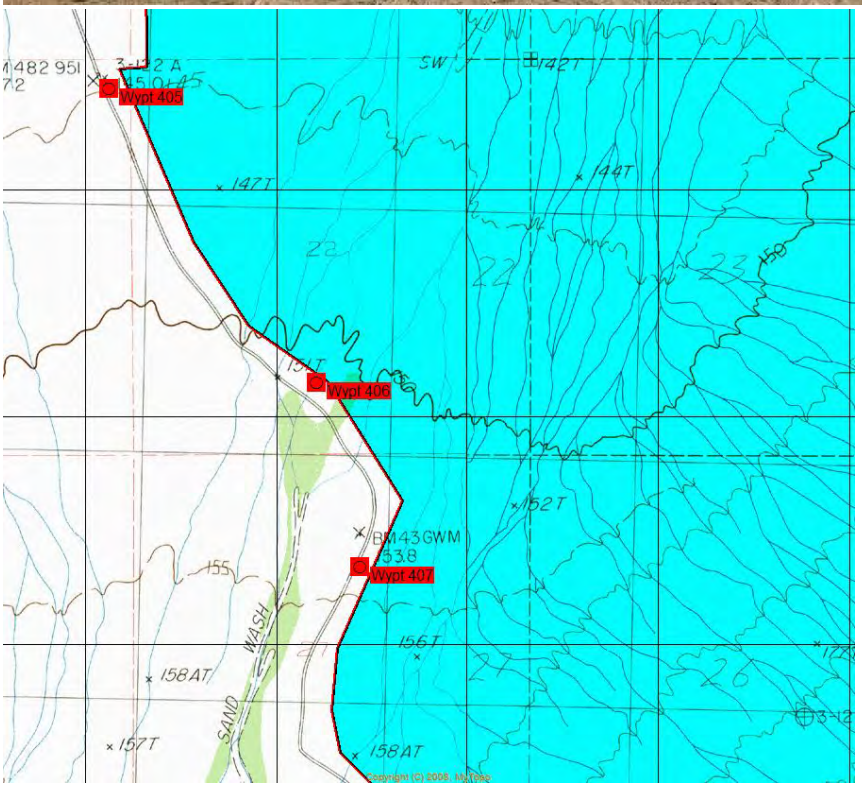
Waypoint 405: A view east into the LWC unit. Note that it is primarily affected by the forces of nature.





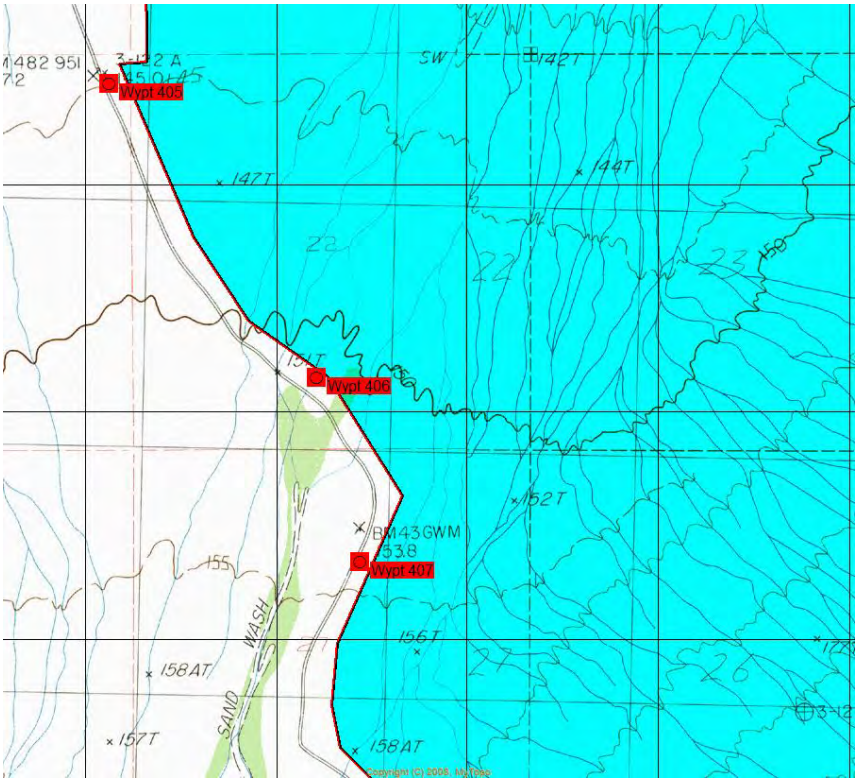
Waypoint 406: A view east into the LWC unit. Note that it is primarily affected by the forces of nature. Portions of the area contain extensive woodlands.





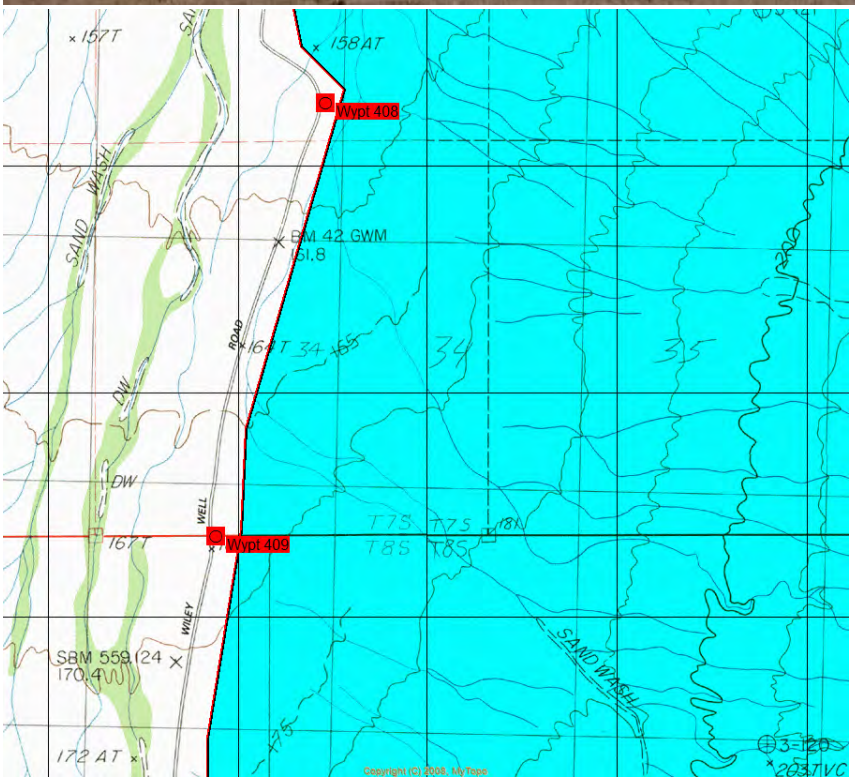
Waypoint 407: A view east into the LWC unit. Note that it is primarily affected by the forces of nature. Old vehicle tracks parallel the existing road. These illegal tracks do not meet the definition of a “road.”





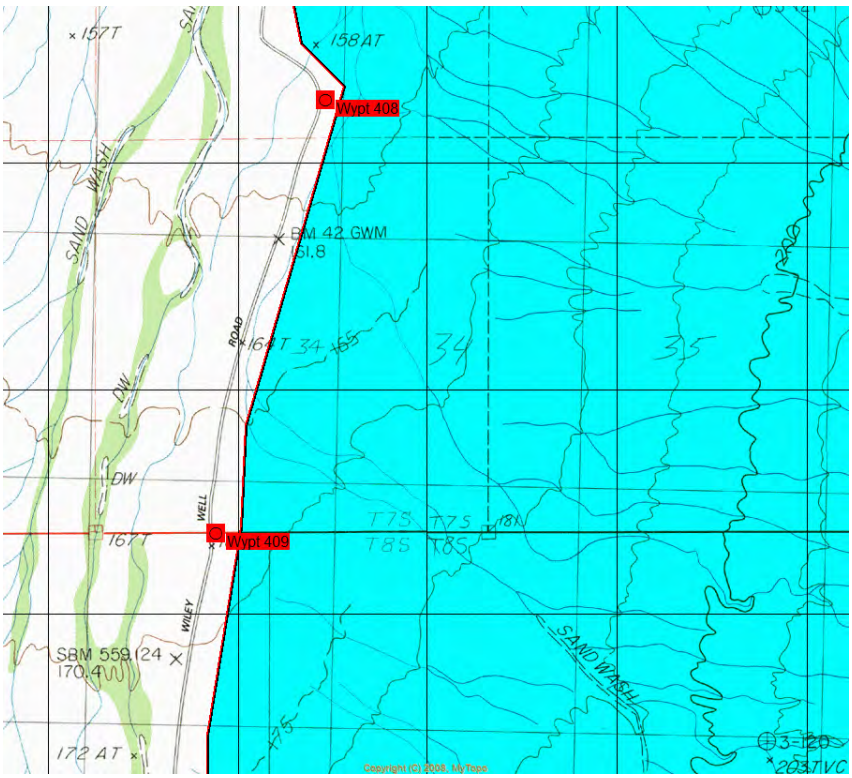
Waypoint 408: A view east into the LWC unit. Note that it is primarily affected by the forces of nature.





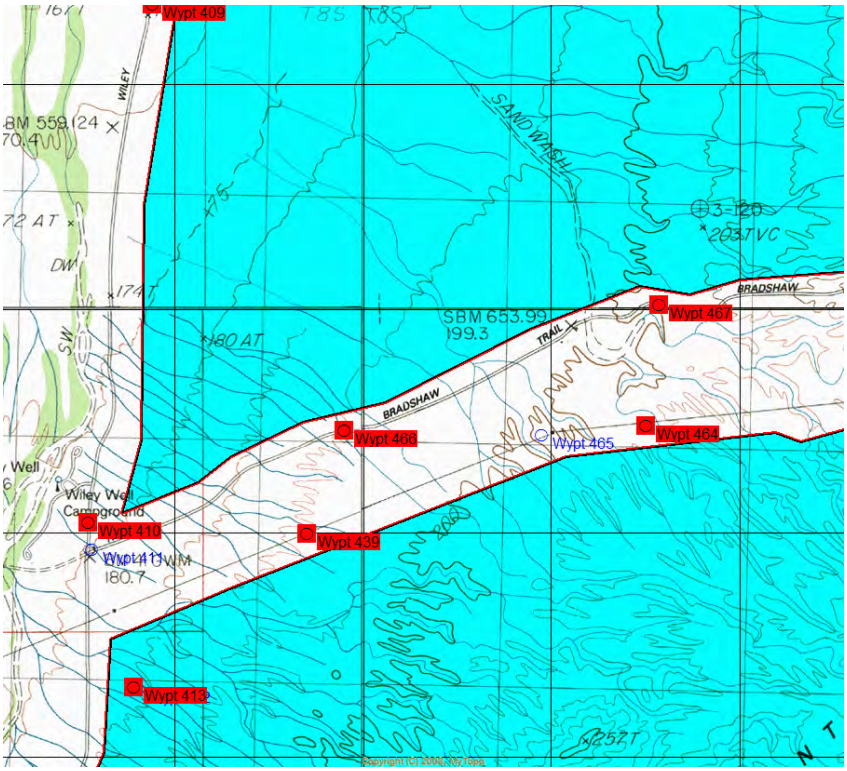
Waypoint 409: A view east into the LWC unit. Note that it is primarily affected by the forces of nature, except for some bicycle tracks.





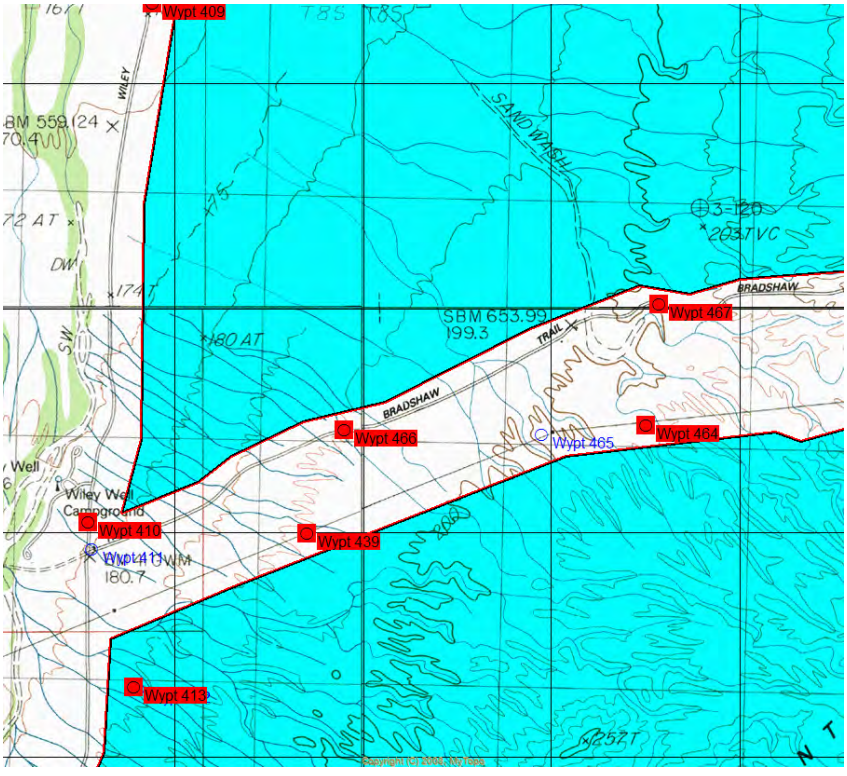
Waypoint 410: A view northeast into the LWC unit. Note that it is primarily affected by the forces of nature.





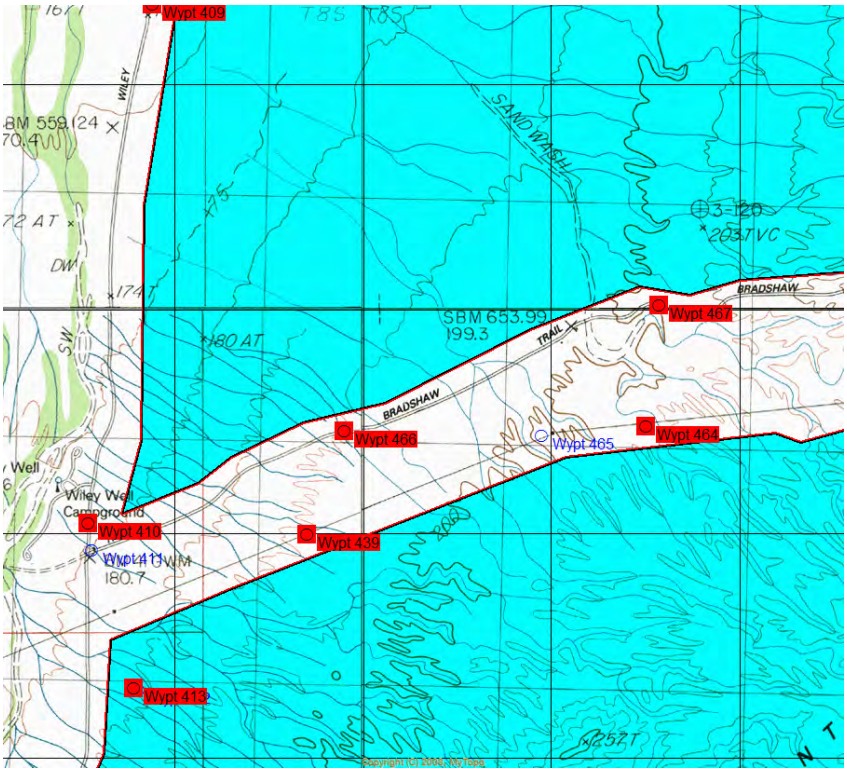
Waypoint 466: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





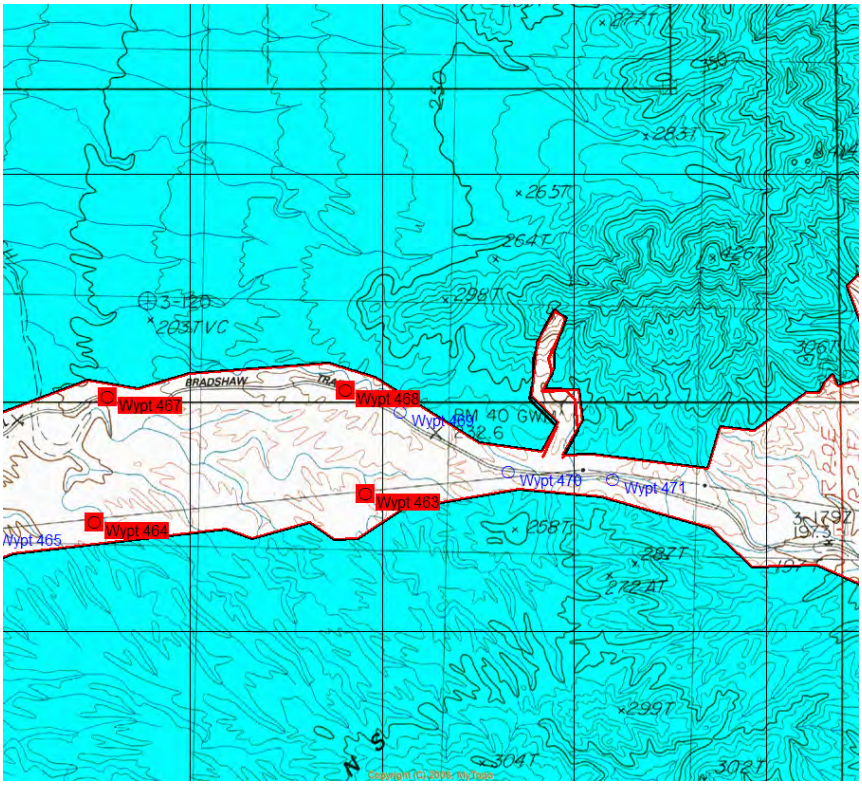
Waypoint 467: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





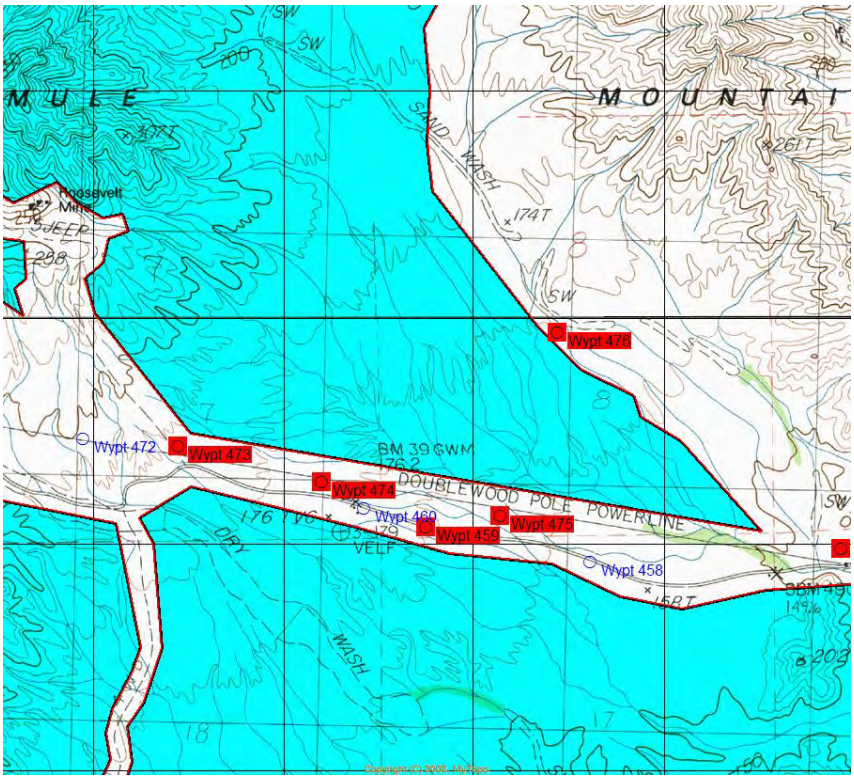
Waypoint 468: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





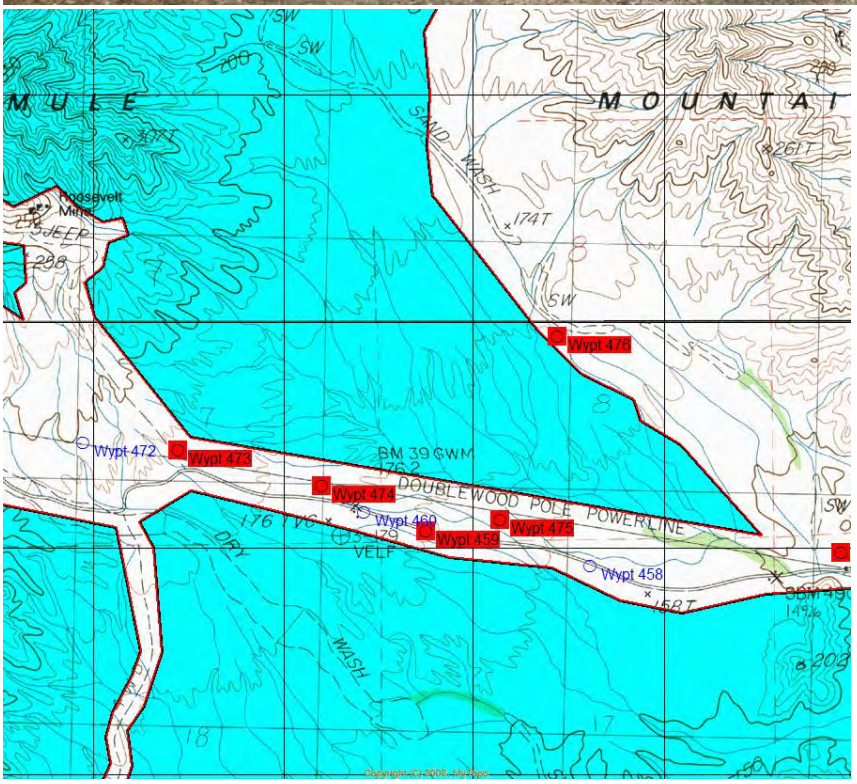
Waypoint 473: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





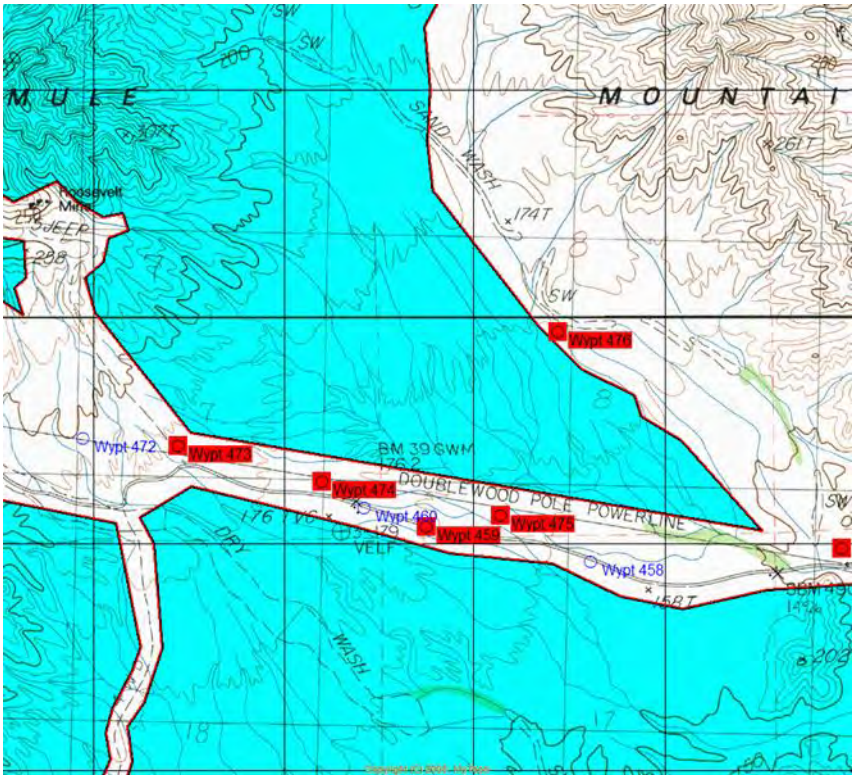
Waypoint 474: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





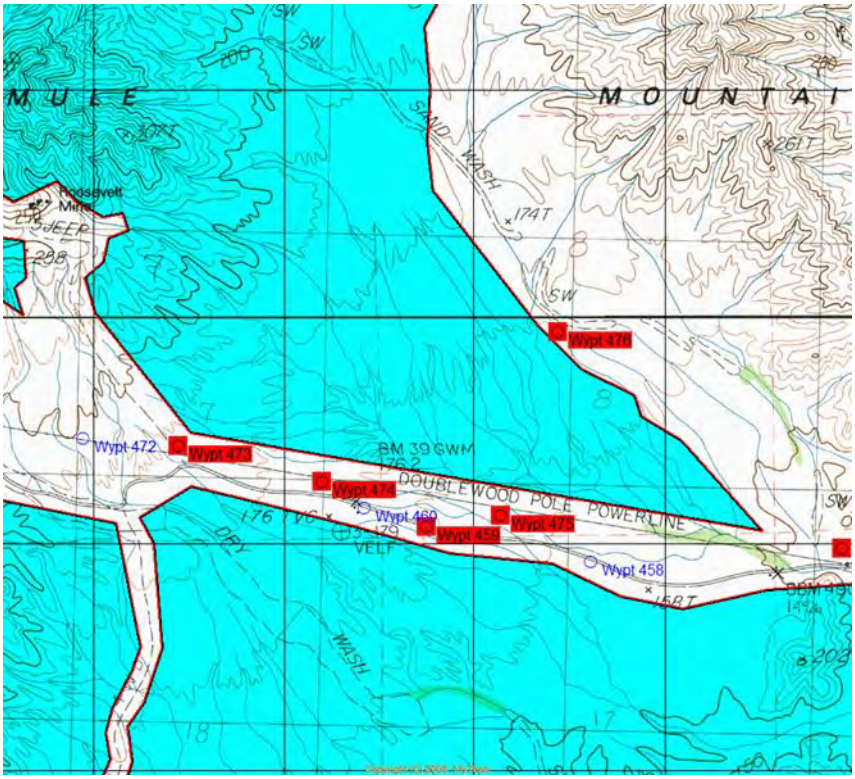
Waypoint 475: A view northwest into the LWC unit. Note that it is primarily affected by the forces of nature.





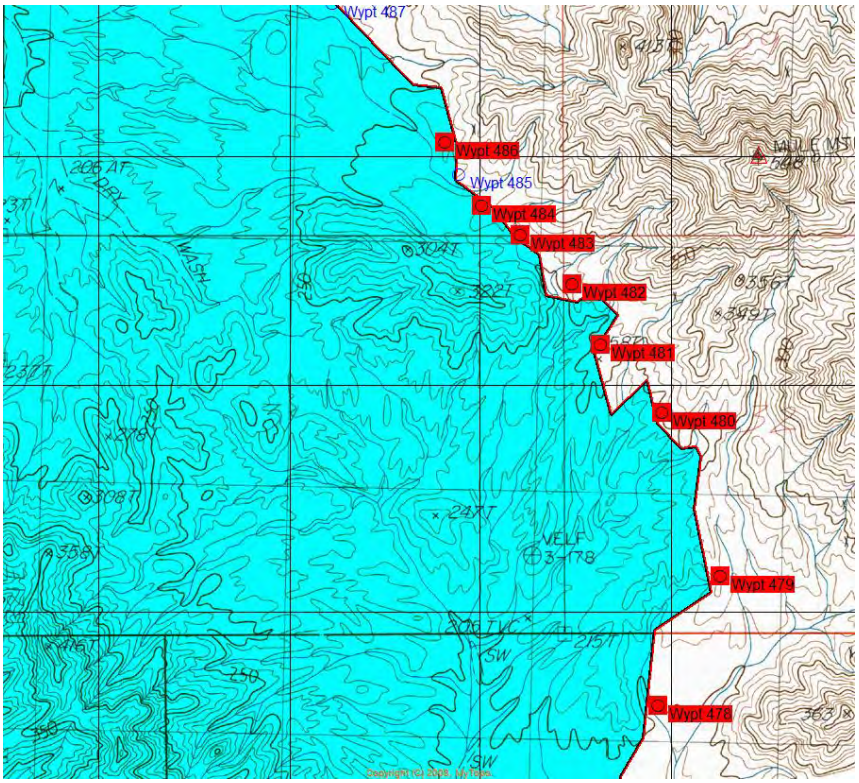
Waypoint 476: A view northwest into the LWC unit. Note that it is primarily affected by the forces of nature.





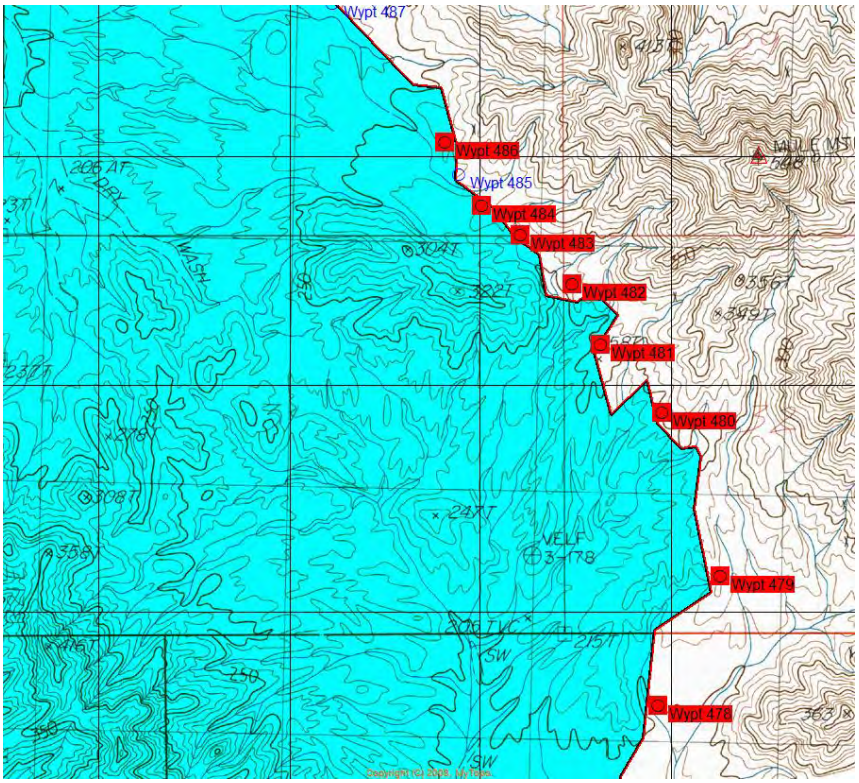
Waypoint 478: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





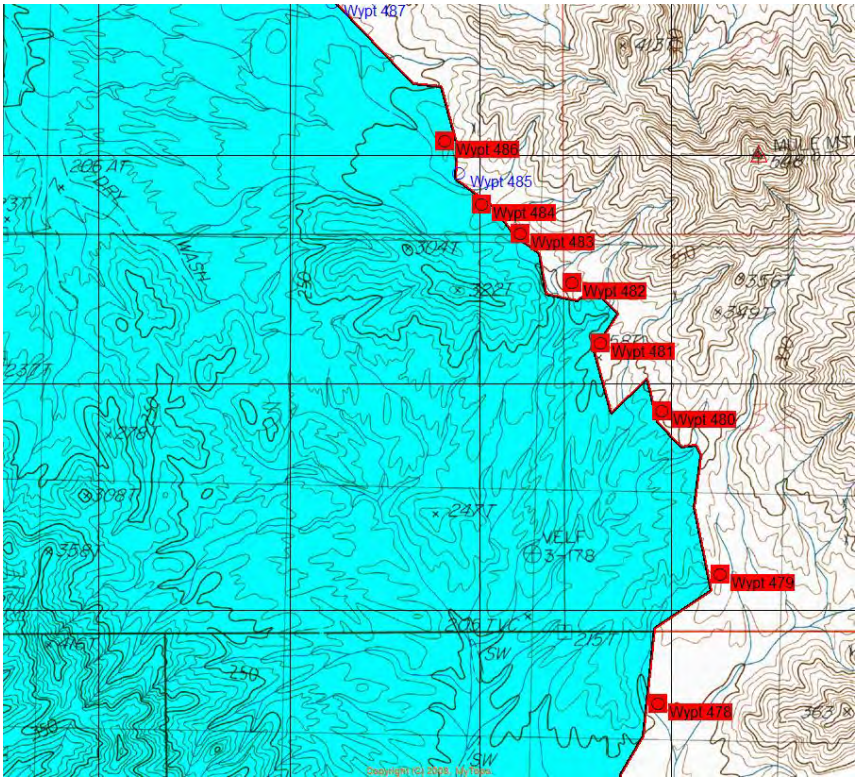
Waypoint 479: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





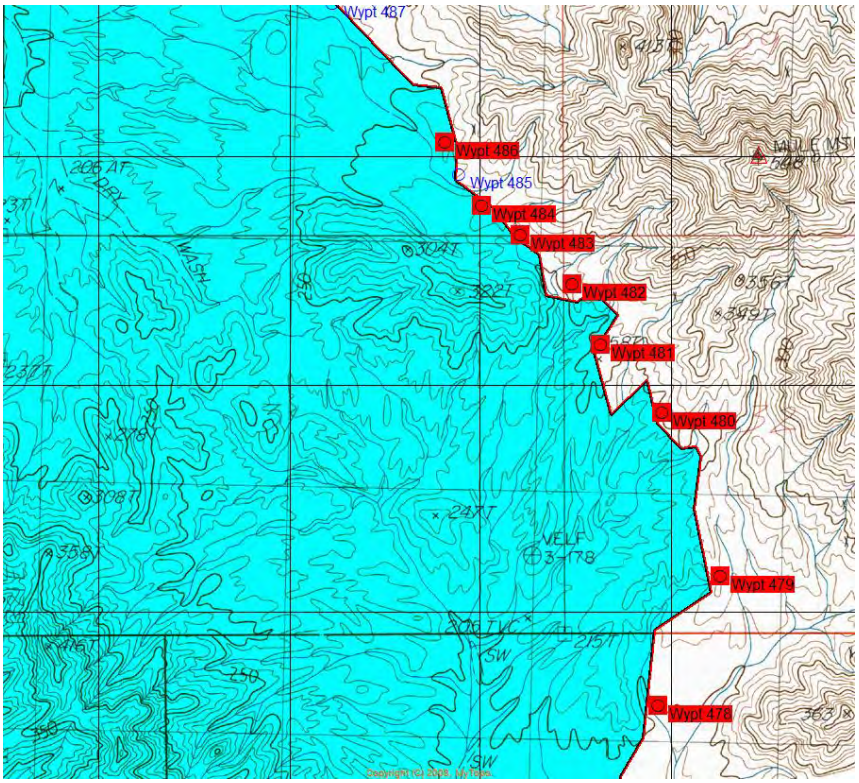
Waypoint 480: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





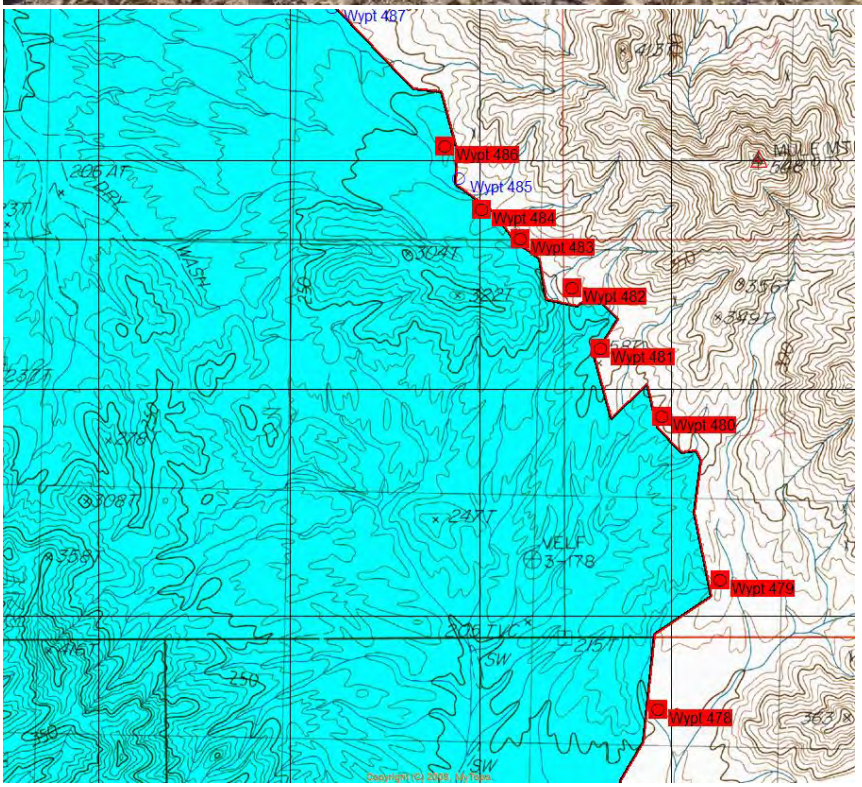
Waypoint 481: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





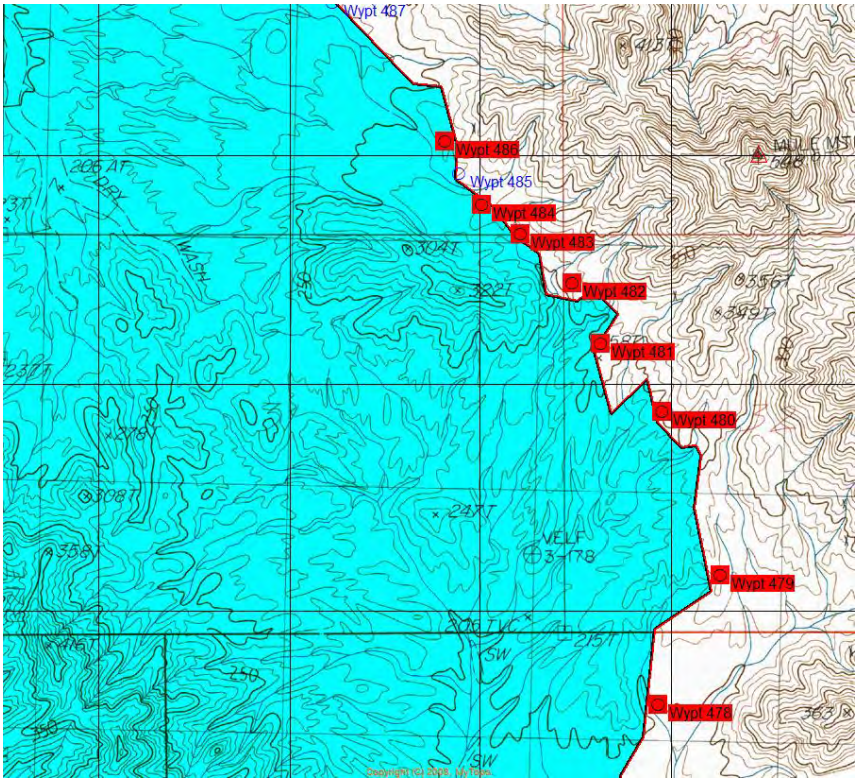
Waypoint 483: A view northwest into the LWC unit. Note that it is primarily affected by the forces of nature.





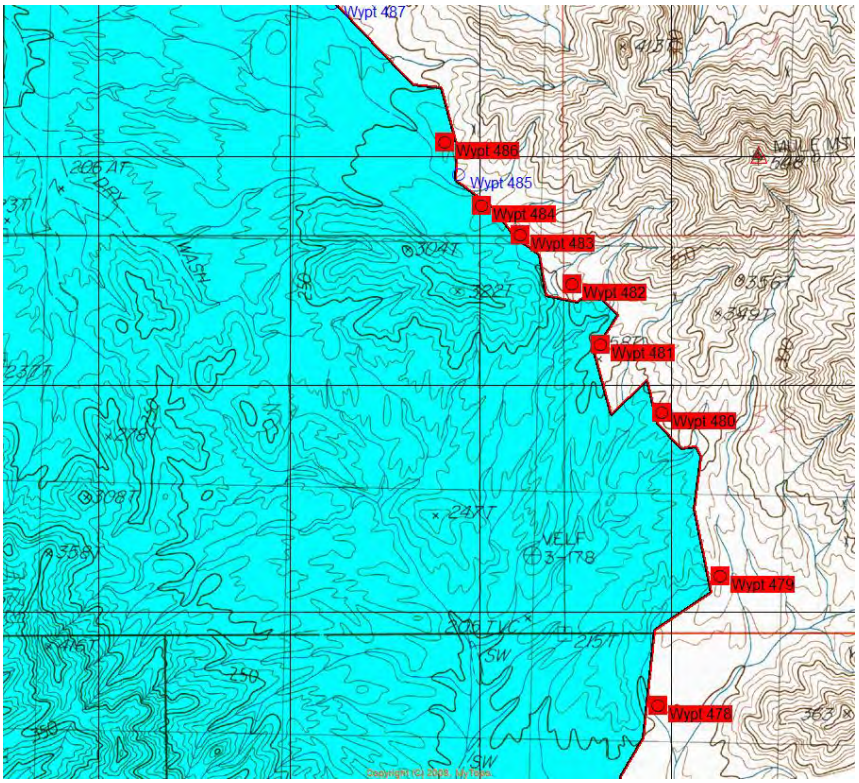
Waypoint 484: As these burrows demonstrate, the area teems with life.





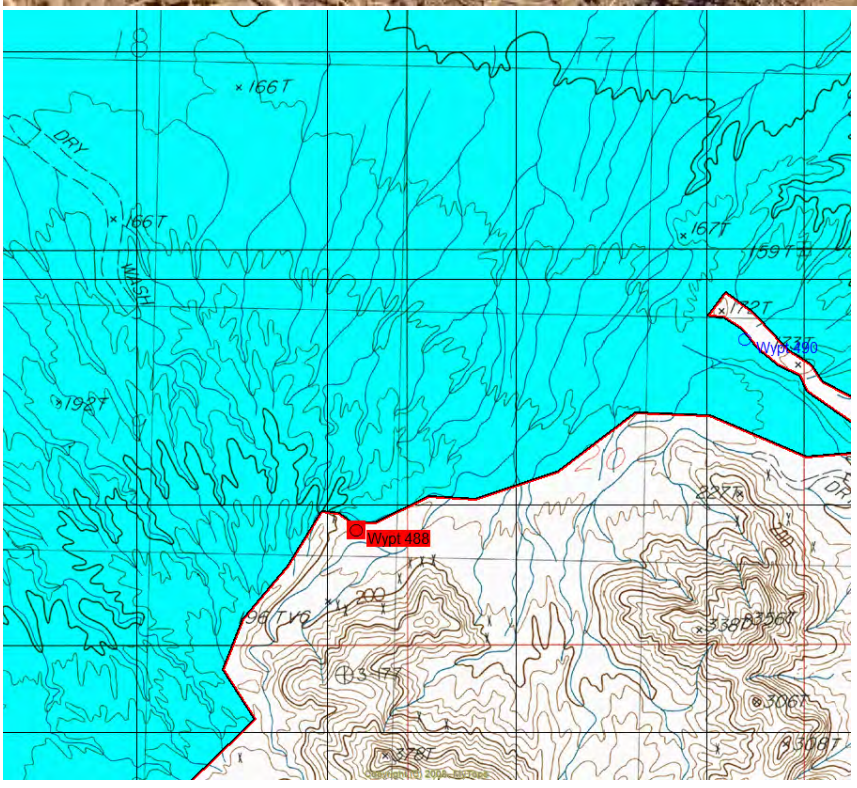
Waypoint 486: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





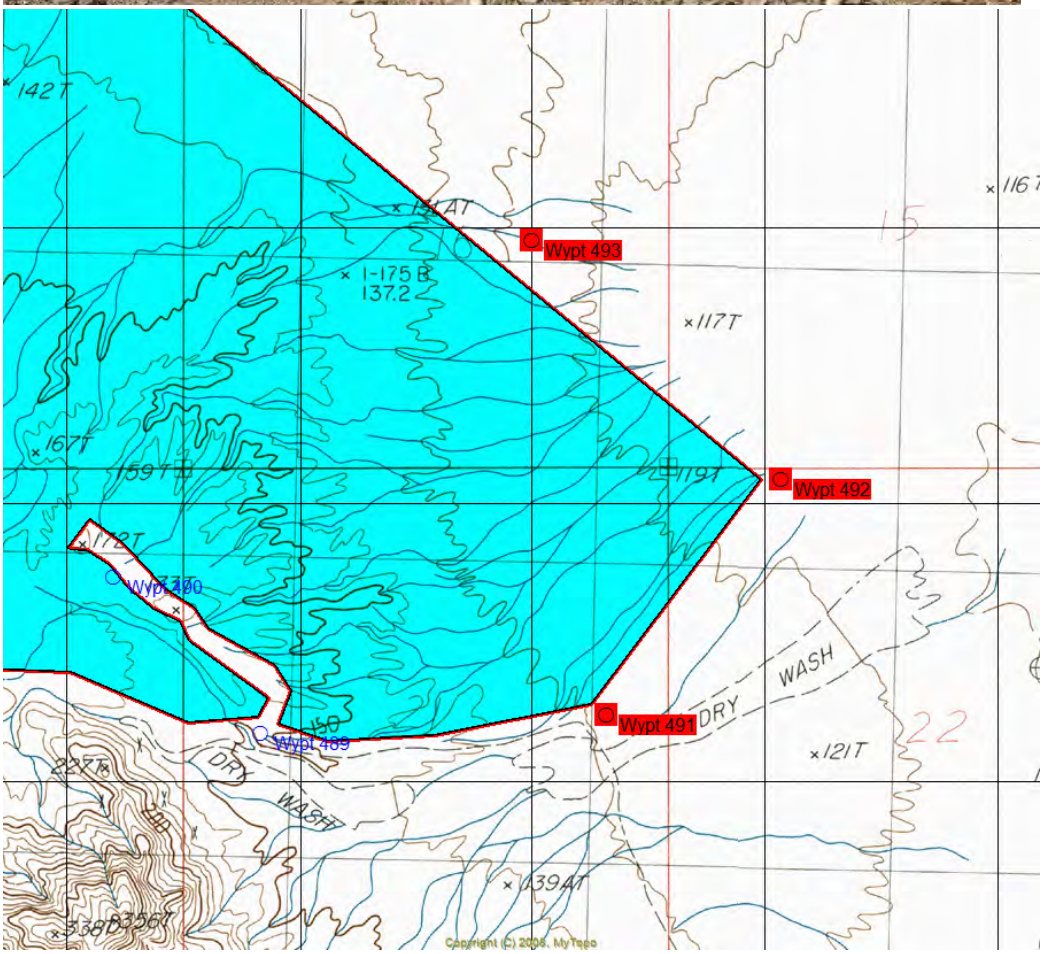
Waypoint 488: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





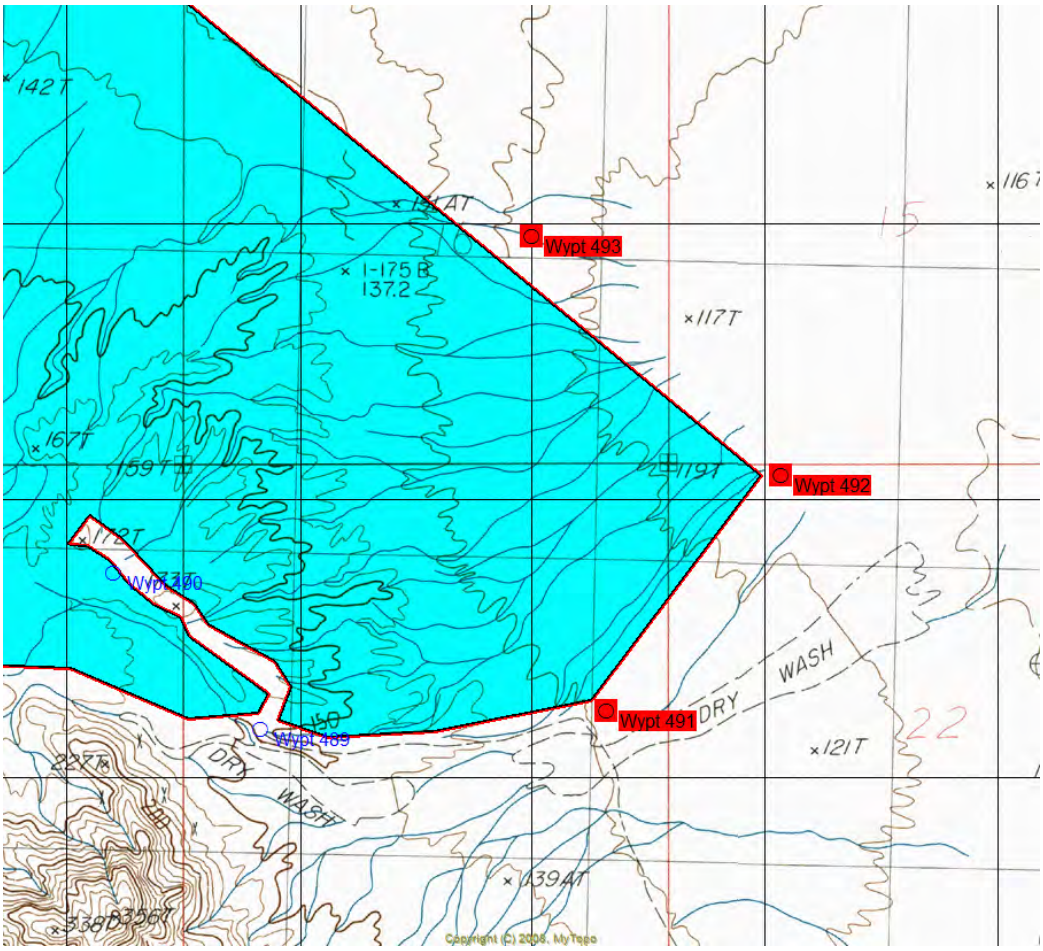
Waypoint 491: A view northwest into the LWC unit. Note that it is primarily affected by the forces of nature.





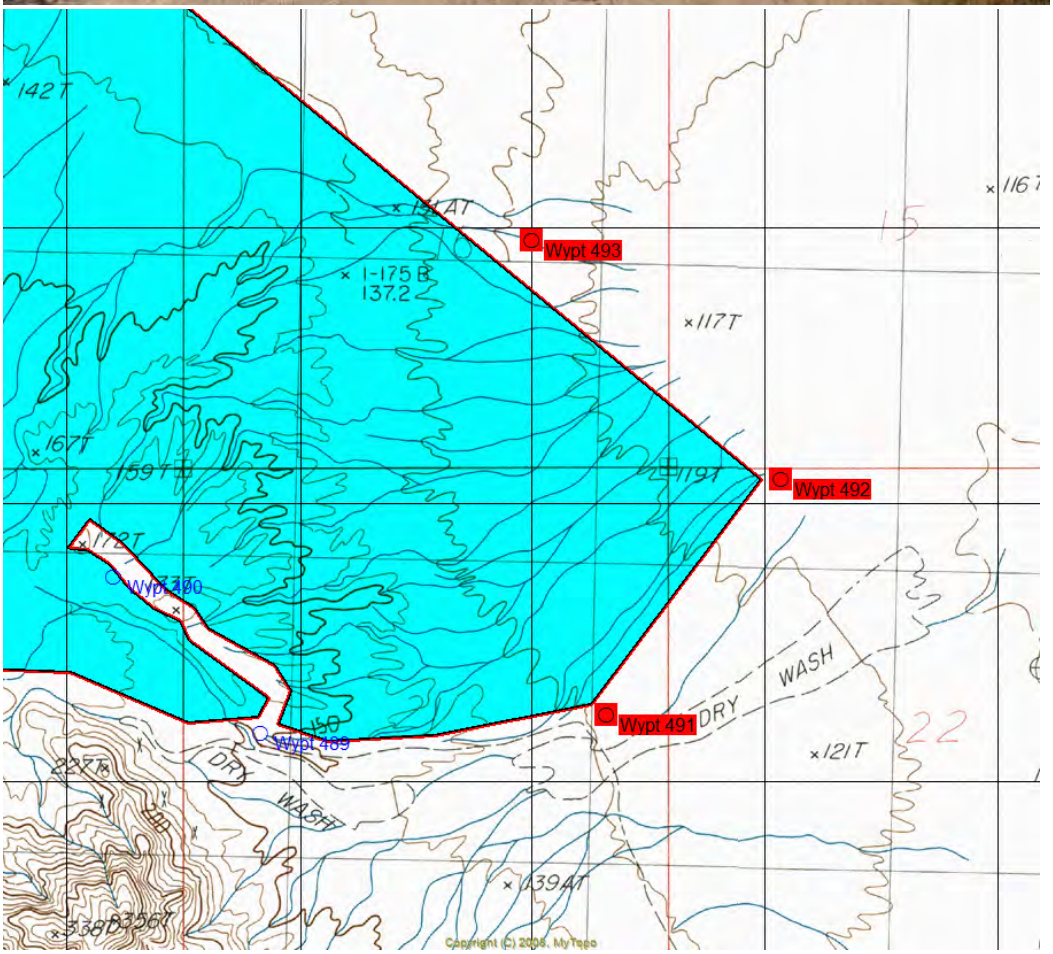
Waypoint 492: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





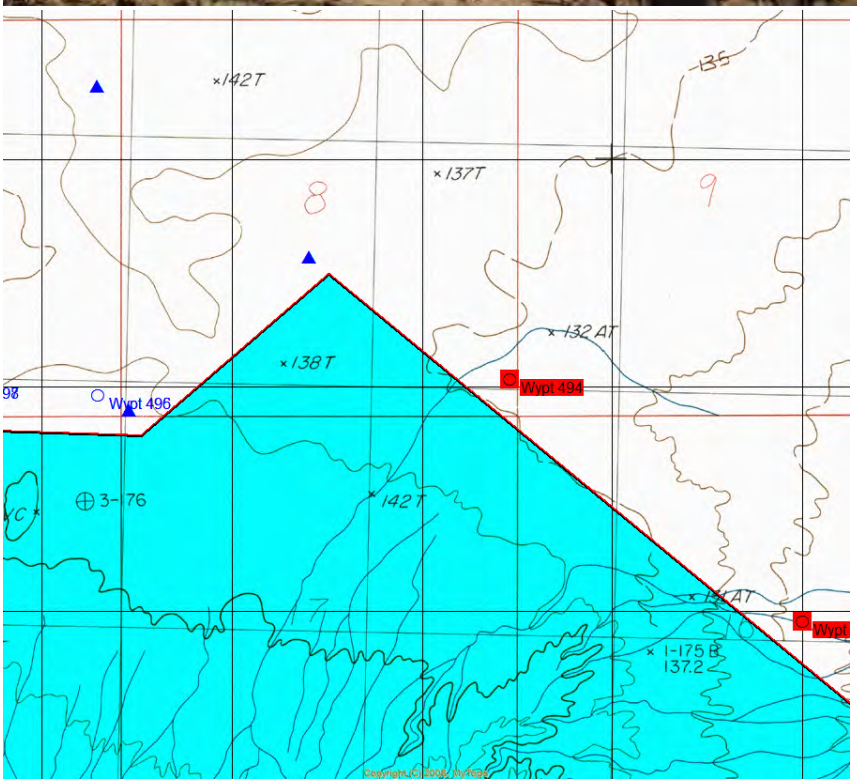
Waypoint 493: A view southwest into the LWC unit at a pristine wash. Note that it is primarily affected by the forces of nature.





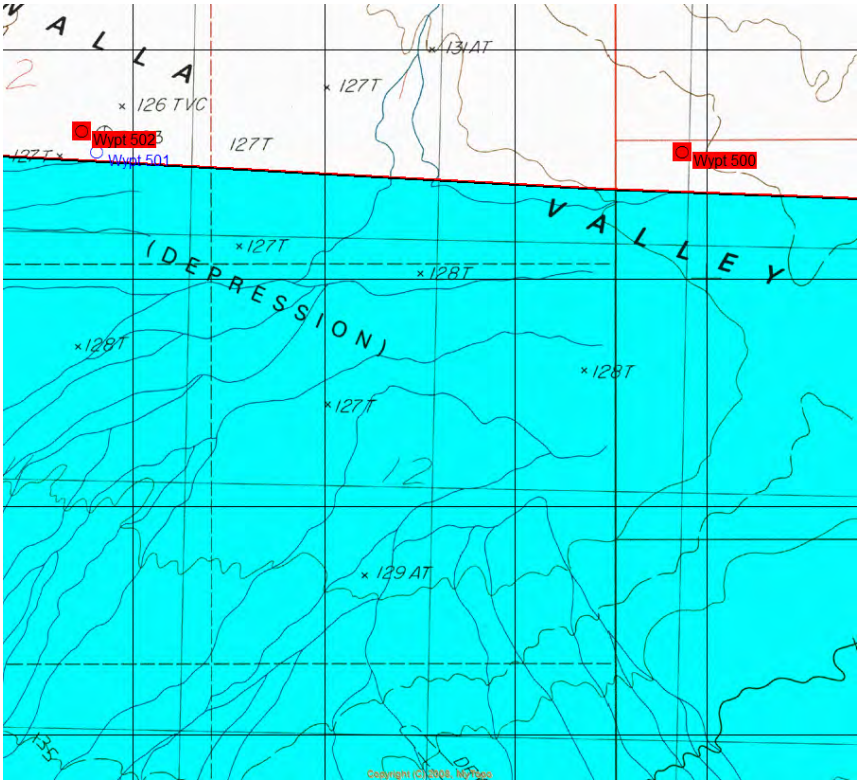
Waypoint 494: A view southwest into the LWC unit. Note that it is primarily affected by the forces of nature.





