

# Appendix G

## Public and Agency Comments on the Draft Environmental Impact Statement

### G.1 Introduction

The joint Bureau of Land Management – California Energy Commission Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) for the Calico Solar Project was published on March 30, 2010. The Notice of Availability (NOA) for the document was published by the Environmental Protection Agency in the *Federal Register* on April 2, 2010, and by the BLM on April 19, 2010. By regulation, the publication by the EPA began the 90-day comment period that expired on July 1, 2010. The following sections have organized the comments into categories, in order to facilitate technical review, development of responses, and, where needed, revision to the text in the Final EIS (FEIS).

### G.2 General Comments

#### G.2.1 Sufficiency of the DEIS (20900)

**Comment Cashen-16:** In evaluating Project impacts, the DEIS provides the Energy Commission staff's conclusions of CEQA significance, but does not relate the BLM's conclusions under NEPA. Therefore, the subsequent discussion of Project impacts applies to the Energy Commission staff's conclusions of CEQA significance, which are based on incomplete survey data. The BLM must issue its conclusions in a revised DEIS so that agencies and the public can review these conclusions

**Comment CURE-47:** The DEIS fails as an informational document because it fails to establish the project setting, it does not fully and fairly describe the proposed action, it wholly omits discussion of a number of potentially significant environmental impacts and fails to provide an adequate description or analysis of mitigation for these significant impacts. "If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion." As described below, the DEIS must be revised to fully describe the project setting, the project, the impacts from the project, and mitigation; and the revised DEIS should be circulated for public review and comment, as required by NEPA.

**Comment CURE-48:** Clearly, the DEIS lacks a tremendous amount of information that is necessary to analyze the Project’s potentially significant impacts. Thus, the DEIS does not satisfy NEPA’s mandate that agencies take a hard look at environmental impacts. Moreover, the DEIS is not supported by sufficient evidence. NEPA requires that a DEIS be “concise, clear, to the point, and supported by evidence that the agency has made the necessary environmental analyses.” A concise and clear EIS that is supported by evidence ensures that federal agencies are informed of environmental consequences before making decisions and that the information is available to the public. As the Council on Environmental Quality (“CEQ”) explains in its regulations, “[e]nvironmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.”

Once the Applicant provides BLM with the pertinent information regarding its proposed Project, the BLM must take a hard look at this evidence and issue a revised DEIS containing additional analysis and mitigation measures that is circulated for public review and comment

**Comment CURE-49:** There is a simple reason that the DEIS is inadequate. The Applicant initially cut corners on surveying for biological impacts, and the BLM rushed the release of the DEIS to assist the Applicant in qualifying for funding under the American Recovery and Reinvestment Act (“ARRA”) . . .

Not only is BLM’s rush improper under NEPA, but the ARRA rules have since changed. It is no longer necessary for the Applicant to begin construction by the end of the year to obtain ARRA funding . . .

Therefore, in light of the Applicant’s failure to provide an enormous amount of information necessary for BLM’s analysis of the Project, and in light of the gaping holes in the analysis in the DEIS, BLM must take the time to gather the information necessary to take a “hard look” at the Project. This hard look must occur while mitigation and alternatives are being developed and analyzed, as is required by NEPA. Moreover, this analysis must be circulated for public review and comment.

**Comment CURE-50:** Now the Applicant’s fallback argument is that their contract with the utility to purchase power has a set deadline. As the BLM is well aware, neither ARRA funding nor a utility contract provides a NEPA override. The BLM must revise the DEIS to include a complete and consistent identification of the affected environment and analysis of the proposed action.

**Comment CURE-51:** The DEIS contains incomplete, inconsistent and inaccurate information that precludes a full understanding of the Proposed Action, a meaningful analysis of all Project impacts, and prevents an informed comparison of the alternatives. This violates the basic requirements of NEPA

**Comment CURE-94:** The DEIS falls short of satisfying either of NEPA's two broad goals. First, the DEIS fails to include ANY information about some of the Project's significant environmental impacts. Second, without a complete and detailed statement, the DEIS fails to provide the public with an adequate basis to understand the Project's impacts or to evaluate and compare the proposed alternatives.