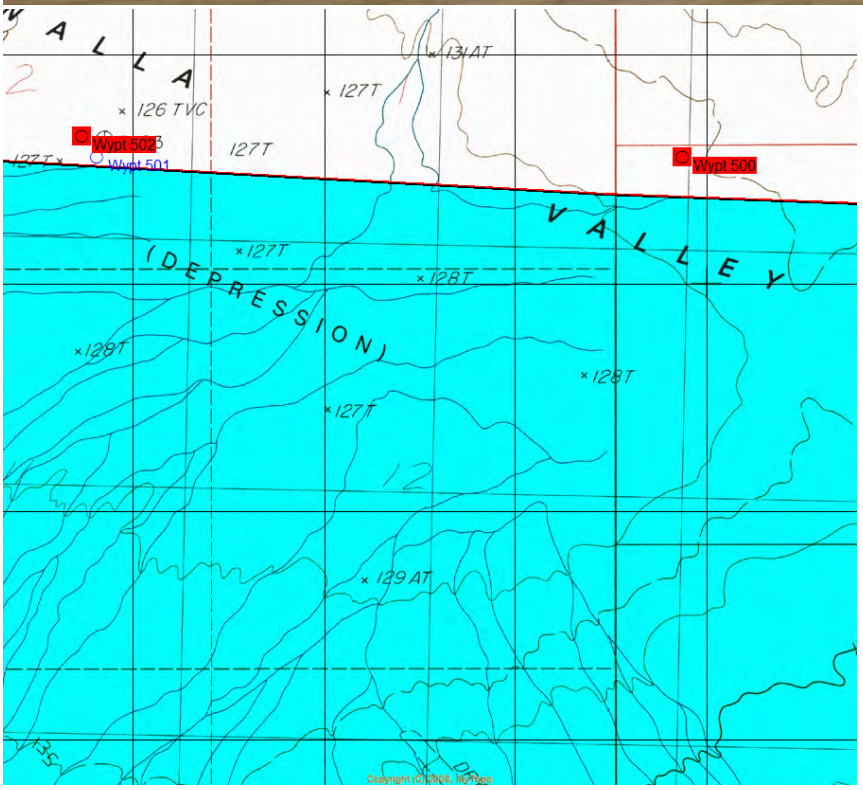
Waypoint 500: A view south into the LWC unit. Note that it is primarily affected by the forces of nature.





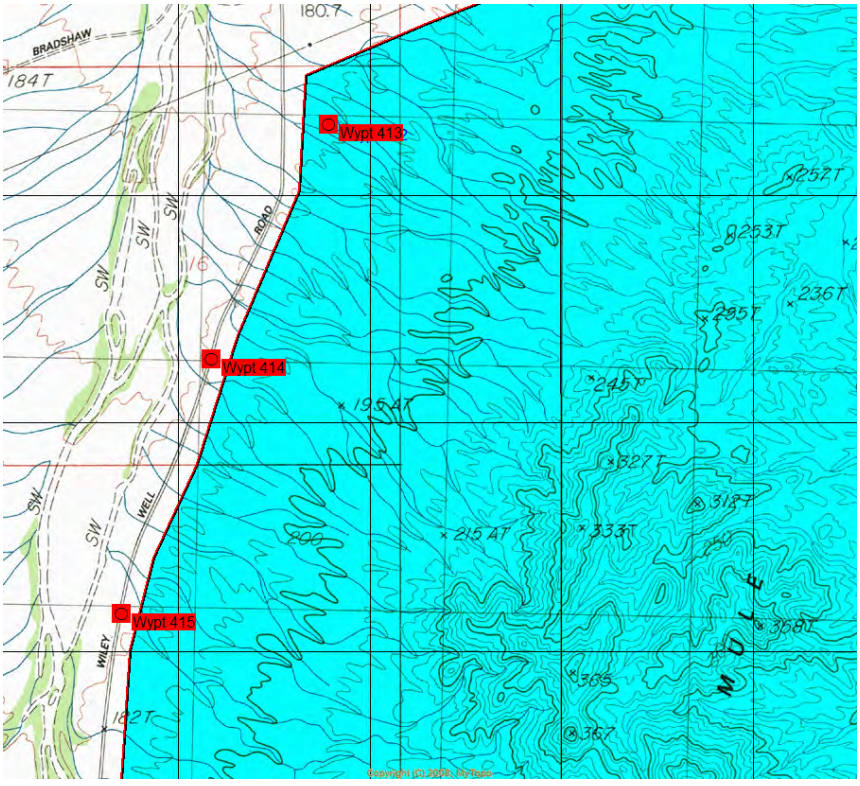
Waypoint 502: A view south into the LWC unit. Note that it is primarily affected by the forces of nature.





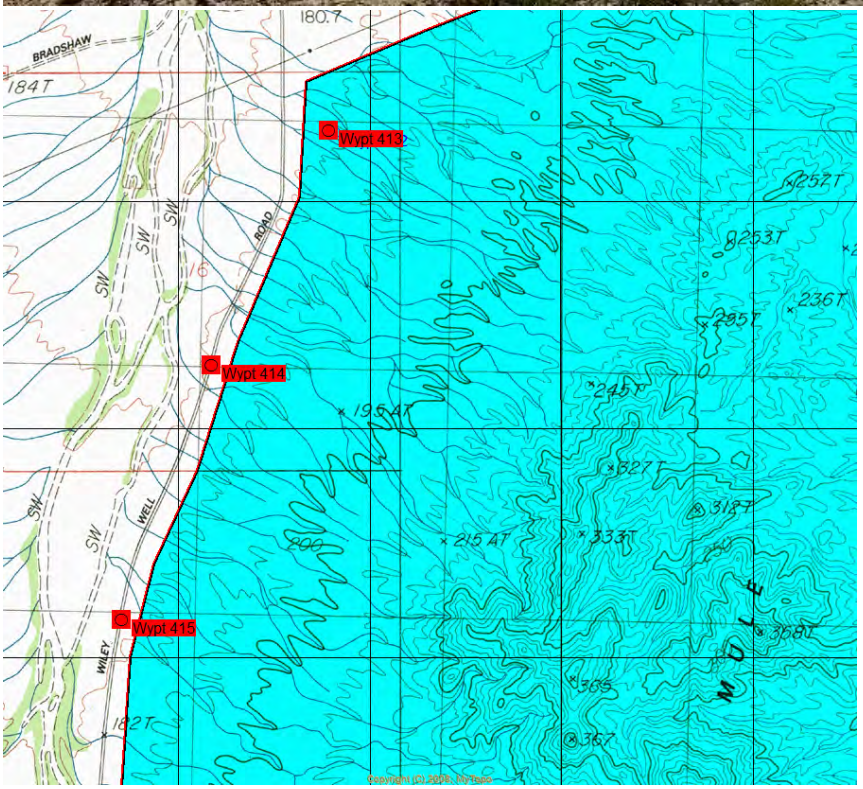
Waypoint 413: A view south into the LWC unit. Old vehicle routes parallel the main road. These tracks do not meet the definition if a “road.”





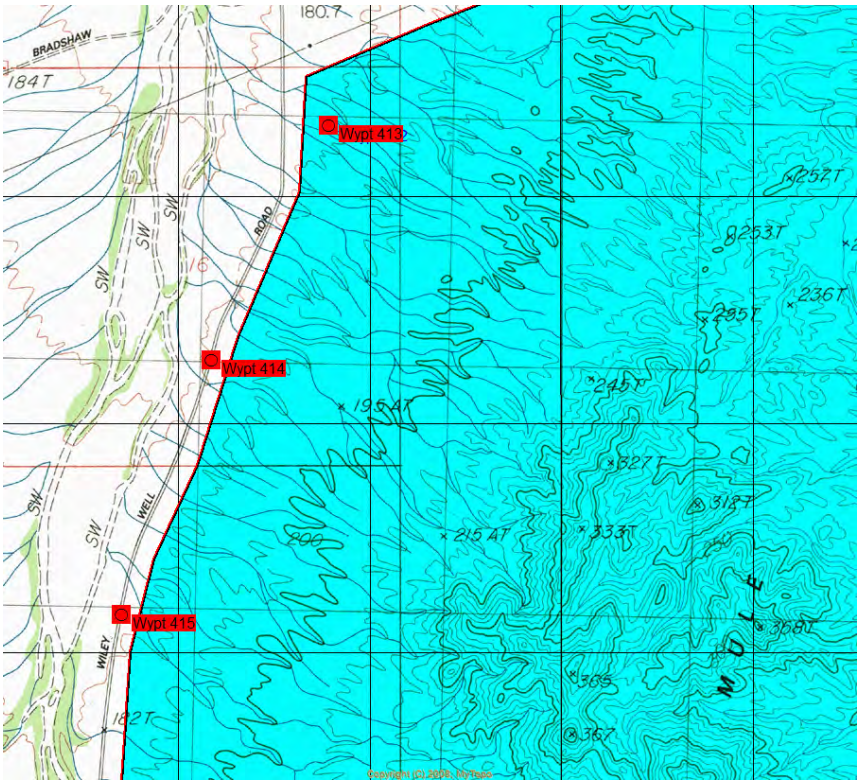
Waypoint 414: A view east into the LWC unit. Old vehicle routes parallel the main road. These tracks do not meet the definition if a "road." Note the plant life growing in the tracks.





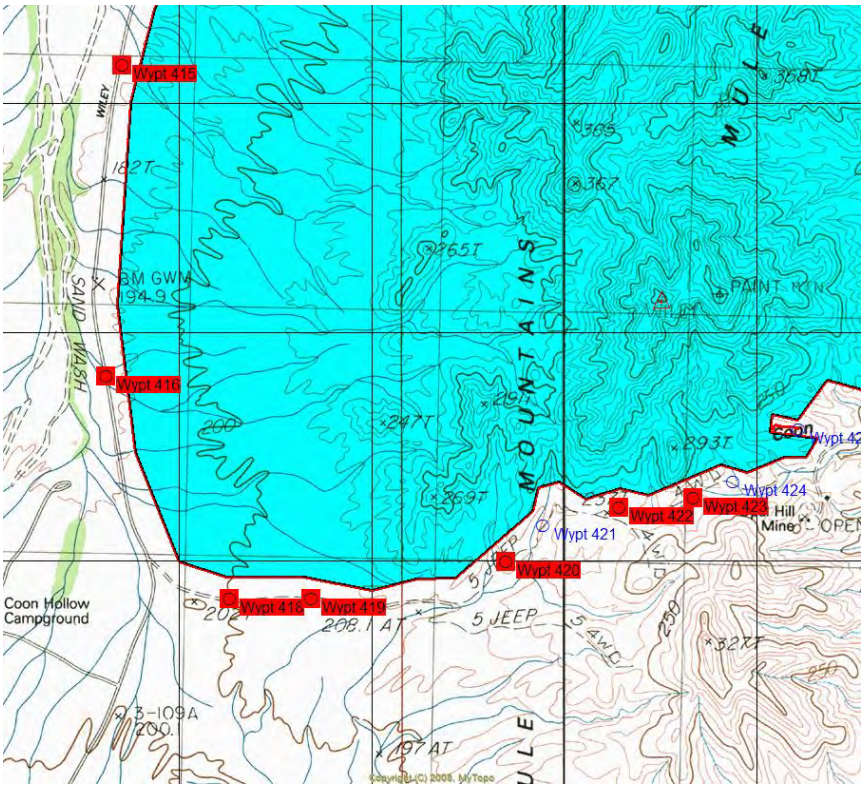
Waypoint 415: A view east into the LWC unit. Note that it is primarily affected by the forces of nature.



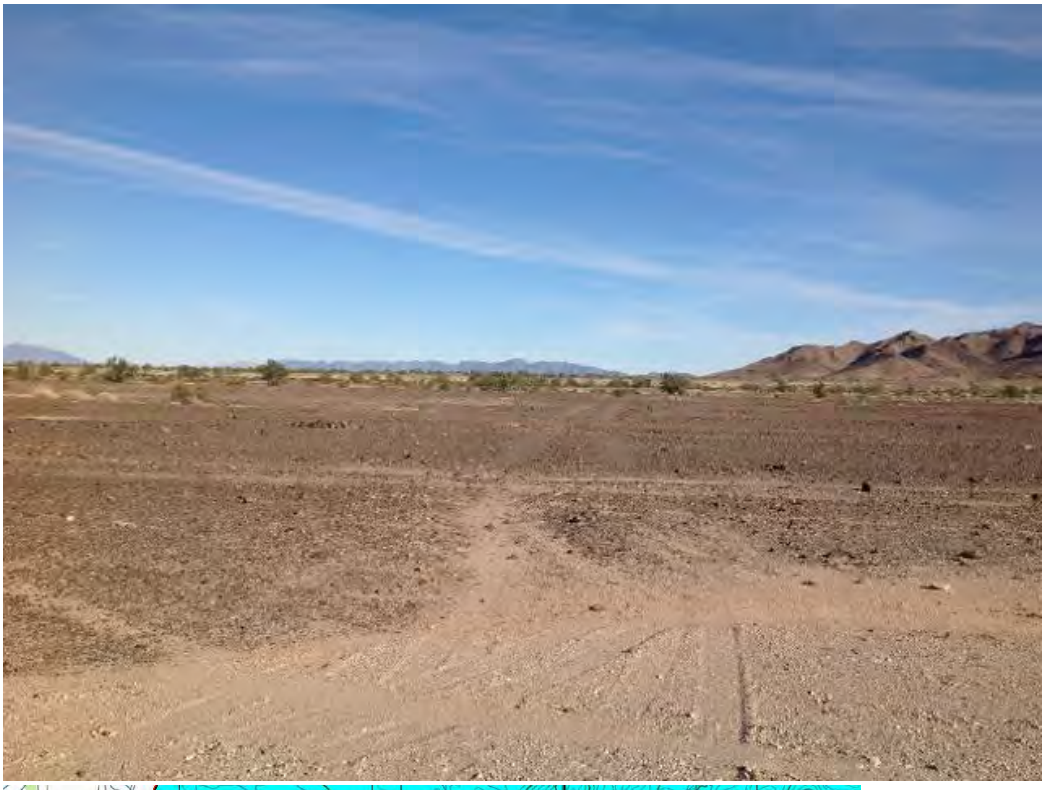


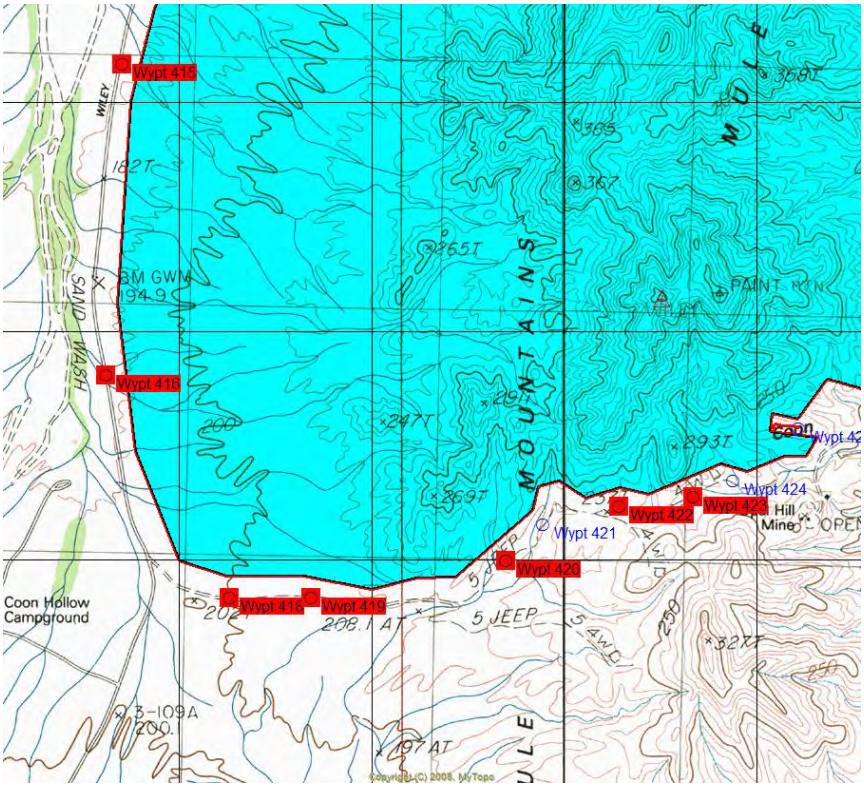
Waypoint 416: A view east into the LWC unit. Note that it is primarily affected by the forces of nature. As is noted above, old vehicle tracks parallel the main road. These tracks do not meet the definition of a "road."





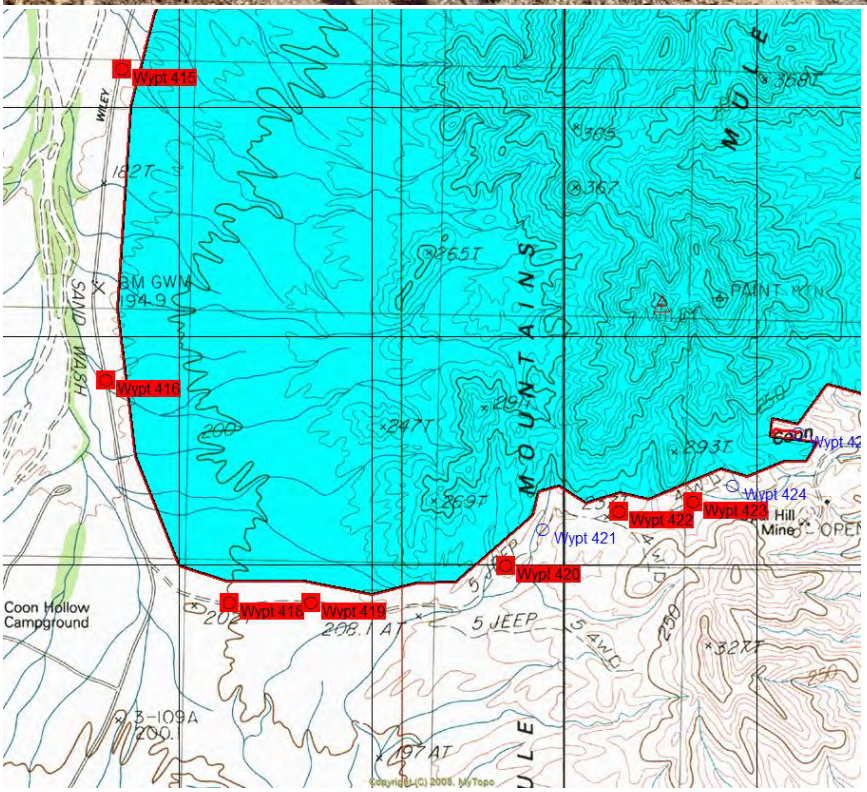
Waypoint 418: As is noted above, old vehicle tracks parallel the main road. These tracks do not meet the definition of a "road."





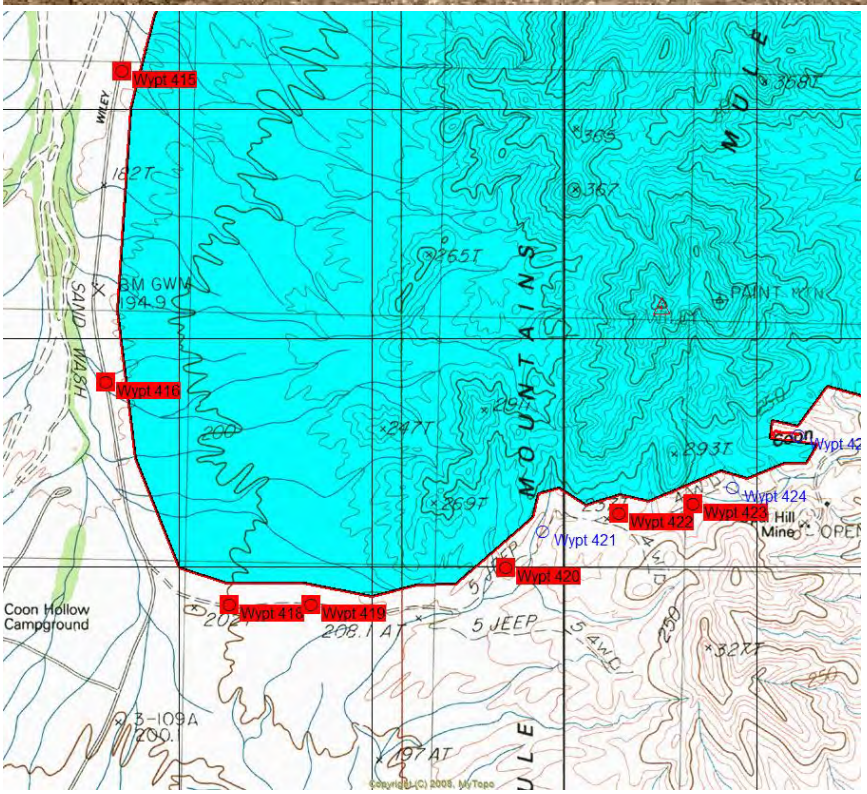
Waypoint 419: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





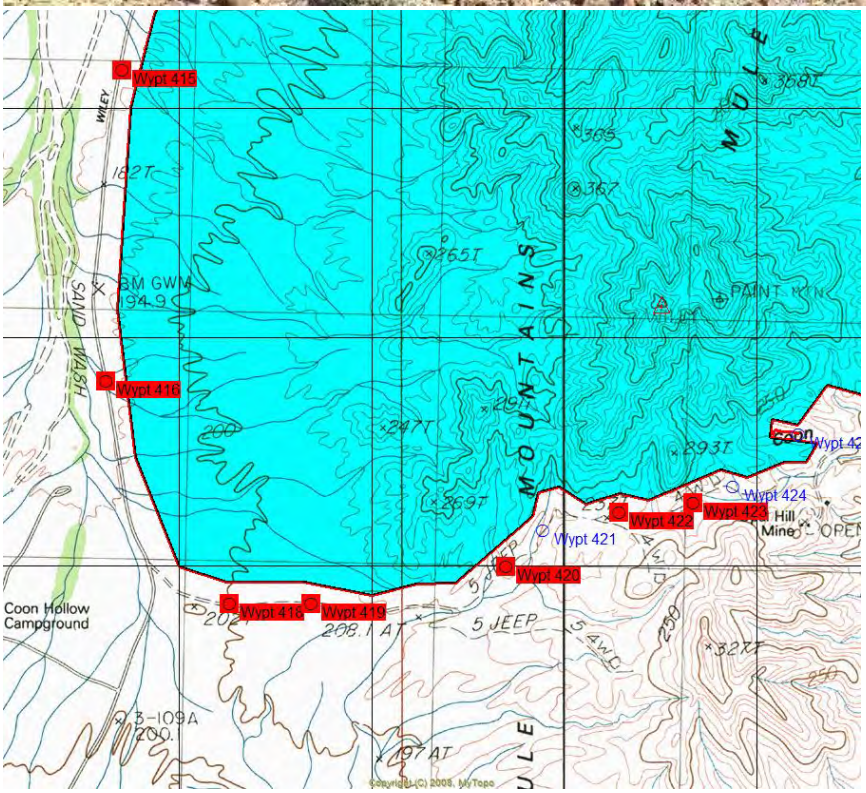
Waypoint 420: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





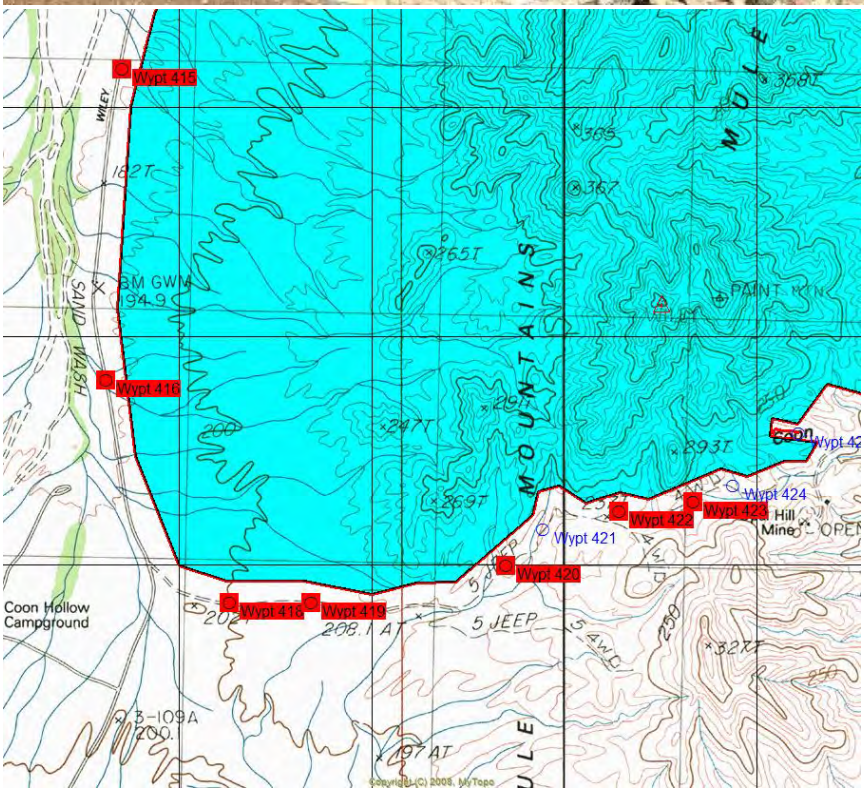
Waypoint 422: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





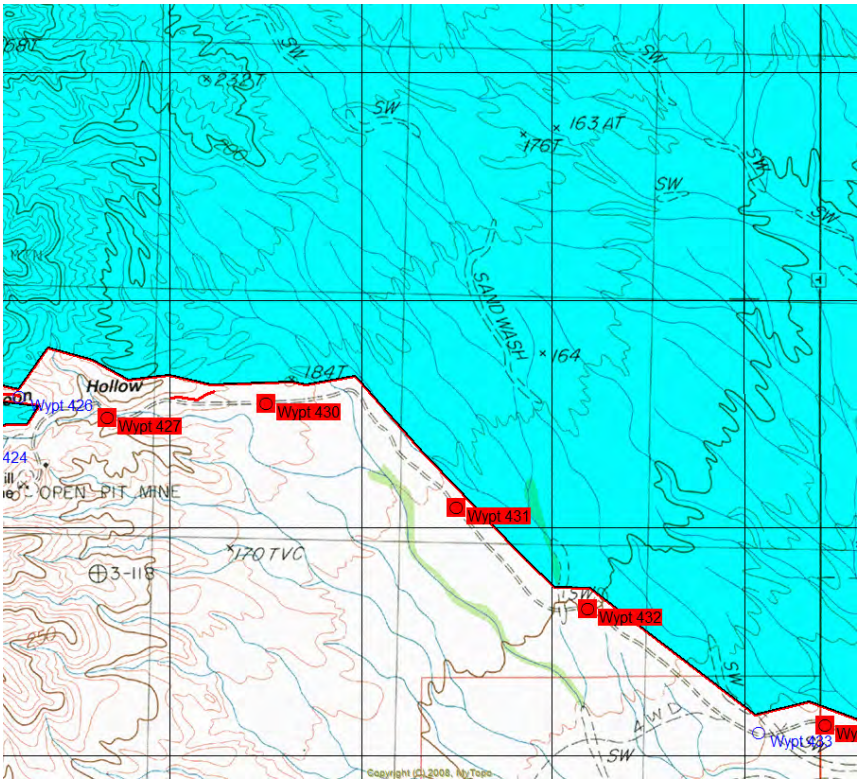
Waypoint 423: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





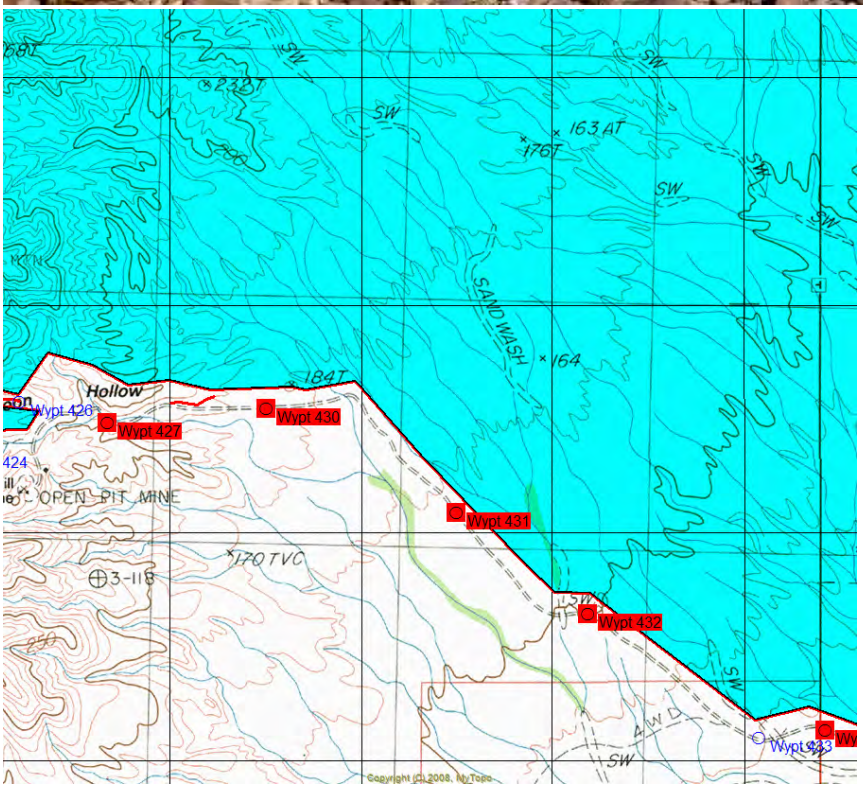
Waypoint 427: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





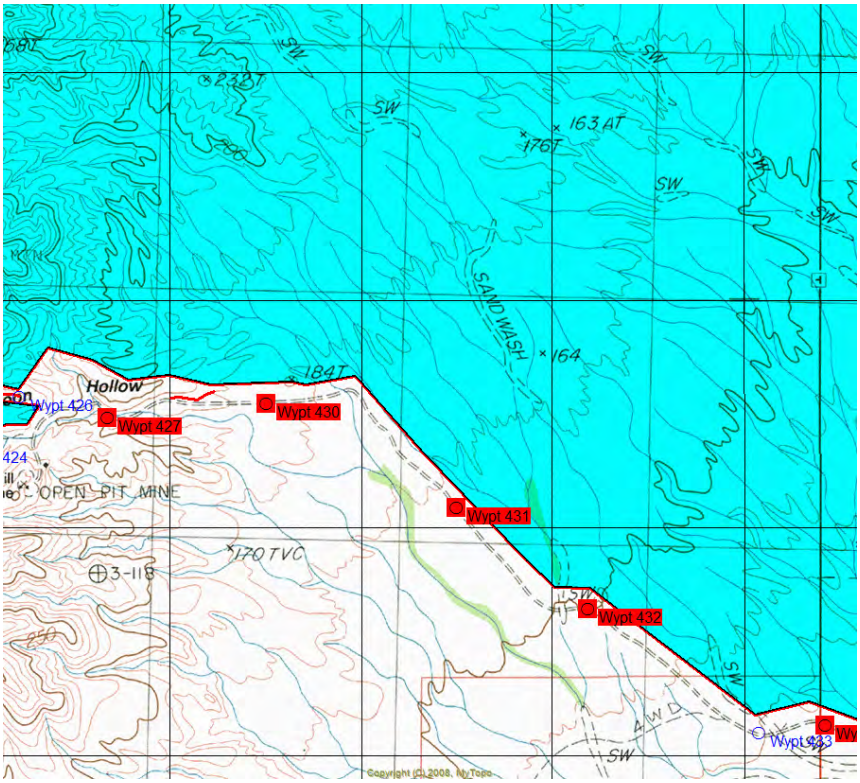
Waypoint 430: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





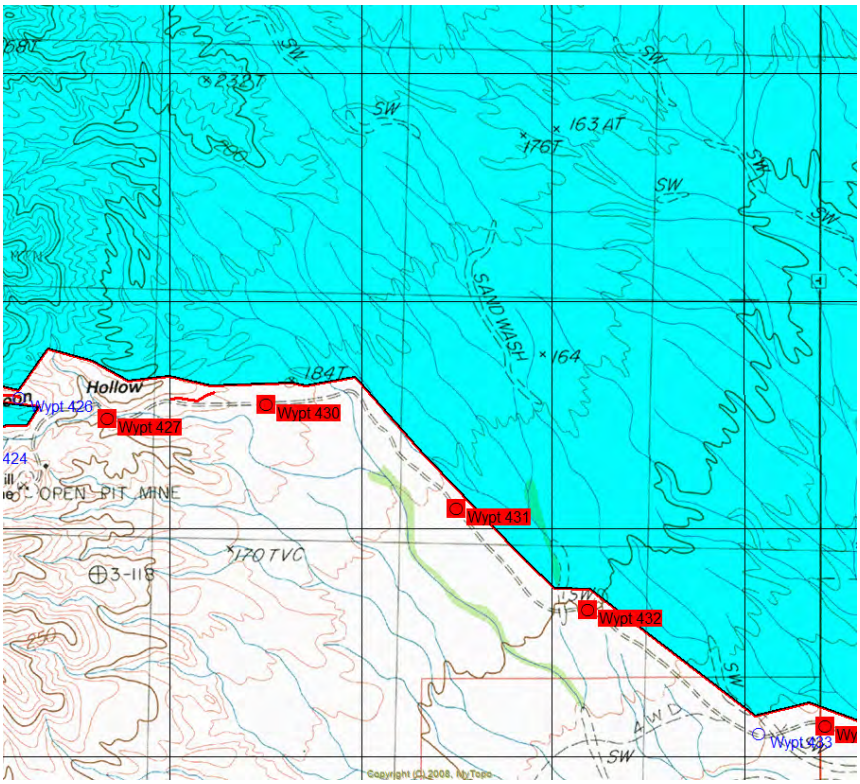
Waypoint 431: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





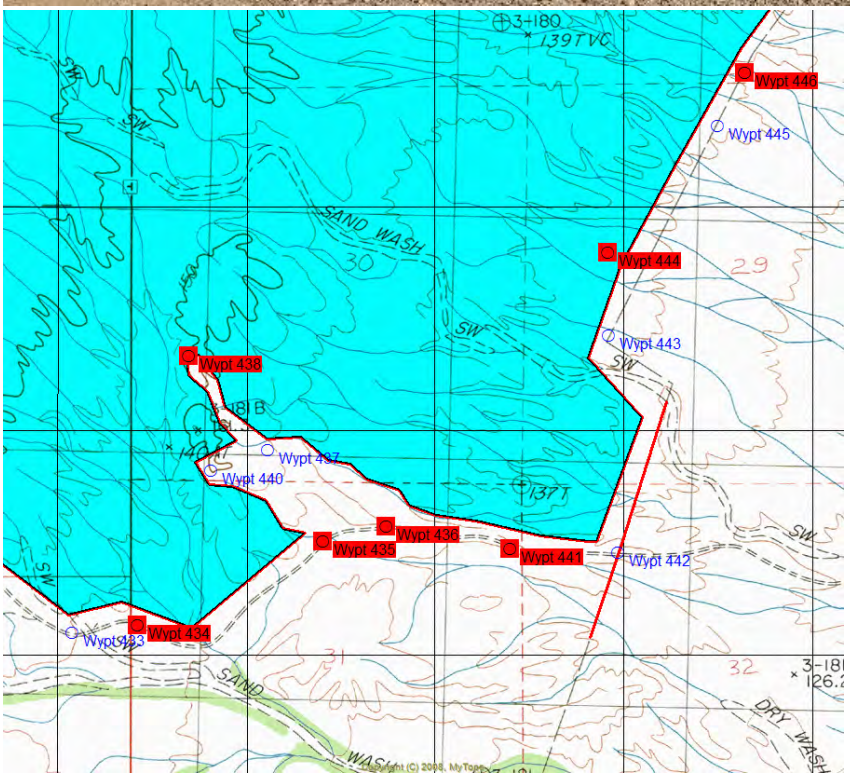
Waypoint 432: A view north into the LWC unit. Note that it is primarily affected by the forces of nature.





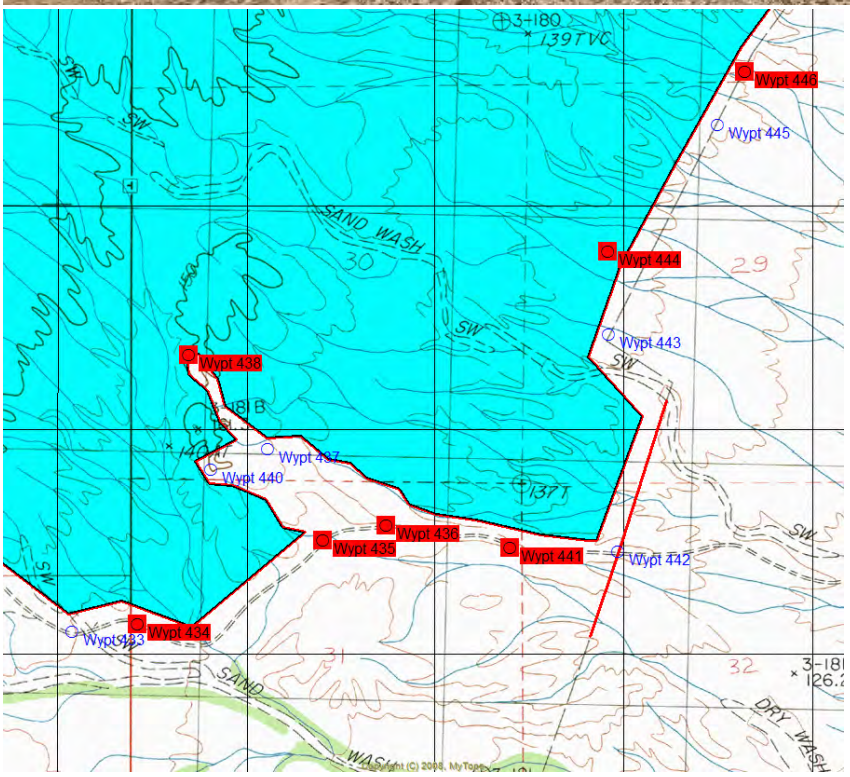
Waypoint 434: A view north into the LWC unit. Note that it is primarily affected by the forces of nature. Also, note the ecologically-significant woodlands that occur in the area.





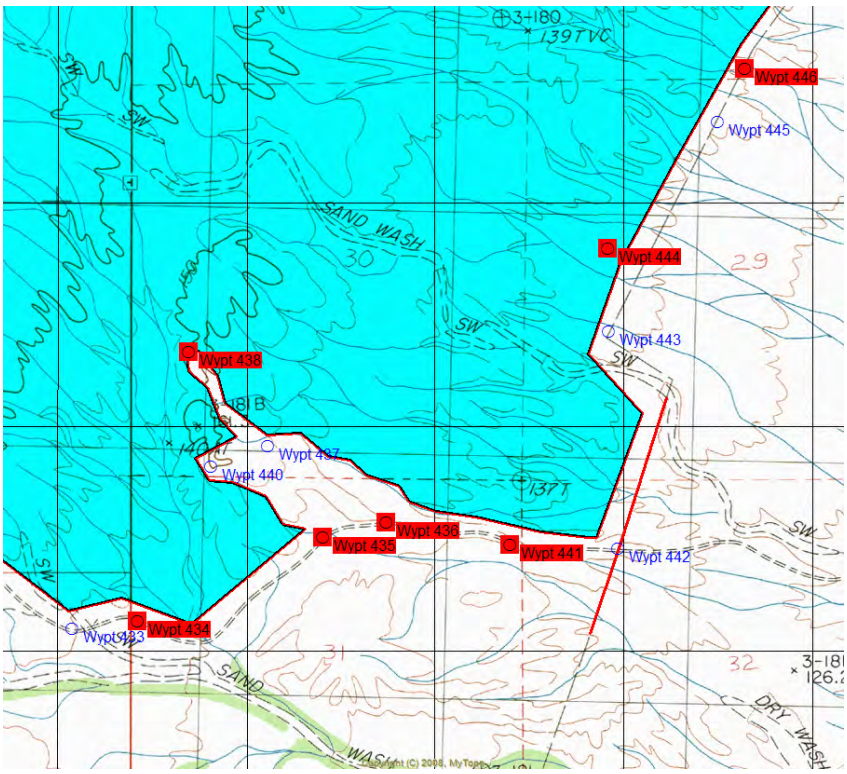
Waypoint 435: A view north into the LWC unit. Note that it is primarily affected by the forces of nature. The tire tracks shown here are immediately adjacent to the road.





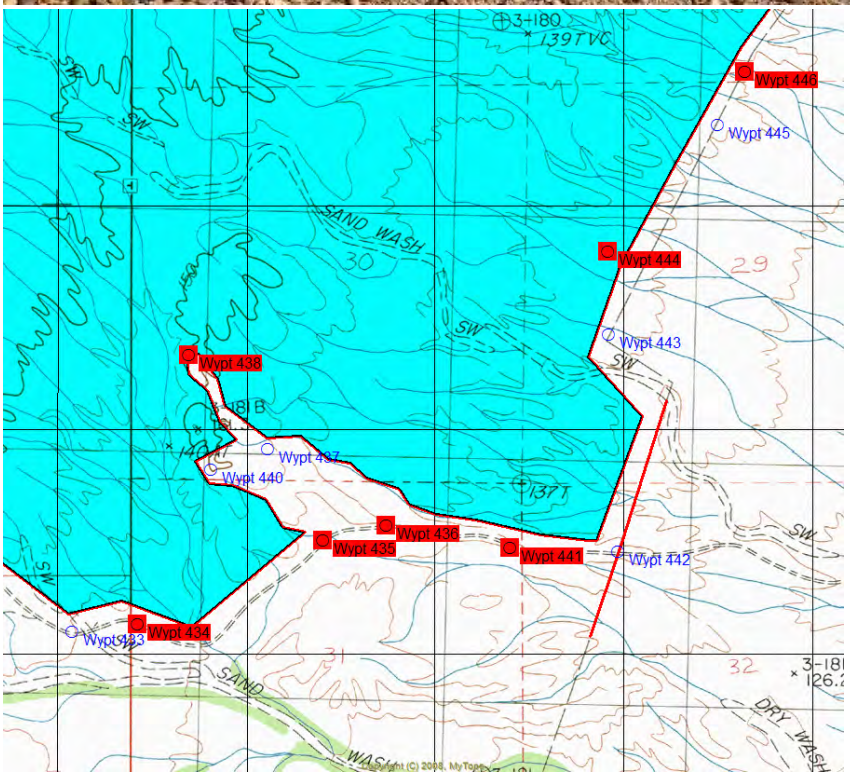
Waypoint 438: A view north into the LWC unit. Note that it is primarily affected by the forces of nature. Also, note the ecologically-significant woodlands that occur in the area.





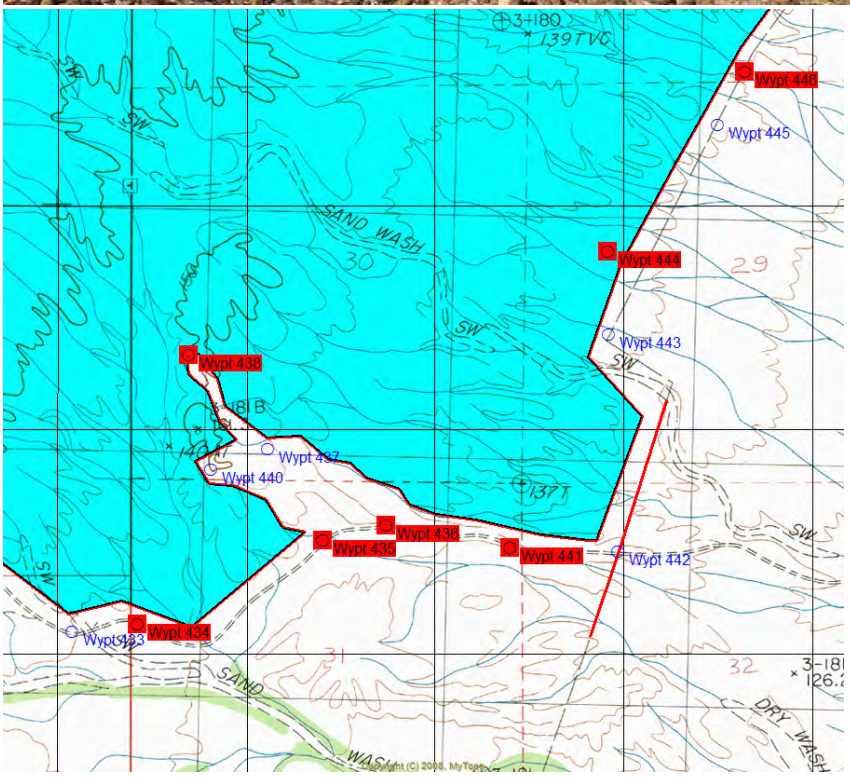
Waypoint 441: A view northwest into the LWC unit. Note that it is primarily affected by the forces of nature.





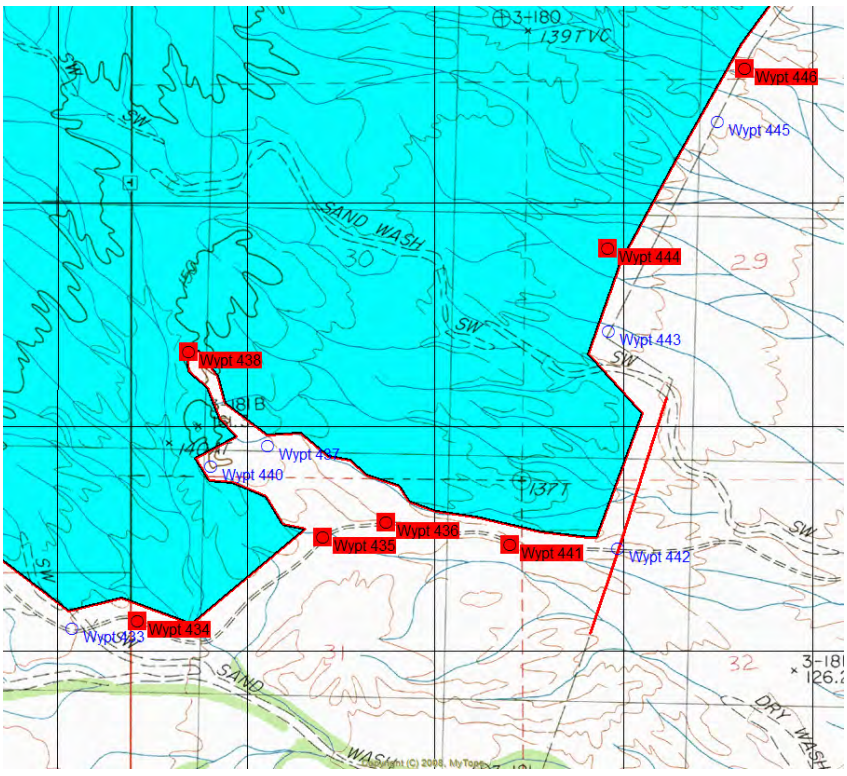
Waypoint 444: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





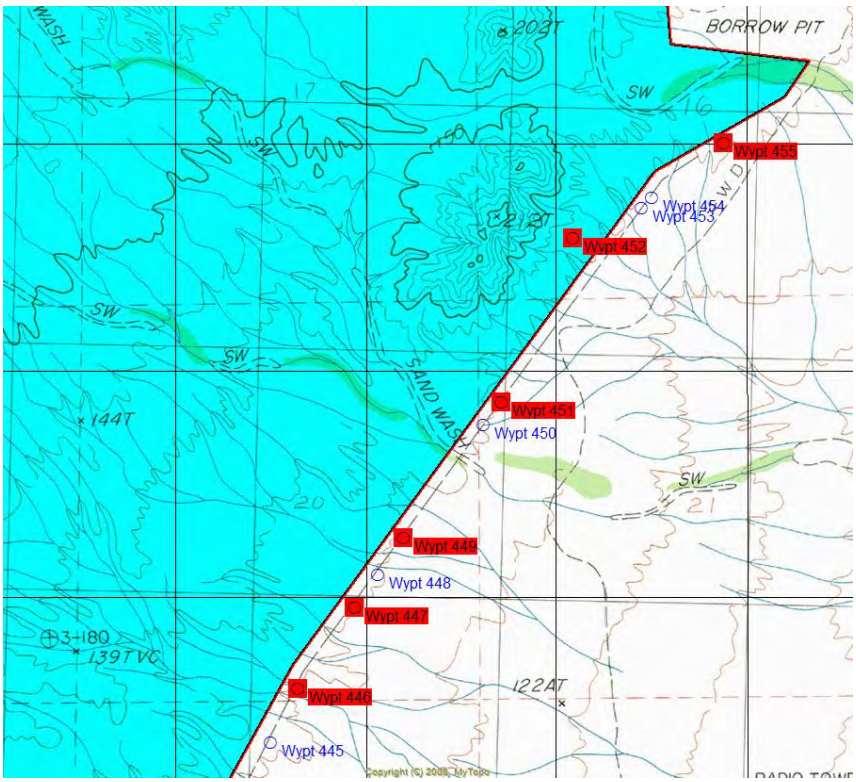
Waypoint 446: A view west into the LWC unit. Note that it is primarily affected by the forces of nature. Also, note the ecologically-significant woodlands that occur in the area.





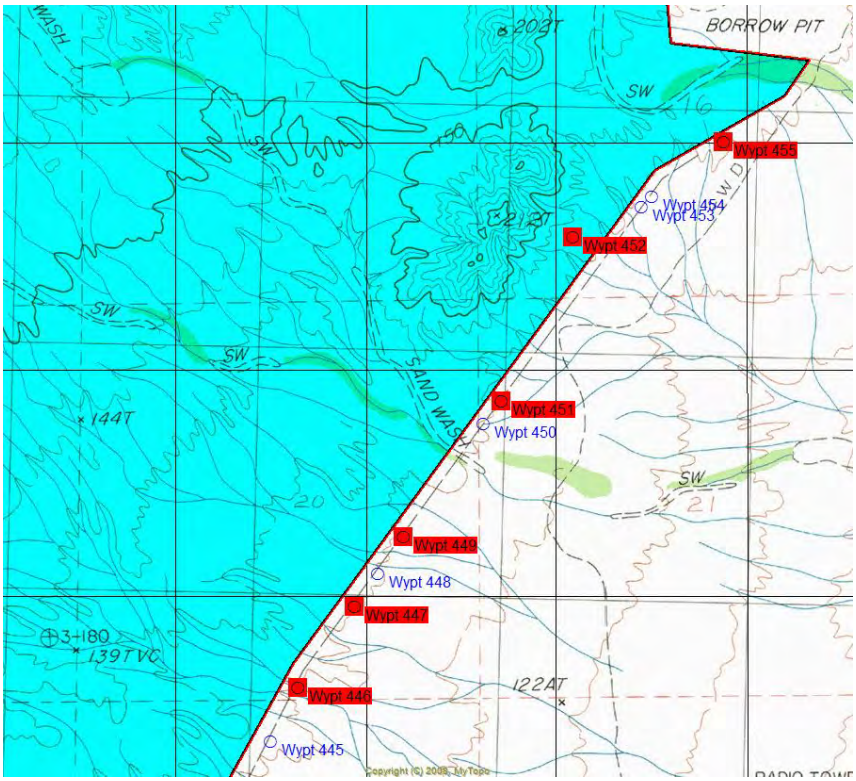
Waypoint 447: A view west into the LWC unit. Note that it is primarily affected by the forces of nature. Also, note the ecologically-significant woodlands that occur in the area.





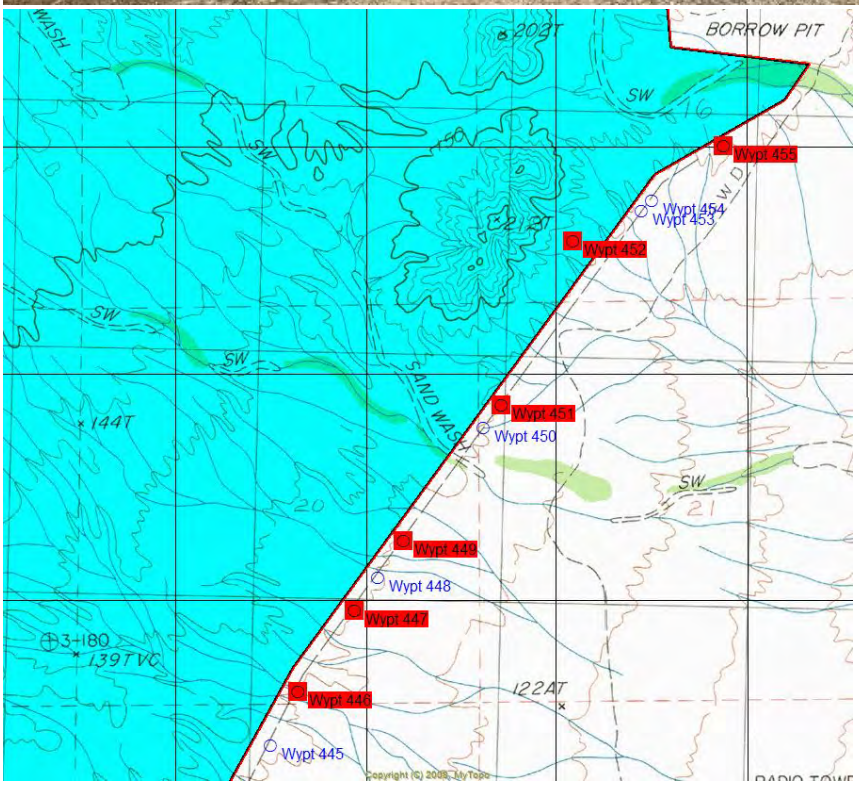
Waypoint 449: The woodlands in the Mule Mountains teem with life, as is shown by these tracks in the sand.





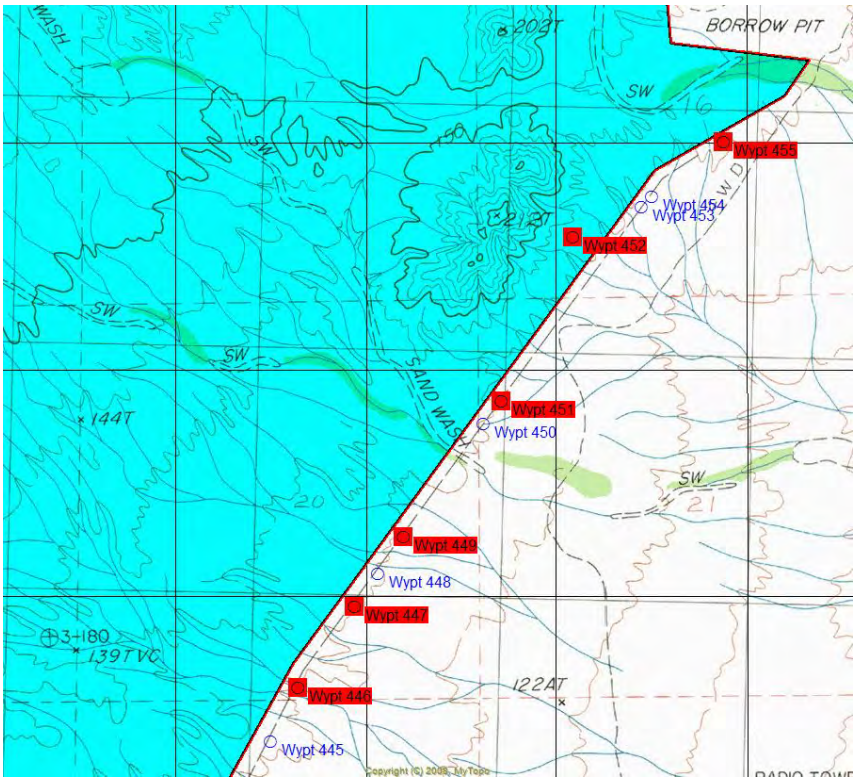
Waypoint 451: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





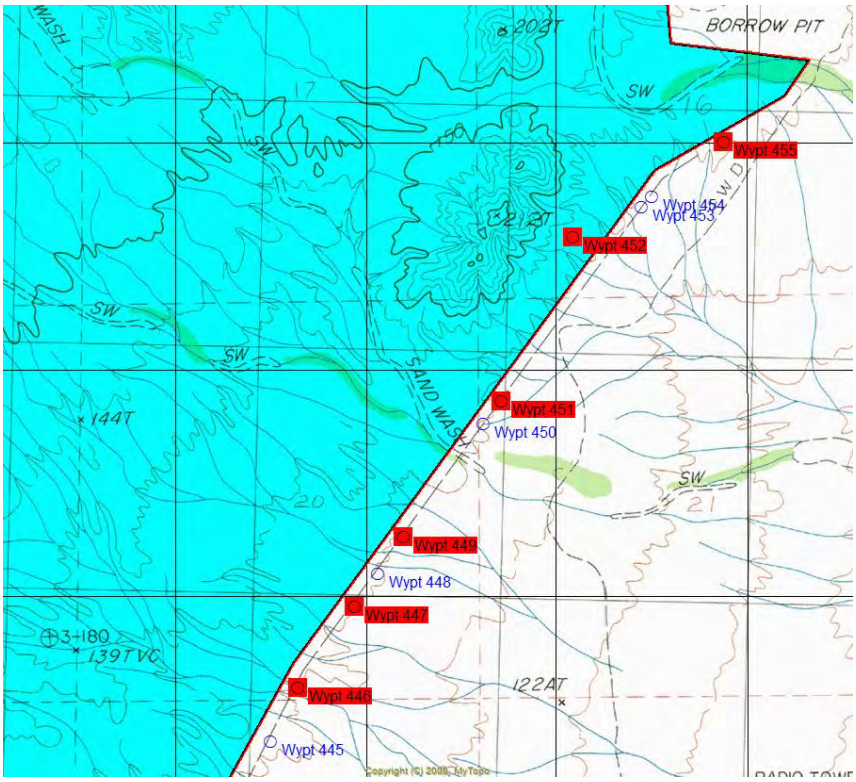
Waypoint 452: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





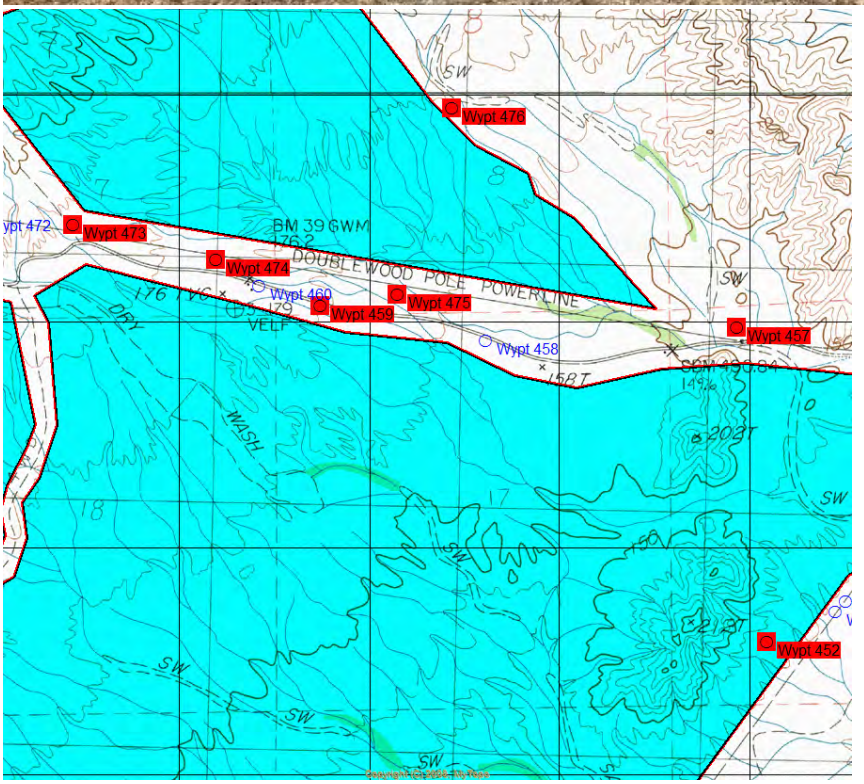
Waypoint 455: A view west into the LWC unit. Note that it is primarily affected by the forces of nature.





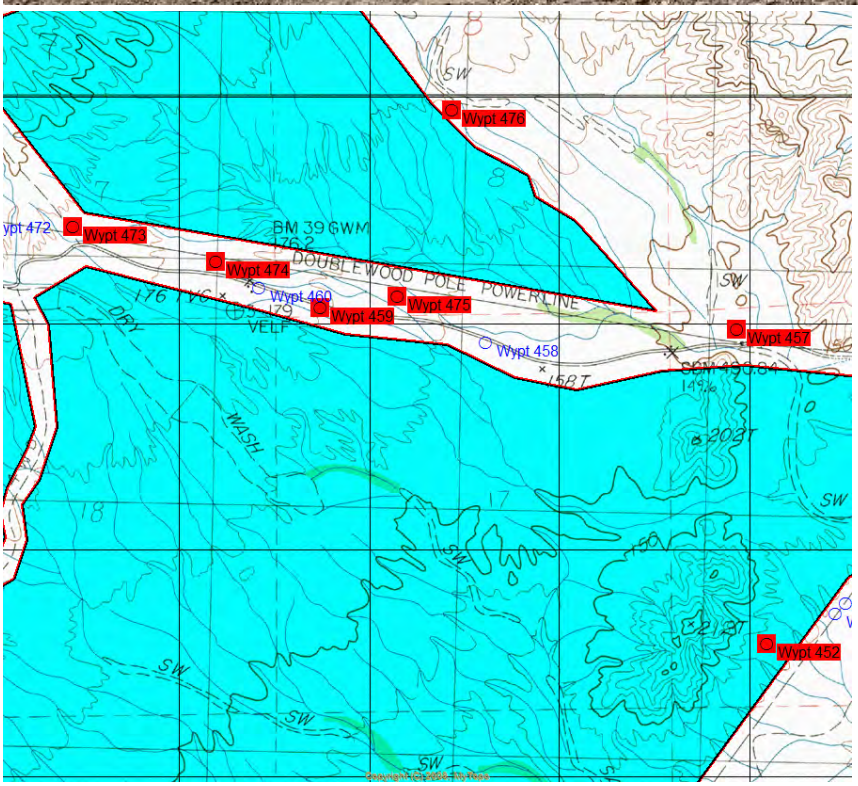
Waypoint 457: A view south into the LWC unit. Note that it is primarily affected by the forces of nature.





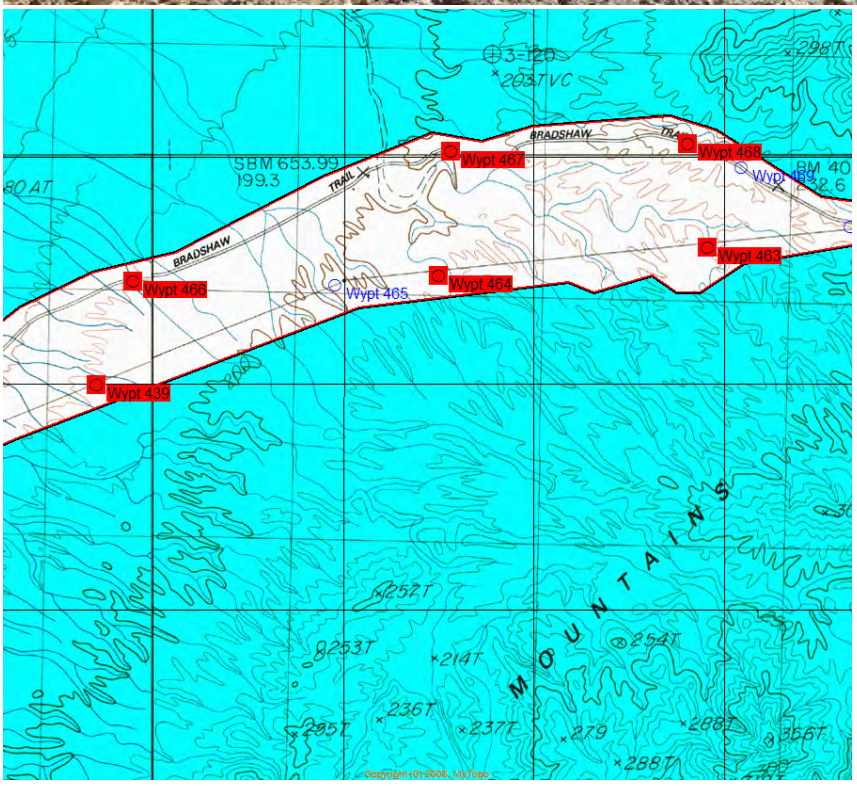
Waypoint 459: A view south into the LWC unit. Note that it is primarily affected by the forces of nature.





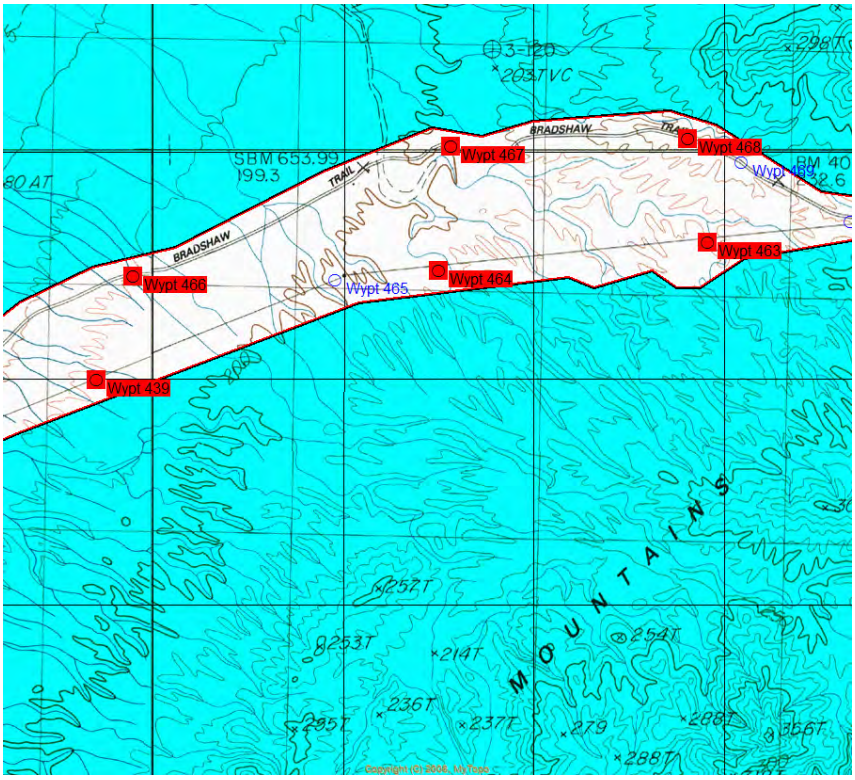
Waypoint 463: A view south into the LWC unit. Note that it is primarily affected by the forces of nature.





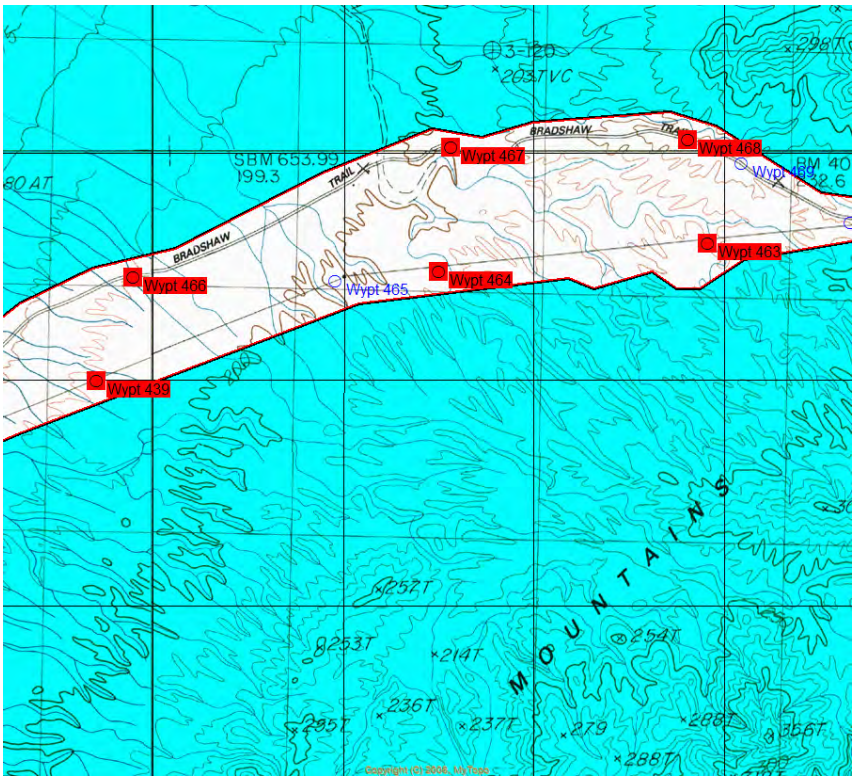
Waypoint 464: A view south into the LWC unit. Note that it is primarily affected by the forces of nature.





Waypoint 439: A view south into the LWC unit. Note that it is primarily affected by the forces of nature.





Attachment 3

Attachment 3 – excerpt from Western Solar Plan Record of Decision (pp. 54-56)

A.4.1.2 Design Features for Specially Designated Areas and Lands with Wilderness Characteristics

The following design features have been identified to avoid, minimize, and/or mitigate potential impacts on specially designated areas and lands with wilderness characteristics from solar energy development identified and discussed in Sections 5.3.1 and 5.3.2 of the Draft and Final Solar PEIS.

A.4.1.2.1 General

LWC1-1 Protection of existing values of specially designated areas and lands with wilderness characteristics shall be evaluated during the environmental analysis for solar energy projects, and the results shall be incorporated into the project planning and design.

(a) Assessing potential impacts on specially designated areas and lands with wilderness characteristics shall include, but is not limited to, the following:

• Identifying specially designated areas and lands with wilderness characteristics in proximity to the proposed projects. In coordination with the BLM, developers shall consult existing land use plans and updated inventories.
• Identifying lands that are within the geographic scope of a proposed solar project that have not been recently inventoried for wilderness characteristics or any lands that have been identified in a citizen's wilderness proposal in order to determine whether they possess wilderness characteristics. Developers shall consider including the wilderness characteristics evaluation as part of the processing of a solar energy ROW application for those lands without a recent wilderness characteristics inventory. All work must be completed in accordance with current BLM policies and procedures.
• Evaluating impacts on specially designated areas and lands with wilderness characteristics as part of the environmental impact analysis for the project and considering options to avoid, minimize, and/or mitigate adverse impacts in coordination with the BLM.

(b) Methods to mitigate unavoidable impacts on specially designated areas and lands with wilderness characteristics may include, but are not limited to, the following:

• Acquiring wilderness inholdings from willing sellers.
• Acquiring private lands from willing sellers adjacent to designated wilderness.
• Acquiring private lands from willing sellers within proposed wilderness or Wilderness Study Areas.
• Acquiring other lands containing important wilderness or related values, such as opportunities for solitude or a primitive, unconfined (type of) recreation.
• Restoring wilderness, for example, modifying routes or other structures that detract from wilderness character.
• Contributing mitigation monies to a "wilderness mitigation bank," if one exists, to fund activities such as the ones described above.
• Enacting management to protect lands with wilderness characteristics in the same field office or region that are not currently being managed to protect wilderness character. Areas that are to be managed to protect wilderness characteristics under this approach must be of sufficient

size to be manageable, which could also include areas adjacent to current WSAs or adjacent to areas currently being managed to protect wilderness characteristics.

A A.4.1.2.2 Site Characterization, Siting and Design, Construction

LWC2-1 Solar facilities shall be sited, designed, and constructed to avoid, minimize, and/or mitigate impacts on the values of specially designated areas and lands with wilderness characteristics.

Via Email (blm_ca_crimsonsolar@blm.gov)

Crimson Solar Project
Attn: Miriam Liberatore, Project Manager
Bureau of Land Management
Palm Springs-South Coast Field Office
1201 Bird Center Drive
Palm Springs, CA 92262

Re: Draft Environmental Impact Statement and Draft Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan
(DOI-BLM-CA-D060-2017-0029-EIS; State Clearinghouse No. 2018031027)

Dear Ms. Liberatore:

On behalf of Arlington Solar, LLC ("Arlington"), a wholly-owned indirect subsidiary of NextEra Energy Resources, LLC ("NextEra"), we hereby submit comments on the Draft Environmental Impact Statement and Draft Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan ("Draft EIS/EIR") for the Crimson Solar Project ("Project"), proposed by Sonoran West Solar Holdings, LLC, a wholly-owned subsidiary of Recurrent Energy, LLC ("Applicant"). While we do not oppose the Project, as the developer of a project in the region that proposes to interconnect to the Southern California Edison ("SCE") Colorado River Substation ("CRS"), we have concerns about the potential for portions of the Project's solar array and associated facilities to be located too close to the CRS.

As discussed below, such location of the solar array and other facilities could compromise the ability of other proposed and possible future projects to interconnect with the CRS. Accordingly, we respectfully request that the BLM make clear in any right-of-way ("ROW") grant and any Land Use Plan Amendment that the Project solar arrays, facilities and fence line must be set back from the substation by a reasonable distance (perhaps 2000') to avoid impacts on future interconnections, unless the BLM or Applicant can show that any Project facilities located less than this distance from the substation boundary would not affect the ability of future projects to interconnect to the substation. Specifically, we want to ensure that in the future, there will be sufficient space surrounding the CRS to allow for additional 500kV interconnections around the west and south, and 230 kV lines coming in from the north and east.

19-1

I. The Final EIS/EIR Should Address Potential Effects on Future Interconnections to the CRS

The CRS plays a critical role in transmission and renewable energy planning in the region. As the BLM is well aware, there is an array of existing utility corridors (Section 368 and BLM corridors), U.S. Department of Energy's Energy Corridors, and a host of relating planning efforts that rely in part upon the CRS. In addition to a number of currently proposed and contemplated interconnections into this substation from across the region (see DEIS/DEIR, Table 3.1-1), such as the Desert Quartzite project and DCR Transmission, LLC's pending application for the 500-kV Ten West Link Project spanning from the Delaney substation to the Colorado River Substation, the CRS is designed to accommodate a number of future projects.

However, the Project, as currently depicted in the Draft EIS/EIR, could restrict the ability of future projects to connect to the CRS. In particular, the Project's proposed layout would surround the CRS on three sides with Project solar arrays and other facilities. On the eastern side, the solar array appears to be set back only several hundred feet from the CRS's existing footprint. On the south and west sides, the setback of Project facilities is, at most, one thousand feet or so. (See Appendix A, Figure 2-1.) This configuration would make it difficult for future projects to connect to the CRS.

The Draft EIS/EIR does not discuss potential effects from the Project's layout on proposed and future transmission in the region that will interconnect to the CRS. In Section 3.9.4, the Draft EIS/EIR discusses potential direct and indirect effects of the Proposed Action on Valid Existing Rights and Potential Conflicts with other rights, uses and interests (see Draft EIS/EIR, p. 3.9-3). Yet nothing is stated in this section about potential effects on the CRS and pending/future interconnections.

Appendix O, Section 3.1 does discuss potential conflicts with utility corridors, but this discussion provides only a short conclusion that the Project would not impact utility corridors because it would not place PV arrays or infrastructure on either CDCA Utility Corridor K, West-wide Section 368 Energy Corridor (Corridor 30-52 or BLM Utility Corridor J) (see Appendix O, Section 3.1). Yet the discussion does not analyze Project effects on regional transmission planning and the ability of future projects to interconnect into the CRS, which, notably, is located outside of Corridor 30-52. Indeed, as noted in the Section 368 Energy Corridor Regional Reviews—Region I, there is a lot of congestion in the area of Corridor 30-52:

> "There are five 500-kV SCE Transmission lines, including a recently completed 500-kV project within parts of the corridor in California between the Devers and Colorado River substations. Five major transmission lines and several major natural gas pipelines run through the corridor. Many of the energy production projects along I-10 and the Riverside East SEZ have generation-tie lines that use the corridors, **which create congestion near the major substations (Red Bluff and Colorado River)**. This congestion is compounded by the Mecca Hills and Orocopia Wilderness and Joshua Tree National Park, which reduce the size of and the potential for increasing the size of the corridor." (Section 368 Energy Corridor Regional reviews – Region 1, Corridor 30-52, March 2019, p. 5, emphasis added.)

Geographic constraints and congestion near the substations will only increase as the agencies modify corridors. Currently, the agencies are considering various revisions and reductions in the utility corridors in the region (see (Section 368 Energy Corridor Regional reviews – Region 1, Corridor 30-52, March 2019, p. 6.)

19-1 cont.

In addition, the Desert Renewable Energy Conservation Plan ("DRECP") and Eastern Riverside Solar Energy Zone ("SEZ") both anticipate a number of future solar projects in eastern portion of their relevant planning areas in the region, all of which will interconnect into the CRS. Yet these multiple, additional interconnections may be affected if the Crimson Project is allowed to locate its solar arrays and facilities in close proximity to the CRS.

Indeed, it is notable that the Applicant is seeking an amendment to the California Desert Conservation Area ("CDCA") Plan to identify the Project's footprint – including the portions of the site in close proximity to the Colorado River Substation – as suitable for the solar project, even though this footprint could impact substation interconnections for future projects contemplated in the DRECP and Eastern Riverside SEZ.[1]

II. The Final EIS/EIR, and Any Right of Way Grant and CDCA Plan Amendments, Should Ensure that the Project Layout Will Not Compromise Future Interconnections to the CRS

As stated above, Arlington does not oppose the Project, and submits these comments solely for the purpose of ensuring that future interconnections to the CRS are not geographically constrained. Accordingly, we respectfully request that the Final EIS/EIR, ROW grant, and CDCA Plan Amendments either require the solar array, facilities and fence line to be set back a minimum distance from the boundaries of the CRS that

[1] As discussed in the Draft EIS/EIR, CDCA Plan Amendments are required because the Project qualifies as a pending application subject to the CDCA Plan in place prior to adoption of the DRECP Land Use Plan Amendment and Western Solar Plan. (See Draft EIS/EIR, p. 2-1.)

ensures the viability of future interconnections, or that the BLM or applicant provide an analysis demonstrating that the proposed layout will not affect the viability of future interconnections into the CRS.

19-1 cont.

Thank you for the opportunity to provide comments on the Draft EIS/EIR.

ARLINGTON SOLAR, LLC

//Scott Castro//
Scott N. Castro
Senior Attorney

Letter 20

AHAMAKAV CULTURAL SOCIETY

Fort Mojave Indian Tribe

P.O. Box 5990 * Mohave Valley, Arizona 86440
Phone (928) 346-2700 * Fax (928) 346-2710

VIA ELECTRONIC MAIL

January 31, 2020 FMIT P035D 012720

Bureau of Land Management
Attention: Mr. Douglas J. Herrema, Field Manager
Palm Springs South Coast Field Office
1201 Bird Center Drive
Palm Springs, CA 92262
dherrema@blm.gov

State of California-Natural Resources Agency
Department of Fish and Wildlife
Attention Ms. Leslie MacNair, Regional Manager
Inland Deserts, Region 6
3602 Inland Empire Blvd. Suite C-220
Ontario, CA 91764

Reference: ***Fort Mojave Indian Tribe Section 106 Consultation and the Crimson Solar Project by Recurrent Energy (Sonoran West Solar Holdings, LLC, as Applicant) for the California Desert District Crimson Solar Project Draft Environmental Impact Statement/Environmental Impact Report/Plan Amendment***

Dear Mr. Herrema, and Ms. MacNair,

The Fort Mojave Indian Tribe (FMIT) thanks you for the opportunity to comment on the above Crimson Solar Energy Project proposed by Recurrent Energy (*Sonoran West Solar Holdings, LLC, as Applicant)* in accordance with the National Environmental Policy Act (40 CFR§ 1507); the National Historic Preservation Act, (NHPA 16U.S.C. 470 et seq., 1966), and the California Environmental Quality Act (CEQA / AB 52 § 21080.3.1). This Draft Environmental Impact Statement(EIS) and Environmental Impact Report (EIR)[1] addresses a possible United States Bureau of Land Management (BLM) amendment to the California Desert Conservation Area Plan of 1980, as amended (CDCA Plan); a possible decision to issue a right-of-way (ROW) grant for construction, operation, maintenance, and decommissioning of a solar electricity generation facility on BLM-administered public land; and possible California Department of Fish and Wildlife (CDFW) approval of a Lake and Streambed Alteration Agreement (LSAA) and issuance of an Incidental Take Permit (ITP).

[1] Crimson Solar Project Draft Environmental Impact Statement and Environmental Impact Report and Draft Land Use Plan Amendment to the California Desert Conservation Area Plan For the Palm Springs-South Coast Field Office Palm Springs, California and California Department of Fish and Wildlife, Region 6 Ontario, California November 2019 DOI-BLM-CA-D060-2017-0029-EIS State Clearinghouse Number: 2018031027

At this time, FMIT is requesting that we be formally considered in all aspects of this project pursuant to Section 106 of the National Historic Preservation Act (NHPA), Executive Order 13175; California Environmental Quality Act (CEQA), Public Resources Code § 21080.3.1(b), and Assembly Bill No. 52, §1 (b)(2). We understand that the BLM, in accordance with NEPA (40 CFR§ 1502.14(e)), has preliminarily identified their preferred alternative as a combination of Alternative B and Alternative C (Crimson Solar Project Draft EIS/EIR, page 2-17). **20-1**

As described, the ROW applicant, Recurrent Energy, proposes to construct, operate, and maintain a 350 megawatt (MW) photovoltaic, (PV) solar electrical generating facility on approximately 2,500 acres of BLM-administered lands, located south of Interstate 10, approximately 15 miles southwest of the City of Blythe, within the Riverside East Solar Energy Zone (SEZ) in Riverside County, California. The No-Build Alternative D would not amend the CDCA Plan to identify the site as a location for a solar project, nor would the BLM approve the ROW application. As the CDFW is also a co-lead, Alternative D would not allow a Lake and Streambed Alteration Agreement (LSAA) nor issue an Incidental Take Permit (ITP), (Crimson Solar Project Draft EIS/EIR, page 2-16).

FMIT is appreciative of the fact that we are able to discuss our concerns with both the BLM, Palm Springs Office and the CDFW Inland Deserts, Region 6 and as stated here, FMIT is not opposed to renewable energy and the benefits of harvesting non-fossil based energies, however, we do agree that the proposed location for the Crimson Solar Project is not suitable as the area is culturally and spiritually significant to Mojave. The project therefore, will cause a significant impact on the environment as a "substantial, or potentially substantial, adverse change in the environment," (CEQA §21068). Additionally, the project may affect special status species of fish, wildlife, native plants, and habitats held in trust by statute for all the people of California (Fish and Game Code § 711.7(a), Public Resource Code §21070, and CEQA Guidelines §15386(a)). [2] **20-2**

Mojave people have religious and cultural affiliations with the Mule Mountains; a National Registered Historic Property, a cultural resource Area of Critical Environmental Concern (ACEC), and a Long-Term Visitors Area (LTVA). Adjacent cultural landscapes are also significant to Mojave cultural identity including the Chuckwalla Valley Dune Thicket and Special Recreation Management Areas (SRMA), such as the Chuckwalla Valley itself. Important exclusion areas such as Wilderness landscapes, the Mule Wildlife Habitat Management Area (WHMA) and the Bighorn Sheep WHMAs (under the Northern and Eastern Colorado Desert Coordinated Management Plan); the Chuckwalla Desert Wildlife Management Area (DWMA)/ACEC; the Chuckwalla Mountain Wilderness and the Little Chuckwalla Mountain Wilderness are integrated into the Mojave social and religious belief system. The Bradshaw Trail Back Country Byway is part of the greater Native American trail system and further to the west and northwest within the Mojave cultural sphere is the Upper Chuckwalla Valley, Joshua Tree National Park Wilderness, Desert Center, and the sacred Eagle Mountain. The Palen-McCoy Wilderness, and the Big and Little Maria Mountains are also part and parcel to geographic-ethnographic[3] elements intertwined within the broader Mojave-Colorado Deserts and the Colorado River Corridor.[4] Mojave people have affiliations with ancestral cultural landscapes within the vicinity of all these management areas, however, our area also extends further north into the Great Basin, west to the Pacific Ocean, south to Yuma, and east to Gila Bend.

The cultural importance of these areas is paramount to Mojave cultural affiliation and identity. A great deal of time and effort over many years has taken place in establishing and protecting the above-mentioned

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[2] Crimson Solar Project Draft EIS/EIR, page 1-5.

[3] For Mojave, the term "ethnographic" is inclusive of spiritual and religious perspectives that are inherently linked with natural and cultural phenomena.

[4] Other important cultural landscapes include the ecological/environmental/ethnographic environments of Alligator Rock, Cadiz Valley, Tortoise Linkage Habitats, Corn Springs, Desert Lily Preserve, McCoy Valley, McCoy Wash Mule□McCoy Linkage Habitat, Palen Dry Lake and Palen□Ford Playa Dunes, and Historic Patton Military Camps.

federally protected cultural landscapes, environments, and resources. Over-all, Mojave prefer avoidance and protection of all tribal cultural resources, sacred-religious-ceremonial sites; both tangible and intangible, natural and cultural (NEPA, NHPA, and CEQA, Crimson Solar Project Draft EIS/EIR, page 3.5-1). In view of this relation to the proposed Crimson Solar Undertaking we appreciate this opportunity to discuss our issues and concerns regarding Mojave cultural and spiritual values. These points are discussed below:

Direct, Indirect and Cumulative Impacts

FMIT agrees with the recent statement put forward by the Advisory Council on Historic Preservation[5] which clarifies definitions for indirect:

> that the meaning of the term "directly" in Section 110(f) refers to the causality, and not the physicality, of the effect. This means that if the effect comes from the undertaking at the same time and place with no intervening cause, it is considered "direct" regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). "Indirect" effects are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

For Mojave, the above statement supports the broader heritage preservation spectrum, (NEPA and CEQA) and as the Draft EIS/EIR discusses analytical assumptions (Crimson Solar Project Draft EIS/EIR, page 3.1-2) regarding regulatory policy being consistent over time, where the project will be constructed, operated and decommissioned. Mojave view such consistency as cumulative impacts, or incremental loss. Therefore, we put forth that, there will be foreseeable negative impacts if the Crimson Solar Project is approved. As stated, (ibid page 2-13):

> The Proposed Action is anticipated to operate for a 30-year service life. At the end of this time, the project would cease operation or, alternatively, be renewed pursuant to the terms of the ROW grant for continued use as a solar/energy facility or another use consistent with the applicable statutes and regulations at the time. undertaking is approved.

Incremental loss of environmental and cultural significance for 30-years and perhaps for an additional 30-years is cultural "loss" for an entire Mojave generation. For Mojave, there will be a significant impact on Tribal cultural and environmental resources within the project area and within the entire Chuckwalla Valley, the Mule Mountain Range and further into the Mojave and Colorado Desert. As we have discussed previously, Mojave traditional cultural resources, sacred areas, religious and significant important places exist and encompass the entire region including the Colorado River Corridor. The substations, ancillary facilities, fences, battery storage, access roads, lighting, discharge, water usage, operations and maintenance buildings and the interconnecting power lines will change the Chuckwalla Valley forever. For Mojave adverse effects, direct, indirect and cumulative include the socio-cultural environments, above and below the surface of the Earth. Just one of several prime directives documented within many of the above land management plans is to, "Protect desert pavement and other soils and geologic features important to the cultural resources of the site."[6] We believe management objectives for the area will be in jeopardy if the Crimson Solar Project proceeds. We are concerned for the entire renewable energy corridor and what the consequences will be if there is not a full re-evaluation of project effects. The BLM's Northern and Eastern Colorado Desert Coordinated Management Plan[7] (NECO) lists seven objectives:

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20-4

[5] June 7, 2019 Memorandum To: ACHP Staff From: ACHP Office of General Counsel Re: Recent court decision regarding the meaning of "direct" in Sections 106 and 110(f) of the National Historic Preservation Act

[6] Desert Renewable Energy Conservation Plan, SCH. No. 2011071092 BLM/CA/PL-2014/025+1793 FWS-R8-ES-2014-N165 September 2014, page 133, Appendix B.

[7] https://eplanning.blm.gov/epl-front office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=96990

1. Maintain wildlife connectivity between the Chuckwalla DWMA/ Palo Verde Wilderness and the Palen-McCoy Wilderness.
2. Bighorn sheep goals and objectives are detailed in Section 2.3.1 of the NECO Plan.
3. Desert mule deer goals and objectives are detailed in Section 2.3.1 of the NECO Plan.
4. Special Status Species goals and objectives are detailed in Section 2.3.2 of the NECO Plan.
5. Maintain the integrity of the sand transport system/ sand sources and Mojave fringed□toed lizard habitat.
6. Protect the microphyll woodland habitat, particularly the microphyll woodland on the southern portion of the ACEC in the area of the Palo Verde Mesa.
7. Provide for the protection of cultural resources associated with the Palen and Ford playas.

20-4 cont.

Management objectives for the NECO, and SMRA values seem incompatible and at odds with the Crimson Solar Project, as the facility will interrupt views, disrupt and un-balance delicate ecological linking habitats disrupt Mojave spiritual sacred landscapes. The project will strip topsoil, level, trench and fence approximately three-thousand acres of pristine cultural and natural ecosystems. The entire region is slowly being destroyed and sensitive lifeways are being extinguished. Removing and clearing desert soils lead to substantial erosion and the loss of valuable topsoil and sands. Also, cumulative impacts are compromising this desert ecosystem and will impact and cause substantial adverse change in the significance of archaeological resources (CEQA § 15064.5) and historic properties (NHPA 36 CFR Part 800). An analysis of one project is not realistic and disregards actual cumulative impacts.

A sensitive management example involves the endangered desert tortoise (Gopherus *agassizii* and/or Gopherus *morafkai*). The United States Fish and Wildlife Service reported[8] that the desert tortoise is being impacted by human activities in the Mojave and Colorado Deserts. In 2018 Hoffman noted that:

> The most apparent threats to the desert tortoise are those that result in mortality and permanent habitat loss across large areas, such as urbanization and large-scale renewable energy projects, and those that fragment and degrade habitats, such as proliferation of roads and highways, off-highway vehicle activity, and habitat invasion by non-native invasive plant species…
>
> We remain unable to quantify how threats affect desert tortoise populations. The assessment of the original recovery plan emphasized the need for a better understanding of the implications of multiple, simultaneous threats facing desert tortoise populations and of the relative contribution of multiple threats on demographic factors (i.e., birth rate, survivorship, fecundity, and death rate; Tracy et al. 2004).

20-5

Mitigation through re-locating desert tortoise into other areas does not appear to be a viable management process. Other projects within other federal departments do not seem to have a positive success rate. Fort Irwin is an example,[9]

> The incremental effect of the larger actions (i.e., solar development, the expansions of Fort Irwin and the Marine Corps Air Ground Combat Center) on the desert tortoise is unlikely to be positive, despite the numerous conservation measures that have been (or will be) implemented as part of the actions. The tortoises that were translocated by the Navy from the Johnson Valley Off-highway Vehicle Management Area [and] were moved into populations that were below the Service's established minimum viable density, to attempt to augment these populations and make them more viable in the long-term. The acquisition of private lands as mitigation for most of these actions increases the level of protection afforded these lands; however, these

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[8] *The Status of Desert Tortoise and Its Critical Habitat*, USFWS, Scott Lawrence Hoffman, 2018, page 1. https://www.fws.gov/nevada/desert_tortoise/documents/misc/status-desert-tortoise.pdf

[9] https://www.fws.gov/nevada/desert_tortoise/documents/misc/status-desert-tortoise.pdf. 2011, pages 5-6.

> acquisitions do not create new habitat and Federal, State, and privately managed lands remain subject to most of the threats and stresses,,,

20-5 cont.

Another example, the Eagle Mountain Pumping Storage Project, is located approximately 40 miles north-northwest of Mule Mountain. The California State Water Board concludes, that,[10]

> ...the Eagle Mountain Pumped Storage Project "may have significant impacts on geology, soils, and mineral resource if the Project does any of the following: (a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of an earthquake fault, strong seismic ground shaking, seismic-related ground failure, liquefaction, or landslides (b) Result in substantial soil erosion or the loss of topsoil (c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse (d) Be located on expansive soils, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property (e) Affect soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are unavailable for the disposal of waste water (f) Cause inundation by seiche, tsunami, or mudflow (g) Result in loss of available mineral resource that would be of value to the region and the residents of the state and/or (h) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan...

In addition, archaeological and cultural resources are located southeast of Eagle Mountain and continue within the Chuckwalla Valley and Mule Mountain range. For Mojave tribal cultural resources, are also seen as layered within the natural resource ecosystem, in that, for instance (but not limited to), artifacts, baskets, pottery, ground stone tools and animals are sourced from a spiritual context. In that manner, one does not separate cultural from natural and vis-a-versa. As documented in the DRECP (ibid page 197),

20-6

> The Mule Mountains are known to contain major rare colonies including a maternity roost for California leaf-nosed bats. The proposed area is known to be at a high sensitivity for cultural resources. Prehistoric Trails are present along the pediments and bajadas in the northern Mules and southern McCoys. These trails appear to have once connected across the I-10 corridor and numerous sites relative to trails appear within the sand transport corridor south of the I-10. A National Register (NRHP) Petroglyph site and natural water source is located on the northwest edge of the Mules and from there, viewshed issues are of an elevated concern. Recent discoveries of Native American cremations have been documented in the area south of I-10, east of Wiley's Well Road, and North of the Mule Mountains. An ancient Pleistocene/Holocene transition period shoreline of Ford Dry Lake has been documented immediately west of the Wiley's Well Rest Stop and Paleoindian artifacts have been recorded along that shoreline contour, and along the southwestern pediment of the McCoy mountains, The area was also actively utilized during WWII for the Desert Training Center.

Projects in this relatively small area, approximately 250 square miles from Eagle Mountain through to the west side of the Mule Mountains, are contributing to cumulative, indirect, and direct impacts. Environmental degradation and the loss of species and habitats will most likely become aggravated with climate change

Balance and Natural Resource Environmental Issues: a) Water

In the context of the above discussion and attempting to explain Mojave spiritual values as layered and holistic, we are concerned with the consequences to natural, cultural and environmental resources if the Crimson Solar Project be permitted. Balance of the natural and spiritual elements are tied to the environment

20-7

[10] Eagle Mountain Pumped Storage Project Final Environmental Impact Report of July 2013, page 3.1-20.

as we have mentioned above. The Supreme Court[11] has acknowledged that environmental harm, by its nature, is often permanent or irreparable, and that the "balance of harms usually favors issuance of an injunction to protect the environment., (Amoco Prod. Co., 480 U.S. at 545).

Mojave look from the past, to the present, to the future and consider the environment as part of a critical cultural continuum that is affected by human activities and consequences, specifically within this region. Therefore, when we look towards the future and being Aha Makav, People of the River, we are apprehensive about future water usage, and energy needs and how these elements are being considered. We are aware that permitting requires additional applications and other agencies. FMIT through the ACS, review all projects in the broader cumulative context specifically with future generations and concerns about natural and cultural resources. We would like the BLM and the CDFW to address the following questions: 20-7 cont.

1. Has the BLM and CDFW reviewed California SB 610[12] requirements in regard to the Crimson Solar Project water usage and mining of ground water? 20-8
2. Has the BLM and CDFW considered how the Crimson Solar project proponents are planning on managing requirements for discharge of contaminants? 20-9
3. The Chuckwalla Valley Ground Water Basin is being affected by the multiple energy projects within this area. What are the water usage parameters for the Crimson Solar Project and in view of climate change, has the BLM and CDFW reviewed future water recharge values for the Basin? 20-10
4. Has a regional detailed soil mapping program been completed for the water supply corridor in the entire Chuckwalla Valley? 20-11

Our primary concerns for water management is balance and considerations for critical habitats and cultural-spiritual needs of Mojave. Water as a life source is originating from the Colorado River Corridor. Chuckwalla Valley and the Palo Verde Mesa groundwater basins are contributors to this system which is operated through a group of compacts, federal laws, court decrees, and contracts that form the "Law of the River," which is managed by The Colorado River "Accounting Surface" method. FMIT is concerned with cumulative water usage by all of the energy projects within the Riverside East Solar Energy Zone, including the Crimson Solar Project.

According to Greer et.al., [13] the *Accounting Surface* method was developed by the U.S. Geological Survey (USGS), in accordance with the Law of the River, "to determine static groundwater elevations in contributing basins that replenish the Colorado River." Greer et., al., adds that, (ibid pages 3-4): 20-12

> In general, if groundwater elevations go below the Accounting Surface elevation, then subsequent groundwater withdrawals are considered Colorado River extractions and infringe on water rights established in the Law of the River. This interpretation does not necessarily represent the true physical nature of surface water– groundwater connectivity for the Colorado River, but it does allow for a basin-wide assessment of potential effects on Colorado River flows that are critical in supplying water users.

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[11] Federal actions significantly affecting the quality of the human environment. 42 U.S.C. § 4332(2)(C).

[12] http://toolkit.valleyblueprint.org/sites/default/files/sb_610_bill_20011009_chaptered.pdf Senate Bill No. 610 CHAPTER 643 An act to amend Section 21151.9 of the Public Resources Code, and to amend Sections 10631, 10656, 10910, 10911, 10912, and 10915 of, to repeal Section 10913 of, and to add and repeal Section 10657 of, the Water Code, relating to water. http://www.swhydro.arizona.edu/07symposium/presentationpdf/ReillyM_pro.pdf Prepared By: Maureen Reilly and Iris Priestaf 2007. "The requirements of California SB 610 are designed to ensure there are sufficient resources for the community in the future. The process of preparing a WSA often opens communication among stakeholders including regional managers, water wholesalers and retailers, county and city planning staff, and developers."

[13] *A Groundwater Model to Assess Water Resource Impacts at the Riverside East Solar Energy Zone,* by Chris B. Greer, John J. Quinn, Adrianne E. Carr, and Ben L. O'Connor Environmental Science Division, Argonne National Laboratory prepared for Bureau of Land Management National Renewable Energy Coordination Office U.S. Department of the Interior Washington, D.C. December 2013

An overdraft of water occurs if water mining exceeds output. If cumulative water usage is not considered within the total Riverside SEZ, there will be an overdraft of water, or a "deficit." Greer et., al., (ibid, page 1) specifically states that,

> Groundwater is the primary water resource available for solar energy development in most of the SEZs and impacts of groundwater withdrawals were investigated qualitatively and semi-quantitatively in the Solar PEIS to assess the range of potential effects. The impacts of reduced groundwater flow to streams, springs, seeps, and wetlands would depend on the connectivity of surface water and groundwater in the region. These impacts would include a decreased supply of water for downstream users; loss of wetland vegetation species; loss of habitat and forage for wildlife, wild horses, and livestock; and others.

20-12 cont.

In this regard, FMIT concurs that the "Project site and its vicinity could experience an increase in the intensity of high rainfall and flood events, which could result in greater stormwater runoff and flash flooding, and an increase in soil erosion on-site and sedimentation on-site and downstream from the site. Implementation of a stormwater management plan would minimize or avoid the degradation of the Project from increased runoff, especially during major storm events" (Crimson Solar Project Draft Environmental Impact Statement and Environmental Impact Report 3.4-4). Therefore, will the total projected water supply available during normal, single dry, and multiple dry water years during a 30-year projection meet the forecasted water demand of the energy facilities within the Riverside SEZ, in addition to existing and planned future uses of other identified water supplies? Has the BLM and the CDFW evaluated the Project's impacts on the Chuckwalla Valley Basin aquifer and on human and environmental justice and on all other ecological communities that rely on that desert aquifer for life-sustaining resources?[14]

20-13

Defining Tribal Cultural Resources and Sensitivity for Buried Archaeological Resources

"Geomorphological field investigations of the Project APE were conducted concurrently with archaeological Phase 2 testing excavations in August 2019 and included detailed geomorphic mapping and field inspection of a representative sample of the geomorphic surfaces tentatively identified on satellite imagery," (ibid 3.5-10). For the Crimson Solar project and projects within the REZ, in evaluating geomorphological and archaeological field investigations for cultural resources, we do not see where tribal perspectives and knowledge are informing representative samples of the geomorphic surface models. How does the BLM's GIS Sensitivity modes and completing inventories per 36 CFR 8000.4(b)(2), incorporate tribal participation and knowledge in providing for ongoing consultation with Native American Indian Tribes and develop strategies for protecting recognized traditional uses?

A western scientific perspective in developing a GIS based sensitivity model does not integrate tribal perspectives regarding cultural resources. For Mojave, our concerns cover both tangible and intangible elements. Mojave view cultural resources holistically, not just as a cultural site or a type of site, but from a layered perspective, that includes spiritual, social, ecological, geological, and geographical components. Cultural resources and landscapes are directly tied to traditional knowledge for such properties "retain the religious artistic, or cultural associations of the natural element rather than material cultural evidence, which may be insignificant or even absent."[15]

20-14

"An archaeological predictive model is a tool that indicates the relative probability of encountering an archaeological site. These are sometimes referred to as archaeological "sensitivity" maps because they indicate that some locations are more sensitive than others for cultural resources," [16] We would like to

[14] https://protectnps.org/wp-content/uploads/2018/09/2018_08_31_Eagle-Crest-IBLA-appeal-and-SoR-FINAL-w-Exhibits.pdf
[15] https://whc.unesco.org/en/culturallandscape/#1
[16] http://environment.transportation.org/documents/MN_Model/chapters/app_a.htm

suggest that an inherent bias is restricting data outcomes because the western scientific geomorphological and archaeological models are not taking into consideration tribal perspectives on identifying archaeological sites, eligibility parameters of those sites, and the connectivity of intangible/tangible elements within a cultural landscape. The outcome reduces "sensitivity" and significance in relation to tribal perspectives as to where, what and how significant "sites" are located especially if only representative samples are being considered.

20-14 cont.

FMIT understands that within the context of the Crimson Solar Project Draft Environmental Impact Statement and Environmental Impact Report,

> The BLM is in the process of reviewing NRHP eligibility evaluations and has not made formal determinations of eligibility and findings of effect under Section 106 of the NHPA for any of these resources…the Project could also adversely affect buried and currently unknown archaeological resources with Natural Register-eligible characteristics, (3.5-12).

As mentioned above, the BLM has not completed eligibility determinations within the Crimson Solar Project, and state that the Project could cause adverse effects to buried, unknown archaeological resources. The CDFW, on the other hand, is "following preliminary recommendations of resource eligibility prepared by Applied Earthworks, as presented in Addendum I (Price 2019)," (Crimson Solar Project Draft EIS/EIR, page 3.5-8). We look forward to knowing how eligibility determinations will be realized in the absence of consulting with FMIT while agencies collected data though either Class I, II or III research activities. As FMIT was not given the opportunity to review the addendum by Price (2019), as the CDFW did, FMIT is not able to contribute our free and informed consent regarding the CDFW's preliminary recommendations of resource eligibility. In the mentioned Addendum 1, "sites were eligible for listing in the National Register, such that they included (Crimson Solar Project Draft EIS/EIR, page 3.5-9):

20-15

> Both single component sites and multicomponent sites where only one component is eligible. CDFW has determined that these resources are eligible for listing in the California Register (Table 3.5-1) and could be impacted by the Project.

A Table such as 3.5-1 is a good summary, but it does not offer full disclosure and enough information to allow a complete and best effort review by FMIT. Nor are we able to contribute our cultural perspective in regard to analytical data, information, and results "of any future geoarchaeological investigations of the Project area" (ibid page 3.5-11) as we were not able to review this material. Our contribution as a Sovereign Tribal government has been limited, and we can only know for certain that the proposed Crimson Solar project will have a significant impact on our Tribal Cultural Resources (CEQA § 21074). For Mojave, tangible and intangible elements, and proximity of sites within a cultural area can be very dense. "Sites," for Mojave people, are not perceived as individual loci. Rather multiple, close sites, with 'over-lapping boundaries,' are intrinsically accepted as "cultural landscapes," and are part and parcel to our collective well-being. For the Mojave people, separating these sites, destroying these sites, not avoiding these sites is akin to ignoring associative aspects that include religious and or artistic cultural values. Natural resources within the landscapes and spiritual teachings are tied together, manifesting though cultural traditions, such as oral histories and learning skills (not limited to) in hunting, pottery, basketry, and cooking. Seasonality and cycles of life are integrated with social well-being, leading to balance within nature and the universe.

20-16

It is important that FMIT be able to participate in management planning and if we had received complete information, specifically relating to tribal cultural and archaeological resources, we could have contributed to the planning and management of mitigation measures. The Draft EIR/EIS discuses proposed actions for cultural resources through the implementation of mitigation measures. There are 23 resources "within the direct effects APE that CDFW has determined are eligible for listing in the California Register and could be directly impacted by the Project," (Crimson Solar Project Draft EIS/EIR, page 3.5-14). As stated in the report (page 3.5-14), "Even though Mitigation Measures CUL-1 through CUL-10 (Cultural) are designed

to reduce impacts on historical resources, they may not fully resolve adverse changes in the significance of the resources."

20-16 cont.

In summary, we are not opposed to renewable energy, however, we feel that the installation of the Crimson Solar facility in the proposed location is not within the best interests of the FMIT or the Public. FMIT concurs that the Crimson Solar Project and any renewable energy facility within this landscape is not suitable for a multiple use management plan and that these projects degrade environmental quality, social justice, interferes with Mojave tribal traditional religious practices and inhibits public enjoyment. The Mule Mountain ridge system is part of a sacred, religious cultural landscape[17] for the Mojave people, and if the undertaking, is to proceed, it will be contrary to management and planning mandates as defined within the Federal Land Policy Management Act (U.S. C. 43, Title 43 Chapter 35, Subchapter VI, (§1781 (b).

At this time, due to the possibilities of locating tribal cultural resources on the proposed project parcel, we can assume that cultural resources will be impacted within the area of potential effect. FMIT, through a review of the received proposed project information by the AhaMakav Cultural Society, agrees that the project, as described, may ***show substantial evidence, that the project may have a significant effect on the environment (CEQA §21083, Public Resources Code; Reference: Sections 21 064, 21064.5, 21080(c), and 21082.1) or on cultural resources or values of significance (AB 52, §1(b)(2) to the FMIT Tribe.***

20-17

In accordance with the National Historic Preservation Act, [NHPA 16U.S.C. 470 et seq.] 1966, undertakings that have a direct bearing on the review process are referred to in S101(d)(6)(A), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969). **We are requesting that the Crimson Solar permit application for a Right of Way (ROW) and a Plan of Development (POD) be declined. The FMIT, through the AhaMakav Cultural Society, agrees that the project as described will adversely affect properties of cultural or sacred significance to the FMIT Tribe.** The partial findings of this S106 review resulted in a determination of **Adverse Effects.**

At this time, we re-iterate our request that the BLM formally send Crimson Solar Project archaeological survey reports, records, maps and confidential cultural resource site information to the FMIT Chairman, Mr. Timothy Williams as soon as possible, in order to complete our S106 review in a thorough and professional manner. FMIT will have additional comments and concerns after completely reviewing other pertinent documents or information. The FMIT appreciates this opportunity to provide our statements and we look forward to continuing our combined efforts in achieving mutually agreed objectives regarding continued government-to-government consultations, and/or staff discussions, for the Crimson Solar Project. If you have any questions, please do not hesitate to contact me by phone at (928) 346-2700 or by email at lindaotero@fortmojave.com.

20-18

Thank you for consulting with the Fort Mojave Indian Tribe.

[17] American Indian Religious Freedom Act (42 U.S.C. 1996) and Executive Order 13007 of May 24, 1996 (Indian Sacred Sites).

Sincerely,

Ms. Linda Otero, Director
AhaMakav Cultural Society, Fort Mojave Indian Tribe

CC:
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Mr. Douglas J. Herrema J. D.
Field Manager
Palm Springs South Coast Field Office
Bureau of Land Management

Via Electronic Mail

January 22, 2020

Dear Mr. Herrema:

The Historic Preservation Office of the Ft. Yuma Quechan Tribe is formally requesting an extension of two weeks to the comment period for the Crimson Solar Project Draft Environmental Impact Statement and Environmental Impact Report and Draft Land Use Plan Amendment (EIS/EIR/PA). We feel this extension is warranted, because the Tribe has not been provided with all pertinent project documents that are necessary for our complete and thorough review of the Draft EIS/EIR/PA. This additional time will allow us to review the documents that were recently provided to the Tribe, have internal discussions about the project, and provide our specific comments on the Draft EIS/EIR/PA.

21-1

Should you have any question feel free to contact the Historic Preservation Office at 760-572-2423 or historicpreservation@quechantribe.com

Sincerely,

H. Jill McCormick, M.A.
Historic Preservation Officer

QUECHAN INDIAN TRIBE

Fort Yuma Indian Reservation

Historic Preservation Office

P.O. Box 1899
Yuma, Arizona 85366-1899
Phone (760) 572-2423
Cell (928) 261-0254

Ms. Magdalena Rodriguez
Project Manager
CDFW Inland Deserts Region
3602 Inland Empire Blvd Suite C-220
Ontario, CA 91764

Mr. Nathan Voegeli
Attorney – Tribal Affairs
California Department of Fish and Wildlife
CDFW Office of the General Counsel
1416 Ninth Street, Suite 1341
Sacramento, CA 95814

Mr. Douglas J. Herrema J. D.
Field Manager
Palm Springs South Coast Field Office
Bureau of Land Management

Via Electronic Mail

May 7, 2020

RE: Comments on the Draft Environmental Impact Statement/Environmental Impact Report/Plan Amendment for the Crimson Solar Project, Riverside County, California

Dear Ms. Rodriguez, Mr. Voegeli and Mr. Herrema:

We are providing comments on the Draft Environmental Impact Statement/Environmental Impact Report/Plan Amendment for the Crimson Solar Project, Riverside County, California. A project of this scale will have significant impacts on cultural and environmental resources along with impacts to the landscape and view sheds that are important to the Quechan Tribe. Projects such as Crimson Solar occupy thousands of acres of land in the Mojave Desert along the I-10 corridor that is part of the Quechan Tribe's ancestral lands and cultural patrimony. As you should be aware, many tribes believe that the disturbance of a landscape, and destruction or removal of prehistoric archaeological resources is taboo. 22-1

These resources comprise a unique footprint that proves to the world that the tribes have been living in this place since time immemorial. When these resources are removed or destroyed, it makes it increasingly difficult for the tribes to demonstrate that these places are their ancestral homeland; places that tie current people and cultures to their origin histories.

The Crimson Project, specifically, sits within a cultural landscape that contains numerous features, landmarks, and view sheds that the Quechan people are intimately tied to not just culturally, but also religiously. Although these are intangible values that cannot be quantified through archaeological and scientific processes that does not lessen their importance to the continuing cultural practices of the Quechan people. We cannot fully express the importance of these locations and how the impacts of these projects affect the continuity of connection of the Quechan people to the places of their origin histories. The Quechan people were the original caretakers of these locations and the people today still feel that responsibility.

22-1 cont.

We say all of this, to lay the groundwork to discuss the connection of locations and the actual items left by the ancestors of the current Quechan people and their religious connection and responsibilities to these places and items of cultural patrimony. The Bird Songs of the people specially name these places and tie them to this cultural landscape that began at the time of the origin of the Quechan people. The Mule Mountains, McCoy Mountains, Palen Mountains, Eagle Mountains, Big Maria Mountains, and the Palo Verde and Chuckwalla Valleys are part of a connected landscape that are tied to areas outside of this region through an association to a landscape that cannot be viewed independently, but must be seen as a linked cultural landscape. If one piece of this landscape is impacted it impairs the religious integrity of the whole to the Tribe. These locations establish an integral web of significant places imperative to the continuation of Quechan religion. Additionally, this area is part of an important travel corridor that the Quechan people use to travel to locations to gather resources used for medicine and healing, ceremonial practices, and sustenance. This region also contains habitat for the local wildlife. These animals are important for their connection to the creation history and ultimately the cultural patrimony of the Quechan people. All of these aspects are essential and central to the cultural teachings of the Quechan people that occurred in the past and continue even today.