The DEIS could not have satisfied these purposes because the Applicant failed to provide BLM with the information necessary for a complete and accurate DEIS prior to the release of the DEIS. Because the Applicant neglected to provide BLM with sufficient information, BLM issued a DEIS that is incomplete with respect to potentially significant impacts and mitigation measures for several resource areas . . .

Due to all the inadequacies stated in this letter, a supplemental DEIS is clearly warranted. This revised DEIS should be circulated for public and agency review and comment.

**Comment CURE-95:** The DEIS fails as an informational document because it fails to establish the project setting; it does not fully and fairly describe the proposed action; it provides an incomplete analysis of Project impacts and wholly omits discussion of a number of other potentially significant environmental impacts; and it fails to provide a reasonable range of alternatives to avoid or mitigate the Project's adverse impacts. The DEIS must be revised to fully describe the project setting, the project, the impacts from the project, mitigation and alternatives; and the revised DEIS should be circulated for public review and comment, as required by NEPA. We respectfully urge the BLM to do so prior to taking any action of any kind on the applicant's pending federal permit applications

**Comment Poff-1:** Elements of the environmental setting were grossly inadequate, and as such, limited the description of the project impacts, hindered the impact analyses, and ultimately undermined the adequacy of the proposed mitigation.

**Comment DEF-16:** The applicant has completed several biological surveys and released reports on the associated findings since the DEIS was published. NEPA requires that all necessary information be available to complete an analysis of significant impacts. Therefore, the DEIS is insufficient. This new information constitutes significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. Therefore, a supplemental EIS must be prepared so the BLM has the best possible information to make any necessary substantive changes in its decisions regarding the proposal.

**Comment DEF-18:** Defenders is also concerned that the project footprint is not yet clearly defined. NEPA requires that a project be properly defined before the DEIS is released. The applicant has submitted two alternative site layouts since the DEIS was published. Neither the relevant agencies nor the public can effectively assess the environmental impacts of a project

without a final and conclusive project description. It is essential that the applicant determine the parameters of its proposed project.

**Comment CBD-12:** As the applicant admits the proposed project is experimental at the scale proposed. The applicant's objective is states: "To assist in meeting the requirement for additional generating capacity, the applicant has developed solar technology which requires commercial-scale development to demonstrate its technical and commercial viability." DEIS at A-11 (emphasis added). Thus, the proposed project appears to meet the DOE criteria because it is admittedly "new"—indeed, experimental—technology at the proposed scale, and the applicant hopes that it will assist in meeting the renewable generating capacity. However, by that same token, the DEIS fails to address the experimental nature of the proposed project including the likelihood of success (or failure) and the consequences of failure (including technological failures and financial failures) and the full extent of the likely resulting impacts to public lands

**Comment CBD-15:** The EIS 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.

**Comment CBD-16:** The DEIS fails to determine the level of significance after mitigation for NEPA, FLPMA or the ESA, although it does determine that the impacts would be significant and unavoidable under CEQA. For this reason alone, a supplemental or revised DEIS needs to be provided that determines if LORS are complied with and the status of mitigation.

**Comment Jackson-1:** The Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) for the Calico Solar Project (formerly SES Solar One) (08-AFC-13) is deficient in that the proposed Calico Solar Project does not comply with all applicable laws, ordinances, regulations and standards (LORS).

**Comment Jackson-29:** The DEIS and FEIS will not comply with NEPA until the BLM provides records requested under FOIA and the records are circulated for public review and comment.

To date, the BLM has not provided relevant and material information in order for the DEIS to comply with NEPA. The Memorandum of Understanding between the U.S. Department of Interior, Bureau of Land Management California Desert District and the California Energy Commission Staff Concerning Joint Environmental Review For Solar Thermal Power Plant Projects states, in pertinent part:

- "The assessments provided by the Parties must be sufficient to meet all federal and state requirements for NEPA and CEQA and shall be included as part of the joint

Preliminary Staff Assessment/Draft Environmental Impact Statement and the joint Final Staff Assessment/Final Environmental Impact Statement.”

The DEIS is deficient and must be revised to comply with NEPA and circulated for public review and comment.

**Response:** BLM has reviewed and evaluated all public comments received on the SA/DEIS. This FEIS was specially developed to address the comments including those associated with the NEPA analysis procedures and standards, and the adequacy of the information presented in the SA/DEIS. Additional information has been included in the FEIS to respond to concerns about the adequacy of the information presented. These and other specific comments on cumulative impacts, project description, and incorporation of data from additional studies are addressed through text modification in their respective sections in the FEIS.