22-2

The Draft EIS/EIR states within the CEQA Summary section (3.5), "The following discussion pertains solely to archaeological sites and does not consider further the isolated artifacts that CDFW has determined ineligible." This statement is made without any discussion of the rational used to determine sites from isolated artifacts, and if the determinations made by the contractor, Æ, are in fact correct under California site criteria. The Class III Cultural Resources Inventory for the Crimson Solar Project, Riverside County, California states the methodology employed by the survey crew, "For the purpose of this survey, and in consultation with BLM Archaeologist George Kline, three or more artifacts greater than 50 years of age within a 30meter (98foot) radius were recorded as a site." A review of the recorded sites and isolated artifacts listed within the cultural resources inventory would conclude that this methodology was not followed. Numerous artifacts listed as isolates were obviously not evaluated using the criteria stated in the cultural resources inventory report, and were merely listed as isolates, given no further evaluation and determined not eligible. Furthermore, inconsistent recording methodologies were employed by the various survey crew personnel during the recording of features, artifacts and characteristics of artifacts that, we feel, have led to ill-informed determinations of eligibility for both the National Register of Historic Places (NRHP) and the California Register of Historic Resources (CRHR) and ultimately impacted the analysis of these resources during the completion of the Draft EIS/EIR.

22-3

The Class III report states, "This report provides the information needed to prepare the cultural resource impacts analyses and relevant sections of the Draft EIS/EIR." Although the Draft EIS/EIR mentions that Tribal input was considered, the methodology employed for analysis should be consistent and in agreement with CEQA regulations. Therefore a comprehensive discussion of Tribal Cultural Resources (TCR) should have been included within the Draft EIS/EIR. A Tribal Cultural Resource, as defined by CEQA/AB 52 as,

> Tribal cultural resources are either of the following: 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following: (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources. (B) Included in a local register of historical resources as defined in subdivision (k) of§5020.1. (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of§5024.1. In applying the criteria set forth in subdivision (c) of §5024. I for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe. (Pub. Resources Code, § 21074)

22-3 cont.

The cultural resource inventory fails to mention TCRs and instead contains lengthy discussions of only the archaeological and scientific values of the resources. The document failed to analyze the resources using these guidelines, which in turn has affected their analysis in the Draft EIS/EIR. Had a discussion of TCRs occurred, with Tribal input, the discussions would have centered on the value of those resources from a Tribal perspective. For example, an isolate (AE-3372-002-ISO), described as a ceramic concentration (single vessel), may not hold archaeological or scientific value, however, to a Tribe, that vessel may have significant cultural context and meaning, and be part of a larger geographical setting that is lost on an archaeologist with no knowledge of intimate, cultural details. The list of isolates within the cultural resources inventory is full of examples such as this and numerous examples of the incorrect classification of artifacts as isolates per the direction of BLM archaeologist, George Kline.

In addition, the cultural resource inventory contains determinations of eligibility that are inconsistent and follow no logical formula in their application. As an example, CA-RIV-11650 is described as a ceramic scatter containing 60 ceramic sherds in two loci with two direct rims present. We concur that this site meets the conditions for NRHP eligibility, because the site contains rim sherds which are diagnostic. Site AE-3372-165 (no trinomial provided) is also a ceramic scatter, which contains 27 painted ceramic sherds. This site is listed as not eligible for the NRHP. This site contains decorated ceramic sherds, which are rare in this region and also diagnostic. So, the question is why is one site which contains diagnostics listed as eligible, but another site, which also contains diagnostic artifacts, is not? Site CA-RIV-10963 is described as a ceramic and lithic concentration containing 147 ceramic sherds, cores, a percussion blade, and a discrete knapping station. The ceramics at this site contain a rim sherd and several shoulder/neck fragments. This site is not listed as NRHP eligible, but we question this determination. The rim, shoulder and neck sherds are diagnostic. This, along with the presence of a chert blade, should raise this site to the level of meeting the conditions of eligibility for the NRHP. More such examples could be given, but we feel these examples are adequate to support the argument that the level of critical review of the sites within this project has not been met. As CEQA acknowledges the importance of Tribal input regarding their expertise in assessment of

22-4

the resources this project should adhere to the guidelines set by AB 52.

> Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because the California Environmental Quality Act calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.

Again, the lack of analysis of these resources both through the CEQA/AB 52 TCR context in conjunction with archaeological and scientific values has produced flawed results per CEQA regulations.

22-4 cont.

As we have stated previously, a project of this scale will have significant impacts on cultural and environmental resources along with impacts to the landscape and view sheds that are important to the Quechan Tribe. Per the California Office of Historic Preservation, "Mitigation of significant impacts must lessen or eliminate the physical impact the project will have on the historical resources." We would like to provide input on mitigation of the impacts of this project on the resources, landscapes and view sheds so important to the Quechan Tribe.

Our first option would be the complete avoidance of all sites and isolates within the current direct APE (alternatives A and B in the Draft EIS/EIR) and the project footprint (alternative C, preferred alternative in the Draft EIS/EIR). This could be achieved by relocating the project footprint outside of the area with sites and isolates or a redesign of the project footprint to avoid all sites and isolates. Our next preferred mitigation measure would be collection and replacement of materials from all sites and isolates. The artifacts that will be impacted can be collected and moved to an area outside of the project direct and indirect APE and any future development areas. Upon locating a suitable location, done in consultation with Tribes, the artifacts would be placed within the new location, fully spatially recorded and a light capping placed over the artifacts to ensure they are not visible to the casual visitor to the area. We feel that this proposed mitigation is not outside of the scope of reasonable options given that the California Office of Historic Preservation discusses this option as a feasible alternative.

22-5

> Relocation of an historical resource may constitute an adverse impact to the resource. However, in situations where relocation is the only feasible alternative to demolition, relocation may mitigate below a level of significance provided that the new location is compatible with the original character and use of the historical resource and the resource retains its eligibility for listing on the California Register (14 CCR Section 4852(d)(1)). Merely recovering artifacts and storing them does not mitigate impacts below a level of significance.

This proposed mitigation could be a means to reduce the level of impact of this project to less than significant.

We urge you to pause the project until a more thorough examination of the sites have been completed and Tribe has been provided adequate documentation to support the basis for the NRHP eligibility decisions and a comprehensive analysis under CEQA in the Draft EIS/EIR has been completed. Additionally, we urge you to consider the information that the Tribe has provided within this letter regarding the significance of the landscape and resources in regards to

22-6

CEQA and Tribal Cultural Resources and our proposed mitigation measures for the project.

We would like to continue to consult with CDFW and BLM to mitigate the effects of this project and work to lessen the impacts of the project on the cultural resources within the project area. Should you have any question feel free to contact the Historic Preservation Office at 760-572-2423, Cell: 928-261-0254, or historicpreservation@quechantribe.com

22-6 cont.

Sincerely,

H. Jill McCormick, M.A.
Historic Preservation Officer

Manfred Scott
Acting Chairman, Quechan Cultural Committee

Ernestina Noriega
Quechan Cultural Committee

Cc: Julianna Polanco, CA SHPO
Karen Moritson, CA BLM State Director
Joe Stout, CA BLM Associate State Director
Steve (Tony) Overly, Deputy Preservation Officer/State Archaeologist, Paleontology, and Tribal Relations Lead, CA State Office
Valarie Hauser, ACHP, Office of Native American Affairs
Ira Matt, ACHP, Senior Program Analyst
Bill Marzella, ACHP, Program Analyst, BLM Liaison

TR

CRIMSON SOLAR PROJECT

DRAFT EIS/EIR/IPA PUBLIC COMMENT MEETING

UC Riverside, Palm Desert Center
Palm Desert, California

Monday, December 2, 2019
5:00 P.M. to 7:00 P.M.

Transcribed by: Christine Bemiss, RPR, CSR 10082

PALM DESERT, CALIFORNIA

MONDAY, DECEMBER 2, 2019

* * *

(The following audio-recorded proceedings were transcribed to the best of my ability due to the quality of the audio recording:)

MR. EMMERICH: Right. My name is Kevin Emmerich. I'm with an organization Basin and Range Watch, and we've been following large energy projects like this for about 12 years.

So, anyway, I just will get started with it. Well, number one, I want to talk about the impacts that I see on this particular project, and I see that it's been highly mitigated, and it looks as though that you're attempting to avoid a lot of the microphyll woodlands. That's that area by the Bradshaw Trail and then all your development down there, your flattest area, but there are quite a number of washes in there, and you haven't avoided all the microphyll. There's quite a -- there's Palo Verde trees and Ironwood that are kind of spread out throughout the entire site. I would challenge the one point whatever acres of microphyll. I would think it's more than that. So I would request some clarification of that in the EIS. TR-1

I'm looking at the map here. I see that it's a

very large area, 2500 megawatts. It's not clear to me what kind of solar panels would be used and how reflective they are. And one of the really big issues that we've had with solar projects is the avian effect, and I believe the solar industry sort of undermined the avian lake effect, I mean, 'cause they said there hasn't been enough evidence that it's killed a lot of birds, but we see projects like the Desert Sunlight Project, a lot of the Imperial Valley projects. I think Imperial Valley has about 40 square miles of PV in it now. Some biologists I talked to in Imperial Valley tell me some of those projects turn up buckets of dead birds a day.

TR-2

TR-3

And it's really interesting about this one, it's gonna be right next to the Desert Quartzsite, which is about to be approved by BLM. It's about 3800 acres. You got a fairly large cumulative scenario here, 2500 acres. There's almost 10,000 acres of pending near Blythe. You got Desert Sunlight to the west, the Genesis Project. And so monitoring might not be enough. I mean, this could actually be a really giant cumulative effect for bird kills.

I want to comment also as well on visual resource here. And your posters only show views where you're not gonna see the project. Now, take a look at that map here. You're on a visual resource class -- VRM

TR-4

Class 4, but you're right next to the Mule Mountain area of critical environmental concern that was established for very significant cultural resources. And what's important in that, the visual resources also reflect cultural landscapes, and so you should evaluate this from a far more severe visual impact level than what you're doing right here. You're gonna be able to see that project. It's going to radically change the character of that landscape from that Mule Mountain's area of critical environmental concern. You should evaluate it more than from a VRM 4. You should evaluate it from whatever the Mule Mountain is. I think that's VRM 2 or 3, VRM Class 2 or 3.

TR-4 cont.

Mojave fringe-toed lizard habitat, I know you've tried to avoid a lot of that, but you've still got a lot of sand trap issues. You've got transmission Gen-tie that will be built in that habitat, and that's a rare species because it -- the sand habitats, and those are arguably almost as rare as wetlands in the Mojave Desert or in the Colorado Desert, Sonoran Desert here.

TR-5

Finally I'll just talk about alternatives. Integrated battery storage, I don't know how long that's gonna work for, but there are several solar projects that have been built. Many of them are being shut down now because there's an overgeneration problem in

TR-6

California, and why not look at alternatives, instead of just wasting public lands like this, of looking at existing solar projects and trying to integrate some of that storage within those existing ones so that we don't have all of these public impacts all of the time. Desert Sunlight, they're building Desert Harvest. I think they've added storage to that. The Palen project, that's not built yet, but it has no storage limit.

So there are ways to conserve habitat without just completely giving it to the solar industry.

TR-6 cont.

As far as air quality, dust mitigation doesn't work. I've been looking at the Sunshine Valley Solar Project in Amargosa Valley, Nevada. They said they were gonna control the dust by mowing the vegetation, but they haven't all summer. It's just been a blackout. And I don't see how you're gonna be able to mitigate projects of this size lumped together here.

TR-7

We've said it before. We think this is a waste of public land. There are better ways to do this. There are better locations for solar. I'm just gonna keep saying that until you finally listen.

So thank you very much.

TR-8

MS. THOMPSON: Thank you, Kevin. All right.

Go ahead.

MS. ROBLES: Okay. My name is Patricia Robles,

and I'm here representing the La Cuna de Aztlan Sacred Sites Protection Circle from -- located in Blythe. Our Sacred Site Protection Circle was formed precisely to target and challenge the mega solar power plants that began to enter the lower Colorado River basin, and due to the extensive cultural resources that are being impacted by these mega solar power plants, we are opposed to them. TR-9

The area, the lower Colorado River basin, is to be a world heritage site, and because if you knew the history, and if you don't, my father has spent 50 years researching the area, he is an author, and the area is home to hundreds of geoglyphs, petroglyphs, pictographs, all that are interrelated and tell the story of the creation story. So if you destroy one site, you take a piece of the creation story away from telling the whole story, and it begins from the -- from Needles up -- and Laughlin, and those -- in that area, and it comes all the way down to the Yuma area. And you really have to look at the -- the footprint that our ancient civilizations left within this area. TR-10

The Blythe Intaglios, the giant Kokopilli that we're still trying to fence, it's a geoglyph near the Palen/McCoy, you know, all these other solar power plants. So that's why I'm here.

And you probably have heard it before, but I'll tell you again, we are -- we all know what happened with Genesis solar site, that they found numerous artifacts that were important to our tribes that have been in this area for thousands and thousands of years because people did live here. Their -- these are dwellings, our dwellings. This land has been and continues to be inhabited by indigenous people.

So we've stated before in all of our comments that the solar power projects are being developed along the I-10 corridor and they're direct -- in the direct line of destruction for the sacred sites. This solar -- this solar project is -- is -- that's continuing right now, it's actually against humanity, against humanity of the world because, again, this tells a creation story. These figures, these geoglyphs, you have to study them, and they're there. They're there. They're being destroyed not -- not just by mega corporate solar power plants, they're being destroyed by other humans. We have not wanted to disclose the locations of these sacred sites before because we feared that humans would go and vandalize them, but now we have just corporations that are coming out and deliberately destroying them.

TR-11

So it's -- now we have to tell people. We have to through our books and through -- we've -- we've

brought Ancient Aliens to -- the TV series to come and study them and tell them what they really mean so they can get the word out so we can stop the destruction of this area.

So the giant geoglyph image is over 200 feet long, yet it's vulnerable. It lies vulnerable. At one time it was a motorcycle off-road course. It went right through the back of it with permission from the Bureau of Land Management. Shortly thereafter, their -- a sign was posted that said "Please respect your ancient ancestors."

But we need to work together with the organizations like the Department of Interior, you know, all the organizations that protect the land so that we don't have to mitigate so much, so much eco system, so much of the air pollution, so much of the water. Let's -- we have to put a stop to the mitigation, so -- because we're sacrificing a lot with climate change coming up along.

TR-11 cont.

We're -- we're not opposed to solar, we need solar, we gotta get away from the crude oil, but we have to be a little bit more reasonable about where we put these power plants. And we need to work together to decide, like Kevin said, where is the best place. I mean, I'm so happy to see parking lots with solar plants

TR-12

on top. That's the best. Disturbed land is everywhere. There's a lot of disturbed land. You don't have to destroy pristine desert land that hasn't been touched. And before you do, let's do the research on what it really means. Yeah, there's a ton of cultural resources there. Why do you think they're there? The I-10 was not there all the time. The entire area is interrelated and it tells the creation story.

TR-12 cont.

So I just want to read something that I think will open your eyes too a little. Sorry. This area is the dwelling of the Nazca, Peru area. The sacredness of this area will stay with you once you visit it. And if you interact with it, you will learn directly how you are connected to the Earth and to the constellations. The geoglyphs, petroglyphs, and pictographs are not of mythical or mysterious origin. Humans have left their footprints on Mother Earth, and these footprints tell the story of their travels on the journey through life on Earth. The geoglyphs are images of the creator's travel on Earth. The petroglyphs are the creator's travels in the galaxy, and the pictographs are the travels of the creator in the underworld.

This is just the opening. But we all need to learn about this area before we do this.

We are not opposed to renewable energy. We are

TR-13

opposed to the destruction of ancient civilization, creation stories that need to be told because they are directly related to the constellation. If you -- if you took a little bit of time to do a little bit of research and learn a little bit more about ancient archeology, ancient constellations, or the geoglyphs, how they're directly tied to the stars, you would -- you would appreciate it. You would appreciate it and you would not want to -- you would not want to destroy it, the sacredness here.

TR-13 cont.

Thank you.

MS. THOMPSON: Thank you so much.

MS. ROBLES: Thank you.

MS. THOMPSON: All right.

(Public Comments concluded.)

* * *

REPORTER'S CERTIFICATE

I, Christine Bemiss, a Certified Shorthand Reporter for the State of California, do here certify that the above-referenced proceedings taken on Monday, December 2, 2019, at UC Riverside, Palm Desert Center, Palm Desert, California were transcribed by me stenographically through computerized transcription under my direction, and the foregoing is a true and correct record of the proceedings taken at that time.

IN WITNESS WHEREOF, I have subscribed my name this 20th day of December, 2019.

/s/
Christine Bemiss, RPR
AZ Certified Court Reporter No. 50037
CA Certified Court Reporter No. 10082

TR

CRIMSON SOLAR PROJECT

DRAFT EIS/EIR/IPA PUBLIC COMMENT MEETING

235 North Broadway
Blythe, California 92225

Tuesday, December 3, 2019
5:00 P.M. to 7:00 P.M.

Reported by: Christine Bemiss, RPR, CSR 10082

BLYTHE, CALIFORNIA

TUESDAY, DECEMBER 3, 2019; 5:50 P.M.

* * *

MS. THOMPSON: So we will begin. We have two commenters, Samuel Navarro and Alfredo Figueroa.

So in no particular order, Mr. Navarro.

MR. NAVARRO: Thank you very much, folks, for allowing me to be here tonight. It's an honor to be here and it's an honor to serve the community as well.

I currently came over here from Riverside to the Ripley area, where I just found out that they were gonna place the solar panels in the Ripley area.

Am I correct?

And according to the maps that we have here, the Mule area, which is in one of my sheets here, the Mule Mountain area, I understand that it's a sacred ground, and that was my main concern. TR-14

I came here tonight because I found out about that two days ago, and I'm glad I came. I was over at the college, and we were discussing that.

So I wanted to make a point of bringing that up to the -- to the people here, that, you know, we have no problem with having the solar industry building and stuff, but I think it's -- it's kind of out of place, you know, to destroy some of the sacred grounds that we

have going up. To dig them up, that's like me coming over to your house and -- and being there when you get home, you know.

These are ancestral grounds that are here from our ancient ancestors, and I think this is a very important -- important matter as far as historical -- the Preservation Act of 1906.

And that's all I have to say about that. Thank you.

TR-14 cont.

MS. THOMPSON: Thank you, Samuel.

And then next we have Alfredo Figueroa.

MR. FIGUEROA: Thank you. Thank you. This is not the first time we've been here. It's not gonna be the last time, either.

I was born in Blythe. I'm one of the monitors for the sacred sites for the Chemehuevi Tribe. We all have an MOU with the BLM to act as guardians with other groups for these -- to protect the sites, like the Intaglios and the Ripley groups, and we've taken our old buddies, George Kline, Norman Johnson, and these people, they were very familiar with all these sites, you see. So we have been here for a long, long time, and that's why we were in opposition for the first time.

TR-15

Bright Source, as soon as Bright Source ran out of money, they didn't get no more free money, they quit

TR-16

and they took off, see. So the other companies took over, and part of the projects that they've developed over there by the McCoy and the Bright Source, they destroyed already one of the most important types there is, Kokopilli. The majority of the people know Kokopilli all over the world. And Cicimitl. Cicimitl is a Cucuy. There's that -- our lady, Cucuy, who Cucuy is. These are the spirits that take to Topock Maze. That's all related, see.

The new mountain is where the word California comes from. *Calli*, it's in the Aztec calendar. I'm not going to show you this right now, but anybody wants to question -- some of the questions that you might have, we can prove it with facts. That's right. We were able to win in the State Supreme Court 'cause one time they killed one of our organizers in Coachella, one of the Coachella four, 1968.

So, anyway, these -- that's one of the most sacred sites there is is the Mule Mountains.

Right now over there at the Mesa Verde, they have the highest asthma per capita. Why? Because they leveled out all that land above it, and that's why you get that asthma.

The Blythe airport is a standby airport for Los Angeles in case the Los Angeles airport is being

TR-16 cont.

TR-17

TR-18

attacked, so they'll bring all the -- the planes down here. TR-18 cont.

That natural gas plant is a standby plant, and it hardly hasn't been in operation. If it's in operation maybe three weeks out of the whole year, that's a lot, see. TR-19

So California right now is meeting its -- sort of its accomplishment by putting all these solar power projects on top of the rooftops, on top of the abandoned air bases or the transit lines in the bottom or in the rooftops. It's coming. It's coming real good, thanks to the old governor, Jerry Brown, my old buddy. TR-20

But, anyway, so this is why it's so important for us to tell you people that it's a very sacred site, and that's why the other companies have failed or didn't get the money or whatever they did.

But, anyway -- so even the BLM reporter, Dr. Bagel, she made the report over 800 sites right here in the Eastern Riverside County all the way around the Mule Mountains and along to Needles, California. TR-21

So this is -- you know, you have these reports in your offices, we don't have to bring it up again, but we do 'cause it's like getting to be like an old movie, you know what I mean. So -- but it's okay. We were born here and we have a purpose, and our purpose is to

maintain that these sacred sites are protected. They're not protected.

But I understand when you don't know, it's hard for you to understand 'cause the first thing that the Europeans did was try to suffocate any kind of indigenous relics or culture there was, and this is just a continuation of that same policy, destroy everything and learn about the Queen of England but not about our native culture.

You see, that's why it's very important that we have these -- have these projects here protected 'cause it's -- let me tell you, while we're here, there's Tezcatlipoca. The first mountain over here, it's called Big Maria Mountain. Anyway, it means your conscience. Tezcatlipoca. Poca means conscience. Remember me.

So that's what you're gonna do, you're gonna say, "Well, I heard that old man talk over there, and, nah, he's just bah, bah, bah, bah." Well, let me tell you, facts are facts despite -- and, you know, sometimes they say like -- they say, "Well, he's just making up stories," but we know. We don't make up stories.

TR-21 cont.

Even in China -- even in China, the Genco -- Genco sell our project. They stopped. Now why? 'Cause the solar power projects that were right there close dried up all the agriculture, my lands, and the Palo

TR-22

Verde Valley is one of -- number one valleys that has number one water rights and for the valley -- for the agriculture, not for solar power projects.

Right now, also, the well in Mesa Verde is going dry. They have -- I don't know how many more feet gone way down there, and the more they put these solar power projects, more of that water is just gonna liquidate. There's no replacement. That water well was put in there millions of years ago. That's when that water recovered down to the bottom, see. And now it's already drying up. Why? Because the whole thing is too much. Even the agriculture was dried there on top of the Mesa. Why? Because the wells were not able to supply that water.

TR-22 cont.

The Colorado River Water Board was against them -- anybody getting water 50 miles from the river.

So Lake Mead is way down, and Lake Mead is one of the main sources of the water for Southern California and Arizona, see, and it's gone way down.

As a matter of fact, for two years we didn't have one inch of water here until last week we had some water. Can you imagine?

So that's what I'm trying to tell you. Like I said also about the Blythe airport, we know, it's proven, an airplane flies over the solar power projects

TR-23

and they cannot see and they perish in the plane. That's due to because the atmosphere is so light. We had two pilots from Blythe, they perished over there in Desert Center around four years ago, something like that, see. Why? Because they flew over it.

That's why Las Vegas now, the international airport over there, they're complaining about Ivanpah. Why? A little late, but Ivanpah's already built. So you gotta go *[made noise]* go around it and go around it. Not like before.

TR-23 cont.

But these are very, very crucial issues that have to be analyzed right by the -- you know, the BLM and also our Congress.

Anyway, so we know that the -- it's a very threat -- it's a big threat.

So we'll be submitting our letter with all this information on there. And, like I say, if you have any -- any questions you want to ask me too, my name's right there.

TR-24

Also, the whole thing is that, you see, the violation of the -- the violation of -- we have 10 laws Federal, State, United Nations, also Mexico. Mexico's entitled to 1,500,000 acres of water -- acres of water from Mexico but not contaminated water. That's why we were able to stop the nuclear dump over there at -- by

Needles, Ward Valley. Took us 10 years, but we stopped it. Why? 'Cause Mexico intervened with us. We were able to go and lobby Mexico.

So these are all why -- common sense, really common sense. So we know that the -- right now the Government is wanting to do their own thing, so they can, but there's people that are not gonna support this and you're gonna have to have a -- like I said, mirror mirror on the wall, who's the finest one of all?

TR-24 cont.

Thank you very much.

MS. THOMPSON: Thank you, Mr. Figueroa.

MS. LIBERATORE: Thank you.

MS. THOMPSON: Any other commenters?

(No response.)

MS. THOMPSON: All right. I'll turn it back to you.

MS. LIBERATORE: Okay. Thank you.

MR. FIGUEROA: You're welcome.

MS. LIBERATORE: Well, that concludes our program, but we're here until 7:00 if you want to talk to any of us any further.

Also, if you want to do written comments or take forms with you to give to somebody who maybe couldn't come tonight.

But, also, I'm gonna put that slide back up

with our contact information.

MS. THOMPSON: Yeah.

MS. LIBERATORE: And that's also in our notice on the Federal register and in the document itself, in the EIS. So if you want to reach out to Magdalena or myself, please feel free to do that, and we will look forward to hearing from you again.

Thank you very much.

(Public Comments concluded at 6:05 p.m.)

* * *

REPORTER'S CERTIFICATE

I, Christine Bemiss, a Certified Shorthand Reporter for the State of California, do here certify that the above-referenced proceedings were reporter by me on Tuesday, December 3, 2019, at 235 North Broadway, Blythe, California were taken by me stenographically and were transcribed through computerized transcription under my direction, and the foregoing is a true and correct record of the proceedings taken at that time.

IN WITNESS WHEREOF, I have subscribed my name this 9th day of December, 2019.

/s/
Christine Bemiss, RPR
AZ Certified Court Reporter No. 50037
CA Certified Court Reporter No. 10082

Appendix W
CDFW Updated
Responses to Comments

APPENDIX W
Responses to Comments

In this section, responses are provided for each substantive comment received on the Draft EIS/EIR/PA. All comment letters, coded to delineate specific comments, are provided in Appendix V in this Final EIR (note that the identification of Appendix V is the lettering used in the Final EIS and Proposed PA and will be remain the same in the Final EIR). Where environmental document section numbers are called out in the responses below, they refer to the BLM Final EIS and Proposed PA (which is incorporated by reference into this Final EIR [BLM 2021]), with the exception of the following sections and chapters: Section 3.5, Cultural, Tribal, and Historic Resources; Section 3.20, Other CEQA and NEPA Considerations; and Chapter 4 Consultation, Coordination, and Public Involvement, all of which are part of CDFW's Final EIR.

W.1 Responses to Written Comments

Letter 1 – John Kriebel

1-1 The commenter's opposition to the Project is acknowledged. The Lead Agencies acknowledge, and have analyzed and disclosed, that the Project could result in adverse impacts on several categories of resources. Please refer to Section 3.5, Cultural Resources, for detailed discussions of potential impacts on cultural resources, including artifacts of Native American origin and trail segments. The Bradshaw Trail is addressed in Sections 3.5 and 3.12, Recreation and Public Access, and is located 1.7 miles from the Project site. Please also refer to Section 3.3, Biological Resources, for discussions of impacts on wildlife and habitats, including burrowing owl, desert tortoise, and Yuma mountain lion, as well as impacts on vegetation and soils including biological soil crusts; to Section 3.10, Noise, regarding noise impacts of construction and operation; to Section 3.12 regarding the loss of recreational uses of the Project site; and to Section 3.17, Visual Resources, regarding views of the Project from offsite. Appendix B, Mitigation Measures, of the Final EIS and Proposed PA, includes the text of measures to avoid, minimize, and/or compensate for impacts on these resources.

1-2 The Desert Quartzite Solar Project, proposed to be located adjacent to the Crimson Solar Project, is considered in the context of cumulative impacts throughout Chapter 3.

1-3 As described in Chapter 1, Introduction and Purpose and Need, the Project site is located within the Riverside East Solar Energy Zone as identified in the Western Solar Plan; however, the proposed Project is not subject to the land use planning decisions in the Western Solar Plan or to the CDCA Plan amendments made in that decision. The Project also is not subject to the land use planning decisions in the Desert Renewable Energy Conservation Plan (DRECP) land use plan amendment. The relationship between the Crimson Solar Project Final EIS and Proposed PA and the DRECP, and the Project's consistency with Conservation and Management Actions (CMAs), is discussed in Appendix F of the Final EIS and Proposed PA.

Letter 2 – Mojave Desert Air Quality Management District (MDAQMD)

2-1 The Lead Agencies acknowledge MDAQMD's comments indicating that the Draft EIS/EIR/PA contains mitigation measures that adequately address previous comments submitted by the MDAQMD, including submission of a Dust Control Plan.

Letter 3 – Defenders of Wildlife and Desert Tortoise Council

3-1 Scoping comments from Defenders of Wildlife (April 5, 2018) and Desert Tortoise Council (April 20, 2018) have been considered and incorporated into the Draft EIS/EIR/PA. Please see Appendix D.3, Scoping Report, of the Final EIS and Proposed PA, where these comment letters are acknowledged and reproduced in full.

3-2 The BLM and CDFW have carefully considered the proposed alternative provided in this comment letter, referred to here as the "Defenders/Council Alternative." As described in detail below, the BLM and CDFW have reviewed this alternative based on the criteria presented in Section 2.2, Alternatives Development and Screening, and have declined to include this alternative in the Final EIS and Proposed PA for detailed consideration.

Figure W-1, presented following responses to this comment letter, provides a comparison of the boundaries of the proposed Project (Alternative A), the Reduced Acreage Alternative (Alternative C),[1] and the Defenders/Council Alternative. The available area for developing solar arrays within the Defenders/Council Alternative boundary would be 1,709 acres, compared with 1,859 acres under Alternative A and 1,684 acres under Alternative C (Draft EIS/EIR/PA Table 2-4, page 2-17). Therefore, the Lead Agencies acknowledge the comment's assertion that this alternative would "not appreciably reduce electricity generation" and agree that this alternative likely is both technically and economically feasible. The Lead Agencies have already expressed a preference for the reduction in area under Alternative C to avoid key areas containing sensitive vegetation, sand dune habitat, and cultural resources; therefore, a more reasonable option for resource avoidance would be to combine the two boundaries to result in an even smaller developable area. This, too, likely would remain feasible.

The Defenders/Council Alternative would respond to the BLM's purpose and need, would meet most of the basic objectives of the Project under CEQA (strict adherence to the Applicant's 350 MW sizing objective is not required to satisfy this criterion), and would be consistent with the basic policy objectives for the management of the area. Its implementation would not be remote nor speculative.

Based on the above, the key screening criteria from Section 2.2 for consideration of this alternative are:

6. Is it substantially similar in design to an alternative that is analyzed?
7. Would it have substantially similar effects to an alternative that is analyzed?
8. Would it avoid or substantially lessen any significant effects of Alternative A?

[1] For purposes of this response, Alternative C is presented as it was in the Draft EIS/EIR/PA. See Chapter 2, Project Description, in the Final EIS and Proposed PA for a description of minor revisions to Alternative C. Because those revisions do not affect the desert tortoise habitat discussed in this comment and response, and would make this analysis and Figure W-1 unnecessarily complicated and confusing, they are not reflected here.

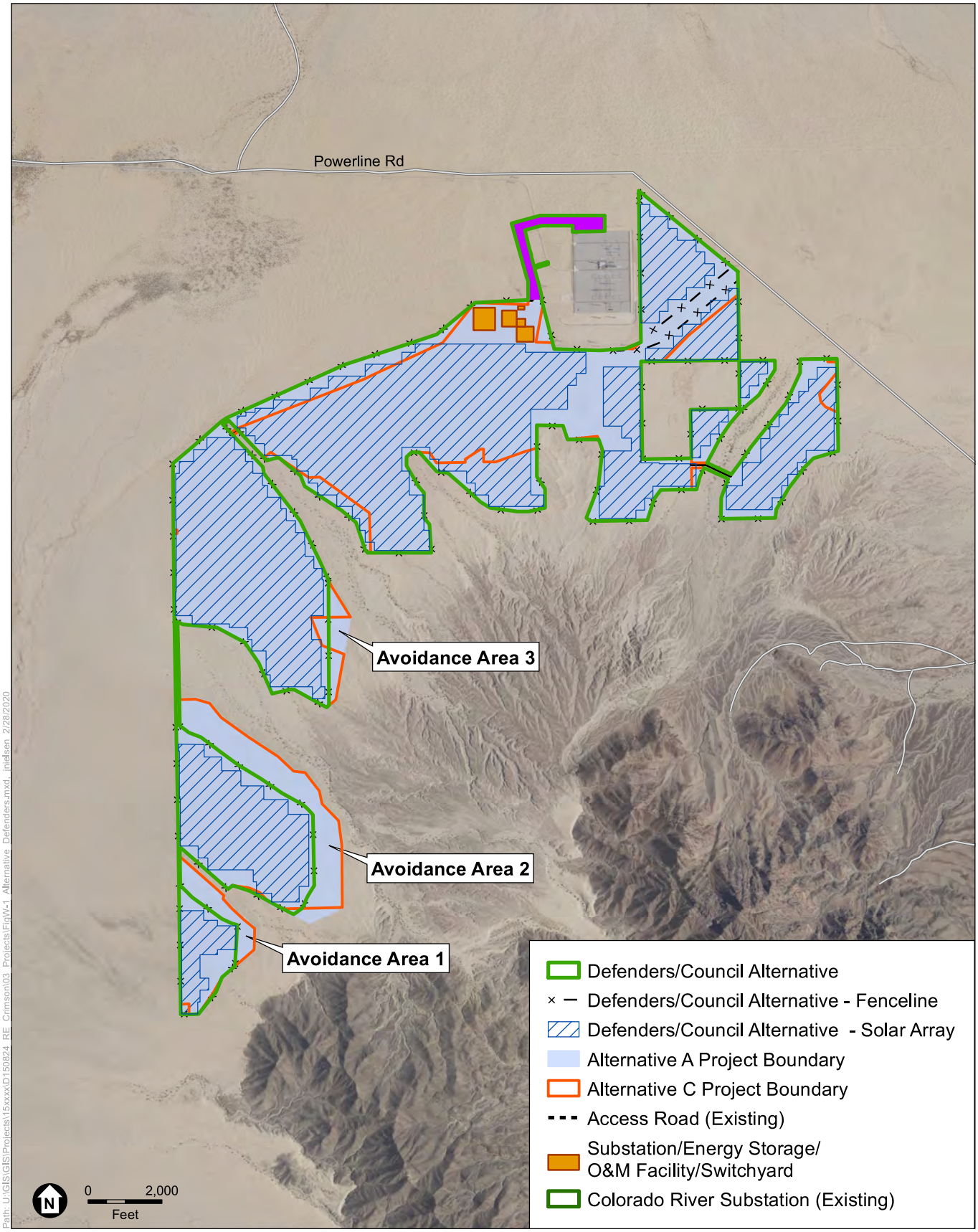
The Defenders/Council Alternative would be similar in design and would have similar effects to both Alternative A and Alternative C, with the exception of areas avoided with the intent to reduce impacts on desert tortoise. Therefore, the remaining relevant criterion for screening this alternative is whether it would avoid or substantially lessen any significant effects of Alternative A.

The map on page 5 of the comment letter depicts the locations of tortoises and occupied burrows (along with other sign) identified during 2012 and 2016 focused surveys as well as 2017 incidental findings during other surveys (see Figures 7 through 10 in Appendix I.1 of the Final EIS and Proposed PA for original survey results). Based on this, Defenders and the Council identified three potential acreage reductions, labeled as "Avoidance Areas" on Figure W-1. As discussed in Section 3 of the Desert Tortoise Translocation Plan (DTTP, see Appendix I.12 of the Final EIS and Proposed PA), a study began in fall 2018 to number and track up to 50 desert tortoises in the Chuckwalla Valley for 18 months through spring 2020 using radio transmitters attached their shells. The purpose of this research was to help confirm existing densities in the Project boundary and adjacent habitat, provide movement data and activity areas, health status, inform the translocation process, and provide additional habitat data" and "may be used to determine the extent tortoises are using the Project site, increase certainty of the total number of tortoises that may be translocated, and assist in the determination of the most-appropriate recipient site." Results of this study indicate that the relative size of tortoise home ranges varies within the study area (Ironwood 2020). Two of the transmittered tortoises' home ranges include all or a portion Avoidance Area 1, and the relative tortoise density in avoidance area is low to moderate. Portions of seven transmittered tortoises' home ranges intersect Avoidance Area 2, and the relative tortoise density is moderate to high within some of the avoidance area and low in much of it. Two of the transmittered tortoises' home ranges include small portions of Avoidance Area 3, and the relative tortoise density in this avoidance area is low. Overall, nine individual tortoises were found to use a portion of one or more of the Defenders/Council Alternative Avoidance Areas, out of 37 tortoises from which data were collected. However, the portions of the Avoidance Areas used by six of these nine tortoises did not make up substantial portions of those tortoises' home ranges. One other small area of the Project site was used by five tortoises. Most of the Project site showed no occupancy by transmittered desert tortoises, while tortoise density in the area between the Project site and the Mule Mountains was high. The tortoises that did use the Avoidance Areas also spent time in these higher-density areas outside the Project site.

Figure 1-3, Project Evolution, shows the original 2009 application area, followed by the 2016 and 2017 refinements. As demonstrated there and as explained in Section 1.1.2, Project Background, the footprint of the proposed Project has been reduced substantially as a result of discussions with stakeholders and agencies including the BLM and CDFW. Specifically, along the southeastern edge of the Project site, the proposed Project footprint has been pulled away from alluvial fans and washes at the base of the Mule Mountains to avoid high-quality desert tortoise habitat. Based on review of the transmitter data from 2018-2020, the Defenders/Council Alternative would not avoid or substantially lessen impacts on the desert tortoise population because few of the desert tortoises for which transmitter data is available use the Avoidance Areas as substantial portions of their home ranges. The USFWS Biological Opinion for the Project (2020) concluded that "Given the small number of desert tortoises potentially affected by the Project, we have no information to indicate that construction and O&M of the Project would appreciably reduce the desert tortoise population levels in the Colorado Desert Recovery Unit" and that "Few, if any, desert tortoises are likely to be injured and killed as a result of moving out of harm's way or translocation." The avoidance, minimization, and mitigation measures including the mitigation

measures in Appendix B of the Final EIS and Proposed PA and the Conservation Measures and Reasonable and Prudent Measures identified in the Biological Opinion (Appendix I.13 of the Final EIS and Proposed PA) would substantially reduce impacts on desert tortoise.

Because the Project already has been refined, and mitigation measures imposed, to minimize impacts on desert tortoise, the Lead Agencies do not find that the Defenders/Council Alternative would substantially reduce significant impacts compared to the proposed Project. Therefore, this alternative has not been carried forward for detailed consideration in the Final EIS and Proposed PA.



SOURCE: ESRI, 2020; ESA, 2020.

Crimson Solar Project **Final EIR**

Figure W-1
Defenders/Council Alternative

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3-3 The Lead Agencies acknowledge the commenter's point that avoiding additional areas of occupied desert tortoise habitat may reduce the likelihood of needing to implement the five-year post-translocation effectiveness monitoring. However, for the reasons described in response to comment 3-2, the Defenders/Council Alternative has not been carried forward.

3-4 Both the DTTP and the USFWS Biological Opinion anticipate that the Mule Mountains Recipient Site, as suggested by the commenter, will be used for any necessary translocation. From the Biological Opinion: "translocation may also affect resident desert tortoises within the recipient site due to local increases in population densities that may result in increased competition for forage, especially during drought years. … As discussed in the Environmental Baseline section above and based on the proximity of the recipient site and telemetry studies of Hinderle (2020), most, if not all of the desert tortoises that may be translocated from the Project site already contribute in part to densities within the recipient site. Therefore, we do not anticipate the translocation of up to 20 large desert tortoises would appreciably affect densities in the recipient site. However, CDFW and the Service will coordinate with the Applicant prior to and during translocation activities to determine if there is new information on densities of desert tortoise that indicates an additional recipient site is warranted." (USFWS 2020, pages 41-42).

3-5 Items 1a through 1j of Mitigation Measure BIO-26 describe minimum selection criteria for compensation lands, effectively providing specific performance standards by which to identify "high quality" habitat. Habitat enhancement on federal land is not identified as an option to satisfy this mitigation requirement. Mitigation Measure BIO-26 is consistent with this comment's recommendations.

3-6 The comment does not provide evidence to support the assertion that the 1:1 compensatory mitigation ratio would not satisfy the CESA requirement to "fully mitigate" impacts on listed species. Note that CDFW is not merely a cooperating agency but is the CEQA lead agency for the Project, and as such has been actively involved in the process of identifying impacts and crafting mitigation measures. CDFW provided direct input on the mitigation measures that use the 1:1 ratio, which is consistent with measures used for other similar projects, prior to publication. CDFW may additionally choose to modify or refine the mitigation ratio during the 2081 permit process.

3-7 Mitigation Measure BIO-26, Desert Tortoise Compensatory Mitigation, requires that the compensation lands selected must be within the Chuckwalla DWMA or, if sufficient land is unavailable, in other locations within the Colorado Desert Recovery Unit. The Chuckwalla DWMA overlaps the Chuckwalla Critical Habitat Unit, which is a portion of the Colorado Desert Recovery Unit. Thus, it is likely that compensation lands would be located within the Chuckwalla Critical Habitat Unit as recommended by this comment; however, if sufficient land is unavailable, compensation within the larger Colorado Desert Recovery Unit would be consistent with the Revised Recovery Plan for the Mojave Population of the Desert Tortoise (USFWS 2011).

3-8 Separate from intended function as a potential firebreak, the purpose of the exterior portion of the perimeter access roads is to provide vehicle access to the outside edge of the Project for fence construction and long-term maintenance. For this reason, the requested change has not been made.

3-9 The BLM and CDFW acknowledge the recommendations made in this comment letter and have carefully considered them. Responses to comments 3-1 through 3-8 provide detailed responses to each of these recommendations.

Letter 4 – Chemehuevi Indian Tribe

4-1 The Chemehuevi Indian Tribe's statement of opposition to the Project is acknowledged. The BLM and CDFW acknowledge the Chemehuevi Indian Tribe's relationship to the Project site and surroundings in the Mule Mountains area.

4-2 Please see the comment letter received from the Colorado River Indian Tribes in Appendix V of the Final EIR (Letter 11) and responses to these comments in this Appendix W of the Final EIR, also under Letter 11.

4-3 The BLM and CDFW acknowledge the Chemehuevi Indian Tribe's relationship to the Project site and surroundings in the Mule Mountains area. Section 3.5, Cultural, Tribal, and Historic Resources, and specifically Section 3.5.2.2, Ethnographic Setting, of this Final EIR describe the Chemehuevi territory. BLM conducted g~~G~~overnment-to-government consultation ~~between the BLM and~~with the Chemehuevi Indian Tribe ~~is ongoing~~. This consultation addressed the topic of cultural and spiritual ties to the Project area. Through the CEQA Tribal Consultation process, CDFW has acknowledged the presence of the Mule Mountain Tribal Cultural Landscape and its interconnectedness to the broader cultural landscape in the Southern California desert region. CDFW has determined that the Project will have significant direct impacts to tribal values of the Mule Mountain Tribal Cultural Landscape that are conveyed through archaeological sites and isolated artifacts in the direct effects APE, and that these impacts are cumulatively significant. Although residual impacts to tribal values of individually impacted archaeological sites and isolates would remain, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

4-4 The Lead Agencies acknowledge, and have analyzed and disclosed, that the Project could result in adverse impacts on plant and animal species and habitats. Please refer to Section 3.3, Biological Resources, for detailed discussions of impacts on plants, wildlife, and habitats, and to Appendix B, Mitigation Measures, in the Final EIS and Proposed PA for Mitigation Measures BIO-1 through BIO-33, which avoid, minimize, and/or compensate for impacts on these resources.

4-5 The statement of opposition to the Project is acknowledged. BLM has conducted g~~G~~overnment-to-government consultation ~~between the BLM and~~with the Chemehuevi Indian Tribe, as well as with the Colorado River Indian Tribes, ~~is ongoing~~ and ~~will address~~has agreed to the request for construction monitoring by archaeologists and Native Americans ~~if the Project or an alternative is approved and constructed~~.

Letter 5 – Maricela Lou

5-1 BLM conducted g~~G~~overnment-to-government consultation pursuant to federal law, including the National Historic Preservation Act, ~~between the BLM and~~with consulting ~~the~~ Indian tribes ~~is ongoing~~ as described in Section 4.2.2; this consultation addresse~~d~~s the topic of sacred lands in the Project vicinity. The Blythe Giant Intaglios located east of the Big Maria Mountains are located more than 20 miles from the proposed Project site and would not be affected by the Project. However, through the CEQA Tribal Consultation process, CDFW has acknowledged the presence of the Mule Mountain Tribal Cultural Landscape and its interconnectedness to the broader cultural landscape in the Southern California desert region. CDFW has determined that the Project will have significant direct impacts to tribal values of the Mule Mountain Tribal Cultural Landscape that are conveyed through

archaeological sites and isolated artifacts in the direct effects APE, and that these impacts are cumulatively significant. Although residual impacts to tribal values of individually impacted archaeological sites and isolates would remain, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

Letter 6 – La Cuna de Aztlan Sacred Sites Protection Circle

6-1 The commenter's background and role are acknowledged. Please also see responses to Mr. Figueroa's comments made at the public meeting in Section W.2, Responses to Public Meeting Comments.

6-2 The comment's statement of opposition to the Project is acknowledged. The PowerPoint attachment that was submitted with this letter is reproduced as a PDF following the comment letter (Letter 6) in Appendix V of the Final EIS and Proposed PA. It has been reviewed and considered by the Lead Agencies.

6-3 The comment summarizes the importance of the Mule Mountains to the commenter and is noted by the Lead Agencies. This comment does not directly address the adequacy or accuracy of the Draft EIS/EIR/PA. The Mule Mountains ACEC is addressed in Sections 3.14, Special Designations, and 3.17, Visual Resources.

6-4 One prehistoric trail segment has been identified in the area of direct impacts (CA-RIV-012750) and would be impacted by Alternatives A and B, but not by Alternative C (see Table 3.5-1). Indirect (i.e., visual) impacts on prehistoric trail segments have been analyzed in Section 3.5, Cultural, Tribal, and Historic Resources; specifically, see Section 3.5.2.4 of this Final EIR which describes that the trail segments within the indirect effects Area of Potential Effect (APE) would not be affected under any of the alternatives. The BLM and CDFW recognize~~s~~ the importance of the area in regard to travel and trail systems, including those that might not have an intact physical representation, and BLM has conducted government-to-government consultation ~~is ongoing between BLM and the~~with consulting Indian tribes, as described in Section 4.2.2.

6-5 The BLM and CDFW acknowledge the perspective expressed in the comment that sacred sites are tied together and that destruction of any sacred site(s) affects the sacredness of an entire area. BLM has conducted g~~G~~overnment-to-government consultation ~~between the BLM and the~~with consulting Indian tribes ~~is ongoing~~ as described in Section 4.2.2; this consultation addresses the topic of sacred lands in the Project vicinity. Further, CDFW ~~is~~ conducted~~ing~~ government-to-government consultation under ~~Assembly Bill 52~~CEQA Tribal Consultation requirements and CDFW's Communication and Consultation Policy with tribes that requested such consultation, as described in Section 4.3 of the Final EIR. Through the CEQA Tribal Consultation process, CDFW has acknowledged the presence of the Mule Mountain Tribal Cultural Landscape and its interconnectedness to the broader cultural landscape in the Southern California desert region. CDFW has determined that the Project will have significant direct impacts to tribal values of the Mule Mountain Tribal Cultural Landscape that are conveyed through archaeological sites and isolated artifacts in the direct effects APE. CDFW has determined that these impacts are cumulatively significant due to residual impacts to tribal values of individually impacted archaeological sites and isolates, but the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

6-6 The comment references a 2010 report by California Energy Commission (CEC) staff which evaluated the potential impacts of full build-out of the large number of solar projects proposed along the I-10 corridor at that time. As these projects have gone through environmental review processes under NEPA, the NHPA, and CEQA, as applicable, they have been refined to avoid many of the identified cultural and tribal cultural resources sites. Specific to this Project, as described in the revised Section 3.5, Cultural, Tribal, and Historic Resources, of the Final ~~EIS/~~EIR ~~and Proposed PA~~, Alternative C would result in substantially fewer impacts on sites and isolates, and would avoid those resources determined to be or treated as eligible for the National Register. Revisions to Mitigation Measure CUL-5 ensure avoidance of ~~these~~ the NRHP eligible resources. However, CDFW has determined that even with mitigation, residual impacts to tribal cultural resources eligible for listing in the CRHR under criteria 1 and 4 for their tribal values, including the Mule Mountain Tribal Cultural Landscape, would remain. The comment related to the CEC's actions is not applicable to this Project, which is not subject to CEC jurisdiction, and it does not address the adequacy or accuracy of the Draft EIS/EIR/PA. The potential for existing, approved, and reasonably foreseeable future projects to cause impacts on cultural and tribal cultural resources that could combine with those of the Project is addressed in the cumulative effects analysis in Section 3.5.6.

6-7 As stated in Section 3.1.5, there is no agriculture on the Project site. The nearest agricultural uses are approximately 5 miles to the east of the site. The potential for a "heat island" effect at the location of photovoltaic solar plants is still being studied, and a 2016 study "found temperatures over a PV plant were regularly 3–4°C warmer than wildlands at night" (Barron-Gafford et al. 2016); however, the same study acknowledged the lack of information regarding the lateral and vertical extent of this effect. The Lead Agencies have found no evidence, nor has any evidence been provided by the commenter or otherwise placed in the Project record, to support the claim that development of a solar project would change atmospheric conditions in such a way as to affect distant agricultural uses. To the contrary, the Department of Energy Office of Energy Efficiency and Renewable Energy publishes a guide recommending the co-location of solar photovoltaic installations and agricultural uses, indicating that they are compatible uses even on the same site (2020).

6-8 Please see response to comment 6-7 regarding the compatibility of solar photovoltaic plants with agricultural uses. The Project's potential effects on Colorado River water are analyzed in Section 3.18, Water Resources. As explained there, the BLM and CDFW recognize disagreement as to whether there is hydrologic connectivity between the groundwater basin that underlies the eastern portion of the Project site as well as the existing offsite well that could be used, and the Colorado River. Nonetheless, Section 3.18 describes that Mitigation Measures WAT-1 and WAT-2 would be implemented should groundwater be used for the project. To ensure that groundwater wells surrounding the Project site and Project supply well(s) are not adversely affected by Project activities, Mitigation Measure WAT-1 requires that prior to groundwater use, that a BLM-approved qualified hydrogeologist would develop a Groundwater Monitoring, Reporting, and Mitigation Plan. Further, Mitigation Measure WAT-2 would require the preparation and implementation of a Colorado River Water Supply Plan that would account for any water that might come from the Colorado River, and to demonstrate the availability of and provide replacement water on an acre-foot to acre-foot basis. The Plan would be submitted to the BLM and the Colorado River Board of California for review and approval.

6-9 This comment refers to several projects other than the one considered in the Draft EIS/EIR/PA and does not comment on the adequacy or accuracy of the Draft EIS/EIR/PA. As described in Section 3.8, Hazards and Hazardous Materials, the Project site is located approximately 5 miles from the Blythe Airport. No portion of the Project site is within the Compatibility Zones established in the Airport Land Use Compatibility Plan for this airport (Riverside County Airport Land Use Commission 2004).

6-10 The use of the site by migratory birds, and the Project's potential impacts on migratory and special-status birds, are analyzed in Section 3.3, Biological Resources.

6-11 Individual monarch butterflies (*Danaus plexippus*) do not have protected status under the Federal Endangered Species Act, California Endangered Species Act, or other applicable laws and policies, and therefore have not been addressed as an individual species in Section 3.3, Biological Resources. California overwintering populations are protected by CDFW; however, overwintering habitat in tree groves that include eucalyptus, Monterey cypress, Monterey pine, and other tree species, is not present in the Project area. Mitigation Measure BIO-20 requires that construction and O&M crews be trained to identify special-status plants likely to occur on-site (including Utah vine milkweed, a special-status plant and host plant to milkweed butterflies including the monarch), and these species would be avoided by trimming and permitted to flower and set seed, thus contributing to the seedbank. Nonetheless, to the extent that Utah vine milkweed is present within the Project site, these plants would be protected through salvage and seeding efforts. As stated in the Draft EIS/EIR/PA, only 105 milkweed plants were documented on the Project site during 2011/2012 surveys, and this species was not detected on the Project site during 2016, 2017, and 2019 surveys (Draft EIS/EIR/PA Table 3.3-3, page 3.3-5). With few milkweed plants on the Project site, the effects of any milkweed losses to the continued viability of monarch butterfly would be considered negligible. Following the application of Mitigation Measure BIO-20, which provide seed salvage and distribution, among other protection measures, milkweed populations are expected to persist on the Project site during construction and operations. As a result, the effects of the Project on monarch butterfly habitat and populations would be negligible.

6-12 Potential Project impacts on Swainson's hawk, golden eagle, Gila woodpecker, elf owl, and burrowing owl are analyzed in Section 3.3, Biological Resources, and mitigation measures are included in Appendix B of the Final EIS and Proposed PA to avoid, minimize, or compensate for adverse impacts on migratory birds and special-status species. CDFW as CEQA lead agency for the EIR, and USFWS as a cooperating agency, each have been involved in preparing the Draft EIS/EIR/PA, Final EIS and Proposed PA, and proposed mitigation measures.

6-13 The potential effects of the Project on air pollution, including from fugitive dust and criteria pollutants that can cause or exacerbate respiratory illnesses, and *Coccidioides* spores that can cause valley fever, are analyzed in Section 3.2, Air Resources. As acknowledged in Section 3.2.2.5, the Project site soils exhibit some, but not all, of the characteristics typical of soils known to contain spores that cause valley fever. Therefore, the Project site has the potential to contain such spores. However, as addressed in Section 3.2.4.1, the spread of these spores can be contained by controlling Project dust emissions, and the Project would be required to implement fugitive dust control measures, and the risk of exposure of local communities to risk of valley fever is low due the Project's distance of about 2.9 miles to sensitive receptors (including Chuckawalla Valley and Ironwood State Prisons). The comment mentions valley fever cases at four prisons that are located in Kings, Fresno, and Kern counties. These counties had valley fever rates of 114, 63, and 323 cases per 100,000 people, respectively, in 2018 (California

Department of Public Health 2019). By contrast, the valley fever rate in Riverside County was about 6 cases per 100,000 people. While this is lower than rates in Central California counties, the presence of *Coccidioides* spores in Riverside County and potentially in Project site soils is acknowledged and appropriate control measures imposed in the EIR/EIS/PA. Therefore, the potential for the Project to increase the risk of valley fever is adequately addressed.

6-14 This comment refers to several projects other than the one considered in the Draft EIS/EIR/PA and does not comment on the adequacy or accuracy of the Draft EIS/EIR/PA. The Ivanpah Solar Power Project and other BrightSource projects use a solar power technology consisting of a large field of mirrored "heliostats" that concentrate solar energy on a central solar power tower (BrightSource 2020). This is a different technology than the solar photovoltaic system proposed for the Crimson Solar Project. Potential impacts of the Project on birds are addressed in Section 3.3, Biological Resources. As described in Section 3.8, Hazards and Hazardous Materials, the Project site is located approximately 5 miles from the Blythe Airport, and no portion of the Project site is within the Compatibility Zones established in the Airport Land Use Compatibility Plan for this airport (Riverside County Airport Land Use Commission 2004). The potential for existing, approved, and reasonably foreseeable future projects to cause impacts on migratory and/or special-status birds that could combine with those of the Project is addressed in the cumulative effects analysis in Section 3.3.6.

6-15 This comment refers to a 1975 SDG&E project that was not built and avoidance of potentially affected resources by PG&E in 2001. Input about these other projects does not comment on the adequacy or accuracy of the Draft EIS/EIR/PA, nor raise any significant environmental impacts of this Project. The Lead Agencies acknowledge the commenter's participation in environmental and historic preservation programs, including NEPA, CEQA, and the NHPA.

6-16 The potential effects of climate change on the Project, and of the Project on greenhouse gases that contribute to climate change, are addressed in Section 3.4, Greenhouse Gas Emissions. The wildland fire history of the Project area and potential effects of the Project related to wildfires are addressed in Section 3.19, Wildland Fire Ecology. The comment does not draw a connection between the climate change and wildfire effects cited and this Project or the Draft EIS/EIR/PA analysis, and therefore is not a substantive comment on the adequacy or accuracy of the Draft EIS/EIR/PA or on the Project itself.

6-17 The commenter's preference for siting solar panels on disturbed lands and within the built environment is acknowledged. Sections 2.10.1, Private Land Alternatives, and 2.10.2, Alternative BLM-Administered Land, address the potential for offsite alternatives and the reasons none were carried forward for detailed analysis in the Draft EIS/EIR/PA. Please also see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative was not carried forward for detailed analysis.

6-18 BLM has conducted g~~G~~overnment-to-government consultation ~~between the BLM and the~~with consulting Indian tribes ~~is ongoing~~ as described in Section 4.2.2; this consultation addresses the topic of sacred lands in the Project vicinity. Alternatives A and B, as analyzed in the revised Section 3.5, Cultural, Resources of the Final EIS and Proposed PA, have the potential to impact 17 resources determined or treated as eligible for listing in the National Register. These 17 resources were identified as significant through field studies and tribal consultation. Alternative C has been drafted to avoid these resources. Revisions to Mitigation Measure CUL-5 ensure avoidance of these resources. In addition, the

BLM recognizes the importance of the Mule Mountains and vicinity to local Indian tribes. Based on an indirect effects analysis summarized in Section 3.5, Cultural Resources, of the Final EIS and Proposed PA, which is primarily based on a visual line-of-site analysis from the resources and an assessment of potential visual alteration to the landscape, the BLM has concluded that the proposed Project would not have an adverse effect on significant cultural sites in the Mule Mountains. The changes to the Final EIS and Proposed PA do not result in new or more significant impacts than were evaluated in the Draft EIS/EIR/PA. Moreover, CDFW, through its own tribal consultation, has identified the Mule Mountains Tribal Cultural Landscape that overlaps the indirect and direct effects APE. In addition, CDFW has determined that the Project would have significant, direct impacts to tribal values attached to archaeological sites and isolated artifacts within the Mule Mountains Tribal Cultural Landscape, which are also cumulatively significant. CDFW Mitigation Measures CUL-8 through CUL-10 reduce the significance of these impacts. Even with implementation of these mitigation measures, residual impacts to tribal values would remain, however, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

6-19 The commenter's statement of opposition to the Project is acknowledged and will be considered by the Lead Agencies in their decision-making processes. The comment suggests that the Project is in violation of a number of laws; however, it provides no specific examples as a basis for the allegation. Appendix E of the Final EIS and Proposed PA summarizes laws applicable to the Project that inform the environmental impact analysis under NEPA and CEQA, including the Native American Graves Protection and Repatriation Act and the Archaeological Resources Protection Act (which updated the Antiquities Act) as listed in the comment. The Lead Agencies are in compliance with these laws.

House Resolution 2419, Native American Sacred Lands Act, and House Resolution 5155, Native American Sacred Lands Act, were introduced in congress in 2003 and 2002, respectively, and did not become law. These proposed acts therefore do not govern the BLM's actions. Furthermore, the Indian Civil Rights Act of 1968 (25 U.S.C. §§1301-1304) applies to the exercise of powers of self-government by Indian tribes, and does not apply to the BLM's actions. However, BLM is complying with all applicable laws related to consultation with federally recognized Indian tribes and protection of cultural resources, including the National Historic Preservation Act, Executive Order 13007, and American Indian Religious Freedom Act.

California Senate Bill 18 (2004) requires cities and counties to conduct consultations with California Native American tribes before the local officials adopt or amend general plans. This law does not apply to state resource agencies including CDFW, and the Project does not involve adoption or amendment of a general plan. Therefore, this law does not apply to the proposed Project. Additionally, California Senate Bill 1828 was vetoed in 2002 by then California Governor Gray Davis, and did not become law. This proposed bill therefore does not govern CDFW's actions; however, CDFW is complying with all applicable laws related to consultation with California Native American tribes and protection of cultural resources, including tribal cultural resources. This includes ~~Assembly Bill 52~~CEQA Tribal Consultation, as described in detail in Chapter 4.3, CEQA Tribal Consultation and CDFW's Communication and Consultation Policy, of this Final EIR.

~~Consultation and Coordination.~~ Assembly Bill 52 government-to-government consultation is ongoing.

Letter 7 – Timothy Ludington

7-1 The commenter's statement of opposition to the Project is acknowledged and will be considered by the Lead Agencies in their decision-making processes.

7-2 Please see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative (e.g., rooftop solar) was not carried forward for detailed analysis. Further, potential impacts of the Project on wildlife are addressed in Section 3.3, Biological Resources.

7-3 As discussed in Section 3.20.4, Short-Term Uses and Long-Term Productivity, the BLM has an obligation under NEPA to consider the relationship between short-term uses of the environment resulting from the Project or alternatives and the maintenance and enhancement of long-term productivity of the environment. The BLM acknowledges that permanent, adverse impacts that would affect long-term productivity of the Project area would persist following Project decommissioning if the Project is implemented. A NEPA lead agency may select a preferred alternative for a variety of reasons, including the agency's priorities, in addition to the environmental considerations discussed in the EIS. Similarly, CDFW has discretion to balance the impacts and benefits of a Project in making a decision under CEQA. Also, Section 3.20.3, Significant Irreversible Changes, describes that the although the Project would result in a long-term commitment of the Project site, when the Project ceases operation, the facilities would be decommissioned and dismantled, and the site restored. The Lead Agencies will consider this input in their decision-making processes.

Letter 8 – Gordon Countryman

8-1 The commenter's statement of opposition to the Project is acknowledged and will be considered by the Lead Agencies in their decision-making processes.

Letter 9 – Ron Dawson

9-1 The Project would be located entirely on federal land managed by the BLM. It would not directly affect privately held lands. As described in Section 3.18, Water Resources, if the Project uses one or more on-site or off-site wells in either the Chuckwalla Valley Groundwater Basin or Palo Verde Mesa Groundwater Basin, groundwater drawdown in the immediate vicinity of the Project well(s) may have the potential to adversely affect nearby wells by lowering localized water levels such that pumping rates decline. To address and mitigate this potential adverse effect, Mitigation Measure WAT-1 requires the development and implementation of a Groundwater Monitoring, Reporting, and Mitigation Plan prior to the onset of groundwater pumping for Project construction. If monitoring identifies an adverse effect on nearby wells, cessation of pumping and/or compensation for equipment to improve nearby wells would be required to mitigate the impact. Therefore, Project direct impacts on off-site private lands would be negligible, and potential indirect impacts resulting from groundwater drawdown would be mitigated to reduce adverse impacts on existing groundwater wells, including those that are located on private lands.

Letter 10 – Sonoran West Solar Holdings, LLC

10-1 Following the close of the public comment period of the Draft EIS/EIR/PA, CDFW has reevaluated the potential for the proposed project to cause significant bird strike-related impacts. Please see response to comment 10-84 that responds to Recurrent's January 10, 2020 letter to CDFW.

10-2 The Lead Agencies acknowledge the Applicant's indication that the Alternative C footprint is a feasible alternative to the proposed Project.

10-3 The Lead Agencies received the updated Plan of Development (Sonoran West Solar, LLC 2020) and have revised the description and analysis of Alternative C to reflect the refinements reflected therein. No new or more significant impacts in any of the environmental topics evaluated in the Draft EIS/EIR/PA have been identified as a result of the changes.

10-4 The Final EIS and Proposed PA has been revised to reflect the updated proposed Project consisting of Unit 1, the interconnection facilities (including the on-site substation and Operations and Maintenance Building) and the energy storage system, and Unit 2, the solar generating facility. No new or more significant impacts in any of the environmental topics evaluated in the Draft EIS/EIR/PA have been identified as a result of the changes.

10-5 Please see response to comment 10-84. Furthermore, Section 3.3 of the Final EIS and Proposed PA has been updated to reflect CDFW reevaluation of the potential for the proposed project to cause significant bird strike-related impacts. The Executive Summary has been revised to remove Table ES-2, which is specific to CDFW's Final EIR. No new or more significant impacts in any of the environmental topics evaluated in the Draft EIS/EIR/PA have been identified as a result of the changes.

10-6 The requested revisions have been made on pages ES-10 and 3.19-2.

10-7 The requested revision has been made to remove the requirement for Riverside County review and approval of the fugitive dust control plan from Mitigation Measure AQ-1 in Appendix B of the Final EIS and Proposed PA.

10-8 As stated in Mitigation Measure AQ-1, item o, in Draft EIS/EIR/PA Appendix B, "This wind fencing requirement may be superseded by local ordinance, rule or project-specific biological mitigation prohibiting wind fencing." The Lead Agencies and consultant staff have considered the wind fencing requirement in light of potential effects on sand transport and have determined that wind fencing would not be appropriate for the Project's location. Therefore, the wind fencing requirement has been removed from the Final EIS and Proposed PA. Because the discussion of air quality impacts and determination of impact severity in Section 3.2, Air Resources, was not dependent on installation of wind fencing, removal of this mitigation requirement does not affect the analysis or mitigation needs for air quality (i.e., fugitive dust).

10-9 The text has been revised to clarify the applicable resource agencies for each resource-specific mitigation measure. CDFW and BLM are included as the CEQA and NEPA lead agencies, respectively, and USFWS is included only for measures related to federally listed species.

10-10 The requested clarifications in Mitigation Measure BIO-1 have been made.

10-11 The requested clarifications in Mitigation Measure BIO-2 have been made.

10-12 The requested clarifications in Mitigation Measure BIO-3 have been made.

10-13 Mitigation Measure BIO-5 has been clarified to avoid the use of "DDWW" (desert dry wash woodland) and instead to use terms consistent with the analysis in Section 3.3.

10-14 The requested clarifications in Mitigation Measure BIO-7 have been made.

10-15 The requested clarifications in Mitigation Measure BIO-8 have been made.

10-16 Text in Mitigation Measure BIO-14 and throughout the Final EIS and Proposed PA has been revised to clarify that a Storm Water Management Plan would be prepared, rather than a Storm Water Pollution Prevention Plan (SWPPP).

10-17 The Weed Management Plan (Appendix I.10 of the Final EIS and Proposed PA) specifies the types of herbicides that may be used in Section 4.6, and the Final EIS and Proposed PA provides the necessary environmental analysis for the proposed herbicide types (see Section 3.3.4.1). As stated in the Weed Management Plan, Appendix B of the Vegetation Treatments PEIS, Herbicide Treatment Standard Operating Procedures, specifies management of noxious weeds through prevention and application of pesticides on BLM-administered land. These procedures are incorporated as requirements of the Plan.

Mitigation Measure BIO-16 has been clarified as requested. The draft Weed Management Plan in Appendix I.10 of the Final EIS and Proposed PA provides detailed information about proposed herbicide use. If the Project or an alternative is approved, BLM would determine during pre-construction review of mitigation plans whether the information is sufficient to support a Pesticide Use Proposal (PUP), ensuring that when the Plan is approved for use, a PUP can be issued on this basis.

10-18 Mitigation Measure BIO-18 has been revised to clarify that the Restoration Plan shall include a description of proposed methods for topsoil salvage *as applicable*.

10-19 The requested clarifications in Mitigation Measure BIO-18 have been made.

10-20 Mitigation Measure BIO-20 has been revised to clarify that drive and crush shall be used where blading for access roads is not required.

10-21 The incorrect reference to a VEG-10.2 has been removed. Mitigation Measure BIO-20 encompasses all necessary requirements.

10-22 Mitigation Measure BIO-22 has been revised to clarify that work activities occurring in unfenced areas will be monitored as detailed in Mitigation Measure BIO-23.

10-23 Mitigation Measure BIO-22 has been revised to incorporate the appropriate USFWS 2018 guidance.

10-24 The fencing inspection interval has been revised in Mitigation Measure BIO-22 to be consistent with the requirements of the USFWS Biological Opinion.

10-25 Mitigation Measure BIO-19 states that "the Project Owner shall acquire the land, in fee or in easement, no more than 18 months after the start of Project ground-disturbing activities." It does not indicate that simply initiating acquisition within 18 months of the start of ground disturbance is adequate to comply with the measure. Further, Mitigation Measure BIO-26, item 3.i similarly states that "Land acquisition,

initial protection or maintenance, and management activities shall be approved by BLM and CDFW and implemented within 18 months of start of construction." The requested revision has not been made.

10-26 The requested clarification has been made. See also response to comment 13-11.

10-27 Mitigation Measure BIO-28 has been revised to clarify that "linear features" refers to access roads and gen-ties and that mitigation land "nesting" may be used. The measure also has been revised to clarify that desert dune habitat mitigation must be in-kind at 3:1 to meet the NECO Plan requirement for dune habitat compensation, but mitigation for non-dune habitat is not required to be desert dune.

10-28 The requested text has been added to Mitigation Measure BIO-29.

10-29 The comment correctly notes that the only bird mortality avoidance measure suggested in the Kagan 2014 report that is relevant to PV panels is to "include UV-reflective or solid, contrasting bands spaced no further than 28 cm from each other;" the other measures pertain only to solar thermal technology or to evaporation ponds, which are not proposed on the Crimson Solar Project site. Therefore, citing this report in Mitigation Measure BIO-32 is not necessary to inform mitigation strategies and the citation has been removed. The text has been revised to require that the BBCS include the use of techniques that minimize attraction of birds to hazardous situations that are mistaken to be or simulate natural habitats (e.g., bodies of water) and evaluation and installation of the best available bird and bat detection and deterrent technologies available at the time of construction.

10-30 Please see response to comment 10-84.

10-31 The requested clarification in Mitigation Measure BIO-34 (renumbered to BIO-33 in the Final EIS and Proposed PA) has been made.

10-32 The requested clarifications in Mitigation Measure BIO-19 have been made.

10-33 The requested clarification has been made for Impact 3.3.5c in the Executive Summary and in Section 3.3. The evaluation under Impact 3.3.5c had concluded there was no impact. The text in the heading for Section 3.3.5c and in the Executive Summary now reflects the correct impact statement.

10-34 ~~This comment is noted and will be addressed in the Final EIR.~~ Since publication of the Draft EIS/EIR/PA in November 2019, CDFW has continued Tribal Consultation in accordance with CEQA and CDFW's Tribal Communication and Consultation Policy (see Final EIR Section 3.5 and Section 4.3). Based on close coordination with the Tribes and the commenter, Section 3.5 of the Final EIR has been revised to reflect the outcome of CDFW's consultation with the Tribes.

10-35 ~~This comment is noted and will be addressed in the Final EIR.~~ See response to comment 10-34. The CDFW-only mitigation measures remain as part of the Final EIR (see Section 3.5 and Appendix A, Final EIR Cultural, Tribal, and Historic Resources Mitigation Measures, of this Final EIR).

10-36 The requested revision to Mitigation Measure PALEO-2 has been made.

10-37 The requested revision to Mitigation Measure PSU-1 has been made.

10-38 The requested revision to Mitigation Measure VIS-1 has been made regarding the BLM Authorized Officer. BLM will retain appropriate oversight of visual resources on BLM managed lands but has required that documents provided the BLM are also provided CDFW for review. The meaning of "measurable by size" as a requirement for visual design elements has been clarified: "schematics will include dimension in set units which can be verified during the construction, operation, and/or decommissioning phases." In item 1 of VIS-1, the second part of the sentence has been changed to read "spot applications of a product such as Permeon shall be used to dull and darken the ground plane quickly after grading." The purpose of this requirement is to quickly reduce the contrast from graded roads, thereby minimizing the amount of time that contrast created by exposing un-oxidized soils and rock is visible from KOPs. Item 2 of VIS-1 has been revised to indicate that color treatment of equipment shall be done when feasible, but that the BLM AO may authorize exemptions for components that would have a warranty voided or would become unusable. Additional changes have been made to acknowledge potential limitations in the feasibility of color treating all facilities or of procuring equipment with compliant coatings.

10-39 The definition of new ground disturbance and applicability of Item 4 has been clarified in Mitigation Measure VIS-3.

10-40 "Lead Agencies" in the first sentence of the second paragraph on page 1-2 has been changed to "BLM" to reflect the roles of the Applicant and the BLM in considering Project alternatives as part of preliminary work.

10-41 Appendix F of the Final EIS and Proposed PA has been revised to clarify the Project's consistency with the intent of the Conservation Management Actions (CMAs) in the DRECP with mitigation incorporated and/or with alternatives considered. Although the CMAs do not apply to the Project, they are based on recent baseline data and state of the art science about many of the resources within the DRECP planning area. Therefore, the Project's consistency with the intent of these CMAs is relevant to the analysis. The fact that the DRECP does not apply to the Project is explained in Chapter 1.

10-42 Reference to NPDES Construction General Permit compliance in Table 1-1 has been removed because the U.S. Army Corps of Engineers has confirmed that the aquatic resources at the Project site do not qualify as federally jurisdictional waters.

10-43 The revised Plan of Development has been incorporated into the description of Alternative C and reflected in the impact analysis for that alternative throughout the Final EIS and Proposed PA.

10-44 The requested clarification has been made in Section 2.4.2.7.

10-45 Section 3.2.3 has been updated as requested to reflect that on August 16, 2019, USEPA approved EMFAC2017 for emission evaluations related to the State Implementation Plan (SIP) or General Conformity purposes and announced that USEPA does not require EMFAC2017 to be used for projects that start before August 16, 2021. This issue was not addressed by USEPA in its comment letter (see Comment Letter 17), nor did USEPA recommend updating the emissions estimates using EMFAC2017; therefore, no updates to the emissions estimates were made in response to this comment.

10-46 The idling policy identified in Mitigation Measure AQ-3 had no effect on the mitigated emission estimates because the emission estimates for off-road equipment are based on total daily use hours with

an applied load factor that accounts for the varying load that the engine would be subject to during its use. The load factor accounts for idling that would occur, but also accounts for low engine-stress activities. Since emissions associated with equipment idling are not estimated separately from the rest of the off-road equipment emission estimates, the emission reductions that would be associated with Mitigation Measure AQ-3 cannot be accurately estimated and have not been accounted for in the mitigated emissions estimates.

10-47 To clarify, the on-road vehicles component of Mitigation Measure AQ-2, *Diesel Engine Standards*, applies to all on-highway vehicles used for construction that would be under direct control of the Project Owner or construction contractor. Since it is not known whether on-highway trucks used for hauling in SCAQMD's jurisdiction would be under the direct control of the Project Owner or the construction contractor, or if Project-related hauling would be conducted by third-party haulers, the mitigated maximum annual emissions disclosed in the Draft EIS/EIR/PA do not reflect reductions associated with on-highway vehicles (see table notes for Table 3.2-3). However, if it is determined that on-highway trucks used for hauling in SCAQMD's jurisdiction would be under the direct control of the Project Owner or the construction contractor, those trucks would be subject to the on-road vehicles component of Mitigation Measure AQ-2. The suggested revision is not necessary.

10-48 The identified typographical error has been corrected.

10-49 The nitrogen oxides (NO_x) and carbon monoxide (CO) emissions in the first row of Table 3.2-7 have been revised to be rounded to the nearest tenth for consistency purposes.

10-50 The requested clarification in Table 3.3-4 has been made.

10-51 The requested clarification in Table 3.3-5 has been made.

10-52 The requested clarification in Table 3.3-5 has been made.

10-53 These species are not expected to use habitat within the Project site, as described in footnote 2 of Table 3.3-5 in Section 3.3, Biological Resources, but were included as regional migrants to evaluate potential effects to migrant and dispersing species related to tower or infrastructure collisions and/or attraction to photovoltaic panels. Inclusion of these species as regional migrants is appropriate given that the Project ROW would be for a 30-year operational period, while the surveys conducted provide brief snapshots in time. Therefore, it is not appropriate to presume absence of these species because they were not detected during surveys.

10-54 The requested clarification in Table 3.3-5 has been made.

10-55 Table 3.3-5 revised to clarify that potentially suitable habitat for avian species may include use of the Project site as a migration or dispersal pathway. As described in Table 3.3-5 footnote 2 (revised), Arizona Bell's vireo was presumed present due to records within 10 miles of the Project site within the last 25 years, potential use of the Project site as migratory pathway, and a low probability of detection during the standard baseline biological surveys conducted for the Project. The probability of detection for this species was considered low, despite the avian surveys conducted for the Project, because this species is only expected to occur as a "flyover" migrant. The inclusion in the environmental analysis of species not documented to occur but presumed present based on factors such as these allows for

disclosure and consideration of potential impacts to these species. The Project occurs within the known range of this species, and due to the proximity of riparian breeding habitat along the Colorado River, this species could be subject to the general effects that are described for migrating birds.

10-56 The BLM included Least Bell's Vireo for consistency with the adjacent Desert Quartzite Project and because of the species' unknown migration path.

10-57 As described in Table 3.3-5 footnote 2, bighorn sheep was presumed present due to records within 10 miles of the Project site within the last 25 years, presence of potentially suitable habitat, and a low probability of detection during the standard baseline biological surveys. The inclusion in the environmental analysis of species not documented to occur but presumed present based on these factors allows for disclosure and consideration of potential impacts to these species.

10-58 As described in Table 3.3-5 footnote 2, Yuma mountain lion was presumed present due to records within 10 miles of the Project site within the last 25 years, presence of potentially suitable habitat, and a low probability of detection during the standard baseline biological surveys. As a highly mobile species capable of traveling 10 miles within a day that is known to use a wide variety of habitats for movement and habitat connectivity, Yuma mountain lion's inclusion is warranted. Table 3.3-5 acknowledges that the species was not documented on the Project site and describes the species' expected occurrence as an infrequent site visitor. The inclusion in the environmental analysis of species not documented to occur but presumed present based on these factors allows for disclosure and consideration of potential impacts to these species.

10-59 It is acknowledged that the Project conducted multiple years of avian surveys including point counts, radar studies, avian observation points, and several species-focused avian surveys. Point counts and observation points were conducted during the daytime and rely on visual or acoustic detection of birds. The majority of birds migrate at night, and daytime flyover migrants of smaller avian species are unlikely to be detected by point counts or observation points. Radar studies were conducted to detect night migrants; however, these surveys are generally not capable of identifying birds to the species level. Therefore, to adequately consider potential impacts to migrating birds given the limited ability for detection using standard avian survey methodologies, avian migrant species were presumed present where they meet the criteria described in Table 3.3-5 footnote 2 (as revised per comment 10-55).

10-60 The text under Table 3.3-5 footnote 2 reads as intended. As described in the footnote, species were presumed absent when they were not detected during surveys *and* there was a high probability that they would have been detected if they were present.

10-61 The reference to footnote 3 has been removed in Table 3.3-5. The second reference to footnote 2 at the end of the table accurately notes the continuation of footnote 2.

10-62 The document considers this species to have the potential to breed on the Project site due to the presence of suitable habitat and documented burrowing owl occurrence. While the survey data collected for the Project indicates that the likelihood of borrowing owl breeding in the Project site is low, mitigation related to breeding borrowing owls would only be applicable if breeding owls are present.

10-63 The text has been revised as follows:

> Golden eagles have not been directly observed within the Project site; however, there are nest sites within 10 miles and a desert kit fox mortality observed within the Project site may be indicative of ~~potential~~ golden eagle foraging activity. ~~kill was observed on the Project site.~~

10-64 The description of species observed during the migratory bird observation point survey efforts during fall 2016 and spring 2017 has been revised.

10-65 The requested clarification in the introductory paragraph to Table 3.3-9 has been made.

10-66 The requested clarification in the paragraph about western burrowing owl has been made.

10-67 See response to comment 10-59.

10-68 The requested editorial revision has been made.

10-69 The requested clarification has been made.

10-70 See responses to comments 10-53 through 10-59 regarding presence/absence assumptions.

10-71 See response to comment 10-59.

10-72 The subsections titled "Climate Change Effects on the Project" are provided within the analysis of direct and indirect effects, which is responsive to NEPA requirements. No discussion of climate change effects on the Project is provided in the CEQA impact discussion. No change has been made.

10-73 The requested clarification has been made.

10-74 The requested clarification has been made. Consistency with the goals of California Senate Bill (SB) 32 already is discussed under Impact 3.4.5b in Section 3.4.

10-75 The BLM, in coordination with USFWS, has determined that disclosure of ongoing research by USGS geomorphologists into sand migration from Wiley's Well Wash is appropriate. Nonetheless, Section 3.7 has been revised to clarify that the Project site does not intersect with the Sand Migration Zones associated with Wiley's Well Wash as mapped in Kenney Geoscience 2018, and that the USGS research is not considered likely to change the understanding of SMZs within the Project site, which defines the existing conditions that provide the basis for the NEPA and CEQA conclusions.

10-76 The reference to NPDES applicability on page 3.7-4 has been revised to indicate that NPDES does not apply to the Project. All references to a required SWPPP have been revised to refer to a Storm Water Management Plan.

10-77 All references to a required SWPPP have been revised to refer to a Storm Water Management Plan.

10-78 All references to a required SWPPP have been revised to refer to a Storm Water Management Plan.

10-79 All references to a required SPCC have been removed because the SPCC rule at 40 CFR Part 112 does not apply to the Project. The text clarifies that Mitigation Measure BIO-8 requires the implementation of spill prevention measures.

10-80 The "Caltrans 1998" reference has been replaced with "Caltrans 2013a" on Draft EIS/EIR/PA pages 3.10-1, 3.10-3, and 3.10-6, as requested. The previous "Caltrans 2013" reference has been changed to "Caltrans 2013b." These changes have also been reflected in Appendix C, *Acronyms, Glossary, and References* in the Final EIS and Proposed PA.

10-81 The nighttime equivalent noise level (L_{eq}) at the northern end of Wiley's Well Campground has been revised from 22 dBA to 21 dBA on Draft EIS/EIR/PA page 3.10-1 for consistency with the Noise Analysis prepared by AECOM for the Project. The same L_{eq} has been revised on the second to last paragraph on Draft EIS/EIR/PA page 3.10-4. These revisions have no effect on the outcome of the analysis of direct and indict effects of the Project.

10-82 The AECOM Noise Analysis prepared for the Project states that the daytime and nighttime operation noise was estimated using the CadnaA® Noise Prediction Model, Versions 2017 and 2019. Draft EIS/EIR/PA page 3.10-3 has been updated to include reference to model Version 2019.

10-83 Mitigation Measures WAT-1 and WAT-2 have been revised to expressly state that these measures apply only if the Project will use groundwater.

10-84 This letter focuses on an earlier significance determination in the Draft EIS/EIR/PA. After the close of the public comment period on the Draft EIS/EIR/PA, however, CDFW reevaluated the potential for the proposed Project to cause significant bird strike-related impacts. CDFW has determined in its sole discretion and independent judgment that, while estimates indicate the Project is likely to cause some level of avian mortality, the impact based on current evidence is less than significant for purposes of CEQA without mitigation based on the relevant CDFW threshold of significance identified in the Draft EIS/EIR/PA. Accordingly, no further response to the comment is warranted.

Letter 11 – Colorado River Indian Tribes

11-1 The BLM and CDFW acknowledge the cultural, spiritual, and religious significance of the Project area to the Colorado River Indian Tribes (CRIT), and CRIT's opposition to the Project.

11-2 The BLM acknowledges the perspective expressed in the comment that cultural resource sites in the Project vicinity are tied together and that destruction of any sacred site(s) affects the sacredness of an entire area. The BLM recognizes the importance of resources in the Mule Mountains especially, and based on an indirect effects analysis summarized in Section 3.5, Cultural Resources, has concluded that the proposed Project would not have an adverse effect on significant cultural sites in the Mule Mountains. Mitigation Measures CUL-1 through CUL-7 address impacts on known resources and potential impacts on unanticipated resources that may be discovered during construction. BLM conducted ~~Government~~government-to-government consultation ~~between the BLM~~ and ~~the~~with consulting Indian Tribes ~~is ongoing~~ as described in Section 4.2.2; this consultation addresses the topic of sacred sites and cultural resources in the Project vicinity. Moreover, CDFW, through its own tribal consultation, has identified the Mule Mountains Tribal Cultural Landscape that overlaps the indirect and direct effects APE. In addition, CDFW has determined that the Project would have significant, direct

impacts to tribal values attached to archaeological sites and isolated artifacts within the Mule Mountains Tribal Cultural Landscape, which are also cumulatively significant. CDFW Mitigation Measures CUL-8 through CUL-10 reduce the significance of these impacts. Even with implementation of these mitigation measures, residual impacts to tribal values would remain, however, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

11-3 The Final EIS and Proposed PA and Final EIR includes measures to identify and reduce construction-related impacts on cultural resources and tribal cultural resources inadvertently encountered during construction. As noted in response to comment 11-2, BLM conducted government-to-government consultation ~~between the BLM and the~~with consulting Indian Tribes ~~is ongoing~~; this consultation addresses the topic of post-review discovery of cultural resources and appropriate mitigation measures to reduce Project-related impacts. Mitigation Measure CUL-5, in particular, ensures avoidance of historic properties and includes measures for monitoring of construction and treatment of post-review discoveries and unanticipated effects. CUL-5 requires the preparation of a Plan for Archaeological Monitoring, Post-Review Discoveries, and Unanticipated Effects (also referred to as a Monitoring and Discovery Plan or MDP). The MDP shall ~~either be appended to the MOA if an MOA is required or will~~ be a standalone document. The MDP will be developed in consultation with all consulting parties including Indian tribes.

11-4 The BLM acknowledges the comment's opposition to the indirect effects analysis conducted as part of the Project, and recognizes the importance of Mule Tank Discontinuous Rock Art District to the CRIT. As for whether the development will lead to vandalism and destruction of cultural resources, this comment is speculative ~~and not supported by evidence~~. Construction activities would be contained within the Project fence line. Neither the Draft EIS/EIR/PA or Final EIS and Proposed PA, nor other publicly available documentation issued by the BLM, discloses the locations of culturally significant sites in the Project vicinity, and the Project would not increase access to the Mule Mountains compared to baseline conditions. As shown in Figure 3.12-1, Open Routes, the open routes in the vicinity of the Project site are all accessible via the existing Powerline Road, and the Project would not create new connections that would increase access around the Project site. Furthermore, for purposes of assessing environmental impacts, the Lead Agencies must reasonably assume that the laws in place to protect resources and property will be obeyed. Regarding the buried site sensitivity analysis, Section 3.5 also states that geoarchaeological field investigations were conducted concurrently with archaeological test excavation, in addition to the analysis based on satellite imagery, soil mapping, and geologic mapping also discussed in Section 3.5. The findings of this analysis are discussed in Section 3.5, Cultural Resources, where both surface and subsurface sediments were examined. ~~Government-to-government consultation to discuss these and other issues between the BLM and the Indian Tribes, including CRIT, is ongoing.~~ However, BLM and CDFW have acknowledged that inadvertent adverse effects to avoided cultural resources, including the Mule Tanks Discontiguous Rock Art District, or the Mule Mountain Tribal Cultural Landscape as defined by CDFW, are possible through public access to the area. Inclusion of CUL-2, preparation of a Long Term Management Plan, anticipates these indirect effects and requires periodic monitoring of avoided cultural resources to assess potential adverse indirect effects resulting from public access.

11-5 The Project will not prevent access to the Mule Mountains. The comment fails to describe what landscape connectivity is necessary to traditional cultural practices; therefore, the comment lacks the necessary specificity to craft a more detailed response. Regarding the statement that "Access to places

of traditional cultural and religious importance may not be maintained" on page 22 of Appendix F, this stems from a preliminary analysis provided by the Applicant. Appendix F has been revised in the Final EIS and Proposed PA to clarify the Project's consistency with the intent of the Conservation Management Actions (CMAs) in the DRECP with mitigation incorporated and/or with alternatives considered. As shown in the revised Appendix F, the Project would be consistent with the intent of LUPA-CUL-3, as following identification of places of traditional cultural and religious importance, the BLM has determined that access to these sites would be maintained for traditional uses.

11-6 The BLM has carefully considered the comment in its Section 106 and NEPA review of the proposed Project. The BLM, through consulting archaeologists, conducted a Class I records search, an intensive Class III survey of the entire direct APE of a total of approximately 3,498 acres, as well as archaeological site testing and other investigations of nine sites within the direct APE. The BLM also conducted an ethnographic literature review and has provided multiple opportunities for government-to-government consultation with tribes. The BLM submitted the Class I inventory, research design, and work plan for the proposed Project to all consulting parties, including the tribes, for comment on October 7, 2016. These documents were not finalized until the BLM had addressed numerous tribal comments. The BLM considered all consulting party comments and used the data presented in the Class I inventory to determine the appropriate APE and level of identification efforts for the proposed undertaking. In response from comments, the BLM expanded the Class I inventory records search area to include 30 square miles extending beyond the indirect APE boundary and viewshed of the proposed Project in some areas.

Based on the results of these studies and consultations, the BLM has concluded there is no basis for connecting the prehistoric sites and isolates of the study area into a larger cultural resource entity such as a district that can be analyzed under Section 106 or NEPA. The cultural resources data for the proposed Project do not demonstrate that the proposed Project area and immediate surroundings contain a district, other than the National Register-listed Mule Tank Discontiguous Rock Art District in the Mule Mountains. A district is defined as a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. (See *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*. National Park Service, n.d., U.S. Department of the Interior, National Park Service, Interagency Resources Division. Washington DC.)

The prehistoric sites and isolates identified within the direct APE are generally surface scatters and manifestations, with very few temporally diagnostic artifacts. They appear to lack intact buried deposits with datable archaeological remains. The presence of certain ceramic types (i.e., Parker Buff and Tumco Buff) at some of the locations suggests that the area is associated with late prehistoric use (A.D. 1000 to 1850), probably related to intermittent procurement of lithic materials and other local resources that cannot be discerned from the data. A more refined understanding of the timing and nature of Native American use, the ethnolinguistic affiliation of the users, and whether individual sites are actually linked in terms of physical development cannot be demonstrated.

However, through the CEQA Tribal Consultation process, CDFW has acknowledged the presence of the Mule Mountain Tribal Cultural Landscape and its interconnectedness to the broader cultural landscape in the Southern California desert region. CDFW has determined that the Project will have significant direct impacts to tribal values of the Mule Mountain Tribal Cultural Landscape that are conveyed

through archaeological sites and isolated artifacts in the direct effects APE. Furthermore, CDFW has determined that these impacts are cumulatively significant due to residual impacts to tribal values of individually impacted archaeological sites and isolates, but the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

11-7 Since publication of the Draft EIS/EIR/PA, the BLM has made its determinations and findings under Section 106 of the NHPA, as described in Section 3.5 and Chapter 4. The BLM has notified the tribes, including CRIT, regarding these determinations and findings. The BLM held a consulting parties meeting (including a site visit to the Project area) in Blythe, CA on December 4, 2019 to further explain these determinations and findings and answer any questions from the consulting parties. In summary, 17 prehistoric archaeological sites or prehistoric site components have been determined eligible for the National Register or are being treated as eligible for purposes of this undertaking. Alternative C was designed in part based on these findings and would result in substantially fewer impacts on sites and isolates, and would avoid the resources found or being treated as eligible for the National Register. Revisions to Mitigation Measure CUL-5 also ensure avoidance of these resources.

11-8 The BLM has accurately analyzed impacts under NEPA to cultural resources (both eligible and not eligible for the National Register). Should Alternative A or B be selected—thus leading to adverse effects to National Register-eligible cultural resources under Section 106—the BLM will develop a Memorandum of Agreement (MOA) to resolve this adverse effect (see mitigation measure CUL-1). The MOA will be prepared in consultation with the ACHP, SHPO, Applicant, tribes, and other identified consulting parties. The MOA will contain measures to avoid, minimize, and mitigate adverse effects to historic properties. While the BLM acknowledges the importance of all prehistoric cultural resources in the proposed Project area to CRIT, the BLM did not find that the non-eligible resources affected by the proposed Project warrant mitigation under NEPA and no such mitigation is proposed. The cultural resource studies prepared for the proposed Project are the basis of this finding. Further, it is not feasible for the proposed Project to avoid all of the non-eligible resources. The BLM notes that the comment does not recommend mitigation measures for the non-eligible resources.

11-9 See response to comment 11-6.

11-10 Both CDFW (in regard to CEQA) and BLM (in regard to NEPA) acknowledge the distinction between resource significance according to the California and National Registers, and significant impacts under CEQA and NEPA, respectively. The BLM has accurately analyzed impacts under NEPA to cultural resources both eligible and not eligible for the National Register. Likewise, CDFW has accurately analyzed impacts under CEQA to cultural resources eligible for listing in the CRHR under criteria 1 and 4, and to tribal cultural resources.

11-11 The argument that the Project would not directly affect ACECs is, as explained in Section 3.14.4.1, based on the fact that the Project would not be located within any ACEC. The evidence to support this argument is clear, as shown on the map in Figure 3.14-1. With regard to indirect impacts, as stated in Section 3.14.4.1, "Because of the proximity of the site to these ACECs, indirect effects could occur during all phases of the Project." ... As described in Section 3.5, Cultural, Tribal, and Historic Resources, the Project may increase public access and awareness of cultural and tribal cultural resources that could result in indirect adverse impacts through vandalism, artifact collection, general degradation, and other activities resulting from public access and awarenesswould have no indirect impacts on

~~cultural resources~~. ~~Therefore, the Project would not conflict with objectives to protect cultural resources known to both ACECs."~~ The resources within ACECs managed to protect cultural resources are the same as those addressed in Section 3.5; a duplicative analysis in Section 3.14 is not necessary.

11-12 As described in Section 4.3 and Section 3.5, CDFW initiated the CEQA consultation process with California Native American Tribes as identified by the Native American Heritage Commission. This was done through certified mailings. Responses were received from several tribes, including CRIT, and CDFW entered into consultation with those tribes, providing technical reports and other documents. ~~While no specific tribal cultural resources were identified through that process as of the publication of the Draft EIS/EIR/PA, consultation between CDFW and tribes to discuss tribal cultural resources is ongoing.~~As a result of this consultation, CDFW has identified the Mule Mountain Tribal Cultural Landscape, along with 23 archaeological sites individually considered tribal cultural resources due to their ability to convey tribal values under CEQA significance criteria 1 and 4. Direct and indirect adverse effects to these resources have been identified by CDFW and, after mitigation, CDFW has determined that residual impacts remain to tribal cultural resources that cannot be avoided. The identification of these resources, impacts to them, and mitigation are described in Section 3.5 (see Appendix A to this Final EIR for a list of cultural, tribal, and historic resources).

11-13 The sentence regarding redirection of flows quoted in the comment comes from the Water Resources section of the summary table in the Executive Summary. Accordingly, erosion is addressed in more detail in Section 3.18, Water Resources, which states, "The Storm Water Management Plan developed for the site, as required by Mitigation Measure BIO-14, would include post-construction measures to manage stormwater and minimize changes in the existing drainage patterns, so that natural stormwater could flow through the site to the greatest practical extent. It is considered unlikely that substantive changes would occur with respect to the quantity or quality of runoff at the site compared to existing conditions because of the nature of the proposed improvements that are spread out across a wide area and confirmed by hydraulic modeling." The Project would not substantially increase the potential for erosion, particularly for offsite erosion, compared to existing conditions. The Genesis Solar Project included substantial infrastructure for redirection of storm flows; this Project would instead maintain existing flow across the site, with design intended to accommodate flows beneath Project structures.

11-14 In response to this comment, Section 3.5.6 has been revised in the BLM Final EIS and Proposed PA and the CDFW Final EIR to include available information about impacts on cultural resources that have occurred or are reasonably foreseeable as a result of the projects in the cumulative scenario. This revision clarifies and amplifies the analysis provided in Section 3.5.6 ~~and does not change the conclusions regarding the Project's contributions to cumulative impacts or identify any new previously undisclosed impacts~~. Specifically, CDFW has determined that adverse impacts cannot be avoided to the Mule Mountain Tribal Cultural Landscape and to 23 individual archaeological sites that CDFW determined to be tribal cultural resources. After implementing the provided mitigation (CUL-1 through CUL-10), residual impacts to these tribal cultural resources remain and cannot be avoided, however, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

11-15 The BLM and CDFW acknowledge the comment's statement that the only way to avoid impacts would be to deny approval of the Project, and that the Final EIS and Proposed PA focuses on California and National Register-eligible resources. However, the cultural resources not found to be significant are

considered in the analysis of impacts. The analysis in the Final EIS and Proposed PA has been conducted in accordance with the requirements of NEPA. CDFW's ~~will issue a~~ Final EIR ~~including~~ includes an analysis conducted in accordance with the requirements of CEQA. Government-to-government consultation ~~between~~ was conducted between both agencies and ~~tribal representatives~~consulting Indian Tribes~~,~~ to address this and other issues~~, is ongoing~~. The Final EIS and Proposed PA and Final EIR document the results of government-to-government consultation conducted by each agency.

11-16 The BLM and CDFW acknowledge the statement that archaeological resources can be significant for reasons other than scientific data potential, and that data recovery excavation, removal of resources, and curation may not suitably mitigate against impacts on these non-scientific characteristics of the resources. All the archaeological resources have been evaluated under all four National Register eligibility criteria. To ensure tribal input regarding the importance of resources is included in the assessment of impacts, government-to-government consultation was conducted between CDFW and California Native American tribes, and BLM and Indian tribes, ~~has continued~~ through the duration of the CEQA and NEPA and Section 106 analyses ~~and is ongoing~~.

The disposition of artifacts located on BLM-managed land is governed by various laws, regulations, and policy. The Native American Graves Protection and Repatriation Act (NAGPRA) governs the discovery and repatriation of human remains, funerary objects, sacred objects, and objects of cultural patrimony. The DOI/BLM regulations at 43 CFR 10 outline the specific process the BLM must follow when such items are discovered, and BLM policy allows for the possibility of reburial of NAGPRA materials on public lands contingent on approvals at the field and state offices and subject to environmental review and other considerations. For those cultural resources that are not subject to NAGPRA, the BLM must comply with the Archaeological Resources Protection Act (ARPA), which requires curation to specific standards for non-NAGPRA archaeological resources excavated or removed under the authority of an ARPA/cultural resource use permit. Artifacts (even those considered "isolates") may be archaeological resources under ARPA, NAGPRA materials, or historic properties under NHPA. If such resources fit any of those definitions, they are subject to the processes and procedures set forth in the relevant laws and regulations. ARPA requires that when archaeological resources, as defined by the statute, are excavated or removed from public lands, they are subject to the ARPA regulations, including those requiring curation. The BLM must operate in accordance with the required regulations.

11-17 Mitigation Measure CUL-5, Monitoring and Discovery Plan, has been revised to clarify that the monitoring strategies used pursuant to the Plan will be guided by the buried site sensitivity model developed from geoarchaeological analysis. The BLM will develop the Monitoring and Discovery Plan in consultation with all consulting parties including CRIT.

11-18 Section 3.5, Cultural, Tribal, and Historic Resources, uses the term "monitor" ~~only three times: twice~~ to refer to requests made by Tribes during consultation processes~~,~~ and ~~once~~ to describe the requirements of Mitigation Measure CUL-10, a CDFW-specific measure. In none of these cases is the term "Tribal Monitor" used to define a specific role. As stated in Section 3.5.5.1, "Mitigation Measure CUL-10 pertains to the retention of a Native American Tribal Observer." The CEQA-specific portion of Section 3.5.6.1, which in the Draft EIS/EIR/PA read, "three measures specifically for CEQA, including…tribal participation in monitoring (CUL-10)" has been revised to clarify that Mitigation Measure CUL-10 provides for "tribal participation in monitoring through the participation of designated Tribal Observers." Mitigation Measure

CUL-10 has been revised to clarify use of the term Tribal Observer. No specific authority has been provided to the Tribal Observer under this CDFW-specific mitigation measure.

Consistent with information provided to Indian tribes in the BLM's November 2019 letter regarding Section 106 eligibility determinations and findings of effect and mitigation measure CUL-5 (Appendix ~~B~~A of the Final EIR), the BLM is encouraging the Applicant to prepare a Tribal Participant Plan (TPP) to be appended to the Monitoring and Discovery Plan (Mitigation Measure CUL-5). The TPP is a plan that would identify specific procedures for continued tribal participation during the Project construction process. The plan would be developed in coordination with all participating tribes and the Applicant. The plan should include specific procedures for tribal participation, a participation schedule, roles and responsibilities of all parties, communication protocols, and reporting requirements.

11-19 See response to comment 11-7 regarding revisions to Mitigation Measure CUL-5. Preparation of an HPTP pursuant to Mitigation Measure CUL-1 would be premature because the purpose of the HPTP would be to identify appropriate treatment for National Register- eligible or listed cultural resources that cannot be protected from adverse direct and/or indirect effects. As explained in Section 3.5, Alternative C (the Preferred Alternative footprint) would avoid impacts to all resources determined eligible for listing in the National Register, thereby avoiding adverse effects to identified historic properties.

11-20 Mitigation Measure CUL-7 has been modified to include the participation of tribal representatives in WEAP training.

11-21 See response to comment 11-18.

11-22 See responses to comments 11-17 and 11-18, as well as Mitigation Measure CUL-5, as revised, in Appendix ~~B~~A of the Final EIR.

11-23 ~~This comment is noted and will be addressed in the Final EIR.~~ Since publication of the Draft EIS/EIR/PA in November 2019, CDFW has continued Tribal Consultation in accordance with CEQA and CDFW's Tribal Communication and Consultation Policy (see Final EIR Section 3.5 and Section 4.3). Based on close coordination with the commenter, Section 3.5 of the Final EIR and the CEQA mitigation measures (CUL-8 through CUL-10) have been discussed and refined (see Appendix A of this Final EIR for a list of the cultural, tribal, and historic resources mitigation measures).

11-24 The BLM has presented the results of the indirect effects analysis to the consulting parties, including CRIT. The BLM acknowledges CRIT's comment that "Any large-scale visual alteration to this space disturbs the sanctity of the outdoor environment, degrades cultural values, and constitutes a significant impact." The indirect impact analysis is provided in Section 3.5.4.1 of the Final EIS and Proposed PA. The Final EIS and Proposed PA includes several mitigation measures to minimize visual impacts, as described in Section 3.17 (see Mitigation Measures VIS-1 through VIS-3 in Appendix B of the Final EIS and Proposed PA). Moreover, CDFW, through government-to-government consultation with consulting Indian Tribes, has determined that the Mule Mountain Tribal Cultural Landscape overlaps the Project~~,~~ and is the material representation of the spiritual, religious, and cultural connectivity of Native American tribes to the broader Southern California desert region. CDFW has determined that, after implementation of Mitigation Measures CUL-1 through CUL-10, residual impacts remain that affect the setting and feel of the tribal cultural landscape and these impacts cannot be avoided.

11-25 As explained in Section 3.17.2.1, the BLM assigned a Visual Resources Inventory (VRI) Class of II to the Project area. VRI describes the existing scenic value of a site and is distinct from Visual Resources Management (VRM), which describes a policy for management of the visual values of a site. Section 3.17.4.1 analyzes the visual contrast that the Project would create within the landscape, and this analysis is based on the existing scenic value of the site. As noted therein, the Project's contrast is considered important because the Project area has been determined to have high visual value, and mitigation measures are recommended to reduce the strong contrast that would occur in this VRI Class II area. This analysis provides the necessary considerations and disclosures under NEPA. Similarly, the CEQA impact analysis for visual resources appropriately focuses on the change in the landscape compared to existing conditions, not to BLM management objectives for the Project site.

As described in Section 3.17.3.2, Plan Conformance, in order to be consistent with the guidance provided in BLM Manual 8431 and 43 CFR Section 1610.5-3(b), the BLM has assigned the Project area an interim VRM Class IV. As explained in Section 3.17.4.1, the strong visual contrast created by the Project would be consistent with VRM Class IV objectives. Nonetheless, the overall VRM goal is to minimize visual impacts even where VRM objectives are met. Therefore, the recommendation of Mitigation Measures VIS-1 and VIS-3 is consistent with BLM's VRM policy.

11-26 The visual simulations provided in the Draft EIS/EIR/PA do not account for implementation of mitigation measures; they depict the Project as proposed. Although the comment does not specify which of the CEQA impacts identified in Section 3.17 it refers to, the only CEQA impact that relies on mitigation for a less-than-significant conclusion, other than the impact specific to glint and glare which is not the subject of this comment, is Impact 3.17.5c, regarding whether the Project would substantially degrade the existing visual character or quality of public views of the site and its surroundings. As explained therein, the only KOP at which a significant impact might occur during long-term operation of the site is KOP 4. The visual simulation provided in Figure 3.17-5 depicts what is described in the analysis, that the strong visual contrast from KOP 4 would result from the broad, flat form and dark, reflective surface of the solar panels against the existing muted tones of the landscape (see also Final EIS and Proposed PA Figures 3.17-7 through 3.17-11, which depict Alternative C). Therefore, the implementation of mitigation measures that would break up the form of the panels and require color treatment is appropriate for the nature of the impact and would reduce the Project's contrast such that it would not substantially degrade the existing visual character or quality of the site, which already is characterized by the presence of transmission lines and the Colorado River Substation.

11-27 See Section 3.13.2.2, which identifies both the Colorado River Indian Reservation and Native Americans living in the Project area outside of the reservation, and acknowledges that Native Americans living in the region, whether or not they are a part of an identified minority or low-income community, represent a community that may be at risk for environmental justice impacts related to physical impacts on cultural resources. Such impacts are addressed throughout Section 3.13.

11-28 The CDFW acknowledges this comment and CDFW's responsibilities under CEQA and other authorities to consider the potential for impacts on sensitive subgroups. See Appendix E of the Final EIS and Proposed PA, where the requirements for lead agencies under CEQA Guidelines Section 15131 (a) through (c) are summarized. Additionally, Appendix E has been revised in the Final EIS and Proposed PA to clarify that CEQA does not use the term "environmental justice" or require the evaluation of impacts on minority or low-income communities in the way required by Executive Order 12898 under

NEPA. The Office of the California Attorney General (OAG) has clarified that environmental justice concerns are relevant to the analysis of a project under CEQA, but has recommended that lead agencies address environmental justice by evaluating whether a project's impacts would affect a community whose residents are particularly sensitive to the impact (i.e., sensitive receptors) and whether a project would have significant effects on communities when considered together with any environmental burdens those communities already are bearing, or may bear from probable future projects (i.e., cumulative impacts) (OAG, 2012).

The impacts of this proposed project on sensitive receptors are analyzed where appropriate (e.g., in Section 3.2, Air Resources). The proposed project's impacts considered together with existing or foreseeable environmental burdens experienced by nearby communities are analyzed throughout Chapter 3 in the Cumulative Effects subsection of each resource section. Further, the OAG indicates that a lead agency must be clear and transparent in its Statement of Overriding Considerations about the balances it has struck in approving a project, such as whether the benefits of the project will be enjoyed widely, but the environmental burdens of a project will be felt particularly by the neighboring communities (OAG, 2012). The information presented in the ~~Draft~~ Final EIS~~/EIR/~~ and Proposed PA and Final EIR will inform such a statement if and when the Project or an alternative is approved and if a significant unavoidable impact is identified under CEQA.

11-29 The only impacts identified in Section 3.13 as posing a potentially disproportionately high and adverse impact on Native Americans in the Project area are those impacts identified in the cultural resources analysis in Section 3.5. The mitigation provided in response to those impacts on cultural resources has been developed in accordance with applicable laws and as a result of ~~the ongoing~~ government-to-government consultation with Indian Tribes conducted by CDFW and BLM. There is no evidence showing that Project-related hiring would disproportionately benefit groups other than Native Americans, resulting in a disproportionate economic and employment burden on Native Americans; therefore, mitigation requiring preferential hiring would not respond to the identified impacts of the Project. Project construction would require a number of skilled, semi-skilled, and labor positions. Currently, it is unknown if the Applicant has selected a construction contractor. However, qualified applicants that live in close proximity to the Project site may prove preferential to the contractor compared to those that do not (and potentially require temporary relocation costs). Due to proximity of the Colorado River Indian Reservation and Native American affiliated individuals to the Project site, tribal members are encouraged to contact the Applicant about the selection of a construction contractor and means for applying for construction employment.

11-30 Please see response to comment 13-20 regarding the BLM's purpose and need statement and its effect on the selection of alternatives.

11-31 The DRECP LUPA covers approximately 11 million acres of BLM-managed lands in the southern California desert, including the Project site. Appendix F of the Final EIS and Proposed PA describes the relationship of the Project to the DRECP and explains that while the CMAs do not apply to the Project, the BLM undertook an evaluation to verify that the resource conservation objectives of each CMA were met, determine whether changes could be made to Project design and technical analysis to improve conformance, and determine whether changes could be made to the preliminary mitigation measures (i.e., those proposed by the Applicant or preliminarily identified by the BLM). Because the CMAs were developed based on landscape-level analysis and planning, the BLM's evaluation of and decision-

making even for projects not subject to the DRECP are inherently informed by the knowledge gained during that planning process. While the Draft EIS/EIR/PA identified instances where the Project as proposed was inconsistent with CMAs, the Final EIS and Proposed PA includes identification of Project changes and BLM-recommended mitigation measures that would bring the Project, if approved, into alignment with the resource conservation objectives of the CMAs. Please see the revised Appendix F in the Final EIS and Proposed PA. The BLM further notes that, because the Project site is in both a Solar Energy Zone and a DRECP Development Focus Area, development of this site as a solar facility would be compatible with current landscape-level management decisions. There is no requirement to consider a "DRECP alternative" to the Project, and such an analysis would be redundant of the considerations provided in Appendix F.

11-32 As explained in Section 2.8 in the Final EIS and Proposed PA, the BLM, in coordination with CDFW and the Applicant, has refined preferred alternative to be Alternative C, as modified by two design elements from Alternative B (DE-1 and DE-3). DE-2 (Avoiding or limiting trenching by placing electrical wiring aboveground) has been determined to have a greater potential impact due to avian interaction with additional aboveground wiring and poles than the impact of ground on-site disturbance from trenching to bury electrical wiring. The Executive Summary has been revised to clarify that this is the BLM's preferred alternative.

11-33 The land use designations for this site do make some future solar development reasonably foreseeable, if not the Crimson Solar Project. However, Section 2.9 has been revised in the Final EIS and Proposed PA to clarify CDFW's meaning with respect to the environmentally superior alternative in consideration of reasonably foreseeable actions on the Project site. Regarding a "DRECP alternative," please see response to comment 11-31.

11-34 In compliance with CEQA, the Project's potential to induce growth is analyzed in Section 3.13.5, under Impact 3.13.5a. The gen-tie line would only connect the Project's on-site substation to the existing Colorado River Substation (CRS), and under any alternative would be less than 6,000 feet long. The presence of the Project and the gen-tie in relation to the CRS would consume available connection capacity at the substation, rather than accommodate additional future development that is not already made likely or possible by the presence of the CRS.

11-35 Please see response to comment 11-31 regarding the relationship of the Project to landscape-level planning.

11-36 ~~This comment is noted and will be addressed in the Final EIR~~Section 4.1.5 has been revised in the Final EIR to include updates regarding the CDFW regulatory process for this Project. A Lake and Streambed Alteration Notification to CDFW would be required for any action alternative due to the presence of ephemeral washes, riparian habitat, and unvegetated streambed within the Project site. Figure 6 in Appendix I.1 of the Final EIS and Proposed PA shows that the Project is sited to avoid major washes, with the exception of unavoidable access road crossings. The alternatives were subject to review and input from CDFW as CEQA lead agency, and Alternative C, developed in coordination with CDFW, represents the alternative that would further minimize impacts on ephemeral washes. As shown in Figure 1-3, the Project area and energy production capacity have been significantly reduced to avoid impacts to various resources, including state waters. Regarding consultation between the Applicant and CDFW under the California Endangered Species Act (CESA), Section 3.3 analyzes the potential impacts of the Project and alternatives on CESA-listed and threatened species and describes mitigation

requirements to avoid, minimize, and mitigate impacts in compliance with the CESA and other applicable laws and policies. Consultation between the Applicant and CDFW, which is also the CEQA lead agency, is ongoing. The Applicant submitted an application for an Incidental Take Permit to CDFW and an Incidental Take Permit will be issued by CDFW for the Project. Finally, the BLM made no conclusions that the Project's biological resources impacts would be less than significant; such significance determination are the conclusions of CDFW as required under CEQA.

11-37 ~~This comment is noted and will be addressed in the Final EIR.~~ CDFW has not received information during tribal consultation identifying any particular plant or animal species potentially affected by the undertaking as significant under tribal values. Specifically, no plants or animals, or their local habitat, has been identified by CDFW through tribal consultation as a tribal cultural resource under CEQA.

11-38 The BLM acknowledges the importance of native plants such as creosote scrub to the CRIT. The analysis of impacts on biological resources is not limited merely to the information provided by site specific surveys. Surveys assist in identifying the relative density of sensitive habitats and special-status species on the Project site; this information then is compared to the regional availability of that habitat or population of that species based on the appropriate geographic scope. The cumulative impacts analysis further considers the contributions of other projects in that geographic scope to the total impacts on each resource. Mitigation measures to avoid, minimize, and mitigate impacts on sensitive habitats and special-status species are based on the need to mitigate overall impacts on these resources, but are designed to do so in proportion to the impacts attributable to this Project. For example, Mitigation Measure BIO-26 requires compensatory mitigation for desert tortoise habitat impacts caused by the Project, but also requires that compensatory mitigation lands be located within the Colorado Desert Recovery Unit in order to address Project and cumulative impacts on this unit.

Further, due Mitigation Measures BIO-18, BIO-19, and BIO-20, a similar (or greater) density of diversity of desert flora endemic to this area would be planted to compensate for the loss of native plants. By replanting species that will be removed, the Native American traditions and culture associated with these plants will remain.

11-39 The impacts of other solar projects in the vicinity on biological resources are considered in the cumulative effects analysis (see Section 3.3.6) and mitigation measures for impacts on biological resources are based on species- and community-level consideration of impacts. The comment does not provide enough specificity about the adequacy of the mitigation measures to allow a more detailed response.

11-40 Appendix G of the Final EIS and Proposed PA, CDCA Plan Consistency, addresses the Project's consistency with applicable CDCA Plan requirements related to cultural, tribal, and historic resources as well as visual resources. Resolution of adverse effects, if needed, under ongoing Section 106 consultation, mitigation of impacts on cultural and visual resources, and the avoidance of resources under the preferred alternative (which includes the Alternative C footprint), would ensure consistency with applicable guidelines for management of Multiple Use Class M lands pursuant to FLPMA.

11-41 The BLM and CDFW have reviewed the CRIT's consultation policy and the BLM District Manager, California Desert District, has sent a response letter to the CRIT dated January 8, 2018. For the proposed Project, the BLM has consulted, and continues to consult, with 15 Tribes, including the CRIT. As outlined in ~~Draft EIS/EIR/Pa~~Final EIR Section 4.3, CDFW's Tribal Liaison acknowledged CRIT's

consultation policy on September 27, 2017. CDFW and CRIT exchanged correspondence related to the Project from 2018 and into 2021. CDFW and CRIT held an initial staff-to-staff meeting on February 25, 2020, and have held a series of staff-level conversations since that time. ~~Assembly Bill 52 government-to-government consultation is ongoing.~~

11-42 The BLM acknowledges the CRIT's perspective that the November 28, 2016 meeting was not a government-to-government meeting.

11-43 As described in Final EIR~~S and Proposed PA~~ Section 4.3, CEQA Tribal Consultation and CDFW's Communication and Consultation Policy~~Consultation Process for Assembly Bill 52~~, CDFW ~~has~~ engaged in government-to-government consultation with CRIT during the environmental review process per ~~Assembly Bill 52~~ CEQA Tribal Consultation requirements and CDFW's Tribal Communication and Consultation Policy. Tribal outreach began in 2017 and has continued through 2021. Also see response to comment 11-41. ~~This consultation is ongoing.~~

Letter 12 – Basin and Range Watch and Western Watersheds Project

12-1 Please see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative (such as "community solar") was not carried forward for detailed analysis. Please also see response to comment 13-20 regarding the scope of BLM's purpose and need statement.

12-2 The BLM acknowledges that the Western Solar Plan and the DRECP Land Use Plan Amendments do not apply to the Crimson Solar Project. As described in response to comment 1-3, Chapter 1, Introduction and Purpose and Need, describes that the proposed Project is not subject to the land use planning decisions in these plans. The relationship between the Crimson Solar Project Final EIS and Proposed PA and the DRECP, and the Project's consistency with the intent of the Conservation and Management Actions (CMAs), is discussed in Appendix F of the Final EIS and Proposed PA.

12-3 The decisions in the DRECP LUPA Record of Decision are outside the scope of this analysis. Section 3.3 of the Final EIS and Proposed PA describes the Project's potential impacts on the sand transport corridor, most of which is avoided by Project design.

12-4 The commenter's statement of support for the No Action/No Project Alternative is acknowledged.

12-5 The proposed Energy Storage System is described in Section 2.4.2.6. The description intentionally provides flexibility to allow the Applicant to choose a battery technology based on technological and economic factors at the time of purchase. The Project Description is, as required, sufficiently detailed to allow analysis of environmental impacts. The potential impacts of the Energy Storage System include those associated with ground disturbance, which is addressed where appropriate within the overall site footprint; GHG emissions and energy consumption, which are addressed in estimates of the emissions and electricity consumption to power the cooling system; noise, which is addressed in Section 3.10 and Appendix P.1 of the Final EIS and Proposed PA (operational noise from the Energy Storage System is included in overall operational noise calculations); and visual impacts, which are addressed based on the visual simulations from key observation points shown in the Draft EIS/EIR/PA (see also new Final EIS and Proposed PA Figures 3.17-7 through 3.17-11 which depict views of the Energy Storage System under Alternative C). Additional detail has been added to Section 2.4.2.6 in the Final EIS and Proposed PA to describe the battery and flywheel options; however, these additional details do not constitute

significant new information under CEQA and do not change the impact analysis under NEPA, which accounts for the impacts of either type of energy storage system. Utility-scale energy storage is not a speculative technology; according to the California Independent System Operator (CAISO), which maintains grid reliability statewide, the U.S. had approximately 24 GW of operational electrical energy storage as of 2019 (CAISO 2019). The details of storage-grid integration do not raise significant environmental issues and therefore have not been addressed in the Draft EIS/EIR/PA or Final EIS and Proposed PA; however, the CAISO provides numerous resources on this topic at its website: http://www.caiso.com/informed/Pages/CleanGrid/default.aspx.

12-6 The potential PV panel types and orientations that may be used are described in Section 2.4.2.1. The description intentionally provides flexibility to allow the Applicant to choose a PV technology based on technological and economic factors at the time of purchase. The Project Description is, as required, sufficiently detailed to allow analysis of environmental impacts. For most types of environmental impacts analyzed in this Final EIS and Proposed PA, the different potential panel types and orientations would not result in different types or intensities of impacts. However, where applicable, such as in the analysis of visual impacts (Section 3.17), the panel types and orientations that would produce the most severe impacts are assumed. There is not currently sufficient information from other projects to determine how, nor does the comment provide any suggestion as to how, panel types and orientations may affect avian-panel interactions. Avian impacts, including the potential for birds to mistake solar arrays as water bodies (sometimes called the "lake effect") are addressed in Section 3.3, Biological Resources; see also response to comment 13-35.

12-7 As stated in Section 2.4.3.4, concrete for foundations would be brought to the site from a batching plant in Blythe or would be batched on-site. Concrete pads, foundations, and vaults may include both pre-cast (i.e., batched and cast off-site) and cast-in-place (i.e., batched en route or on-site) construction methods. The CO_2 emissions related to concrete production are primarily a result of producing Portland cement, a component of concrete. These emissions would occur regardless of where and how the concrete used for the Project is batched and cast. The commenter's preference for siting solar panels within the built environment to avoid the use of new concrete to build the Project is acknowledged. Please see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative was not carried forward for detailed analysis.

12-8 Please see response to comment 13-20 regarding the BLM's purpose and need and responsibilities under FLPMA.

12-9 Please see response to comment 13-20 regarding the scope of the BLM's purpose and need. Consistent with FLPMA, the BLM relies on project proponents to identify renewable energy technologies and general project locations and configurations that are technically and economically viable given current market conditions, renewable portfolio standards, technological advancements, transmission access, and related considerations. Further, as clarified in the Final EIS and Proposed PA (see response to comment 13-21), the Applicant's objectives for the Project are listed in Section 1.2.2, CDFW and Applicant's Project Objectives. CDFW has not adopted the Applicant's objectives as its own for the purposes of crafting alternatives to the Project in compliance with CEQA Guidelines Section 15126.6. As explained in Section 2.2, this section is intended to define the project objectives for purposes of CDFW's alternatives development and screening process pursuant to the California Environmental Quality Act (CEQA) and its implementing regulations (CEQA Guidelines, 14 Cal. Code Regs. Section 15126.6(a)).

12-10 The CDCA Plan of 1980, as amended, is a comprehensive, long-range plan that governs a 25-million-acre area that contains over 12 million acres of BLM-administered public lands within the area known as the California Desert. The Plan initially was prepared and continues to provide guidance concerning the use of the California Desert public land holdings while balancing other public needs and protecting resources. The Plan anticipated that renewable power generation facilities would be proposed in the California Desert. Accordingly, it made allowances for the review of such applications, including a provision that all proposed applications "associated with power generation or transmission not identified in the [CDCA] Plan will be considered through the Plan Amendment process." The intention of this provision was to ensure that the BLM would take a planning view of all of the renewable energy applications proposed and that such projects would require an amendment to the CDCA Plan to maintain consistency throughout the plan. Amendments to the CDCA Plan can be site-specific or global, depending on the nature of the amendment. Thus, the Plan Amendment process is an intentional aspect of the Plan designed to allow for both flexibility and consistency in the use and protection of public lands and resources. Accordingly, the overall amendment process would be consistent with the CDCA Plan. The Project's impacts on specially-designated areas are addressed in Section 3.14.

12-11 Please see response to comment 13-20 regarding the BLM's purpose and need and responsibilities under FLPMA. The comment correctly states that implementation of the Project would result in environmental impacts. Regarding the disclosure of impacts to Visual Resources, see Section 3.17; see also Section 3.12 (regarding impacts to Recreation), Section 3.5 (regarding impacts to Cultural, Tribal, and Historic Resources), Section 3.3 (regarding impacts to Biological Resources), Section 3.18 (regarding impacts to hydrologic resources), and Section 3.13 (regarding impacts to Socioeconomics). Appendix B, Mitigation Measures, of the Final EIS and Proposed PA, includes the full text of measures to avoid, minimize, and/or compensate for Project impacts as determined necessary by the Lead Agencies pursuant to NEPA and/or CEQA. Appendix A of the Final EIR includes the CEQA cultural, tribal, and historic resources mitigation measures determined necessary by CDFW. Further, as outlined extensively in Chapter 2, Proposed Action and Alternatives, a reasonable range of alternatives was developed as a result of the public scoping process and each feasible alternative was fully evaluated in the Draft EIS/EIR/PA.

12-12 Section 1.2.1, Purpose and Need, cites FLPMA, a federal law (43 USC §1701 et seq.), and BLM right-of-way regulations (43 CFR 2805.10(a)(1)), each of which applies to BLM's actions with regard to this Project. No executive or secretarial orders are cited in Section 1.2.1. Response to comment 13-20, to which the commenter has been referred regarding the purpose and need statement, cites Secretarial Order 3285A1, which applies to the BLM's consideration of this Project. The comment does not provide enough specificity to allow more than a general response.

12-13 Please see response to comment 13-20 regarding the BLM's purpose and need and responsibilities under FLPMA.

12-14 The commenter's preference for the No Action alternative is acknowledged. Section 2.10.2, Alternative BLM-Administered Land, addresses the potential for offsite alternatives and the reasons none were carried forward for detailed analysis in the Draft EIS/EIR/PA. Please also see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative (such as rooftop solar or distributed battery storage) was not carried forward for detailed analysis. More information has been added to this section in the Final EIS and Proposed PA to clarify this decision.

12-15 This comment is acknowledged; however, consideration of an alternative under a "no net loss" standard for wildlife and wildlife habitat is not required by either NEPA or CEQA and has not been undertaken. See Table ES-1, Summary of Impacts by Alternative, which shows which among the alternatives analyzed would have the least impact on Biological Resources.

12-16 The third paragraph of Appendix B, Mitigation Measures, of the Final EIS and Proposed PA, addresses the BLM's compliance with Instruction Memorandum 2019-018 regarding compensatory mitigation.

12-17 As described in Chapter 2 and analyzed in Section 3.6, Energy Conservation, the Project would include an energy storage system (battery or flywheel) capable of storing up to 1,400 MWh of electricity. Section 3.6.5.1 addresses the "duck curve" and acknowledges the need for flexible supply to replace the electricity lost from solar sources as the sun sets, and explains that the Project would have a beneficial effect on peak and base periods of demand for electricity by providing a new source of flexible supply that would assist the CAISO in managing this evening ramp-up period to better match supply and demand by delaying the input of electricity to the grid until it is needed, after the sun has set and consumer demand spikes during evening hours. The comment does not provide sufficient detail about the "problems with a plan to integrate 350 megawatts of battery storage on site" to allow the Lead Agencies to address this statement in more detail. Generally, however, the CAISO indicated in a 2019 report that:

> Energy storage is essential in enabling the large-scale deployment of renewables, which are in turn needed to support the energy transition and achieve Paris Agreement climate targets. Energy storage can be integrated at different levels of the electricity system, including at transmission and distribution levels. It can provide flexibility and balancing services, frequency control, voltage control in addition to acting as a back-up for variable renewables generation. (CAISO 2019, p. 6)

The California Energy Efficiency Strategic Plan, adopted by the California Public Utilities Commission (CPUC) in 2008 and updated in 2011, is not a state law but a "roadmap for energy efficiency" consisting of energy savings goals covering a planning period of 2009 to 2020 (CPUC 2011). The plan makes no mention of large-scale renewable energy projects in comparison to distributed generation, and states "this first Plan has not been able to focus specific attention on renewable energy" (p. 46).

Please see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative (such as rooftop solar or distributed battery storage) was not carried forward for detailed analysis. The NREL study cited in the comment (Denholm et al. 2015) includes a modeling case with 1,290 MW of storage added to the state electricity grid, and finds that "additional storage (beyond existing and mandated storage) could be used to shift load" (p. 35) – thus, it is not "despite storage options" that "duck curve" problem exists, and storage is identified as one option for enabling higher solar penetration in California's grid.

12-18 As noted in Section 2.4.2.6's description of the Proposed Action, a battery-based storage system would need to be cooled to maintain functioning and efficiency. The cooling needs of a battery option for the energy storage system are included in the estimates used to calculate air pollutant and greenhouse gas emissions, energy consumption, and noise generation (see Sections 3.2, 3.4, 3.6, and 3.10, respectively). As has been clarified in Section 3.6.4.3 of the Final EIS and Proposed PA, the electricity needs specific

to energy storage system would be up to 40 MWh per year, the source of which would be stored electricity from the solar plant or from Southern California Edison.

12-19 Please see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative (such as distributed battery storage) was not carried forward for detailed analysis.

12-20 As noted in Section 2.4.2.6, the Applicant could use any commercially available battery technology, including but not limited to, lithium ion, lead acid, sodium sulfur, and sodium or nickel hydride or mechanical fly wheels. The exact disposal method at decommissioning would depend on the technology chosen, but all batteries would be recycled to the extent feasible and materials not recycled would be disposed in a landfill in accordance with applicable federal, state, and local regulations. Lead-acid batteries have a recycling rate of 98 percent in the United States. Less infrastructure currently exists to recycle lithium ion, sodium sulfur, and sodium or nickel hydride batteries. (Electric Power Research Institute 2017) Flywheels may be made of composite materials that are difficult to recycle.

12-21 The commenter's preference for meeting the State's renewable energy goals from sites within the built environment is acknowledged. Please see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative was not carried forward for detailed analysis. The BLM's Purpose and Need for the Project is established in Section 1.2.1. As noted in response to comment 12-2, the BLM acknowledges that the Western Solar Plan does not apply to this Project.

12-22 As acknowledged in Section 3.1.6.2 regarding the approved and planned renewable energy projects in Eastern Riverside County, the entire suite of planned projects that are considered to be possible for future development is not expected to actually be built due to construction funding constraints, schedule, and/or delays. Given the uncertain and challenging economic circumstances facing federal and state economies as well as private developers, it is not ensured that future funding and other necessary support will be sufficiently available for all of the proposed projects to be realized within the anticipated schedules.

12-23 The fact that the Project site would become unavailable for other allowed activities and uses under the CDCA Plan designation of Multiple Use Class M is acknowledged in Section 3.12, Recreation. This does not mean that the Project would be inconsistent with the Class M designation; as explained in detail in Appendix G, CDCA Plan Consistency, of the Final EIS and Proposed PA, the Project would be consistent with each of the applicable CDCA Plan requirements governing the site. While the comment suggests that the Project would conflict with 11 CDCA Plan elements, it does not specify how such conflict would occur. By contrast, Appendix G addresses the Project's consistency with requirements related to Cultural, Tribal, Historic, and Paleontological Resources; Native American Values; Wildlife Species and Habitat; Vegetation and Vegetation Manipulation; Wild Horses and Burros; Livestock Grazing; Recreation; Motorized Vehicle Access/Transportation; Minerals; Electrical Generation Facilities; and Land Tenure Adjustment. As described in Section 3.14, Special Designations, there is no designated wilderness within the Project site. Please see responses to comments in Letter 18 from The Wilderness Society and California Wilderness Coalition regarding Lands with Wilderness Characteristics.

12-24 Decision criterion 1 from the CDCA Plan Energy Production and Utility Corridors Element is applicable to planning corridors, i.e., for transmission lines and other linear utilities. As the Project would be sited at the Colorado River Substation, it does not include a long-distance transmission line. The comment's statement that siting battery storage within an existing project would avoid many of the impacts of the Project is acknowledged, but is not relevant to the analysis of the Project and action alternatives. The No Action/No Project Alternative describes the effects of not building the Project.

12-25 The impacts of the Project and alternatives on cultural, hydrologic, visual, air, and biological resources are analyzed throughout the Draft EIS/EIR/PA (see, e.g., Sections 3.5, 3.18, 3.17, 3.2, and 3.3, respectively), and do not constitute an inconsistency with the CDCA Plan Energy Production and Utility Corridors Element. Please also see detailed discussion of these topics in relation to the CDCA Plan in Appendix G of the Final EIS and Proposed PA. The general nature of the comment is not sufficiently informative to allow the BLM and CDFW to provide a more detailed response.

12-26 This general comment does not provide enough specificity to allow a detailed response regarding consistency with the NECO Plan and CDCA Plan; please see Appendix G of the Final EIS and Proposed PA.

12-27 Please see responses to comments in Letter 18 from The Wilderness Society and California Wilderness Coalition regarding Lands with Wilderness Characteristics.

12-28 The BLM's explanation of the relationship of the Project to the Western Solar Plan and DRECP does not indicate that the BLM would "prioritize" Project approval in any way. The Project application is being processed consistent with all applicable laws, regulations, plans, and policies, including the CDCA Plan and NEPA.

12-29 Please see response to comment 13-20 regarding the BLM's purpose and need and responsibilities under FLPMA.

12-30 The commenter's characterization of the BLM's sensitive species policy objectives is acknowledged. Section 3.3 acknowledges the status of Mojave fringe-toed lizard and California leaf-nose bat as BLM Sensitive Species (see Table 3.3-5) and recognizes Harwood's milkvetch as a NECO Plan Special-Status Species (Table 3.3-3). Section 3.3.4 describes the potential impacts of the Project and alternatives on these species and indicates that Mitigation Measure BIO-25 would be required to reduce predation effects and BIO-28 to reduce habitat loss effects on Mojave fringe-toed lizard, and Mitigation Measures BIO-13 (lighting) and BIO-32 (bird and bat collision avoidance) would be required to reduce impacts on California leaf-nose bat. The following mitigation measures would reduce impacts on special-status plants including Harwood's milkvetch: AQ-1 (Dust Control Plan); BIO-1 (Designated Biologist); BIO-2 (Biological Monitors); BIO-3 (BRMMRP); BIO-4 (Delineation of Work Areas); BIO-5 (Staging, Stockpiling, and Materials Storage); BIO-6 (Vehicle Access and Speed Limits); BIO-7 (Equipment Parking and Storage); BIO-8 (Hazardous Spills); BIO-10 (Debris and Trash Disposal); BIO-14 (Storm Water Management Plan and a Drainage, Erosion, and Sediment Control Plan (DESCP)); BIO-15 (Wildfire Prevention); BIO-16 (Weed Management); BIO-18 (Vegetation Communities Restoration and Compensation); BIO-17 (Worker Environmental Awareness Program (WEAP)); and BIO-20 (Special-Status Plant Avoidance, Minimization, and Compensation).

12-31 Appendix E, Applicable Regulations, of the Final EIS and Proposed PA, summarizes laws and policies applicable to Cultural, Tribal and Historic Resources, including the Archaeological Resources Protection Act (ARPA). Section 3.5 analyzes the impacts of the Project and alternatives on archaeological resources. The Project has and will continue to be in full compliance with ARPA.

12-32 Appendix E, Applicable Regulations, of the Final EIS and Proposed PA, summarizes laws and policies applicable to Biological Resources, including the Migratory Bird Treaty Act (MBTA). Section 3.3 analyzes the potential impacts of the Project and alternatives on migratory birds and describes mitigation requirements to avoid, minimize, and mitigate impacts in compliance with the MBTA and other applicable laws and policies.

12-33 Please see response to comment 12-23 regarding consistency with the Project site's Class M designation. Also see response to comment 13-20 regarding the BLM's purpose and need for the Project.

12-34 Appendix E, Applicable Regulations, of the Final EIS and Proposed PA~~,~~ summarizes laws and policies applicable to Biological Resources, including the Federal Endangered Species Act (FESA). Section 3.3 analyzes the potential impacts of the Project and alternatives on FESA-listed species including desert tortoise, Yuma Ridgway's rail (formerly clapper rail), yellow billed cuckoo, and southwestern willow flycatcher, and describes mitigation requirements to avoid, minimize, and mitigate impacts in compliance with the FESA and other applicable laws and policies. The BLM also has completed consultation with the USFWS under Section 7 of the FESA; see Appendix 1.13, Biological Opinion, of the Final EIS and Proposed PA.

12-35 Appendix E, Applicable Regulations, of the Final EIS and Proposed PA~~,~~ summarizes laws and policies applicable to Biological Resources, including the California Endangered Species Act (CESA). Section 3.3 analyzes the potential impacts of the Project and alternatives on CESA-listed and threatened species including the species identified in this comment (i.e., Gila woodpecker, yellow billed cuckoo, elf owl, Swainson's hawk, and Arizona Bell's vireo), and describes mitigation requirements to avoid, minimize, and mitigate impacts in compliance with the CESA and other applicable laws and policies. Consultation between the Applicant and CDFW, which is also the CEQA lead agency, is ongoing. The Applicant submitted an application for an Incidental Take Permit to CDFW and ~~the need for~~ an Incidental Take Permit will be issued by CDFW for the Project~~is anticipated under CESA~~.

12-36 Appendix E, Applicable Regulations, of the Final EIS and Proposed PA~~,~~ summarizes laws and policies applicable to Biological Resources, including the Bald and Golden Eagle Protection Act (BGEPA). Section 3.3 analyzes the potential impacts of the Project and alternatives on golden eagles and describes mitigation requirements to avoid, minimize, and mitigate impacts in compliance with the BGEPA and other applicable laws and policies.

12-37 The stated preference for the No Action/No Project Alternative is acknowledged. As shown in Table 3.1-1, Crimson Solar Cumulative Projects List, the Desert Quartzite Solar Project is one of the projects considered as part of the cumulative scenario. Cumulative impacts, including the contributions of that project, are analyzed throughout the resource sections of the Draft EIS/EIR/PA, ~~and~~ Final EIS and Proposed PA, and Section 3.5.6 of the Final EIR.

12-38 Please see response to comment 12-6 regarding the Project photovoltaic panels. Section 3.3 discusses avian impacts, including the potential for birds to mistake solar arrays as water bodies (sometimes called the "lake effect"); see also response to comment 13-35.

12-39 See response to comments 13-20 and 13-21 regarding a discussion on Project Purpose and Need and the range of alternatives selected. Consistent with FLPMA, the BLM relies on project proponents to identify renewable energy technologies and general project locations and configurations that are technically and economically viable given current market conditions, renewable portfolio standards, technological advancements, transmission access, and related considerations. Through pre-application and NEPA processes for such projects, the BLM works with applicants, stakeholders, and other federal land and resource management agencies to refine proposals and help identify possible alternate locations that conform with applicable federal laws, regulations, policies, and land use plans. Section 2.10.1, Private

Land Alternatives, addresses the potential for offsite alternatives and the reasons none was carried forward for detailed analysis in the Draft EIS/EIR/PA.

12-40 The stated support for the No Action/No Project Alternative is acknowledged. Consideration of a battery storage alternative on existing solar plant sites would meet neither the BLM's purpose and need for the Project nor most of the basic objectives of the Project under CEQA. See response to comment 12-18 regarding the cooling and electricity needs for an energy storage system.

12-41 Please see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative (such as "community solar") was not carried forward for detailed analysis. Please also see response to comment 13-20 regarding the scope of BLM's purpose and need statement.

12-42 See responses to comments 12-5, 12-18, and 12-20. The Applicant has clarified that in addition to relevant portions of the International Building Code, International Fire Code, California Electric Code, National Electric Safety Code, and Operational Safety and Health Administration regulations, the following specific safety regulations, codes, and protocols would apply to design and operation of the energy storage system (as applicable based on the technology selected at the time of construction) and would be implemented:

ANSI Z535-2002 Safety Labels	UL 1642 Standard for Lithium Batteries (cell safety)
IEEE 693 Recommended Practice for Seismic Design of Substations	UL 1973 Batteries for Use in Light Electric Rail Applications and Stationary Applications
IEEE 1584 Guide for Performing Arc Flash Hazard Calculations	UL 9540 Outline of Investigation for Energy Storage Systems and Equipment
ISO 9001 Quality Management System	Large Scale Fire (LSF) testing per UL9540A to determine minimum spacing requirements for rack assemblies inside the battery space or container
ISO 14001 Environmental Management System	UL Standards for balance of system miscellaneous parts and components
NEMA ratings for outdoor containers	UL 9540 Outline of Investigation for Energy Storage Systems and Equipment
NFPA Standard 1 Fire Code	UN 38.3 Lithium Battery Testing
NFPA Standard 70 National Electric Code (NEC)	49 CFR 173.21(c) (All batteries)
NFPA Standard 70E Standard for Electrical Safety in the Workplace	49 CFR 173.185 (Lithium batteries)
NFPA 855 Installation Standard for Energy Storage Systems	

12-43 The energy storage system would store up to 350 megawatts (MW), or 1,400 megawatt-hours (MWh). One MWh is the energy represented by one MW of power for one hour. See also response to comment 12-5 regarding the feasibility of utility-scale energy storage technology.

12-44 The Applicant has provided additional detail regarding the potential dust palliatives that may be used. These include ChlorTex Road Binder, Eccotext Soil Binder, or PlasTex Soil Stabilizer or similar product (not lime treatment) as described in Final EIS and Proposed PA Section 2.4.2.7, Access Roads. The impacts of access roads on surface hydrology are fully addressed in Section 3.18, Water Resources.

12-45 The paper cited and quoted in the comment (Fernie and Reynolds 2005) does conclude that "A great deal of uncertainty surrounds the findings on the effects of EMF exposure on birds. Most of the uncertainty exists because there has been a limited number of studies involving birds. Despite the limited numbers, much of the research has found that EMF exposure has generally affected birds, and most of the effects have been adverse." However, the paper notes that "For the most part, birds that are only transiently associated with power lines sustain limited exposure to EMFs." It also indicates that in contrast to American kestrels and tree swallows, which are sensitive to EMF exposure, "ferruginous hawks, ravens, golden eagles, and red-tailed hawks do not appear to be reproductively sensitive to EMFs from power lines. However, it remains unknown whether these latter species (and others besides) show differential physiological, endocrine and immune sensitivities to EMFs." Further, "Generally, the reproductive success of some wild bird species does not appear to be compromised by EMF conditions, at least not in the short term." The power lines internal to the Project site would be low-voltage and would not generate substantial electromagnetic fields outside of the site. Given the short length of the gen-tie line and its presence near multiple other power lines and the Colorado River Substation, where no raptor nests were identified on existing poles or other infrastructure during surveys, it is unlikely that the gen-tie would attract breeding birds (such as by providing nest sites for raptors), or that birds would have any more than transient exposure to Project-related electromagnetic fields. EMFs are addressed as potential human hazards in Section 3.8.2.4, Electromagnetic Fields, and in Section 3.8.4, Direct and Indirect Effects. Text consistent with this response has been added to Section 3.3.4.1 under the heading "Special-Status and Migratory Birds" to indicate that EMF-related impacts on breeding birds would be minor to negligible.

12-46 As described in Section 2.4.3.2, under Alternative A, mowing would be used in flatter areas of the site, but across a majority of the site, grubbing and grading would be required to level rough or undulating areas of the site. Grubbing would involve the removal of vegetation from the construction site, while grading would include earthwork to achieve a certain base or slope. Under Alternative B Design Element 1 (DE-1), the site preparation techniques would consist of mechanically trimming vegetation to 18 inches high in the solar array field except within about 5 percent of the site that would be graded and grubbed. DE-1 is part of the preferred alternative.

The comment notes that on the Pahrump Solar Project and Sunshine Valley Solar Project, "no dust palliatives are used" resulting in fugitive dust. As described in Section 2.4.2.7, dust palliatives would be used for this Project on all unpaved access roads. Within the solar plant site, as analyzed in Section 3.2, Air Resources, fugitive dust emissions would occur, but would be minimized with implementation of fugitive dust control measures consistent with MDAQMD Rule 403 and Mitigation Measure AQ-1 (Dust Control Plan). DE-1 would reduce fugitive dust emissions compared to the proposed site preparation and vegetation clearance methods under Alternative A.

The comment also notes that on the Pahrump Solar Project site, "small doors were installed in the perimeter fence so tortoises can re-enter." No such site access would be provided to allow tortoises to re-enter the Crimson Project Site. Therefore, the comment's point about the presence of less nutritious vegetation on the Project site is not relevant because tortoises would not be foraging on the site. Invasive weeds and mitigation to prevent their spread are addressed in Section 3.3.

Required pre-construction clearance surveys and relocation requirements in Mitigation Measures BIO-23 (for desert tortoise), BIO-29 (for burrowing owls), and BIO-30 (for desert kit fox and American badger) would ensure that animals that use burrows would not be present in burrows when vegetation clearance occurs.

12-47 Air quality impacts, including those from fugitive dust, are fully analyzed in Section 3.2, Air Resources. As analyzed in Section 3.2, fugitive dust emissions would occur, but would be minimized with implementation of fugitive dust control measures consistent with MDAQMD Rule 403 and Mitigation Measure AQ-1 (Dust Control Plan). A requirement of the Dust Control Plan is that vegetative ground cover would be planted in disturbed areas as soon as possible following construction activities, thereby reducing the potential for dust to be created. Further, in consideration of concurrent projects in the project area, the Final EIS and Proposed PA includes Mitigation Measure AQ-5, which would ensure that the Mojave Desert Air Quality Management District would be kept informed of the Project-specific construction schedule relative to other projects in the Mojave Desert Air Basin, thereby controlling the potential for dust creation during construction from multiple projects occurring at one time (see Section 3.2.6, Cumulative Effects). The water consumption estimates for the Project and alternatives are presented in Chapter 2 and are based on the anticipated needs to suppress dust on the site during all Project phases. Further, Section 3.16, Utilities and Public Services, analysis water supply, and as outlined, with implementation of Mitigation Measures WAT-1 and WAT-2, a Groundwater Monitoring and Reporting Plan and Colorado River Water Supply Plan, respectively, would ensure Colorado River and groundwater supplies are monitored and not overdrawn.

12-48 Please see response to comment 6-13 regarding Valley Fever risk in prison populations. Impacts related to Valley Fever, including cumulative impacts, are fully analyzed in Section 3.2.

12-49 The BLM acknowledges that the DRECP Land Use Plan Amendments do not apply to the Crimson Solar Project. The cited portion of the Draft EIS/EIR/PA to which this comment responds refers to the CEQA Lead Agency's (i.e., CDFW's) consideration of the environmentally superior alternative, and is not the BLM's statement. Regardless, the land use designations for this site do make some future solar development reasonably foreseeable, if not the Crimson Solar Project. However, Section 2.9 has been revised in the Final EIS and Proposed PA to clarify CDFW's meaning with respect to the environmentally superior alternative in consideration of reasonably foreseeable actions on the Project site.

12-50 Section 3.3, Biological Resources, acknowledges the presence of resident special-status and migratory birds and addresses the potential for avian mortality resulting from the Project. The monitoring results from the Desert Sunlight and Genesis solar projects are among the data relied on in the analysis (see Sections 3.3.4.1 and 3.3.5.1). Mitigation Measures BIO-31 (Nesting Bird Management and Monitoring Plan) and BIO-32 (Bird and Bat Conservation Strategy) (see draft plans in Appendix I of the Final EIS and Proposed PA) would reduce the potential for avian mortality as a result of avian-panel interaction. Also, see responses to comments 10-84 and 13-35.

12-51 In recent years, that BLM has revised contracting procedures with solar plant ROW grantees to improve the BLM's direct oversight of the monitors through the Environmental Compliance and Construction Monitoring Plan (ECCMP). If the BLM approves the Project or an alternative, the ECCMP will be included in the Record of Decision.

12-52 Differing survey methods, implementation of mitigation including adaptive management, and other factors may contribute to varying levels of mortality observed over time. The Genesis Solar Project uses solar thermal technology that differs from the proposed PV technology. Some of the avoidance and minimization measures may be applicable to both technologies, but the causal mechanism for attracting birds to the site and the available mitigation specific to the technology on the project sites are different between thermal and PV projects.

12-53 Please see Mitigation Measure BIO-32 in Appendix B, Mitigation Measures, of the Final EIS and Proposed PA. The Bird and Bat Conservation Strategy requires avoidance and minimization measures, monitoring, and adaptive management. All of these would inform the larger-scale research requested in the comment and ongoing among BLM, CDFW, and USFWS.

12-54 The roughly 10 acres of active wash avoided by the Alternative C footprint are unvegetated, as shown in Table 3.3-11. Both the proposed Project and Alternative C would be subject to mitigation measures for avian impacts (i.e., BIO-13, BIO-31, and BIO-32). Support for the No Action/No Project Alternative is noted.

12-55 The preference for not approving the Project is noted. Cumulative avian impacts are addressed in Section 3.3.6.

12-56 The preference for performing additional study on avian mortality before approving solar projects is noted. Please see Mitigation Measure BIO-32 in Appendix B, Mitigation Measures, of the Final EIS and Proposed PA. The Bird and Bat Conservation Strategy requires avoidance and minimization measures, monitoring, and adaptive management to reduce or avoid avian-panel interaction hazards. Also, see response to comment 10-84.

12-57 The comment mentions two types of vegetation communities that are present on the Project site. To clarify, as summarized in Table 3.3-7, the Project would affect 289.4 acres of the Creosote Bush—White Bursage/Big Galleta Grass Association. This is a riparian vegetation community, but is distinct from the microphyll woodland vegetation community that occurs on the site, which is Blue Palo Verde—Ironwood Woodland (the Project would affect 1.2 acres of that vegetation community).

Impacts on microphyll woodlands (i.e., Blue Palo Verde—Ironwood Woodland) would be avoided or minimized by the implementation of Mitigation Measure BIO-19, which requires micrositing of access road crossings to avoid mature trees and the use of 200-foot buffers around microphyll woodlands for boundary fencing. For impacts on mature trees that cannot be avoided, this measure also requires compensatory mitigation.

Alternative C would reduce impacts on the Creosote Bush—White Bursage/Big Galleta Grass Association by nearly 84 acres. Impacts on this community where it occurs within the Alternative C boundary cannot be avoided further if Alternative C is implemented, but as noted in the comment, mitigation would include restoration or compensation. In response to this comment, Mitigation Measure BIO-18 has been revised to include performance standards and minimum qualifications for compensation lands acquired for impacts on this vegetation community, consistent with compensatory mitigation requirements for other resources in Appendix B of the Final EIS and Proposed PA.

12-58 The Environmentally Sensitive Areas (ESAs) identified in Mitigation Measure BIO-20 are intended to preserve locations of special-status plants outside of the solar plant site, as specified in the measure. These locations would not be graded, mowed, crushed, or trimmed. The purpose of the ESAs outside of the Project site is to minimize indirect impacts on offsite special-status plants. The effects on special-status plants are described in detail in Section 3.3.4.1, which acknowledges the permanent loss of such plants within the Project site. The trimming requirement in Mitigation Measure BIO-20 is intended to minimize the loss of seed; however, as stated in Section 3.3.4.1, because the Project would avoid directly impacting the majority of local special-status populations and leave hundreds of previously recorded individuals undisturbed, it is expected that these special-status plant populations would persist after development of the Project. Additionally, due to genetic exchange through winged pollinators, effects on wind-related seed dispersal are not expected to affect genetic exchange for special-status plants. Support for the No Action/No Project Alternative is noted.

12-59 The rate of carbon uptake by existing desert vegetation is estimated to be equivalent to 1.48 MT of CO_2 per acre per year, based on a study of Mojave Desert vegetation (Wohlfahrt et al. 2008). This includes the contribution to carbon uptake by biological soil crusts. Assuming this rate occurs over the entire Project site, the loss of 2,500 acres of desert vegetation and soil crusts would result in a loss of uptake of 3,700 MT of CO2 per year. This is equivalent to about 1 percent of the net carbon savings of 354,209 MT CO_2e per year as expressed in Section 3.4.5.1, meaning that the Project would still have a large net benefit in carbon savings.

In addition, Alternative B provides for alternative construction methods that would avoid much of the proposed ground disturbance (DE-1 would trim vegetation exceeding 18 inches for module installation, and grading and grubbing would be limited to 5 percent in the module field instead of traditional mowing, grubbing, and grading), and DE-1 is incorporated into the preferred alternative, which also has a smaller overall footprint than the proposed Project. Avoidance and minimization measures to reduce impacts on biological soil crusts are addressed through mitigation measures that minimize ground disturbance and vegetation removal. Mitigation Measure BIO-18 already specified that "the Restoration Plan shall include a description of proposed methods for …inoculation of native microbial organisms for plant mycorrhizae and for biotic soil crust formation…" In response to this comment, this measure has been revised to specify that "Only native plant species and native microbial organisms which would naturally occur within the disturbed habitats shall be used for restoration." The performance standards in the mitigation measure are sufficient to ensure that mitigation is not deferred by requiring preparation of a plan prior to construction.

12-60 A Couch's Spadefoot Management Plan was provided for public review as Appendix I.9 of the Draft EIS/EIR/PA. It is also provided in the Final EIS and Proposed PA appendices.

12-61 Site-specific hydrologic modeling performed for the Project site identified that during a 100-year storm event, the flood depths across the majority of the site are less than 0.5 feet with relatively low velocities. The maximum flood depth in isolated areas within the model study area is approximately 1.5 feet; however, these are outside of the Project site boundary. The hydrologic study was provided as Appendix U.3. The Project has been designed such that all proposed improvements would be elevated at least 1 foot above the 100-year peak flood depth and thus would not impede or redirect flood flows such that flooding would differ substantially from pre-Project conditions. As stated in Section 2.4.2.1, supports for the photovoltaic panels would be driven 12 feet below the ground surface. Modeled flood flows would not reach the above-ground height of the panels nor dislodge deep-seated steel supports. The risk of flood damage to panels is remote.

12-62 Designation of the Project site as an Area of Critical Environmental Concern (ACEC) is outside the scope of this Final EIS and Proposed PA. Designation of additional ACECs was considered in the DRECP planning process and did not result in such a designation for the Project site. Please see responses to comments 13-25 through 13-30 regarding Project-specific and cumulative impacts on desert tortoise. The comment does not provide support for the assertion that compensatory mitigation measures are not successful with respect to desert tortoise recovery. Numerous factors are affecting the population of desert tortoise, and the USFWS continues to support avoidance, minimization, and finally compensation as appropriate measures for desert tortoise conservation. See the USFWS Biological Opinion for the Project in Appendix I.13 of the Final EIS and Proposed PA. The Applicant initially proposed an option to design perimeter fencing such that tortoises could continue to access the site following construction. Please see response to comment 17-25, which explains in detail the reasons that this option was removed from detailed consideration. Briefly, fencing that would allow tortoises to access the site was not analyzed as an alternative due to the potential effects on Project financing opportunities and the relatively small number of desert tortoises anticipated to be subject to translocation.

12-63 Mitigation Measure BIO-28 requires that occupied and unoccupied Mojave fringe-toed lizard habitat (both dune and non-dune habitat) would need to be mitigated at a 3:1 ratio. As explained in response to comment 10-27, this measure has been revised to clarify that desert dune habitat mitigation must be in-kind at 3:1 to meet the NECO Plan requirement for dune habitat compensation, but mitigation for non-dune habitat is not required to be desert dune. The measure specifies criteria for compensation lands.

Under Alternative A, this would require 87.6 acres of desert dune compensatory habitat to mitigate the loss of 29.2 acres of occupied and potentially suitable dune habitat as shown in Table 3.3-9. The remaining Project impact area for Mojave fringe-toed lizard habitat is occupied and potentially suitable non-dune habitat (516.4 acres) which could be mitigated with suitable non-dune lands (e.g., washes, hillsides, margins of dry lakes, and sandy hummocks). Further, Alternative C would reduce the loss of occupied and potentially suitable dune habitat to just 0.85 acre compared to Alternative A's 29.2 acres, nearly avoiding dune habitat completely. The required dune habitat compensation would then be fewer than 3 acres. It is expected that the compensatory mitigation requirements in Mitigation Measure BIO-28 can be met through the over 100,000 acres of various habitats available through School Lands Trust and State Lands Commission; however, as an alternative to lands acquisition, this measure allows for in-lieu payment to fulfill compensatory mitigation requirements.

12-64 The Bird and Bat Conservation Strategy was provided for public review as Appendix I.5 of the Draft EIS/EIR/PA. It is also provided in the Final EIS and Proposed PA appendices.

12-65 As stated in Table 3.3-5, burro deer is present on the Project site based on documentation of scat, tracks, and a skull within microphyll woodlands and adjacent habitat in 2016, and a sighting captured on wildlife cameras in microphyll woodlands. Effects on wildlife movement, analyzed in Section 3.3.4.1, were found not to be substantial.

12-66 As stated in Table 3.3-5, desert bighorn sheep is presumed present on the Project site based on the potential to use the site for seasonal and dispersal movement area or occasional foraging only, due to the lack of permanent water within or adjacent to the Project site. There are no documented records on bighorn sheep on the Project site. Effects on wildlife movement, analyzed in Section 3.3.4.1, were found not to be substantial.

12-67 The American Badger and Desert Kit Fox Monitoring and Management Plan was provided for public review as Appendix I.8 of the Draft EIS/EIR/PA. It is also provided in the Final EIS and Proposed PA appendices. The plan includes specific protocols and best management practices to avoid and minimize the potential for spread of canine distemper virus (CDV).

12-68 As stated in Table 3.3-5, Yuma mountain lion is expected only as an infrequent site visitor. Effects on wildlife movement, analyzed in Section 3.3.4.1, were found not to be substantial. The comment gives no information about the value of species-specific surveys to inform the analysis of this Project's impacts beyond the analysis provided in the Final EIS and Proposed PA.

12-69 As stated in Table 3.3-5, burrowing owls are present on the Project site based on detections near the Project site in 2012 and 2016. As noted in the Burrowing Owl Management Plan (Appendix I.6 of the Final EIS and Proposed PA), surveys detected a limited amount of sign (pellets, white wash, prey remains, burrow decorations) outside of the burrows where owls were detected, indicating that the burrowing owls appeared to be migrating through the area and using burrows as temporary shelter, or wintering in the area. None of the burrows showed characteristic burrow decorations that are often visible at burrow entrances where burrowing owls are residing. Based on these observations, it appears that the Project site does not support breeding burrowing owls, but provides suitable wintering and migration habitat for the species. The analysis and mitigation measures in this Final EIS and Proposed PA address this seasonal use of the Project site by burrowing owls.

12-70 Focused breeding season surveys were performed for Gila woodpecker in 2012 and none were detected on the Project site. However, as stated in Table 3.3-5, Gila woodpecker is presumed present on the Project site as a migrant. The site lacks suitable habitat and adjacent habitat is only marginally suitable. Impacts on Gila woodpecker are addressed collectively in the Draft EIS/EIR/PA and Final EIS and Proposed PA under the category of special-status and migratory birds.

12-71 Focused breeding season surveys were performed for elf owl in 2012 and 2017 and none were detected on the Project site. However, as stated in Table 3.3-5, elf owl is presumed present on the Project site as a migrant. The site lacks suitable habitat and adjacent habitat is only marginally suitable. Impacts on elf owl are addressed collectively in the Draft EIS/EIR/PA and Final EIS and Proposed PA under the category of special-status and migratory birds.

12-72 Golden eagle helicopter surveys were performed in 2012 and 2018. As stated in Table 3.3-5, golden eagle is presumed present on the site as a foraging resident (based on nearby nests and potential sign detected during surveys) and migrant. Section 3.3 analyzes impacts on golden eagle, including the loss of foraging habitat and potential for power line collision and electrocution impacts. Mitigation Measure BIO-32 (Bird and Bat Conservation Strategy [BBCS]), incorporates guidelines for reducing avian electrocution and collision hazards.

12-73 The BLM acknowledges the perspectives expressed in the comment regarding the treatment of cultural resources of importance to Native Americans. The comment points out that while Alternative C would avoid all cultural resources determined or assumed to be eligible for the National Register, the other non-eligible cultural resources in the path of development would be impacted, through damage or destruction during construction activities. This point is reflected in the impacts analysis in Section 3.5.4. The BLM and CDFW acknowledge~~s~~ the comment that if the ~~BLM approves the~~ Project is approved, there would be some level of impact that cannot be addressed to certain tribes' satisfaction. Moreover, CDFW

acknowledges that after implementation of mitigation (CUL-1 through CUL-10), residual impacts to tribal values of individually impacted archaeological sites and isolates would remain, but the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

12-74 See response to comment 12-61. The potential PV panel types that may be used are described in Section 2.4.2.1. Also, Mitigation Measure BIO-14 requires that prior to issuance of the Notice to Proceed, that a Storm Water Management Plan and a Drainage, Erosion, and Sediment Control Plan (DESCP) are prepared. A draft DESCP was provided in Appendix U.5 of the Final EIS and Proposed PA. As required by this measure, the Project shall employ a comprehensive system of management controls, including site-specific BMPs, to minimize erosion and storm water contact with contaminants. The Plan must include an adaptive management plan to monitor system performance and make adjustments to the design and BMPs if the BLM AO determines through monitoring that the system is inadequate.

12-75 As explained in Section 3.17.2.1, the BLM assigned a Visual Resources Inventory (VRI) Class of II to the Project area. VRI describes the existing scenic value of a site and is distinct from Visual Resources Management (VRM), which describes a policy for management of the visual values of a site. Section 3.17.4.1 analyzes the visual contrast that the Project would create within the landscape, and this analysis is based on the existing scenic value of the site. As noted therein, the Project's contrast is considered important because the Project area has been determined to have high visual value, and mitigation measures are recommended to reduce the strong contrast that would occur in this VRI Class II area.

The VRM Class II and I objectives cited in the comment do not apply to the BLM's management of the Project site. As described in Section 3.17.3.2, Plan Conformance, in order to be consistent with the guidance provided in BLM Manual 8431 and 43 CFR Section 1610.5-3(b), the BLM has assigned the project area an interim VRM Class IV. As explained in Section 3.17.4.1, the strong visual contrast created by the Project would be consistent with VRM Class IV objectives. Nonetheless, the overall VRM goal is to minimize visual impacts even where VRM objectives are met. Therefore, the recommendation of Mitigation Measures VIS-1 and VIS-3 is consistent with BLM's VRM policy. VRM class assignments refer to the management objectives for the lands they cover, and not to management of other lands that may be visible from a location that has been assigned a higher or lower VRM class.

12-76 The visibility of the Project site from, and the visual contrast that would be created by the Project at, different distance zones is analyzed throughout Section 3.17. The comment does not identify a deficiency in the EIR/EIS analysis.

12-77 As stated in Section 3.17.4.1 under the subheading "Glint and Glare," the amount of glare created by PV solar facilities is variable based on the material type of the solar panels. The glare analysis performed with the ForgeSolar PV planning and glare analysis tool assumed that the panels would be smooth glass without AR coating (ForgeSolar 2018, p. 2). This is a conservative assumption because as the Draft EIS/EIR/PA explains in the same Glint and Glare subsection, polished surfaces such as smooth glass result in a higher level of contrast, or glare, while diffuse reflection is caused by rough surfaces such as textured glass and results in a relatively lower level of contrast, or glare. Additionally, while solar panels without an anti-reflective coating are found to produce around the same amount of reflectivity as water, which is about half the amount of reflectivity as the standard glass commonly used in residential or commercial applications, if an anti-reflective coating is applied to the solar panels, the reflectivity of the panels can be further reduced to be significantly less. Therefore, although the precise panel type has

not yet been determined, the glare analysis encompasses the selection of the most reflective options for solar panels. Other choices would produce even less than the minor to moderate glare than summarized in Table 3.17-4.

12-78 As explained in Section 3.17.3.1, the intent of establishing the key observation points (KOPs) is to evaluate the degree of visual contrast created by the Project and alternatives with the existing landscape from locations most representative of how the public perceives the affected landscape. Many of the example photos shown in the comment letter depict existing solar installations at relatively close range. Such locations relative to the Crimson Solar Project site would not be representative of typical public views of the site based on known uses in the area. Simulations from locations that receive little to no use would not effectively inform the analysis of the Project's visual contrast or change impact conclusions and mitigation measures.

12-79 Visual simulations of fugitive dust during construction would not affect the outcome of the analysis or mitigation measures, as this impact already has been described as being adverse with respect to visual contrast (see Section 3.17.4.1 under the subheading "Construction") and Mitigation Measure AQ-1 has been recommended to minimize fugitive dust. The relatively short daily duration of seasonal early evening lighting would not cause substantial night lighting effects. No nighttime (i.e., from 7 p.m. to sunrise) construction lighting is proposed.

12-80 The commenter's statement of support for the No Action/No Project Alternative is acknowledged, including the comment's reasons listed. The responses to comments throughout letter 12 address the conclusion statements made.

Letter 13 – Center for Biological Diversity and Mojave Desert Land Trust

13-1 The Applicant has not provided information regarding an existing or potential power purchase agreement (PPA). A proposed project need not have a PPA in place to be adequately analyzed under NEPA or CEQA.

13-2 As described in Section 1.1.2, Project Background, in the 2009 application to the BLM, the proposed Project consisted of a 540 MW dual-turbine solar thermal tower project on approximately 7,600 acres of combined BLM-administered and privately-owned land. A subsequent site design revision converted the proposed technology from solar thermal to solar photovoltaic and reduced the size of the site to approximately 4,000 acres to avoid or reduce impacts on cultural and biological resources, including desert tortoise and riparian habitat. Working with the BLM, the Applicant further decreased the land area to the now proposed 2,500 acres to reduce impacts on microphyll woodland areas, desert tortoise habitat, and Mojave fringe-toed lizard habitat. This history of project changes culminating in the 2017 Plan of Development reflects the changes in technology and enhanced understanding of environmental and cultural resources on the site between 2009 and 2017. Alternatives evaluated in the Final EIS and Proposed PA, as well as refinements in the 2020 Plan of Development, further address sensitive resources. The stated opposition to the Project is acknowledged.

13-3 The comment letter provides more specific comments regarding the analysis of impacts on desert tortoise, Mojave fringe-toed lizard, rare plants and other biological resources, significant cumulative impacts, and the range of alternatives in later subsections of the letter; responses are provided below where the comment letter provides enough specificity to allow a substantive response. Generally,

however, see Section 3.3's analysis of potential impacts to Biological Resources, including desert tortoise, Mojave fringe-toed lizard and rare plants; the resource-by-resource analysis of cumulative effects throughout Chapter 3, Environmental Analysis; and Chapter 2's description of the alternatives screening process and identification of and rationale for alternatives analyzed in detail in the document as well as alternatives that initially were considered but not carried forward for more detailed review.

13-4 Section 2.3, Proposed Land Use Plan Amendment Decisions, explains the two CDCA Plan amendments that would be required if the Project were approved. The comment provides insufficient detail for the BLM to determine which post-2009 CDCA Plan amendments the commenter thinks should be examined further, but notes that the DRECP Land Use Plan Amendment (LUPA) (adopted on September 14, 2016) is one such amendment. The Western Solar Plan did not amend the CDCA Plan. The Western Solar Plan created Solar Energy Zones on public lands in six western states, including California. It relates to the DRECP in that the DRECP builds upon and refines the decisions made in the Western Solar Plan specifically in the California desert region.

The DRECP LUPA covers approximately 11 million acres of BLM-managed lands in the southern California desert, including the Project site. Appendix F of the Final EIS and Proposed PA describes the relationship of the Project to the DRECP and explains that while the Conservation Management Actions (CMAs) do not apply to the Project, the BLM undertook an evaluation to verify that the resource conservation objectives of each CMA were met, determine whether changes could be made to Project design and technical analysis to improve conformance, and determine whether changes could be made to the preliminary mitigation measures (i.e., those proposed by the Applicant or preliminarily identified by the BLM). Because the CMAs were developed based on landscape-level analysis and planning, the BLM's evaluation of and decision-making even for projects not subject to the DRECP are inherently informed by the knowledge gained during that planning process. While the Draft EIS/EIR/PA identified instances where the Project as proposed was inconsistent with CMAs, the Final EIS and Proposed PA includes identification of Project changes and BLM-recommended mitigation measures that would bring the Project, if approved, into alignment with the resource conservation objectives of the CMAs. Please see the revised Appendix F in the Final EIS and Proposed PA. The BLM further notes that, because the Project site is in both a Solar Energy Zone and a DRECP Development Focus Area, development of this site as a solar facility would be compatible with current landscape-level management decisions.

Regarding the identification and discussion of NECO Plan considerations in the Draft EIS/EIR/PA, see, for example, Section 3.1.7, Mitigation Measures Identified in the Analysis, which identifies the NECO Plan as an amendment to the CDCA Plan and as a source of compensatory mitigation requirements for impacts to desert tortoise and Mojave fringe-toed lizard; Table 3.3-3, which identifies NECO Plan-designated special-status plants including Harwood's milkvetch, Utah vine milkweed and Desert unicorn plant as present or presumed present within the Project site; and Table 3.3-5, which identifies NECO Plan-designated special-status wildlife including desert tortoise, Couch's spadefoot, Mojave fringe-toed lizard, and several other NECO-designated special status species as present or presumed present within the Project site. Regarding the analysis of impacts to NECO-designated special status species, see, for example, Table 3.3-8, which quantifies special-status plant impacts within the Project site and vicinity; and Table 3.3-12, which quantifies the special-status plant species that would be avoided under Alternative C. The Draft EIS/EIR/PA considers NECO Plan guidance in other contexts as well. Section 3.12.2.1 discloses some Project site overlap with a "popular rock hounding area" mapped in the NECO Plan, Section 3.12.2.3 notes that access to the Project site by motorized vehicles is allowed

on designated routes under baseline conditions consistent with the NECO Plan, and Section 3.17.3.2 advises that mitigation obligations set forth in the NECO Plan have been considered in the Visual Resources analysis. For these reasons, the BLM disagrees with the suggestion in the comment that the Draft EIS/EIR/PA "fails to fully identify and discuss NECO Plan guidance."

The BLM also disagrees with the suggestion in the comment that either NEPA or CEQA requires a lead agency to "fully mitigate" project impacts.

13-5 As explained in Section 2.7, Alternative D: No Plan Amendment/No Action/No Project, if the Project is not approved, the BLM would not amend the CDCA Plan to identify the site as suitable for solar development. The only reason the BLM needs to consider a Plan Amendment for this Project is that it is not subject to the Western Solar Plan or DRECP LUPA. Therefore, if the Plan Amendments to allow the Project or an alternative are not adopted, the BLM would then manage the land under the CDCA Plan, as amended by the DRECP LUPA. The DRECP LUPA designates the proposed site as a DFA. Thus, if ROW Grant Application CACA-51967 were denied, the area would remain available for solar energy development as set forth in the DRECP LUPA. The BLM has not considered a Plan Amendment alternative to identify the site as unsuitable for solar development because, outside of the context of this specific ROW Grant Application, the DRECP LUPA already includes a land use management decision for the site.

13-6 The stated preference for siting solar panels within the built environment is acknowledged. Sections 2.10.1, Private Land Alternatives, and 2.10.2, Alternative BLM-Administered Land, address the potential for offsite alternatives and the reasons none were carried forward for detailed analysis in the Draft EIS/EIR/PA. Please also see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative was not carried forward for detailed analysis. See response to comment 13-2 regarding the history of the Project size. The BLM's decision to evaluate a Reduced Acreage Alternative (Alternative C) was based on specific locations of sensitive resources rather than on limiting the MW output of the project, as the output does not have a direct bearing on physical environmental impacts.

13-7 The comment quotes the BLM's Purpose and Need from Section 1.2.1, which does not describe the Plan Amendment itself. The two amendments to the CDCA Plan that would be required if the Project were approved are described in Section 2.3, and their effects are analyzed throughout the Draft EIS/EIR/PA.

13-8 The BLM believes that the Draft EIS/EIR/PA sufficiently addresses the CDCA Plan and the NECO Plan. Because the comment does not provide any details or examples of how or why there may be disagreement on this point, the BLM does not have enough information to provide a more in-depth reply. See response to comment 13-4, which addresses the Draft EIS/EIR/PA's consideration of the NECO Plan and other CDCA Plan amendments that have occurred since 2009.

Specifically regarding off-road vehicle routes, and as described in Section 3.12.2.3, Public Access (OHV Routes), access by motorized vehicles is allowed only on designated routes, and there are no designated routes within the Project site. There are also no open wash zones on the Project site; thus, no OHV use currently is allowed on the Project site. Further, there is no desert tortoise critical habitat or DWMA designation on the Project site. The comment suggests that the Draft EIS/EIR/PA fails to consider the cumulative impact of OHV use on desert tortoise critical habitat and DWMAs; however, the Project would not contribute to this impact. Neither NEPA nor CEQA require an environmental analysis to evaluate cumulative impacts to which a Project would not contribute.

The comment describes a suggested CDCA Plan amendment that would remove all "open wash zones" from all critical habitat and Desert Wildlife Management Areas (DWMAs) in the NECO planning area "to mitigate impacts from the project." As described above, none of these designations is present on the Project site; therefore, the suggested amendment in the comment would necessarily pertain only to areas outside the requested ROW boundary, making it in effect a type of offsite compensatory mitigation for impacts on the Project site. The Project's impacts on desert tortoise are described in Section 3.3, Biological Resources, and would be mitigated by the avoidance, minimization, and compensation measures identified therein. A BLM-initiated plan amendment for areas outside the requested ROW boundary is outside the scope of this analysis.

13-9 The Desert Quartzite Solar Project EIS/EIR/PA identified 3,692 acres of potential Mojave fringe-toed lizard habitat that could require compensatory mitigation at a 3:1 ratio, resulting in a potential need to acquire over 11,000 acres of land meeting the relevant habitat criteria (BLM and Riverside County 2019, page 4.4-7). By contrast, the Crimson Solar Project may need to acquire 1,636.8 acres, based on 545.6 acres of estimated impacts under Alternative A (Mitigation Measure BIO-28). Under Alternative C, this would be reduced to 376.6 acres (Table 3.3-11), resulting in a need to acquire 1,129.8 acres. This is an order of magnitude less than the Desert Quartzite Solar Project's compensatory mitigation need, and is not subject to the same feasibility concerns as that project's potential 11,000-acre acquisition requirement. See response to comment 13-34 regarding the availability of lands, including School Lands Trust.

13-10 See responses to comments 13-4 and 13-5.

13-11 The quoted text from Mitigation Measure BIO-28 contains an editorial error that has been corrected in the Final EIS and Proposed PA; the sentence should have read "Compensation shall be initiated or completed within 18 months from the time the resource impact occurs" (i.e., not 188 months).

13-12 The existing Powerline Road through the Colorado River Substation (CRS) is the only access road to the Project site. The 2014 *Devers-Palo Verde No. 2 Transmission Line Project Mitigation Monitoring, Compliance, and Reporting Program Final Report* (Aspen Environmental Group 2014) notes that after 103 MFTL mortalities (an unanticipated high number) were recorded at the CRS access road, to decrease mortalities, Southern California Edison "added temporary speed bumps, additional speed limit signs, and full-time biological monitoring during the active season to monitor the road, and provided additional WEAP training to personnel working in the area." With these actions in place, monitors observed a decrease in the number of mortalities.

Mitigation measures included to reduce vehicle-related mortalities of MFTL from the Crimson Solar Project include BIO-1, BIO-2, BIO-3, BIO-6, and BIO-17. BIO-6 has been revised to reduce speed limits on Powerline Road from 25 to 15 mph. In addition, BIO-28 has been revised to include the additional measures that were adaptively implemented and observed as effective at Devers-Palo Verde No. 2, including addition of temporary speed bumps (as feasible), speed limit signs, WEAP training, and use of biological monitors during MFTL active periods to ensure the effectiveness of these measures.

13-13 Regarding the need to evaluate alternative plan amendments, see response to comment 13-5. Additionally, as acknowledged in comment 13-14, "Even in 1980 the CDCA Plan contemplated that alternative energy projects would likely be developed in the future but did not expressly provide planning direction for solar energy production." The result of this lack of planning direction was that the

CDCA Plan required that the BLM later amend the plan to allow solar energy production. The BLM has considered such land use plan amendments in the context of individual projects such as the Crimson Solar Project and in landscape-level planning including the Western Solar Plan and DRECP LUPA. But for these plan amendments designating Solar Energy Zones and Development Focus Areas, respectively, any solar development within the CDCA Planning area would be subject to the need for a plan amendment. Therefore, it would not have been a useful exercise to identify an alternative BLM-administered site "that would not require a plan amendment," as suggested in the comment. Sections 2.10.1, Private Land Alternatives, and 2.10.2, Alternative BLM-Administered Land, address the potential for offsite alternatives and the reasons none were carried forward for detailed analysis in the Draft EIS/EIR/PA. The impacts that would result from Project approval, including from amendment of the CDCA Plan as set forth in Section 2.3, Proposed Land Use Plan Amendments, are evaluated at a regional scale as appropriate for each resource throughout the Draft EIS/EIR/PA, particularly in the assessment of cumulative impacts.

13-14 See Appendix G of the Final EIS and Proposed PA, which documents the BLM's evaluation of CDCA Plan consistency, including with respect to the CDCA Plan's Energy Production and Utility Corridors Element. See also responses to comments 13-2, 13-4, 13-5, 13-8, and 13-13.

13-15 As stated in the NECO Plan Final EIS, "Multi-species WHMAs are complementary to existing restricted areas and DWMAs, which also cover other special status species and habitats. No restrictions are proposed other than closure of some routes of travel. Management emphasis is placed on active management, specific species and habitats mitigation, and restoration from authorized allowable uses." The resources emphasized under the multi-species WHMA, including desert dune habitat, sensitive vegetation communities, special-status plant and wildlife species, habitat connectivity, and wildlife movement, are addressed in detail in Section 3.3, Biological Resources, and mitigation measures for all alternatives as well as the Design Elements under Alternative B and the reduced footprint under Alternative C have been recommended to address impacts on these WHMA-related resources. However, the presence of the WHMA itself, as demonstrated in the NECO Plan Final EIS, does not pose additional restrictions.

13-16 Section 501(a)(4) of FLPMA authorizes BLM to issue ROW grants for the generation, transmission, and distribution of electric energy, and the CDCA Plan, as amended (prior to the DRECP LUPA), allows for the development of solar projects on Moderate Use classified lands with a plan amendment and completion of the NEPA process. Contrary to the suggestion in this comment, the Draft EIS/EIR/PA does address how the loss of the Project site for multiple uses could affect other nearby public lands by increasing pressure on the uses provided by those lands: see Section 3.12.4.1 (Project-specific impacts) and Section 3.12.6.1 (cumulative impacts). Regarding the Multi-species WHMA and impacts on sensitive species, see response to comment 13-15.

13-17 The Project exterior access roads would not be designated Open Routes available to OHV users, and the presence of the Project would not open adjacent lands to authorized OHV use. As shown in Figure 3.12-1, Open Routes, the open routes in the vicinity of the Project site are all accessible via Powerline Road. The Project perimeter roads would not provide a shortcut to Open Routes compared to the authorized Open Routes nearby. Furthermore, the potential for the Project to attract OHV users to the site boundary over land and to result in vandalism, illegal cross-country use, or other disruptive behavior is addressed in Section 3.12.4.1. Mitigation Measure REC-1 would reduce this potential effect by requiring notification of penalties for any off-route OHV activities to deter off-route travel.

13-18 See response to comment 13-4, which addresses the Draft EIS/EIR/PA's consideration of the Solar PEIS, the DRECP, and the NECO Plan. Appendix F of the Final EIS and Proposed PA describes the Project's consistency with DRECP CMAs; although they do not apply to the Project, the Project design and mitigation measures are generally consistent with the intent of the CMAs. Numerous other past, present, and reasonably foreseeable renewable energy, transmission, and non-energy-related projects are considered in the context of cumulative impacts throughout the Draft EIS/EIR/PA. See, e.g., Table 3.1-1, Crimson Solar Cumulative Projects List, which identifies 16 separate utility-scale solar projects and 11 other electrical facility projects, the incremental impacts of which have been considered in the cumulative effects analysis. The comment does not specify which, if any such projects the Draft EIS/EIR/PA fails to adequately address.

13-19 Appendix F of the Final EIS and Proposed PA describes the Project's consistency with the DRECP overall and with the relevant CMAs. The comment does not specify which, if any goals or avoidance, minimizations, or mitigation measures identified in the Western Solar Plan and DRECP the Draft EIS/EIR/PA fails to adequately address (note that these land use plan amendments do not apply to the Project). Further, the comment does not provide any explanation or evidence to support the assertion that CDFW has failed to comply with CEQA by failing to adequately consider the avoidance, minimization, and mitigation measures of the PEIS and DRECP. These measures are not applicable to the Project, and the avoidance, minimization, and mitigation required by recommended mitigation measures would reduce impacts to less than significant, with the exceptions noted in the Draft EIS/EIR/PA (exceedances of daily NO_x and PM_{10} significance thresholds, Impact 3.2.5b) which cannot be reduced to less than significant.

CDFW, through its own tribal consultation, has identified the Mule Mountains Tribal Cultural Landscape that overlaps the indirect and direct effects APE. In addition, CDFW has determined that the Project would have significant, direct impacts to tribal values attached to archaeological sites and isolated artifacts within the Mule Mountains Tribal Cultural Landscape, which are also cumulatively significant. CDFW Mitigation Measures CUL-8 through CUL-10 reduce the significance of these impacts. Even with implementation of these mitigation measures, residual impacts to tribal values would remain, however, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA. ~~**[CDFW, we will revisit the cultural impacts following input from consultation.]**~~

13-20 The BLM's purpose and need statement describes the problem or opportunity to which the BLM is responding and the goals or objectives the BLM hopes to accomplish by the action (BLM NEPA Handbook Section 6.2). The narrower the purpose and need statement, the narrower the range of alternatives that must be analyzed; the converse also is true. The BLM has considerable discretion in defining the purpose and need of the proposed action (40 CFR 1502.13).

In accordance with FLPMA Section 103(c) (43 USC §1702(c)), the BLM manages public lands for multiple use in a manner that takes into account the long-term needs of future generations for renewable and non-renewable resources. The Secretary of the Interior is authorized to grant ROWs on public lands for systems for generation, transmission, and distribution of electric energy (43 USC §1761(a)(4)). As directed by Secretarial Order 3285A1, the BLM has identified renewable energy projects on federally managed lands as a priority use of the lands it manages. The BLM is not in the business of developing and operating energy production facilities; its responsibilities are to consider and to approve, approve with

modification, or deny issuance of a ROW grant to a qualified individual, business, or government entity and to direct and control the use of rights-of-way on public land. Therefore, in responding to a ROW grant application under this authority, the BLM may decide to deny or grant a requested ROW, or to grant the ROW with modifications. Modifications may include modifying the proposed use or changing the route or location of the proposed facilities (43 CFR 2805.10(a)(1)).

Consistent with FLPMA, the BLM relies on project proponents to identify renewable energy technologies and general project locations and configurations that are technically and economically viable given current market conditions, renewable portfolio standards, technological advancements, transmission access, and related considerations. Through pre-application and NEPA processes for such projects, the BLM works with applicants, stakeholders, and other federal land and resource management agencies to refine proposals and help identify possible alternate locations that conform with applicable federal laws, regulations, policies, and land use plans.

The BLM's purpose and need, as stated in Section 1.2.1, is based on two key considerations: (i) the potential action the BLM could or would take on the specific proposed action; and (ii) the response of the BLM in meeting specific directives regarding the implementation of renewable energy projects on federally managed lands. The primary action that BLM is considering is a response to a specific ROW grant application from the Applicant to construct and operate a specific solar technology on a specific site managed by the BLM. As a result, the BLM determined that a key purpose and need for action is to determine whether to approve, approve with conditions, or deny that ROW application for the Proposed Action (Alternative A). The BLM also considered an alternative design that would reduce ground disturbance within the proposed Project footprint (Alternative B) as well as a reduced acreage alternative that has been configured to avoid or reduce particular resource impacts (Alternative C). A No Action alternative also is considered (Alternative D).

The BLM acknowledges that the Applicant has specific objectives and constraints for the project; these are set forth in Section 1.2 of the Applicant's May 2019 POD (Sonoran West Solar, LLC 2019). While the BLM has reviewed and is aware of the Applicant's objectives and constraints, it has not relied upon them to define the statement of its own (public) purpose and need, which is provided in Draft EIS/EIR/PA Section 1.2.1.

The purpose and need for the Project, as discussed in Chapter 1, is reasonable, consistent with governing directives and the requirements of Title V of FLPMA, and satisfies the requirements of NEPA. Courts have upheld NEPA lead agencies' decisions to limit the alternatives that must be discussed to those that are consistent with the agency's purpose and need. *See*, e.g., *League of Wilderness Defenders-Blue Mountains Biodiversity Project v. U.S. Forest Service*, 689 F.3d 1060, 1069 (9th Cir. 2012) ("The scope of an alternatives analysis depends on the underlying 'purpose and need' specified by the agency for the proposed action…. The agency need only evaluate alternatives that are 'reasonably related to the purposes of the project.'" (citations omitted)). Here, a private entity has submitted an application, and ~~this~~ the Final EIS and Proposed PA is the BLM's response to that application. The range of results includes approval, denial, or modification of the proposal, as described above. The need to make this decision is acknowledged in Section 1.2.1, p. 1-3. Potential alternatives that do not respond to the Purpose and Need Statement were rejected from more detailed consideration.

13-21 Section 1.2.2 has been revised in the Final EIS and Proposed PA to clarify that the first five objectives listed have been identified by the Applicant, while CDFW has included several additional objectives specific to the agency's role in resource protection. CDFW has not adopted the Applicant's objectives as its own for the purposes of crafting alternatives to the Project in compliance with CEQA Guidelines Section 15126.6. As explained in Section 2.2, Alternatives Development and Screening, the BLM and CDFW used alternatives screening criteria to determine whether potential alternatives would be carried forward for detailed analysis. Criterion 2 asks whether a potential alternative would "meet most of the basic objectives of the Project under CEQA." In crafting the boundary of Alternative C, the Reduced Acreage Alternative, CDFW and BLM did not consider the potential output capacity of the resulting solar plant site, but as explained in Section 2.6 and analyzed throughout the Draft EIS/EIR/PA, Alternative C was developed to avoid key areas containing sensitive vegetation, sand dune habitat, and cultural resources. It is not within the BLM's or CDFW's technical expertise to estimate the solar energy capacity of a particular site, and the design of this alternative was unrelated to the Applicant's objective to develop a 350 MW facility. Rather, after BLM and CDFW presented the Alternative C boundary to the Applicant, the Applicant indicated that through site design, it would still be possible to develop a 350 MW facility within that reduced acreage. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation (CEQA Guidelines Section 15126.6(a)). The alternatives considered in the Draft EIS/EIR/PA, as revised in the Final EIS and Proposed PA, could feasibly accomplish most of the basic objectives of the Project and could avoid or substantially lessen one or more of the significant impacts that have been identified; they represent a reasonable range of alternatives to the proposed Project.

13-22 See response to comment 13-21 regarding revisions to the Final EIS and Proposed PA clarifying the project objectives identified by the Applicant and CDFW. The Applicant has indicated that the proposed Project and alternatives are financially feasible under reasonably foreseeable economic and regulatory conditions. The feasibility considerations described in Section 2.10, Alternatives Considered but Eliminated from Detailed Consideration, are unrelated to the availability of subsidies for renewable energy projects.

13-23 The need for the Project as expressed in Section 1.2.1 responds to the application, which addresses one component of climate change, i.e., greenhouse gas emissions. Strategies to address other components of climate change, such as adaptation, have been considered in other BLM planning actions, including the DRECP, and are beyond the scope of the Draft EIS/EIR/PA, which analyzes the impacts of the proposed Project on the human and physical environment. Project impacts on all of the resources addressed in the comment are analyzed where applicable throughout the Draft EIS/EIR/PA, with the exception of "major washes." The Project design avoids the large washes present in the Project vicinity.

13-24 See response to comment 13-15. See also response to comment 13-4, which explains how and where the Draft EIS/EIR/PA considered the CDCA Plan, NECO Plan and Western Solar Plan.

13-25 The listing status of the desert tortoise is acknowledged in Table 3.3-5, Special-Status Wildlife Occurrence on the Project Site, and impacts to the species are identified in Section 3.3.4.1 (Alternative A, which is the Project as proposed), Section 3.3.4.2 (Alternative B) and Section 3.3.4.3 (Alternative C). More specifically, the Project and cumulative impact analyses address the impact on desert tortoise and habitat within the Cadiz Valley and Chocolate Mountains ecoregion subarea,

consistent with the ecoregional baseline definitions developed for the DRECP. Mitigation Measure BIO-26, item 1a requires that compensatory mitigation lands be located within the Colorado Desert Recovery Unit in order to address Project and cumulative impacts on this unit.

13-26 The Desert Tortoise Translocation Plan (Appendix I.12 of the Final EIS and Proposed PA) identifies both a primary and a secondary recipient site, and indicates that the primary recipient site (the Mule Mountains) can accommodate at least five translocated tortoises. The ongoing coordination called for in the Plan refers to consideration of the results of the Pre-Clearance Research proposed in Section 3 of the Plan, which may indicate that the primary recipient site can accommodate additional translocated tortoises. However, the Plan states that once the maximum number of tortoises translocated to the primary recipient site has been reached (as determined by the lead agencies and wildlife agencies), further translocations would be moved to the secondary recipient site (Appendix I.12, pp. 17, 42). Further, the Biological Opinion for the Project was finalized in February 2020 and is included in this Final EIS and Proposed PA as Appendix I.13. The avoidance, minimization, and mitigation measures including the mitigation measures in Appendix B of this Final EIS and Proposed PA and the Conservation Measures and Reasonable and Prudent Measures identified in the Biological Opinion would reduce impacts on desert tortoise. Also see response to comment 3-3.

13-27 The BLM and the USFWS in consultation under Section 7 of the Endangered Species Act have considered the potential for desert tortoises to die during or as a result of translocation and have required best practices to minimize this potential. From page 40 of the USFWS Biological Opinion, provided as Appendix I.13 of this Final EIS and Proposed PA:

> The death and injury of desert tortoises associated with the proposed action (i.e., construction and O&M activities) would be minimized through translocation, which recent studies have shown to be an effective conservation tool (Field et al. 2007, Esque et al. 2010, Drake et al. 2012, Nussear et al. 2012, Farnsworth et al. 2015, Hinderle et al. 2015, Brand et al. 2016, Nafus et al. 2017). However, the capture, handling, and moving of desert tortoises for the purposes of translocating them out of the Project site or moving them out of harm's way may result in accidental death or injury if these methods are performed improperly. The Project's Desert Tortoise Translocation Plan (Ironwood 2019) follows the Service's most recent guidance (Service 2019a) and includes measures to minimize stress and potential adverse effects to desert tortoises associated with translocation activities. … Ultimately, because the Applicant would adhere to the Project's translocation plan and most recent Service translocation guidance, we anticipate any death or injury to desert tortoises from activities associated with removing individuals from the Project site is unlikely.

The commenter cites the year 2 desert tortoise translocation Progress Report for the Fort Irwin Expansion (Gowan and Berry 2010) as its source for mortality rates of translocated tortoises of up to 45 percent. That report, which is also cited in USFWS' Biological Opinion (as U.S. Army 2010) indicates that in both year 1 and year 2 of monitoring translocated tortoises, 44.3 percent of translocated tortoises were found dead and that the primary cause of death was predation, likely by coyotes. The Biological Opinion acknowledges this study and also cites two additional reports that compare this rate to natural mortality levels, on page 42:

> Studies associated with the Fort Irwin expansion (U.S. Army 2010) compared mortality rates associated with resident and translocated desert tortoise populations with that of control populations; preliminary results indicated translocation did not increase mortality above natural levels (Esque et al. 2010). More recently Dickson et al. (2019) found that based on intensive monitoring of 58 translocated desert tortoises, along with resident and control populations, translocated individuals in each of two size classes (120–160 mm MCL and larger than 160 mm MCL) did not survive at lower rates than resident and control desert tortoises over the 5-year study period. Therefore, we anticipate that death or injury of few, if any, large desert tortoises would be the direct result of translocation.

> Further, because most desert tortoises that would be translocated from the Crimson Solar Project site would retain access to large portions of their existing home ranges, they are less likely than tortoises translocated away from their home ranges to "experience higher potential for mortality because they are moving through unfamiliar habitats and are less likely to have established cover sites that provide protection" (Final EIS and Proposed PA, Appendix I.13, p. 42).

13-28 Mitigation Measure BIO-26 part 3 specifies the requirements "to provide for the acquisition and *perpetual protection and management* of the compensation lands" (emphasis added).

13-29 The Draft EIS/EIR/PA acknowledges that the loss of desert tortoise habitat from Project development would be permanent (see Draft EIS/EIR/PA page 3.3-18), and BIO-26 requires that compensatory mitigation lands be conserved in perpetuity. The comment does not provide enough specificity to allow for a more detailed response.

13-30 CDFW's approach to fully mitigating for loss of habitat does not rely on strict ratios, but is based on the relative habitat value of the land to be occupied by a project. CDFW, as CEQA lead agency, has been involved in the development of the Draft EIS/EIR/PA, Final EIS and Proposed PA, and mitigation measures, including BIO-26 and the compensatory mitigation ratio therein. CDFW may determine during its consideration of an incidental take permit under the California Endangered Species Act that a different overall amount of mitigation acreage is appropriate; however, for purposes of CEQA, CDFW has determined that implementation of the applicable mitigation measures in Appendix B of the Final EIS and Proposed PA would reduce impacts on desert tortoise to less than significant. For purposes of the BLM's NEPA compliance, the 1:1 compensation ratio outside of desert tortoise critical habitat is consistent with the NECO Plan. Items 1a, 1d, and 1e of Mitigation Measure BIO-26 address the population connectivity concerns expressed in the comment.

13-31 The compensatory mitigation lands, which would be acquired by the Applicant if the Project were approved and recommended mitigation measures adopted, would be conserved in perpetuity. The translocation areas are BLM-administered lands that would continue to be managed in accordance with applicable laws, regulations, plans, and policies.

13-32 As shown in Figure 1-3 of the Final EIS and Proposed PA, the Project area and energy production capacity has been significantly reduced since the initial application to avoid impacts on various resources, including desert dunes. Complete avoidance of dune habitat is not feasible due to the location of the Colorado River Substation to which the Project would connect; by necessity, a gen-tie line must cross dune habitat to reach the substation. As indicated in Table 3.3-7, the acreage of dunes impacted is the same as the acreage of dunes present and impacts would occur entirely along the gen-tie or within the gen-tie access road. The

Alternative C configuration in the Final EIS and Proposed PA would reduce impacts due to the shorter gen-tie line and access road. Dune habitat would be mitigated at a 3:1 ratio under BIO-28.

13-33 The mitigation ratios in the document have been developed and reviewed in coordination with CDFW, which is the CEQA lead agency. Mitigation ratios and the requirements for species protection plans are project-specific and relate to the degree and scale of impacts for each individual project. The fact that different conclusions were reached for other projects on other sites with the participation of other lead and responsible agencies does not reflect on the adequacy of the ratio recommended for this Project. The preference indicated in the comment that a higher ratio be imposed here is acknowledged; however, the comment provides no evidence that the mitigation ratio for this Project is inadequate. Further, the Draft EIS/EIR/PA analyzes both direct and indirect impacts on Mojave fringe-toed lizard. Regarding indirect impacts, such as increased predation, see Section 3.3.4.1 and the mitigation measures recommended therein. The scale and significance of residual (post-mitigation) indirect effects would not warrant requiring compensatory mitigation because Mitigation Measure BIO-25 would substantially reduce predation impacts by requiring implementation of a detailed Raven Monitoring, Management, and Control Plan, and Mitigation Measure BIO-28 would substantially reduce other types of indirect effects through monitoring, employee training, and enforcing speed limits. Additionally, the "Criteria for Compensation Lands" specified in Mitigation Measure BIO-28 provides specific criteria and performance measures for the quality of lands used to meet the mitigation ratios for Mojave fringe-toed lizard, supporting the recommended ratio.

13-34 It is expected that the compensatory mitigation requirements in Mitigation Measure BIO-18, BIO-19, BIO-20, BIO-26, BIO-28, and BIO-29 can be met through the over 100,000 acres of various habitats available through School Lands Trust and State Lands Commission; however, as an alternative to lands acquisition, Mitigation Measures BIO-18, BIO-19, and BIO-20 allow for restoration of protected lands to specified minimum criteria, and BIO-18, BIO-20, BIO-26, and BIO-28 allow for in-lieu payment or purchase of Covered Species credits from a CDFW-approved mitigation or conservation bank, as applicable, to fulfill compensatory mitigation requirements. Based on these measures, the Lead Agencies believe that the proposed mitigation for this Project would be both adequate and feasible; the comment provides no evidence to support a contrary conclusion. The Desert Quartzite determination related to feasibility of acquiring enough habitat to satisfy the NECO Plan requirement was based on the fact that that project would affect over 3,600 acres of habitat requiring compensation. The Crimson Solar Project would affect fewer than 600 acres, making the acquisition of compensatory habitat more feasible.

13-35 Ongoing impacts on Biological Resources, including avian species, of previously-approved large-scale solar projects (and of pressures caused by climate change and development) are reflected in the description of the environmental setting in Section 3.3.2. The potential for past projects to contribute to effects that could combine with those of the Project and other proposed projects to cause or contribute to cumulative effects is analyzed in Section 3.3.6. Potential direct and indirect impacts from avian interaction with solar panels were discussed on Draft EIS/EIR/PA pages 3.3-23, 3.3-34, 3.3-35, 3.3-40, and 3.3-41.

While the Draft EIS/EIR/PA does not use the term "lake effect," the potential for this causal mechanism is acknowledged in Section 3.3.4.1:

> While the causal mechanism is not known and is under investigation at other facilities, what is known is there is some kind of attractant or risk at solar facilities that results in avian mortalities at a higher rate at solar facilities as compared to background mortality

rates on non-developed desert lands. Presently, one hypothesis regarding why birds may collide with panels is the idea that birds, particularly water-dependent species, may be attracted to solar panels, mistaking them for water features.

Mitigation Measure BIO-32, items 3c and 5 through 8 contain numerous requirements to implement the latest monitoring, detection, and avoidance measures applicable to photovoltaic projects; post-construction mortality monitoring and reporting; and adaptive management based on the monitoring program.

13-36 Section 3.3 addresses the presumed presence of and potential impacts on Yuma Ridgway's rail. The impact mechanism (collision and powerline interaction) is the same for this species as for other avian species. As discussed in Section 3.3.5.1 under Impact 3.3.5a, Yuma Ridgway's rail is one of the special-status species that may be killed as a result of collision on the Project site; however, at present, there is no data indicating that the estimated loss of special-status bird individuals would have a substantial adverse effect on the species' populations. Therefore, while estimates indicate the Project is likely to cause some level of avian mortality, the impact based on current evidence is less than significant for purposes of CEQA without mitigation based on the relevant CDFW threshold of significance identified in the Draft EIS/EIR/PA.

13-37 See response to comment 13-35 regarding the analysis of "fake lake" considerations. The Lead Agencies believe that the Final EIS and Proposed PA adequately evaluates the risks to avian species, discloses mortalities documented at existing projects, and will ensure that the Project would avoid and minimize avian impacts through implementation of BIO-32 (Bird and Bat Conservation Strategy). Two years of post-construction avian/bat fatality monitoring is the typical post-construction monitoring requirements for similar solar projects such as Desert Quartzite; however, the BBCS for this Project has been revised to include three years of post-construction avian and bat fatality monitoring. Pre-construction on-site avian surveys may not detect certain "flyover" species and, therefore, the analysis considered all species records within 10 miles of the Project site from the last 25 years in the California Natural Diversity Database. This 10-mile radius includes various aquatic features such as evaporation and detention ponds. The opinions expressed in the comment about the adequacy of the duration of recommended monitoring and pre-construction surveys and about other efforts that could have been taken to characterize potential impacts are acknowledged; however, the comment provides no evidence that the analysis or conclusions reached in the Draft EIS/EIR/PA are inaccurate or inadequate.

13-38 The RE Crimson Solar Project Burrowing Owl Management Plan is consistent with the CDFW 2012 *Staff Report on Burrowing Owl Mitigation* and has been reviewed and determined as adequate by CDFW. Additional habitat compensation associated with the desert tortoise and Mojave fringe-toed lizard would encompass a much larger area, and would also likely serve as habitat for burrowing owls. As stipulated in Mitigation Measure BIO-29, acquisition of burrowing owl compensatory habitat would occur consistent with the requirements of Mitigation Measure BIO-26 part 3, which specifies requirements "to provide for the acquisition and *perpetual protection and management* of the compensation lands" (emphasis added).

13-39 Draft EIS/EIR/PA Section 3.3.4.1 acknowledges, "Without preventative measures, the presence of humans and potential passive relocation of desert kit foxes from the site could… result in the introduction and spread of diseases such as canine distemper." To address this possibility, measures to

address the potential for outbreak of canine distemper virus are included in the draft American Badger and Desert Kit Fox Monitoring and Management Plan (Appendix I.8 of the Final EIS and Proposed PA), which would be required to obtain BLM and CDFW approval prior to implementation per Mitigation Measure BIO-30. The commenter's concern regarding the success of passive relocation is acknowledged and may be taken into consideration as part of the decision-making process.

The current status and level of threat to these species posed by the Project was not determined to warrant requiring compensatory habitat mitigation for either American badger or desert kit fox; however, it should be noted that compensatory mitigation lands for desert tortoise would likely serve as habitat for these two species as well. The opinion expressed in this comment about whether "take" would occur is acknowledged; however, based on evidence including published literature and the expert opinions of BLM wildlife biologists and CDFW staff, the Lead Agencies disagree with the suggestion that passive relocation necessarily would result in take.

13-40 The impacts associated with the removal of soil crusts are addressed in Section 3.2, Air Resources, as explained in Section 3.2.3 (the methodology for estimating the increase in fugitive dust emissions inherently addresses disturbance of soil surfaces) and 3.3.3 (the long recovery period required for disturbance in desert settings is acknowledged and contributes to the severity of disturbance-related impacts). The effects of Project ground disturbance on soil crusts are also acknowledged in Section 3.3, Biological Resources. It is assumed the biological (or cryptobiotic) soil crusts may be present throughout the Project area, so no specific mapping of their locations is necessary, and avoidance is not feasible under the proposed Project's construction methods. However, the Alternative B design elements (DE) provides for alternative construction methods that would avoid much of the proposed ground disturbance (DE-1 would trim vegetation exceeding 18 inches for module installation, and grading and grubbing would be limited to 5 percent in the module field instead of traditional mowing, grubbing, and grading), and DE-1 is incorporated into the preferred alternative. Avoidance and minimization measures to reduce impacts on biological soil crusts are addressed through mitigation measures that minimize ground disturbance and vegetation removal, and stockpiling of topsoil, including BIO-18 ("For all temporarily disturbed areas, the Restoration Plan shall include a description of proposed methods for topsoil salvage and replacement, plant/seed salvage including salvage of succulents, seeding techniques, inoculation of native microbial organisms for plant mycorrhizae and for biotic soil crust formation, methods to stabilize and shape soil surface to reduce soil erosivity, and techniques to increase soil fertility and water holding capacity").

13-41 As with biological soil crusts (see response to comment 13-40), desert pavement is assumed to be present on the Project site as noted in Section 3.5, and avoidance in general is not feasible except under the alternative construction techniques in Alternative B, which make up part of the preferred alternative. No mapping of desert pavements is necessary to adequately analyze and disclose the potential impacts of disturbing desert pavement (i.e., fugitive dust emissions). Mitigation Measure AQ-1, which requires stabilization of disturbed soils, has been revised to include a requirement that the Applicant identify and avoid desert pavement to the extent feasible; however, where avoidance is not feasible, soil stabilization would be required.

13-42 No special-status insect species have been indicated as having potential to occur on the Project site based on a review of standard sources including the NECO Plan, range maps of state and federal threatened and endangered species, and California Natural Diversity Database records of special-status

species and commenters have not identified any potential species that may occur within the Project site. Incidentally observed insects were noted on the Project site; however, no focused insect surveys were recommended by the resource agencies or warranted based on database and plan review. Since common insect species do not have protected status under the Federal Endangered Species Act, California Endangered Species Act, or other applicable laws and policies, they have not been addressed in Section 3.3, Biological Resources. For these reasons, the Lead Agencies believe that the Draft EIS/EIR/PA is adequate without the requested additional data.

13-43 Section 3.3.3 acknowledges that "a long period [of time], relative to areas with higher rainfall, is required for natural revegetation to recover from disturbance in the desert" and, for this reason, "all ground-disturbing activity is considered a permanent impact for the purpose of the analysis." The BLM will determine whether and to what extent financial bonds are needed to ensure implementation of the restoration requirements in Mitigation Measures BIO-18 (Vegetation Communities Restoration and Compensation) and BIO-33 (Decommissioning Plan) when and if the Project or an alternative is approved. In accordance with 43 CFR 2804.20, the BLM requires performance and reclamation bonds to cover any losses, damages, or injury to human health, the environment, or property in connection with the use and occupancy of the right-of-way. The BLM would require the Applicant/Project Owner to develop a Decommissioning Plan, which will include revegetation and reclamation activities, and obtain BLM approval of the plan prior to issuance of a ROW grant (a draft Decommissioning and Reclamation Plan is provided as Appendix I.4 of the Final EIS and Proposed PA). Based on the approved Decommissioning Plan, the BLM would require the Applicant/Project Owner to prepare a reclamation cost estimate, which will summarize the costs of reclaiming public lands. The bond amount would be based on the activities identified in the decommissioning plan and reclamation cost estimate.

13-44 Consistent with the suggestion in this comment, a draft Decommissioning and Reclamation Plan was provided in the Draft EIS/EIR/PA as Appendix I.4, and its implementation would be required by Mitigation Measure BIO-33. Impacts on sensitive vegetation communities and wildlife habitats are considered permanent and are mitigated through compensatory mitigation at ratios ranging from 1:1 to 3:1. Rehabilitation requirements are intended to determine whether a community or habitat is on a trajectory towards recovery by sampling within a time-limited monitoring period. Vegetation may continue to grow, mature, and expand after the monitoring period to reach pre-disturbance levels of vegetative cover.

13-45 As discussed in other responses to this comment letter, clarifications have been made in Mitigation Measures AQ-1, BIO-6, and BIO-28. The comment does not specify which impacts or mitigation measures it claims are inadequate. Without more information, the BLM is unable to provide a more detailed response.

13-46 Section 3.3.2.1 has been revised in the Final EIS and Proposed PA to clarify that a total of 91.8 acres of ephemeral washes occur on the Project site, including approximately 90.6 acres of unvegetated ephemeral streams and washes that occur within the mapped vegetation communities on-site and an additional 1.2 acres of ephemeral wash habitat that is concurrent with the blue palo verde-ironwood woodland vegetation community (Figure 3.3-3). The 90.6 acres of small ephemeral streams and washes were not considered a separate vegetation community or cover type, and this acreage is overlapping, not in addition to, the acreages described in Table 3.3-1.

13-47 Section 3.3 describes and analyzes potential impacts to on-site habitats, including riparian vegetation communities and ephemeral washes. Regarding surface water flows, site-specific hydrologic modeling performed for the Project site identified that during a 100-year storm event, the flood depths across the majority of the site are less than 0.5 feet with relatively low velocities. As described in Section 3.18, the maximum flood depth in isolated areas within the model study area is approximately 1.5 feet; however, these are outside of the Project site boundary. The hydrologic study was provided as Appendix U.3 of the Final EIS and Proposed PA. The Genesis and Desert Sunlight project sites are located in different sub-watersheds than the Crimson Solar Project site. Modeling performed for these projects did identify the potential for on-site flooding (BLM 2010, 2011a).

13-48 Water requirements are described for the Proposed Action in Section 2.4.3.6, for Alternative B in Section 2.5.2.4 and for Alternative C in Section 2.6. More specifically, Section 3.18, Water Resources, describes the projected construction and operational water needs compared to the available groundwater in (and the annual recharge to) the basins, and, based on this evidence, concludes that "considering the temporary demand for water during construction, the total quantity needed compared to the total annual recharge and amount of groundwater in storage, and the relative stability of groundwater levels in the basins, there would be no adverse effects related to overall groundwater levels from Project construction," and "the relatively small annual [operational] demand would be met without causing any adverse effects on groundwater levels in the basin." Further, in Section 3.3, Biological Resources, the analysis references the Water Resources analysis to support a conclusion that no adverse effects to the blue palo verde–ironwood woodland community are expected to result from potential Project groundwater pumping – this includes both during construction and over the life of the Project. Other vegetation communities and other surface resources on BLM-administered and other lands were not identified as being potentially dependent on groundwater levels in the Chuckwalla Valley Groundwater Basin (CVGB) and Palo Verde Mesa Groundwater Basin (PVMGB), and regardless, the Project's effects on groundwater levels are expected to be minor, particularly in light of the preferred alternative's substantially reduced construction water demand. In addition, Mitigation Measure WAT-1 requires the development and implementation of a Groundwater Monitoring, Reporting, and Mitigation Plan prior to the onset of groundwater pumping for Project construction. If monitoring identifies an adverse effect on nearby wells, cessation of pumping and/or compensation for equipment to improve nearby wells would be required to mitigate the impact. Finally, the cumulative impacts on groundwater resources from this project and others in the same groundwater basins are addressed in Section 3.18.6.1. The comment does not suggest any inaccuracy or inadequacy in the cumulative effects analysis.

13-49 The BLM disagrees with the suggestion that Public Water 107 applies in the current context because the beneficial uses addressed in Public Water 107 cover only municipal water and water for livestock grazing – concerns not at issue in this Final EIS and Proposed PA. Acknowledging the commenter's apparent difference of opinion on this point (based on the comment), the BLM notes that the topic of water rights is not one typically addressed in an EIS or EIR because it is a legal matter that is rarely relevant to the question of whether a proposed project being evaluated under NEPA or CEQA will generate impacts on the environment. Here, however, the issue of water rights is raised to identify a potential physical environmental impact on surface resources, and this response is therefore focused on those environmental impacts.

The wilderness areas mentioned in this comment are within or partially within the CVGB. As described in Section 3.18.6.1, in addition to the Crimson Solar Project, five additional projects with foreseeable future construction activity are wholly within the CVGB (i.e., Desert Center 50, Arica, Jupiter, Desert Harvest, and Palen), and although not very likely due to the different phases of environmental review and permitting each project is in, it is possible that these cumulative solar projects could overlap in construction and/or decommissioning in timing such that cumulatively they would withdraw groundwater in excess of natural recharge, causing groundwater levels to decline. To protect against this possibility, Mitigation Measure WAT-1 would require the development and implementation of a Groundwater Monitoring, Reporting, and Mitigation Plan prior to the onset of construction of the Project that would result in implementation of measures to mitigate any adverse effects on nearby wells. This would reduce the Project's incremental contribution to a less-than-significant level because it would ensure that all Project-related impacts would be reversed through cessation of pumping or would be compensated for through improvement of pumping equipment for affected wells.

13-50 As stated in response to comment 13-49, the topic of water rights is a legal matter that is only relevant to a NEPA or CEQA analysis if it identifies a potential physical environmental impact. With respect to the potential to consume groundwater that would come from within the "accounting surface" of the Colorado River aquifer, the Draft EIS/EIR/PA addresses this issue in Section 3.18.4.1, identifies the potential for an adverse impact related to the use of Colorado River water. This environmental impact would be avoided or minimized through the implementation of Mitigation Measure WAT-2, which would require the implementation of a plan to account for any water that might come from the Colorado River, demonstrate the availability of and provide replacement on an acre-foot to acre-foot basis. If this were to occur, this impact would be reduced by identifying the Colorado River accounting surface at the location of the well that would supply the Project, and replacing any amounts of water withdrawn at or below that accounting surface level from an outside source. Questions of creation and accrual of water rights are beyond the scope of the Draft EIS/EIR/PA, which analyzes potential impacts of the proposed solar project on the human and physical environment.

13-51 The impacts from truck trips associated with hauling water from an off-site source are analyzed and disclosed throughout the Draft EIS/EIR/PA where relevant. Specifically, see Table 2-2 which lists water trucks under anticipated construction equipment; Section 3.2.3.1 ("In addition to commute trips by construction workers, approximately 41,575 truck deliveries of equipment, water, and materials were estimated to be required over the course of the construction period."); Section 3.4.4.1 ("Construction- and decommissioning-related GHG exhaust emissions would be generated by heavy-duty diesel off-road equipment; trucks used to transport fuel, water, and deliver materials and equipment to and from the Project site; and construction worker commutes."); and Section 3.15.4.1 ("The construction delivery traffic would peak at 72 vehicles (equipment and water delivery trucks) per day; however, to account for the larger size, slower speeds, and limited maneuverability of large trucks, the construction delivery traffic was adjusted using a Passenger Car Equivalent (PCE) factor of 3.0."). The calculations used to estimate criteria pollutant and greenhouse gas emissions and fuel consumption included the impacts of water delivery truck trips sufficient to allow for delivery of the Applicant's estimated water demand. See Appendices H.3 (On-road Trip Emissions) and L.1 (On-Road Vendor Trucks).

13-52 Mitigation Measure AQ-1, Dust Control Plan (see Appendix B~~,~~ <u>of the Final EIS and Proposed PA,</u> pages B-1 and B-2), part e., has been revised to specifically address fugitive dust from areas of disturbed desert pavement. Also see responses to comments 13-40 and 13-41.

13-53 This comment asserts that the Draft EIS/EIR/PA "does not meaningfully analyze the cumulative impacts" on California desert resources, but is general in nature. The cumulative analysis in the Draft EIS/EIR/PA was prepared in accordance with both NEPA (40 CFR 1508.7) and CEQA (14 CCR 15130), which requires an analysis of cumulative impacts as part of the evaluation and analysis of potential impacts. Section 3.1, and as shown in Table 3.1-1, Crimson Solar Cumulative Projects List, indicates that the geographic extent of 42 projects were considered in the analysis of cumulative impacts associated with the Project. These cumulative projects include the vicinity of all reasonably foreseeable cumulative projects and extends throughout eastern Riverside County. Table 3.1-1 provides the known projects at the time of issuance of the Notice of Intent and Notice of Preparation considered in the cumulative analysis. Given that there is a potential for continually adding possible future projects, a lead agency possesses the authority to set a reasonable cut-off date for such new projects. BLM and CDFW have set issuance of the Notice of Preparation and Notice of Intent for the Draft EIS/EIR/PA as the cut-off date to determine which projects should be included in the cumulative analysis. Cumulative impacts, including the contributions of the Project, are analyzed throughout each resource section of the Draft EIS/EIR/PA (Sections 3.2 through 3.19).

The specific geographic scope of each resource section's cumulative analysis was evaluated and determined to be sufficient based on the magnitude of the Project's potential to interact with other potential projects and thus cause potentially cumulative physical environmental impacts, and differs for each resource section based on the geographic extent of potential Project impacts on that resource (e.g., the viewshed, the air basin). Riverside County and other state and local agencies were consulted as to additional projects in the area that may be applicable on a cumulative basis and these projects are considered in the analysis to the extent applicable.

Comments specific to the analyses of impacts on desert tortoise, Mojave fringe-toed lizard, sand dune ecosystems, golden eagles, surface hydrology, water resources, and air quality have been addressed elsewhere in responses to this letter. Cumulative loss of special-status wildlife habitat in the vicinity of the Project is assessed in Section 3.3.6. Regarding insects, see response to comment 13-42: No special-status insect species have been indicated as having potential to occur on the Project site. Because the Project would cause no impact on special-status insects, it could not cause or contribute to any cumulative impact in this regard.

13-54 See responses to comments 13-20 and 13-21 regarding the Project purpose and need, project objectives, and range of alternatives considered.

13-55 The project does not specify which portions of the Project should be allowed to move forward while others are pursued in different locations; however, please see response to comment 13-6 regarding off-site alternatives.

13-56 See response to comment 13-6 regarding off-site alternatives. See also responses to comments 13-32 and 13-33 regarding dune habitat and Mojave fringe-toed lizard impacts.

13-57 See Section 2.10.3.1, which addresses the consideration of conservation and demand-side management alternatives and the reasons for which they were rejected from detailed consideration.

13-58 The BLM disagrees with the suggestion that the Project is inconsistent with the NECO Plan. Without some information about how or why the commenter believes that it would be inconsistent, the BLM

does not have enough information to provide a more detailed response in that respect. The same is true for the DRECP LUPA. As stated in Appendix F of the Final EIS and Proposed PA, Section 1, according to the DRECP, renewable energy applications in the Riverside East SEZ filed before June 30, 2009, including the application for the Project, are not, and will not be, subject to the terms of the DRECP. The comment also does not specify which goal of the DRECP would be undermined by the Project. The CMAs would continue to work towards the conservation goals and objectives identified in the DRECP regardless of implementation of the Project. As stated in the revised Final EIS and Proposed PA Appendix F, the Project would be partially consistent with LUPA-BIO-PLANT-2 because Alternative C would avoid 409 out of the 420 Harwood's eriastrum individuals within the Alternative A footprint, and Mitigation Measure BIO-20 would assign a qualified biologist to designate environmentally sensitive areas around special status plants outside of the Project site within 100 feet of the limits of disturbance. LUPA-BIO-PLANT-3 was determined as not applicable because none of the plant species listed in DRECP Table 23 occur within the Project site.

13-59 As explained in Section 3.9.4.1, no use restrictions are specified for the donated lands in Section 8 within the Project site. The BLM California State Director's review and approval is required for facilities proposed on these lands; this would occur at the time a decision to approve the Project or an alternative on these lands is considered. No revision to the Draft EIS/EIR/PA is necessary in relation to donated lands.

13-60 The comment's preference for rejecting the proposed Project is acknowledged. The Lead Agencies have not identified a need to supplement or recirculate the Draft EIS/EIR/PA.

Under NEPA, new information that emerges after the circulation and public comment period of a Draft EIS may be included in the Final EIS without recirculation, and supplemental analysis must be prepared only when there are substantial changes in the proposed action relevant to environmental concerns or when significant new circumstances or information relevant to environmental concerns are presented (40 CFR 1502.9(c)(1); BLM NEPA Handbook §5.3). No substantial changes have been made to the Proposed Action since the Draft EIS/EIR/PA was circulated. The Applicant submitted a revised POD in February 2020 proposing a reconfigured gen-tie line and revised locations of other facilities; these updates are reflected in the description of Alternative C in Chapter 2 and all facilities remain within the impact footprint studied in the Draft EIS/EIR/PA. Although these changes were not previously considered, they are not substantial or relevant to environmental concerns because none would cause or contribute to an impact that is beyond the scope of impacts analyzed in the Draft EIS/EIR/PA.

No significant new circumstances or information relevant to environmental concerns are presented in this Final EIS and Proposed PA. As described in Final EIS and Proposed PA Section 3.5, since publication of the Draft EIS/EIR/PA, subsurface testing and reporting of results has been completed for sites and isolates within the cultural resources Area of Potential Effects. As explained in Section 3.5, these results do not identify any new adverse impacts that were not already identified, analyzed, and mitigated in the Draft EIS/EIR/PA.

CEQA and the CEQA Guidelines require recirculation of a Draft EIR for an additional round of agency and public comment only if significant new information is added after the close of the public comment period (Pub. Res. Code §21092.1; CEQA Guidelines §15088.5). "Information" can include revisions in the project or the environmental setting as well as additional data or other information (CEQA

Guidelines §15088.5). Recirculation is intended to be the exception, not the general rule. *Save Our Peninsula Committee v. Monterey County Board of Supervisors*, 87 Cal.App.4th 99. (2001). CEQA Guidelines Section 15088.5(a) provides four examples of "significant new information" requiring recirculation, including:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.

(4) The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

The Draft EIS/EIR/PA for this Project provides an adequate and complete disclosure of direct, indirect, and cumulative impacts related to construction, operation, maintenance, and decommissioning of the Project and alternatives. The inclusion of supplemental data and analysis also does not trigger recirculation when the new information reaches the same conclusion as was reached in the draft EIR.

Letter 14 – Colorado River Board of California

14-1 Scoping comments from the Colorado River Board of California (April 9, 2018) have been considered and incorporated into the Draft EIS/EIR/PA. Please see Appendix D.3, Scoping Report, of the Final EIS and Proposed PA, where this comment letter is acknowledged and reproduced in full. As acknowledged in Section 3.18.4.1, the Project site may be within the accounting surface of the Colorado River Aquifer, and that Project pumping for on-site water use could take groundwater from below the accounting surface. The Colorado River Board of California's support for the implementation of Mitigation Measures WAT-1 and WAT-2 is acknowledged. Mitigation Measure WAT-2 requires that the Colorado River Water Supply Plan be submitted not only to the BLM and the Colorado River Board of California for review and approval, but also to the Metropolitan Water District of Southern California for review and comment, as that agency holds a contract to provide a legally authorized and reliable water supply to replace water from the Colorado River. In response to this comment, the Colorado River Regional Water Quality Control Board (RWQCB) has been added to Mitigation Measure WAT-2 as an agency to which the plan must be submitted for review and comment, given the RWQCB's role in water resource allocation and efficient use. The Colorado River Board's list of conservation and offset activities that have been considered and determined not viable is acknowledged.

Letter 15 – Metropolitan Water District of Southern California

15-1 No direct or indirect physical impact of the Project on MWD's infrastructure has been identified. As stated in MWD's scoping comment on April 9, 2018, MWD's closest facilities are over 6 miles away from the Project site. Please see Appendix D.3, Scoping Report, of the Final EIS an Proposed PA, where this comment letter is acknowledged and reproduced in full. Comments directed at the Applicant regarding interconnection do not identify potential significant environmental impacts and are outside the scope of the Draft EIS/EIR/PA and Final EIS and Proposed PA.

15-2 The impacts associated with groundwater pumping from either a new on-site well within the CVGB or PVMGB or an existing off-site well within the PVMGB are addressed throughout Section 3.18, Water Resources, which addresses impacts of pumping on these basins compared to annual recharge, the potential to lower localized water levels at nearby wells and thereby to affect pumping rates, and the potential to draw groundwater that would be replaced by Colorado River water (a river compact violation). The cumulative effects are addressed in Section 3.18.6.1, which acknowledges that nine additional projects could draw water from the same groundwater basin as the proposed Project, potentially combining to exacerbate effects from groundwater pumping (these include the Desert Center 50, Arica, Jupiter, Desert Harvest, Palen, Blythe Mesa, Palo Verde Mesa, McCoy, and Desert Quartzite projects). The comment does not identify what, if any, other potential impacts from the use of one-site or off-site wells should be addressed in the Draft EIS/EIR/PA.

Letter 16 – Morongo Basin Conservation Association

The letter submitted by Morongo Basin Conservation Association is the same as that submitted by Basin and Range Watch and Western Watersheds Project. For responses to comments 16-1 through 16-80, please see responses to comments 12-1 through 12-80, respectively.

Letter 17 – United States Environmental Protection Agency

17-1 The commenter's statement of support for the preferred alternative is acknowledged. As explained in Section 2.8 in the Final EIS and Proposed PA, the BLM, in coordination with CDFW and the Applicant, has refined the preferred alternative to be Alternative C, as modified by two design elements from Alternative B (design elements DE-1 and DE-3). DE-2 (Avoiding or limiting trenching by placing electrical wiring aboveground) has been determined to have a greater potential impact due to avian interaction with additional aboveground wiring and poles than the impact of ground on-site disturbance from trenching to bury electrical wiring, therefore is not included in the preferred alternative.

17-2 Responses to comments 17-3 through 17-38 address each of these concerns specifically.

17-3 The commenter's request that the mitigation measures be included as conditions of certification for the Final EIS and Proposed PA and Final EIR is acknowledged and will be considered by the Lead Agencies in their decision-making processes. The BLM anticipates that if the Project or an alternative is approved, all BLM-enforced mitigation measures in Appendix B of the Final EIS and Proposed PA will be incorporated into the Record of Decision by inclusion in the Environmental Compliance and Construction Monitoring Plan (ECCMP). CDFW anticipates that all CDFW-enforced mitigation measures in Appendix B of the Final EIS and Proposed PA and Appendix A of the Final EIR will be incorporated into the Mitigation Monitoring and Reporting Plan adopted at the time of approving the Project or an alternative (CEQA Guidelines Section 15091(d)).

17-4 The commenter's support for Alternative B, DE-1 is acknowledged. The preferred alternative would incorporate both DE-1 and the smaller Alternative C footprint to reduce disturbance of vegetation and soils. For remaining disturbance within the Project site, several mitigation measures require micrositing and reduced disturbance to minimize vegetation and soil disturbance (e.g., BIO-19, BIO-20, VIS-2, VIS-3).

17-5 As described in Section 2.5, *Alternative B: Alternative Design*, Alternative B is defined by implementation of Design Elements 1 through 3 (see Draft EIS/EIR/PA p. 2-14). The emissions estimates included in Tables 3.2-7 and 3.2-8 for Alternative B already incorporate the vehicular and fugitive dust emissions that would be associated with Design Elements 1 through 3. For detailed discussion of why the maximum annual and maximum daily emissions associated with Alternative B are similar to Alternative A, refer to Draft EIS/EIR/PA pages 3.2-11 through 3.2-13. To summarize, Alternative B would include a net reduction in grading- and trenching-related emissions compared to Alternative A, but it would result in greater overhead pole installation activity, partially offsetting the reductions due to grading. In addition, although the maximum annual and daily construction emissions for Alternative B in 2021 would be similar to those for Alternative A, the annual emissions in 2022 were found to be substantially reduced under Alternative B due to 6 months of reduced construction duration in 2022.

17-6 The Section 3.2 emissions tables have been revised in the Final EIS and Proposed PA as requested to break down the fugitive dust emissions expected from on-site activities and off-site vehicles, with the exception of Tables 3.2-9 and 3.2-10, which present the estimated cumulative scenario construction emissions. The revisions have not been made to Tables 3.2-9 and 3.2-10 because the breakdown for on-site and off-site fugitive dust emissions was not reported for several of the cumulative projects, making it impractical for those tables to be modified for that purpose. Nonetheless, the maximum daily PM10 and PM2.5 fugitive dust emissions broken down for on-site and off-site sources, for the cumulative projects that reported those emissions (i.e., Modified Blythe and McCoy Solar Energy), are presented below compared to those emissions for the Mitigated Project. For the revised emission calculations necessary to split the on-site and off-site fugitive dust emissions for the Project, refer to revised Final EIS and Proposed PA Appendix H, part C.

Estimated Maximum Daily Cumulative Scenario Fugitive Dust Emissions (pounds)

Project	PM_{10} Fugitive Dust			$PM_{2.5}$ Fugitive Dust		
	On-site	Off-site	Total	On-site	Off-site	Total
Mitigated Project	13.3	264.8	278.2	7.3	27.2	34.6
Cumulative Projects						
Modified Blythe	674.4	17.3	691.7	53.0	5.3	88.3
McCoy Solar Energy	110	19	129	23	5	28

SOURCE: BLM 2012; BLM 2014.

17-7 As stated in Mitigation Measure AQ-1, *Dust Control Plan* (see Appendix B of the Final EIS and Proposed PA), the performance standard for the dust control plan is the prevention of Project-generated visible fugitive dust plumes from leaving the Project site during the construction and operational phases of the Project. Requiring the installation of real-time PM10 dust monitoring equipment is not necessary to inform compliance with this measure. Confirmation that dust plumes do not leave the Project site would be confirmed visually through mitigation monitoring, as has been clarified in Mitigation Measure AQ-1 in the Final EIS and Proposed PA. NEPA requires mitigation monitoring as established by regulation in 40 Code of Federal Register (CFR) Section 1505.2(c), with additional specificity provided in the BLM NEPA Handbook (H-1790-1), Chapter 10 (Monitoring). The BLM requires holders of right-of-way (ROW) grants to prepare and fund an environmental compliance monitoring program to ensure compliance with the BLM terms, conditions, and stipulations in the ROW grants, the Plan of Development (POD), and other project-specific

mitigation, terms, and conditions. If a ROW grant is issued for the Project, a compliance monitoring program report will be prepared that presents the objectives of the BLM's ECCMP for the Project. The purpose of the ECCMP would be to provide an on-the-ground approach to compliance during Project construction, which is designed to facilitate successful implementation. The report will also discuss the monitoring, reporting, and documentation requirements, stop work authority, and the variance process. Implementation of the ECCMP would ensure that the mitigation measure performance standards are achieved. Further, in accordance with CEQA Guidelines Section 15097, Mitigation Monitoring or Reporting, CDFW will adopt a program for monitoring or reporting the measures it has imposed to mitigate or avoid significant environmental effects.

17-8 The comment summarizes the Draft EIS/EIR/PA findings with regard to indirect and cumulative air emissions. For responses to the commenter's recommendations relative to indirect and cumulative air emissions, refer to responses to comments 17-9 through 17-11.

17-9 It continues to be unclear whether all on-highway heavy-duty trucks used for Project construction would be under the direct control of the Project Owner or construction contractor. For those trucks that would not be under the control of the Project, it would not be logistically possible to give preference to contractors that use newer heavy-duty truck fleets as requested. However, as required by Mitigation Measure AQ-2 (see Appendix B of the Final EIS and Proposed PA), all on-highway vehicles used for construction of the Project that would be under direct control of the Project Owner or construction contractor would be required to meet or exceed the U.S. Environmental Protection Agency and California Air Resource Board exhaust emissions standards for model year 2014, including the use of newer heavy-duty highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, shuttle buses, etc., that are over 19,500 pounds). This measure exceeds the standards identified by the commenter for trucks under direct control of the Project.

17-10 The Project construction emissions that would be generated within the South Coast Air Quality Management District (SCAQMD) would be associated with truck hauling, and would be dispersed along a 213-mile route from the Port of Los Angeles to the western border of the Mojave Desert Air Quality Management District (MDAQMD) jurisdiction. The purpose of Mitigation Measure AQ-5 is for MDAQMD to consider other cumulative projects in the vicinity of the Project site that could result in emissions that could combine with those of the Project. It would not be practicable or informative for the SCAQMD to consider other projects surrounding the 213-mile haul route that could result in emissions that could combine with those of Project-related hauling. Therefore, the request to add a commitment to consult with SCAQMD regarding overlapping project schedules in the SCAQMD has not been added to the Final EIS and Proposed PA.

17-11 As stated in Section 3.2.6, implementation of Mitigation Measure AQ-5 would ensure that the MDAQMD is kept informed of the Project-specific construction schedule relative to other projects in the Mojave Desert Air Basin, and Mitigation Measures AQ-1 through AQ-4 represent the maximum feasible reduction in Project construction emissions; therefore, additional mitigation measures to reduce cumulative emissions are not recommended. The BLM and CDFW are not aware of any circumstances where the Project could affect the ability of other foreseeable projects to be permitted.

17-12 The USEPA's support for DE-1, DE-3, and Mitigation Measure BIO-19 is acknowledged. Please see response to comment 17-3 regarding incorporation of the mitigation measures into Project approvals.

17-13 As stated in Section 2.5.1, even under Alternative B, mass grading and clearing would be needed for about 5 percent of the module field acreage (this would be about 95 acres of the 1,859 acre-module field, assuming the Alternative A footprint is used). Within the remaining approximately 1,765 acres within the module field, as stated in Section 2.5.2.2, up to 50 percent of this area (about 880 acres) would be subject to vegetation crushing by pile drivers under DE-1. DE-3 would avoid the need for grading on about 4 acres spread throughout the solar module field, instead resulting in trimming vegetation to 6 inches where inverter-transformer stations would be installed on raised skids. DE-2 would result in crushing additional vegetation along the 22 miles of electrical collector system (an additional 50 acres); however, this element of Alternative B is not included in the BLM's preferred alternative.

The BLM's preferred alternative includes both DE-1 and DE-3 to maximize the use of pile driving and trimming instead of grading and/or mowing and rolling. Animal burrow networks are not expected to interfere with ability to use pile driving. Piles would be driven approximately 12 feet deep and would therefore be seated beneath the depth of typical desert tortoise burrows and with enough depth that encountering animal burrows would not affect the stability of piles.

17-14 Section 2.5.1 has been revised to clarify that vegetation trimming at inverter/transformer stations would be trimmed to 6 inches in height using hand techniques or hand-held equipment under DE-3.

17-15 The 200-foot avoidance buffer for microphyll woodlands is required by Mitigation Measure BIO-19 and is intended to protect microphyll woodlands (i.e., Blue Palo Verde—Ironwood Woodland) from direct and indirect impacts of construction and access road siting. It is unrelated to the intensity of storm events such as the 100-year or 500-year storm event.

17-16 Because the Drainage, Erosion, and Sedimentation Control Plan (DESCP) provided in Appendix U.5 of the Final EIS and Proposed PA is based on 30 percent design, the final locations of and/or need for each type of sediment control measure are not known at this time. However, to the extent that such locations are reasonably foreseeable, they have been clarified in Section 3.18.5.1 where DESCP best management practices are discussed.

17-17 Intentional compaction would be used only in areas to be graded, which would include the areas containing the substations, O&M building, switchyard, and energy storage system; the unpaved access roads including the fenceline roads; and approximately 5 percent of the module field acreage (needed due to topography, regardless of whether DE-1 is implemented under Alternative B). Where used, compaction would minimize sedimentation, scour, and fugitive dust compared to the decompaction that would be caused by mass grading and vegetation removal. On areas of the site where vegetation would be mowed (under Alternative A) or trimmed (under Alternative B), no intentional soil compaction would occur, but as noted in the Decommissioning Plan (Appendix I.4 of the Final EIS and Proposed PA), compaction may nonetheless occur over the life of the Project in non-graded areas. As stated in the Decommissioning Plan, "If soils are determined to be compacted at levels that would affect successful revegetation, decompaction would occur. The method of decompaction will depend on how compacted the soil has become over the life of the Project. Following decompaction, recontouring of the site will be conducted, if necessary, to return the land to approximately match the pre-construction surface conditions and the surrounding alluvial fan grade and function. The original site drainage features will be restored where they have been substantially modified. It is unlikely that a significant amount of earthwork will be required as the construction plan calls for limited disturbance of the Project site."

No decompaction is proposed (e.g., between rows of solar panels) to increase stormwater infiltration potential because the Project would have minimal impact on infiltration rates. Decompaction would result in increased surface disturbance compared to proposed construction methods, and could result in destruction of soil crusts and increases in fugitive dust and erosion. Decompaction between rows of solar panels was included in an Applicant-proposed measure for the Desert Sunlight Solar Farm in order to increase infiltration following intentional compaction of the site during mass grading. However, in the Record of Decision for that project, the BLM noted that "decompaction has been replaced by use of disc and roll and micrograding techniques and […] additional storm water mitigation measures" (BLM 2011b). Therefore, decompaction ultimately was not implemented at that project. The Crimson Solar Project does not propose mass grading and compaction of the entire Project site, and therefore would not substantially affect on-site infiltration rates. Therefore, decompaction is not necessary to address loss of infiltration, and for this Project would result in additional adverse impacts.

17-18 Section 4.1.5 has been revised in the Final ~~EIS and Proposed PA~~EIR to include updates about CDFW consultation. A Lake and Streambed Alteration Notification to California Department of Fish and Wildlife (CDFW) would be required for any action alternative due to the presence of ephemeral washes, riparian habitat, and unvegetated streambed within the Project site. Appendix I.1 Figure 6 shows that the Project is sited to avoid major washes, with the exception of unavoidable access road crossings. The alternatives were subject to review and input from CDFW as CEQA lead agency, and Alternative C represents the alternative that would further minimize impacts on ephemeral washes and was developed in coordination with CDFW. As shown in Figure 1-3 of the Final EIS and Proposed PA, the Project area and energy production capacity has been significantly reduced to avoid impacts to various resources, including state waters.

17-19 As stated in Section 2.4.2.7, where possible, Arizona crossings would be used to maximize avoidance and minimize impacts on washes. The four low-water crossings would be armored with rip-rap, rip-rap with some cementing, or concrete, to provide long-term protection. Additional details regarding wash crossing construction methods would be developed in later phases of engineering design.

17-20 As stated in Section 2.4.2.7, internal roads would be approximately 12 to 20 feet in width or as otherwise required by BLM fire standards. Final road widths would be determined based on BLM standards and equipment and vehicle transportation needs. Construction methods for access roads are described in Sections 2.4.2.7 and 2.4.3.2 and access roads are already incorporated into site disturbance estimates.

17-21 Mitigation Measure BIO-14 has been revised to require that the Storm Water Management Plan include an adaptive management component to be implemented if the BLM AO determines through monitoring that project design and BMPs are inadequate to minimize stormwater pollution. Specific adaptive management techniques would be based on later phases of engineering design and on final selection of appropriate erosion and sedimentation controls in the Storm Water Management Plan (i.e., a Storm Water Pollution Prevention Plan or SWPPP-equivalent document).

17-22 The Applicant has not provided information regarding an existing or potential power purchase agreement (PPA). A proposed project need not have a PPA in place to be adequately analyzed under NEPA or CEQA. It is unlikely that the Applicant could commence full construction of the solar plant without a PPA(s) in place due to financing needs.

17-23 A requirement that soil disturbance be allowed only when an existing PPA is in place, and be proportional to that PPA (e.g., that disturbance would be allowed only as needed to build the power plant capacity needed to serve the PPA) is an issue that would be addressed in a ROW grant, if one is issued for the Project or an alternative. To address environmental impacts identified in the Draft EIS/EIR/PA, several of the mitigation measures requiring compensation for disturbance of vegetation and habitats require that financial assurances for mitigation be put in place prior to the start of construction. Also see the revised description of Alternative C, which would allow the Project to be constructed as two concurrent or consecutive units depending on the Applicant's service agreements following approval.

17-24 As explained in Section 3.18.2.2, the entire region in which the Project site is located is designated as FEMA Flood Hazard Zone D, "Area of Undetermined Flood Hazard." Therefore, there is no FEMA mapped 100-year or 500-year floodplain available for the Project site; however, a review of the California Department of Water Resources (DWR) Best Available Map database shows that the Project site is not located within any FEMA effective floodplains, DWR Awareness floodplains, floodplains mapped as part of regional or special studies, or U.S. Army Corps of Engineers Comprehensive Study floodplains for the 100-year, 200-year, or 500-year flood (DWR 2020). Consistent with other projects in this region and guidance stemming from regional planning efforts (such as DRECP CMAs; see Appendix F of the Final EIS and Proposed PA), the BLM has not required that the Applicant provide modeling of the 500-year flood for the Project site.

The locations of the substations, switchyard, buildings, and energy storage systems are all in areas experiencing less than 0.5-foot maximum flood depths during a 100-year, 24-hour storm. Both the electrical facilities and the racking and solar modules would be elevated to at least 1 foot above the 100-year peak flood depth as depicted in Exhibit 6 of Appendix U.3 of the Final EIS and Proposed PA.

17-25 The Applicant initially proposed an option to design perimeter fencing such that tortoises could continue to access the site following construction. However, prior to publication of the Draft EIS/EIR/PA, the Applicant withdrew support for this design option. The Applicant indicated that this option was would create operational constraints throughout the life of the Project in order to protect desert tortoises on-site and comply with the federal and California Endangered Species Acts that would have threatened Project funding opportunities to the extent that the Project may not be economically viable to develop. Therefore, after coordination between the Applicant and the BLM, CDFW, and USFWS, this option was removed from detailed consideration. It is true that in the December 2019 Final EIS for the Gemini Solar Project, the BLM identified the preferred alternative as the "Hybrid Alternative" which would include fencing around mowed areas of the site to allow tortoise access to the site (BLM 2019). For that project, located in Nevada, the Final EIS stated "It is expected that approximately 219 adult desert tortoises, and 1,100 or more juveniles, would be encountered on the Project site for the Hybrid Alternative" (p. 3-84). By contrast, as stated in the Biological Opinion prepared for the Crimson Solar Project, USFWS estimates that up to 20 large desert tortoises may occur within the Project site (see Appendix I.13 of the Final EIS and Proposed PA, p. 48). This number of tortoises subject to translocation is not expected to increase density within the adjacent recipient site such that tortoises would need to be translocated to a more distant recipient site.

Break-away fencing is not proposed for this project. Site-specific hydrologic modeling performed for the Project site identified that during a 100-year storm event, the flood depths across the majority of the site are less than 0.5 feet with relatively low velocities. The hydrologic study was provided as Appendix U.3 of the Final EIS and Proposed PA. As stated in section 3.18.4.1, the Storm Water Management Plan developed for the site, as required by Mitigation Measure BIO-14, would include post-construction measures to manage stormwater and minimize changes in the existing drainage patterns, so that natural stormwater could flow through the site to the greatest practical extent. It is considered unlikely that substantive changes would occur with respect to the quantity or quality of runoff at the site compared to existing conditions.

17-26 Cumulative impacts on local groundwater basins are addressed in Section 3.18.6. Support for an alternative that requires less water during construction is acknowledged. As shown in Final EIS and Proposed PA Table 2-5 (Draft EIS/EIR/PA Table 2-4), the BLM's preferred alternative would require about 550 acre-feet during construction.

17-27 Section 3.18.6.1 has been revised in the Final EIS and Proposed PA to include quantitative estimates of potential cumulative groundwater consumption during both construction and operation for both the CVGB and the PVMGB. None of these scenarios would exceed the annual recharge for either of these basins. Therefore, the conclusions of this chapter have not changed as a result of the provision of additional groundwater consumption data.

17-28 Mitigation Measure WAT-2 has been revised to clarify that the amount of groundwater depletion requiring mitigation, if any, shall be equal to the amount of withdrawals from below the Colorado River Accounting Surface as determined by the Groundwater Monitoring, Reporting, and Mitigation Plan in Mitigation Measure WAT-1. Accordingly, the Project's share of mitigation, if any, would be based on Project-specific consumption.

17-29 Long-term operation of the Project would not involve daily watering of access roads to minimize dust; rather, as described in Section 2.4.2.7, internal roads would be surfaced with gravel, compacted native soil, or a dust palliative such as ChlorTex Road Binder, Eccotext Soil Binder, or PlasTex Soil Stabilizer or similar product (not lime treatment)**.** Any dust palliative would require approval from the BLM Authorized Officer prior to application. The footnotes in Tables 3.2-4 and 3.2-5 have been clarified to indicate that fugitive dust emissions include reductions based on treating permanent unpaved roads, not twice daily watering. Mitigation Measure AQ-1 (item r) has been clarified to require that long-term treatment of unpaved roads to minimize dust would be maintained throughout the life of the project.

17-30 The commenter's preference for eliminating or reducing panel washing is acknowledged. Currently, the Applicant proposes quarterly panel washing to maintain efficiency; the need for panel washing may depend on the type of panel ultimately selected for the Project. Because operational water consumption impacts would be minimal, the Lead Agencies have not incorporated a mitigation requirement to reduce or eliminate panel washing to reduce operational water consumption.

17-31 The Biological Opinion was finalized in February 2020 and is included in this Final EIS and Proposed PA as Appendix I.13. Chapter 4, Consultation and Coordination, has been updated to reflect current information about consultation processes with USFWS and CDFW.

17-32 The recommendation to include any additional mitigation and monitoring measures that result from consultation to protect sensitive biological resources has been noted. The Section 7 Biological Opinion for the Crimson Solar Project (Appendix I.13 of the Final EIS and Proposed PA) includes conservation measures that are similar to the mitigation measures in the Final EIS and Proposed PA as well as terms, conditions, and allowances of the Incidental Take Statement. Consultation between the Applicant and CDFW, which is also the CEQA lead agency, is ongoing. Currently, there are no additional measures identified by CDFW for addition to the Final EIS and Proposed PA.

17-33 The USFWS Biological Opinion offers no views on the merits of Alternative B's DE-2 because this design element would not affect the Project's impacts on desert tortoise, the focus species of the Biological Opinion. However, the Lead Agencies have removed DE-2 from the description of the preferred alternative and environmentally superior alternative due to the potential for increased avian impacts.

17-34 The Biological Opinion, provided as Appendix I.13 of the Final EIS and Proposed PA, states that the proposed Project would impinge on the width of the 5-mile-wide desert tortoise habitat linkage centered on Wiley's Well Road, reducing the width of the linkage on the east side of Wiley's Well road from 2.5 miles to approximately 1.5 miles along the southern half of the Project site. However, connectivity already is impaired to a large degree by lower habitat values in areas directly north of the Mule Mountains along with the presence of the existing Colorado River Substation and associated infrastructure (e.g., roads, etc.) and the I-10 and associated berms and fencing. The approved Desert Quartzite Solar Project and the Crimson Solar Project would further impact connectivity directly to the north. Higher probability modeled habitat occurs south of the Project associated with the bajadas of the Mule Mountains and likely facilitate connectivity with areas further to the south and west. Numerous washes emanating from the Mule Mountains would be avoided by the Project and allow movement through these washes to areas further west, reducing impacts to connectivity to some degree. The Biological Opinion concludes that the USFWS does not expect this loss of habitat to appreciably impact regional population connectivity, and anticipates that the Project would not appreciably diminish the distribution of the species.

17-35 It is expected that the compensatory mitigation requirements in Mitigation Measures BIO-18, BIO-19, BIO-20, BIO-26, BIO-28, and BIO-29 can be met through the various habitats available for acquisition, such as through School Lands Trust and State Lands Commission; however, as an alternative to lands acquisition BIO-18, BIO-19, and BIO-20 allow for restoration of protected lands and BIO-18, BIO-20, BIO-26, and BIO-28 allow for in-lieu payment or purchase of Covered Species credits from a CDFW-approved mitigation or conservation bank, as applicable, to fulfill compensatory mitigation requirements.

17-36 Appendix I.1 of the Final EIS and Proposed PA describes the potential for desert pavement to occur as small patches within certain vegetation communities that are mapped within the Project area, and Appendix K of the Final EIS and Proposed PA, Section 2.1.6, describes the general location of desert pavement within the Project area and also describes it as poor to moderately developed. Where desert pavement is quantitatively mapped as a distinct community for similar solar projects (e.g., Desert Quartzite), this community is mapped in sparsely vegetated areas which are not present in the Project site (Appendix I.1). Mitigation Measure AQ-1, which requires stabilization of disturbed soils, has been revised to include a requirement that the Applicant identify and avoid desert pavement to the extent feasible; however, where avoidance is not feasible, soil stabilization would be required.

17-37 The Final EIS and Proposed PA (Section 4.2.2.2~~ and the section herein~~) provides updates on consultations between the BLM and the tribes. These sections discuss issues that were raised and how those issues were addressed in relation to the proposed Project. The BLM ~~has offered, and continues to offer,~~ conducted government-to-government consultation for the proposed Project in accordance with Executive Order 13175, Executive Order 13007, and other authorities and in accordance with BLM policy. Certain tribes are also consulting parties in the NHPA Section 106 process during which the BLM has found, with SHPO concurrence, that the Preferred Alternative (Alternative C) would have no adverse effect to National Register-listed or -eligible cultural resources. There would be direct impacts to non-eligible cultural resources, as discussed in Section 3.5; however, these impacts are not considered significant under NEPA. To clarify, the term "tribal cultural resources" is used in CEQA, not in Section 106 and NEPA. Through the CEQA Tribal Consultation process (see Section 4.3 in the Final EIR), CDFW has consulted with Tribes and has acknowledged the presence of the Mule Mountain Tribal Cultural Landscape and its interconnectedness to the broader cultural landscape in the Southern California desert region. CDFW has determined that the Project will have significant direct impacts to tribal values of the Mule Mountain Tribal Cultural Landscape that are conveyed through archaeological sites and isolated artifacts in the direct effects APE, and that these impacts are cumulatively significant. Although residual impacts to tribal values of individually impacted archaeological sites and isolates would remain, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.~~CDFW will finalize its EIR analysis of impacts on tribal cultural resources in a forthcoming Final EIR. Assembly Bill 52 government-to-government consultation between CDFW and tribes is ongoing.~~

17-38 The proposed Energy Storage System is described in Section 2.4.2.6. The description intentionally provides flexibility to allow the Applicant to choose a battery technology based on technological and economic factors at the time of purchase. The Project Description is, as required, sufficiently detailed to allow analysis of environmental impacts. The potential impacts of the Energy Storage System include those associated with cooling needs, which are addressed where appropriate, including analysis of GHG emissions and energy consumption and noise. Additional detail has been added to Section 2.4.2.6 in the Final EIS and Proposed PA to describe the battery and flywheel options; however, these additional details do not constitute significant new information under CEQA and do not change the impact analysis under NEPA, which accounts for the impacts of either type of energy storage system.

Letter 18 – The Wilderness Society and California Wilderness Coalition

18-1 Scoping comments from The Wilderness Society and California Wilderness Coalition (April 18, 2018) have been considered and incorporated into the Draft EIS/EIR/PA. Please see Appendix D.3, Scoping Report, of the Final EIS and Proposed PA, where this comment letter is acknowledged and reproduced in full.

18-2 Section 3.14.2.3 acknowledges that based on a BLM inventory of lands in 2018, approximately 2,108 acres of lands within the Project site possess wilderness characteristics (i.e., sufficient size, naturalness, and outstanding opportunities for either solitude or primitive and unconfined recreation). However, the BLM does not manage the lands within the Project site for protection of wilderness characteristics.

18-3 As the comment notes, the Applicant in coordination with the BLM and CDFW already has reduced the Project size to avoid and minimize impacts on numerous resources. As detailed in the responses to comments below, mitigation measures in Appendix B of the Final EIS and Proposed PA and Appendix A of the Final EIR would additionally reduce and mitigate impacts on resources that contribute to the "naturalness" of lands with wilderness characteristics (LWCs).

18-4 As shown in Attachment 1 of the comment letter, the portion of the Project site which the California Wilderness Coalition identifies as LWCs, but which the most recent BLM inventory (2017) did not identify as LWCs, is an area of approximately 100 to 150 acres. This is in addition to the 2,108 acres of acknowledged LWCs within the Project site, per the BLM's inventory. These 100 to 150 acres ("Citizen LWCs") are in the portion of the Project site located closes to the existing Colorado River Substation, Power Line Road, and several high-voltage transmission lines.

The comment mentions the BLM's responsibility to evaluate Project impacts on resources that contribute to wilderness characteristics, including special-status plant and wildlife species and their habitats, cultural resources, scenic viewsheds, recreation opportunities, and economic values. The Draft EIS/EIR/PA analyzes each of these in detail for the entire Project site, including indirect impacts within lands outside of the Project site boundary where appropriate, in Sections 3.3, Biological Resources; 3.5, Cultural, Tribal, and Historic Resources; 3.19, Visual Resources; 3.12, Recreation; and 3.13, Socioeconomics and Environmental Justice, respectively. The "Citizen LWC" acres are included in the analyses of these impacts. Because the BLM already has decided not to manage lands within and surrounding the Project site as LWCs, the NEPA analysis and applicable mitigation would not change regardless of whether the "Citizen LWCs" within the Project site are inventoried as LWCs by the BLM.

18-5 As explained in Section 3.14.2.3, the BLM already has issued a record of decision for management of the LWCs found within Unit CDCA 351-1 (BLM 2018). The decision stated: "CDCA 351-1 will not be managed for wilderness characteristics. Impacts to wilderness characteristics will be evaluated under the NEPA document for any projects that are evaluated. The unit will be reassessed and a new inventory completed if projects are approved within the unit." As noted in response to comment 18-4, the impacts of the Crimson Solar Project on the wilderness characteristics present on the Project site have been evaluated in the Draft EIS/EIR/PA, and measures have been identified to avoid, minimize, and mitigate impacts on the resources that contribute to wilderness characteristics. These impact analyses and mitigation measures are not limited to the BLM-inventoried LWCs on the Project site; they address the entire Project site based on the distribution of each resource within the area of impact.

18-6 Sections 2.10.1, Private Land Alternatives, and 2.10.2, Alternative BLM-Administered Land, address the potential for off-site alternatives and the reasons none were carried forward for detailed analysis in the Draft EIS/EIR/PA. Minimization of on-site impacts through the implementation of a Storm Water Management Plan and Drainage, Erosion, and Sedimentation Control Plan is addressed in Mitigation Measure BIO-14, and dust control best management practices are addressed in Mitigation Measure AQ-1. The use of silt fencing is addressed in Mitigation Measure BIO-20, and numerous other applicable best practices are addressed throughout the mitigation measures in Appendix B of the Final EIS and Proposed PA.

18-7 As explained in response to comment 18-5, the BLM has issued a decision not to manage the LWCs in the Project area for wilderness characteristics. Therefore, compensatory mitigation specific to replacement of these LWCs is not appropriate and has not been recommended.

18-8 The BLM acknowledges the perspective that the BLM should require that "development appropriately avoids, minimizes, and offsets impacts to cultural resources and areas of importance for Native American Tribes." The BLM ~~has offered, and continues to offer,~~conducted government-to-government consultation for the proposed Project in accordance with Section 106 of the National Historic Preservation Act, Executive Order 13175, Executive Order 13007, and other authorities and in accordance with BLM policy. The Final EIS and Proposed PA (Section 4.2.2.2) provide a summary on consultations between the BLM and the tribes. This section discusses issues that were raised and how those issues were addressed in relation to the proposed Project. Under Section 106, the BLM has presented a finding of no adverse effect to National Register-listed or -eligible cultural resources for the Preferred Alternative (Alternative C) to the SHPO and tribal consulting parties. The SHPO has concurred with this finding. There would be direct impacts to non-eligible cultural resources, as discussed in Section 3.5 of the Final EIS and Proposed PA; even though these impacts are not considered significant under NEPA, the BLM acknowledges that the entirety of undeveloped public lands in the lower Colorado River region is of great importance to the contemporary identity and culture of certain tribes and, therefore, potential impacts to cultural and natural resources as a result of the proposed Project cannot be reduced to a level that is satisfactory to the tribes. Government-to-government consultation that was conducted between the BLM and the Indian tribes is ~~ongoing as~~ described in Section 4.2.2.

Letter 19 – Arlington Solar

19-1 The Lead Agencies have received an updated Plan of Development (Sonoran West Solar, LLC 2020) and have revised the description and analysis of Alternative C to reflect the Project refinements described therein. The Lead Agencies understand based on discussions with the Applicant that the refinements to the location of the gen-tie line, energy storage system, and on-site substations take into account future transmission routing into and out of the Colorado River Substation (CRS). According to the Applicant, the relocation of the Crimson Project substation location and gen-tie route was at the behest of Southern California Edison (SCE) to reduce future interconnection congestion on the north side of the CRS. The revised location of the gen-tie takes into account several approved and all planned future 220 kV and 500 kV transmission lines and their routing into and out of CRS based on information from SCE. Additionally, several hundred acres of solar arrays were removed from the Alternative C footprint to the east of CRS to allow for flexibility in transmission routing. The closest fenced solar facility in the revised Alternative C footprint is approximately 1,200 feet from the CRS. This setback distance as well as the removal of solar arrays is intended to address the transmission concerns in this comment and to allow for the future siting and operation of transmission interconnections at CRS.

Letter 20 – Fort Mojave Indian Tribe

20-1 The BLM and CDFW acknowledge~~s~~ the Fort Mojave Indian Tribe's (FMIT) request to be formally considered in all aspects of the Project pursuant to Section 106 of the National Historic Preservation Act as well as Executive Order 13175; California Environmental Quality Act (CEQA), Public Resources Code§ 21080.3.l(b), and Assembly Bill No. 52, §1 (b)(2), and note~~s~~ that government-to-government tribal consultation ~~is ongoing,~~was conducted by both with BLM and CDFW.

20-2 The BLM and CDFW acknowledge FMIT's concern that the Project will be located in an area that is culturally and spiritually significant to the tribe, and that the Project will cause a significant impact on the environment.

20-3 The comment's reference to the Advisory Council on Historic Preservation's statement regarding indirect and direct impacts under Section 106 of the NHPA is acknowledged. The BLM and CDFW further acknowledge FMIT's concern over incremental loss of resources and cumulative impacts. The Final EIS and Proposed PA provides an updated analysis of cultural resources impacts under NEPA. The Final EIR provides an updated analysis of cultural and tribal cultural resources under CEQA (see Section 3.5 of this Final EIR). Alternatives A and B, as analyzed in the revised Section 3.5, Cultural Resources of the Final EIS and Proposed PA, have the potential to impact 17 resources determined or assumed eligible for listing in the National Register. These 17 resources were identified as significant through field studies and tribal consultation. Alternative C has been developed to avoid these resources, and revised Mitigation Measure CUL-5 will ensure avoidance of the resources.

20-4 BLM and CDFW acknowledge FMIT's concern over the continued loss of natural and cultural resources, and notes that government-to-government consultation was conducted between the BLM and Indian tribes, as well as consultation under Assembly Bill 52 with CDFW~~, is ongoing~~. Regarding the NECO Plan management objectives listed in the comment, impacts on wildlife connectivity, bighorn sheep, desert mule deer, special-status species, the sand transport system and associated Mojave fringed-toed, lizard habitat, and microphyll woodland are analyzed in Section 3.3, Biological Resources. Desert pavement is addressed in Section 3.5, Cultural, Tribal, and Historic Resources, and would be protected to the extent feasible by Alternative B's design element (DE) 1 as well as Mitigation Measure AQ-1. Desert soils would not be removed intentionally from the Project site, and measures to avoid and minimize erosion are provided in Section 3.2, Air Resources, and Section 3.7, Geology and Soils.

Each of the Chapter 3 sections in the Draft EIS/EIR/PA includes a resource-specific cumulative analysis that addresses the impacts of the Project in the context of cumulative impacts from the combination of numerous projects proposed and underway in the region. The analysis of the proposed Project in ~~this~~ the Project-specific Draft EIS/EIR/PA, ~~and~~ Final EIS and Proposed PA, and Final EIR that include cumulative analyses is consistent with the requirements of NEPA and CEQA.

20-5 Please see response to comment 13-27 regarding the effectiveness of desert tortoise translocation.

20-6 The quoted paragraph from the Eagle Mountain Pumped Storage Project Final Environmental Impact Report merely lists the sample questions from the CEQA Guidelines, Appendix G, for the resource categories of geology and soils and mineral resources, as of 2013 when that EIR was published. The Draft EIS/EIR/PA also considers whether the Project would have significant impacts on geology, soils, and mineral resources, based on the CEQA Guidelines Appendix G sample questions as of the 2018 comprehensive update to the CEQA Guidelines. Regardless, any conclusions about the Eagle Mountain Pumped Storage Project are irrelevant to this Project except to the extent that they may contribute to cumulative impacts to which the Project also could contribute.

The BLM recognizes the importance of the Mule Mountains and vicinity to local Indian tribes. In regards to cultural resources in the Mule Mountains and vicinity, BLM notes that, based on an indirect visual effects analysis summarized in Section 3.5, Cultural Resources, which is primarily based on a visual line-of-site analysis from the resources and an assessment of potential visual alteration to the

landscape, the BLM has concluded that the proposed Project would not have an adverse effect on significant cultural sites in the Mule Mountains. Please also see Response to Comment 11-6.

CDFW has acknowledged the presence of the Mule Mountain Tribal Cultural Landscape and its interconnectedness to the broader cultural landscape in the Southern California desert region. CDFW has determined that the Project will have significant direct impacts to tribal values of the Mule Mountain Tribal Cultural Landscape that are conveyed through archaeological sites and isolated artifacts in the direct effects APE, and that these impacts are cumulatively significant. Although residual impacts to tribal values of individually impacted archaeological sites and isolates would remain, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA.

20-7 The BLM and CDFW acknowledge the FMIT perspective regarding the connection between natural and cultural resources. In general, the Draft EIS/EIR/PA addresses impacts on water resources in Section 3.18. Specific water resources-related questions are addressed below in responses to comments 20-8 through 20-13.

20-8 California Senate Bill 610 requires the preparation of Water Supply Assessments for certain large projects. A Water Supply Assessment was prepared for the Project, its results are analyzed in Section 3.18, Water Resources, and a copy is provided in Appendix U.2 of the Final EIS and Proposed PA.

20-9 Although the comment does not specify what type of contaminants it refers to, the Draft EIS/EIR/PA provides analysis of potential discharges of water-borne or potentially water-borne pollutants. Please see Section 3.8, Hazards and Hazardous Materials, where the potential for spills is addressed and Mitigation Measure BIO-8, Hazardous Spills, is proposed to require the implementation of spill prevention measures. In addition, Section 3.18, Water Resources, addresses the potential for loosening surface soils and sediments, causing erosion and sedimentation. Mitigation Measure BIO-14 requires that the Applicant prepare and implement a Storm Water Management Plan and a Drainage, Erosion, and Sediment Control Plan to control the discharge of sediments.

20-10 The Project's proposed water usage is described in Chapter 2 and analyzed in Section 3.18, Water Resources. Long-term annual water use would be up to approximately one-half percent of annual recharge in either groundwater basin that may be used. The potential effects of climate change on future groundwater recharge within the local groundwater basins is unknown, and such an analysis would be speculative based on the available information.

20-11 This question about a "water supply corridor" in the Chuckwalla Valley appears to pertain to the Eagle Mountain Pumped Storage Project Final EIR, quoted earlier in the comment letter, which describes a "water supply corridor" as part of that project's study area.[2] Soil mapping in the Crimson Solar Project study area is described, and any relevant impacts analyzed, in Sections 3.5, Cultural, Tribal, and Historic Resources; 3.7, Geology and Soils; and 3.11, Paleontological Resources.

[2] For example, from Section 3.1.2.4.2 of the Final EIR, "Current published regional SCS soils surveys in eastern Riverside County are limited to the Coachella Valley Area (Knecht, 1980, cited in EMEC, 1994), located tens of miles southwest of the Eagle Mountain site, and the Palo Verde Area (Elam, 1974), similar distances east of the site near Blythe. Therefore, detailed soil mapping of the water supply corridor in the western Chuckwalla Valley has not been performed." Source: https://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/docs/eagle_mountain_pumped_ferc13123/eir/vol2/em_feir_3_1.pdf

20-12 Potential impacts related to the consumption of Colorado River water are addressed in Section 3.18, Water Resources, where mitigation measures are proposed to avoid, minimize, and mitigate any unlawful withdrawals of Colorado River water due to groundwater withdrawals from below the Colorado River Accounting Surface. Please also see responses to comments in Letter 14 from the Colorado River Board of California.

Section 3.18 analyzes cumulative water consumption in the Chuckwalla Valley Groundwater Basin and Palo Verde Mesa Groundwater Basin, both of which are within the Riverside Solar Energy Zone. Section 3.18.6 has been revised in the Final EIS and Proposed PA to include additional quantitative information about other projects within these basins. None of the possible scenarios analyzed therein would exceed the annual recharge for either of these basins. Nonetheless, Mitigation Measure WAT-1 would require the development and implementation of a Groundwater Monitoring, Reporting, and Mitigation Plan that would result in implementation of measures to mitigate any adverse effects on nearby wells. This would reduce the Project's incremental contribution to a less-than-significant level because it would ensure that all Project-related impacts would be reversed through cessation of pumping or would be compensated for through improvement of pumping equipment for affected wells.

20-13 The comment's statement of concurrence with the conclusion regarding stormwater runoff and related erosion and sedimentation is acknowledged. However, it is unrelated to the question of whether the Project or the cumulative scenario would have adequate water supply over the life of the Project. This question is addressed in Section 3.16, Utilities and Public Services, and specifically in Section 3.16.5.1 under Impact 3.16.5b (Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?) The Project-specific impact related to water supply under this CEQA significance criterion was found to be less than significant, and the contribution to cumulative impacts would be less than significant with implementation of Mitigation Measures WAT-1 and WAT-2. Because the Project and cumulative scenario would not substantially deplete groundwater resources in either of the potential groundwater basins to be used, no indirect impacts (e.g., on biological resources dependent on water supplies or on human uses of water that may cause environmental justice concerns) have been identified.

20-14 BLM acknowledges the importance of tribal knowledge and perspectives in assessing the significance of cultural resources and in assessing sensitivity for buried resources. To incorporate tribal knowledge and perspectives, the BLM formally notified 15 tribes, including the Fort Mojave Indian Tribe, and invited them to participate in government-to-government consultation by letter dated February 19, 2016, at the earliest stages of planning for the proposed Project. As summarized in Section 4.2.2.2, the BLM further notified tribes and invited government-to-government consultation regarding the proposed Project by letter multiple times from July 2016 through July 2020 (the July letter was regarding updated proposed Section 106 determinations and findings as well as response to tribes' earlier written comments if any were provided). These notifications led to multiple meetings between the BLM and the tribes. The BLM received and considered several written comments from the tribes. Also, the BLM has executed data sharing agreements with three tribes so that they can obtain and review confidential cultural resources data (such as site records) for the proposed Project. Tribal outreach and consultation efforts are summarized in Section 4.2.2.2. The BLM continue~~d~~s to offer government-to-government consultation as well as data sharing agreements with tribal consulting parties for the proposed Project. Should the proposed Project be approved and move to the construction phase, the BLM will develop a monitoring and discovery plan in consultation with all consulting parties including the Fort Mojave

Indian Tribe, providing another opportunity to incorporate tribal knowledge and perspectives with regard to cultural resources (including buried archaeological resources) into the proposed Project.

20-15 BLM has conducted additional consultation and resource analysis since the publication of the Draft EIS/EIR/PA, and proposed Section 106 determinations and finding of effect are included in Section 3.5, Cultural Resources, of the Final EIS and Proposed PA. The reassessment also includes revisions to Mitigation Measures CUL-1 through CUL-7. Comments regarding CDFW's determinations of eligibility for the California Register are noted and will be addressed in the Final EIR. As stated in Footnote 1 on Draft EIS/EIR/PA page 3.5-8, "CDFW's use of the recommendations in Addendum 1 to make discretionary determinations of resource eligibility for the California Register does not affect the BLM's process of making formal determinations of eligibility for the National Register; the BLM has not accepted these recommendations and this discussion of Addendum 1 is relevant to CDFW's CEQA analysis only." Therefore, Addendum 1 is not part of the formal record for the Final EIS and Proposed PA. BLM (under NEPA) and CDFW (under CEQA) have conducted government-to-government consultation with consulting tribes. ~~Both agencies are currently involved in government-to-government consultation with tribes.~~

20-16 Although the Lead Agencies declined to extend the 90-day NEPA and CEQA public comment period beyond January 30, 2020, as described in Final EIS and Proposed PA Chapter 4, Consultation and Coordination, the BLM reissued its notification of availability of the findings and determinations of eligibility under the NHPA to the Section 106 consulting parties, including the FMIT, in early February 2020, initiating a second 30-day review comment period for consulting parties ending in mid-March 2020. Both Section 106 and ~~Assembly Bill 52~~CEQA Tribal ~~c~~Consultation is ongoing at this time, and FMIT has been provided opportunities for input on the Project and review process in that setting that extend beyond the NEPA and CEQA public comment period.

20-17 The BLM and CDFW acknowledge FMIT's statement that, while not opposed to renewable energy, the FMIT believes that, given the location of the Project, it will have a significant effect on cultural or spiritual significance to the tribe. The Lead Agencies also acknowledge the request that the Project be denied. The BLM has requested government-to-government consultation with the Tribe to discuss the Tribe's comment letter.

20-18 The BLM offered a draft data sharing agreement to the Tribe via email in March 2020. Upon full execution by the Tribe and the BLM, the BLM will provide confidential cultural resources data for the Project with the Tribe. To date, there has been no response from the Tribe regarding the data sharing agreement.

Letter 21 – Fort Yuma Quechan Tribe

21-1 Although the Lead Agencies declined to extend the 90-day NEPA and CEQA public comment period beyond January 30, 2020, as described in Final EIS and Proposed PA Chapter 4, Consultation and Coordination, the BLM reissued its notification of availability of the findings and determinations of eligibility under the National Historic Preservation Act to the Section 106 consulting parties, including the Fort Yuma Quechan Tribe, in early February 2020, initiating a second 30-day review comment period for consulting parties ending in on March 13, 2020. Section 106 consultation is ongoing at this time, and the Fort Yuma Quechan Tribe has been provided opportunities for input on the Project and review process in that setting that extend beyond the NEPA and CEQA public comment period.

Letter 22 – Fort Yuma Quechan Tribe

22-1 CDFW acknowledge the commenter's statements that the project site is part of the Quechan Tribes ancestral land and cultural patrimony, and that the tribe is tied to the land culturally and religiously. Further, CDFW recognizes Quechan's position that that disturbance and removal of resources make it difficult to demonstrate that these places are part of the Quechan's ancestral heritage.

22-2 CDFW acknowledges the comment that the Project area could fall within a cultural landscape, and that archaeological sites, trails, and other types of cultural sites within the Project area could be components of that landscape. Consideration of archaeological resources as individual resources or as part of a landscape for the purposes of determining significance is a management decision. Significance criteria (such as Criterion D under Section 106, Criterion 4 under CEQA) require significance considerations to take into account regional themes that convey significance, including the contribution of individual resources to a larger pool of resources. In this way, landscape considerations, including the "connective and cumulative" value of individual resources, is taken into account in determinations of significance. Regarding landscape in the Project vicinity, and specifically Mule Mountains, the Lead Agencies note that, based on an indirect visual effects analysis summarized in Section 3.5, Cultural, Tribal, and Historic Resources, of the Final EIR, which is primarily based on a visual line-of-site analysis from the resources and an assessment of potential visual alteration to the landscape, CDFW has concluded that the proposed Project would have an adverse effect on the Mule Mountain Tribal Cultural Landscape that includes direct effects to tribal cultural resources within the Project site and possible indirect effects (through vandalism, increased public access and visitation) to parts of this landscape outside of the direct effects APE. However, CDFW has determined that the Project will not prevent access to the Mule Mountains, McCoy Mountains, Palen Mountains, Eagle Mountain, Big Maria Mountains, or the Chuckawalla or Palo Verde Valleys. The BLM and CDFW recognize the importance of the area in regard to travel and trail systems, including those that might not have an intact physical representation, as well as the potential for a cultural landscape.

BLM conducted government-to-government consultation with consulting Indian Tribes as described in Section 4.2.2. In addition, as described in Section 4.3, CEQA Tribal Consultation and CDFW's Communication and Consultation Policy, of the Final EIR, CDFW has conducted government-to-government consultation in accordance with CEQA Tribal Consultation requirements and CDFW's Tribal Communication and Consultation Policy. CDFW has not received information during tribal consultation that identified any particular plant or animal species potentially affected by the undertaking as significant under tribal values. Specifically, no plants or animals, or their local habitat, has been identified by CDFW through tribal consultation as a tribal cultural resource under CEQA. Further, please refer to Section 3.3, Biological Resources, in the Final EIS and Proposed PA for discussions of impacts on special-status species of wildlife, native plants, and habitats. CDFW, as CEQA lead agency, has evaluated these and other resources held in trust by statute for all the people of California through preparation of the Final EIR and by incorporation by reference the Final EIS and Proposed PA. Appendix B, Mitigation Measures, of the Final EIS and Proposed PA includes the text of measures to avoid, minimize, and/or compensate for impacts on these resources. Further, due to implementation of Mitigation Measures BIO-18, BIO-19, and BIO-20, a similar (or greater) density of diversity of desert flora endemic to this area would be planted to compensate for the loss of native plants. By replanting species that will be removed, the Native American traditions and culture associated with these plants will remain.

22-3 CDFW acknowledges the commenter's concern regarding the Class III report prepared for the proposed Project. CDFW disagrees that methodology was inconsistently applied. Methodologies approved for archaeological fieldwork are industry standard and have been employed on numerous other projects in the region and should not be taken as new or modified methods. Those isolated artifacts with more than three items consist of pieces of the same object, such as multiple pieces of a ceramic vessel that fit together, though not forming a whole vessel. Therefore, CDFW disagrees that eligibility determinations were incorrectly applied due to methods of resource recordation for archaeological sites conveying archaeological values.

While there is no requirement under CEQA for the archaeological contractor to include a discussion of tribal cultural resources in the cultural resources inventory reports, CDFW completed Tribal Consultation according to the CEQA statute with the express goal of identifying tribal cultural resources (including archaeological sites that convey tribal values) that may be impacted as a result of implementation of the undertaking. CDFW has identified, through government-to-government consultation with consulting Indian Tribes, the Mule Mountain Tribal Cultural Landscape that overlaps the Project site, in addition to 23 individual TCRs located within direct effects APE for the Project site, as described in Section 3.5 of the Final EIR.

22-4 Since publication of the Draft EIS/EIR/PA in November 2019, CDFW has continued Tribal Consultation in accordance with CEQA and CDFW's Tribal Communication and Consultation Policy (see Final EIR Section 3.5 and Section 4.3). Based on close coordination with the Tribes and the commenter, Section 3.5 of the Final EIR has been revised to reflect the outcome of CDFW's consultation with the Tribes.

22-5 The Final EIR provides an updated analysis of cultural resources impacts under CEQA. Alternatives A and B, as analyzed in the revised Section 3.5, Cultural, Tribal, and Historic Resources, of the Final EIR, have the potential to impact 23 resources determined or assumed eligible for listing in the National Register. These 23 resources were identified as significant through field studies and tribal consultation. Alternative C has been drafted to avoid these resources, and revised Mitigation Measure CUL-5, preparation of a Monitoring and Discovery Plan, will ensure avoidance of the resources. Further, Mitigation Measure CUL-8 requires that a data recovery plan is part of the Archaeological Resources Treatment Plan prepared for the project that will guide the treatment of artifacts that could be impacted by construction. Any discussion of artifact relocation would be handled in the Treatment Plan, which consulting tribes will have an opportunity to review. In addition, government-to-government consultation pursuant to Section 106 of the NHPA with the BLM is ongoing. Furthermore, as described in Section 4.3, CEQA Tribal Consultation and CDFW's Communication and Consultation Policy, of the Final EIR, CDFW has engaged in government-to-government consultation during the environmental review process per CEQA Tribal Consultation requirements. This consultation addresses the topic of sacred sites and other resources of tribal importance in the Project vicinity. Section 3.5.6, Cumulative Effects, concludes that cumulative impacts to the Mule Mountain Tribal Cultural Landscape would be significant due to residual impacts to tribal values of individually impacted archaeological sites and isolates, but the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA. The changes to the Final EIR do not result in new or more significant impacts than were evaluated in the Draft EIS/EIR/PA.

22-6 CDFW acknowledge the commenter's concerns regarding additional examination of resources and request for ongoing consultation to mitigate the effects of the proposed Project. Since circulation of the Draft EIS/EIR/PA, CDFW and the Quechan Indian Tribe engaged in formal consultation and held a series of staff-level discussions through 2020 and into 2021. Through communications, CDFW has responded to the comments herein adequately and provided explanations that resolve the issues. Rather than revise mitigation, CDFW feel that the Tribal Cultural Resources Treatment Plan, as required under Mitigation Measure CUL-8, will provide an opportunity for consulting tribes to engage in the specific details of artifact treatment, such as the possibility of relocation, should such actions be deemed appropriate in certain circumstances.

W.2 Responses to Public Meeting Comments

Kevin Emmerich, Basin and Range Watch

TR-1 Basin and Range Watch also submitted written comments; see Comment Letter 12 in Appendix V and Responses to Comment Letter 12 in Appendix W, Section W.1, of the Final EIR.

Regarding microphyll woodland, see response to comment 12-57 from Basin and Range Watch, which explains that the microphyll woodland vegetation community that occurs on the site is Blue Palo Verde—Ironwood Woodland, and that the Project would affect 1.2 acres of that vegetation community. Impacts on this community would be avoided or minimized by the implementation of Mitigation Measure BIO-19, which requires micrositing of access road crossings to avoid mature trees and the use of 200-foot buffers around microphyll woodlands for boundary fencing. For impacts on mature trees that cannot be avoided, this measure also requires compensatory mitigation. Appendix I.1, the Biological Resources Technical Report (BRTR), of the Final EIS and Proposed PA describes the survey and mapping methods for this vegetation community (see, e.g., pages 26 and 27 of the BRTR). These methods accurately identified the extent of microphyll woodland on and near the Project site. Surveys conducted at the site do not support the commenter's assertion that palo verde and ironwood trees are spread out throughout the Project site; rather, as stated on page 48 of the BRTR, "blue palo verde and ironwood occur almost exclusively within the vegetation type 'Blue Palo Verde—Ironwood Woodland.'"

TR-2 The proposed Project size is 350 megawatts on approximately 2,500 acres of land. See response to comment 12-6 from Basin and Range Watch, which explains that the potential PV panel types and orientations that may be used are described in Section 2.4.2.1, and that Section 3.17 (Visual Resources) analyzes the reflectivity of the potential panel types and orientations.

TR-3 Avian impacts, including the potential for birds to mistake solar arrays as water bodies (sometimes called the "lake effect") are addressed in Section 3.3, Biological Resources; see also response to comment 13-35. The analysis in Section 3.3, as well as these responses to comments, address the data available from existing solar projects such as Desert Sunlight, as well as the cumulative impacts from these existing as well as and approved and potential projects such as Desert Quartzite.

TR-4 Display posters in print and electronic (projector and screen) formats were available for viewing at the public meetings and included Draft EIS/EIR/PA Figures 3.17-2 through 3.17-6, which show existing conditions and simulated conditions for each of the Key Observation Points (KOPs) analyzed in Section 3.17, Visual Resources. As described in Section 3.17, the Project would not be visible from several of

these KOPs. See response to comment 12-75 from Basin and Range Watch, which explains the applicability of Visual Resources Management (VRM) classes to the Project site and the methods for analyzing the Project's impacts on the existing scenic value of the site as well as consistency with BLM's management objectives. As described in that response, the analysis of consistency with VRM class objectives was properly implemented.

TR-5 The commenter's statements about the rarity of the Mojave fringe-toed lizard and its habitat are acknowledged. This species is a California species of special concern, BLM sensitive species, NECO Plan special-status species, and DRECP focus species, as shown in Table 3.3-5. Accordingly, impacts on Mojave fringe-toed lizard are analyzed in detail, and mitigation measures proposed, in Section 3.3, Biological Resources.

TR-6 See response to comment 12-17 from Basin and Range Watch, which explains how the integration of battery storage into the Project addresses peak and base periods of demands for electricity in California to address supply and demand issues inherent in solar energy. See also response to comment 12-40 from Basin and Range Watch regarding consideration of a battery storage alternative on existing solar plant sites.

TR-7 See response to comment 12-46 from Basin and Range Watch, which addresses the commenter's complaints regarding the Sunshine Valley Solar Project. That project is being constructed on privately owned former agricultural land in Nevada and is outside the BLM's jurisdiction. The Environmental Statement for the Sunshine Valley Solar Project does not specify what dust control measures were to be used during construction; therefore, a comparison to the dust control mitigation measures for the Crimson Solar Project cannot be undertaken with available information (Sunshine Valley Solar, LLC 2014). BLM and CDFW have proposed effective fugitive dust control, monitoring, and corrective measures consistent with MDAQMD Rule 403 and Mitigation Measure AQ-1 (Dust Control Plan) to minimize dust from the Project.

TR-8 The commenter's statement of opposition to the Project and preference for alternative locations for solar development are acknowledged.

Patricia Robles, La Cuna de Aztlan Sacred Sites Protection Circle

TR-9 La Cuna de Aztlan Sacred Sites Protection Circle also submitted written comments; see Comment Letter 6 in Appendix V and Responses to Comment Letter 6 in Appendix W, Section W.1, of the Final EIR. The commenter's statement of opposition to the Project is acknowledged.

TR-10 The comment summarizes the importance of the lower Colorado River basin to the commenter and is noted by the Lead Agencies. This comment does not directly address the adequacy or accuracy of the Draft EIS/EIR/PA. The Blythe Giant Intaglios located east of the Big Maria Mountains are located more than 20 miles from the proposed Project site and would not be affected by the Project. Other geoglyphs mentioned by the commenter also are located outside of the Project site, typically on the north side of I-10. However, CDFW, through government-to-government consultation with consulting tribes, has identified the Mule Mountain Tribal Cultural Landscape that overlaps the Project site, along with 23 individual tribal cultural resources within the Project site. CDFW acknowledges that this landscape (and associated 23 individual tribal cultural resources) is part of a broader Native American landscape encompassing the Southern California desert region that conveys through archaeological sites, trails, artifacts, and other material remains, the cultural connectivity of local Native American groups to the landscape that includes, among other resources, the Blythe Giant Intaglios.

TR-11 The BLM and CDFW acknowledge the perspectives expressed in the comment regarding the vulnerability of sacred sites and areas of importance to indigenous people. This comment does not directly address the adequacy or accuracy of the Draft EIS/EIR/PA. Government-to-government consultation between the BLM and the Indian tribes ~~is ongoing~~was conducted as described in Section 4.2.2; this consultation addresses the topic of sacred lands in the Project vicinity. Further, CDFW has conducted government-to-government consultation under ~~Assembly Bill 52~~CEQA Tribal Consultation requirements and CDFW's Communication and Consultation Policy with tribes requesting such consultation, as described in Section 4.3 of the Final EIR. Please also see responses to comment 6-16 from La Cuna de Aztlan regarding climate change.

TR-12 See response to comment 6-17 from La Cuna de Aztlan, which explains why distributed solar power alternatives were not analyzed in detail, and response to comment 6-18 regarding sacred lands in the Project vicinity.

TR-13 See response to comment 6-18 from La Cuna de Aztlan regarding sacred lands in the Project vicinity.

Samuel Navarro

TR-14 The Project site is located approximately 5 miles from Ripley, California. BLM has conducted g~~G~~overnment-to-government consultation with Indian Tribes pursuant to federal law, including the National Historic Preservation Act and the Archaeological Resources Protection Act (which updated the Antiquities Act of 1906), ~~between the BLM and the Indian tribes is ongoing~~ as described in Section 4.2.2; this consultation addresses the topic of sacred lands in the Project vicinity. Moreover, CDFW has conducted government-to-government consultation with consulting Indian Tribes under CEQA statute, considering tribal cultural resources, including sacred lands.

Alfredo Figueroa, La Cuna de Aztlan Sacred Sites Protection Circle

TR-15 La Cuna de Aztlan Sacred Sites Protection Circle also submitted written comments; see Comment Letter 6 in Appendix V and Responses to Comment Letter 6 in Appendix W, Section W.1, of the Final EIR. The comment's statement of opposition to the Project is acknowledged.

TR-16 The comment summarizes the importance of the Mule Mountains to the commenter and is noted by the Lead Agencies. Through the CEQA Tribal Consultation process, CDFW has acknowledged the presence of the Mule Mountain Tribal Cultural Landscape and its interconnectedness to the broader cultural landscape in the Southern California desert region. CDFW has determined that the Project will have significant direct impacts to tribal values of the Mule Mountain Tribal Cultural Landscape that are conveyed through archaeological sites and isolated artifacts in the direct effects APE, and that these impacts are cumulatively significant. Although residual impacts to tribal values of individually impacted archaeological sites and isolates would remain, the incremental contribution of the proposed Project would not be cumulatively significant for purposes of CEQA. This comment does not directly address the adequacy or accuracy of the Draft EIS/EIR/PA. The Mule Mountains ACEC is addressed in Sections 3.14, Special Designations, and 3.17, Visual Resources.

TR-17 The potential effects of the Project on air pollution, including from fugitive dust and criteria pollutants that can cause or exacerbate respiratory illnesses such as asthma, are analyzed in Section 3.2, Air Resources. Mitigation measures are proposed that would reduce emissions to below thresholds established by the applicable air district.

TR-18 See responses to comments 6-9 and 6-14 from La Cuna de Aztlan regarding the Project site's proximity to the Blythe Airport.

TR-19 This comment refers to an unnamed natural gas power plant. The comment does not draw a connection between the power plant and this Project or the Draft EIS/EIR/PA analysis, and therefore is not a substantive comment on the adequacy or accuracy of the Draft EIS/EIR/PA or on the Project itself.

TR-20 Please see Section 2.10.3.3, Distributed Generation, for a discussion of the reasons that a distributed generation alternative was not carried forward for detailed analysis.

TR-21 See response to comment 6-18 from La Cuna de Aztlan regarding consultation addressing the topic of sacred lands in the Project vicinity.

TR-22 See response to comment 6-8 from La Cuna de Aztlan regarding Project-related groundwater consumption and required mitigation measures that would ensure that groundwater wells surrounding the Project site are not adversely affected by Project pumping. Response to comment 6-8 also addresses potential effects on Colorado River water (including water released from Lake Mead, which impounds the Colorado River in Nevada and Arizona).

TR-23 See responses to comments 6-9 and 6-14 from La Cuna de Aztlan regarding the Project site's proximity to the Blythe Airport.

TR-24 Responses to written comments from La Cuna de Aztlan are provided in Section W.1 under Letter 6. Specifically, please see response to comment 6-19, which addresses La Cuna de Aztlan's statement that the Project would be in violation of various laws, and response to comment 6-8 regarding Project-related water consumption.

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