## **G.2.2 Comments Specific to CEQA (10110, 20600)**

**Comment CURE-1:** . . . the Applicant failed to provide sufficient information about the environmental setting upon which Staff can provide a legally adequate analysis . . . Much of Staff’s work on this Project is to be commended. But no amount of Staff problem-solving can get around CEQA’s requirement that an environmental review must begin with adequate baseline data and a stable project description. Thus, until these legal requirements are met, the SA does not satisfy the requirements of the California Environmental Quality Act (“CEQA”) or the Warren-Alquist Act.

**Comment CURE-3:** The purpose of recirculation is to give the public and other agencies an opportunity to evaluate the new data and the validity of conclusions drawn from it. Consequently, the plan to include numerous additional analyses and mitigation measures in the Revised SA without renoticing and recirculating the revised document for public review and comment violates CEQA. The SA is being revised to inform the public and decision makers of the Project’s significant impacts, and to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures. Thus, Staff, after receiving the necessary information from the Applicant, must draft and circulate a complete SA for public review and comment. The Committee must revise the schedule to incorporate this legally mandated procedure.

**Comment CURE-12:** Several analyses pertaining to biological resources, cultural resources, and water resources are admittedly incomplete. In addition, the SA failed to provide complete analyses of impacts related to the Pisgah to Lugo transmission line and associated facilities. Thus, the SA does not satisfy CEQA or the Commission’s Regulations. After the Applicant provides the outstanding information, the SA should be revised to address the impacts, and recirculated for public review and comment.

**Comment Jackson-24:** The Supplemental Staff Assessment/Final Environmental Impact Statement (SSA/FEIS) must address the:

- (1) Presiding Member's Proposed Decision (PMPD) and the Warren-Alquist Act as they pertain to development and the health and safety of the population on the adjacent privately owned lands.
- (2) Impact the Project will have on the sensitive, scenic, natural, ecological, cultural and biological resources of the adjacent privately owned lands.
- (3) Impact the Project's water well(s) will have on groundwater supplies and groundwater recharge.

**Comment WWP-3:** The environmental review for this project is being rushed at the expense of public participation and this rush shows in the documentation. To comply with the spirit and intent of CEQA, the CEC Staff should issue a Supplemental Staff Assessment that fully describes the project and the project site, and includes a full analysis of the Applicant's new alternative. Only by doing so can the CEC ensure that the public can review the project and provide informed comment.

**Comment CURE-4:** Clearly, the SA lacks a tremendous amount of information that is necessary to analyze the Project's potentially significant impacts. Thus, the SA does not satisfy CEQA. Once the Applicant satisfies its burden to provide Staff with the pertinent information regarding its proposed Project, a revised SA containing additional analyses and mitigation measures must be drafted and circulated for public review and comment.

**Response:** This FEIS describes the revised project, modified from the Proposed Action, and project site, and includes a full analysis of the proposed project as currently proposed by the project Applicant. The environmental analysis made use of the best available information and follow-up field survey data have been incorporated into existing (baseline) conditions as analyzed in this FEIS. As described in Section 1.2 and 1.3 of the FEIS, the FEIS has been prepared following regulations promulgated by the Council on Environmental Quality for implementing the procedural provisions of NEPA (40 CFR 1500-1508); the Department of the Interior's NEPA regulations, 43 C.F.R. Part 46; the BLM NEPA Handbook, H-1790-1; Sections 201, 202, and 206 of FLPMA (43 CFR 1600); and the BLM Land Use Planning Handbook, H1601-1. This FEIS is not required to comply with CEQA.

**Comment SC-30:** Although the ostensible goal of the project is to help ramp up renewable energy and thereby contribute to the reduction of GHG emissions, CEQA mandates that the responsible agencies also consider what effect the project will have on climate change adaptation for habitats and species. CEQA Guidelines § 15126.2. As outlined under Cumulative Impacts, the SA/DEIS has failed to do so.

**Response:** Since the proposed project will result in a net beneficial impact on GHG emissions and climate change, it therefore does not contribute meaningfully to this cumulative effect. The understanding of how and when climate change may result in noticeable effects on the different species and habitats within the Mohave Desert is unknown and speculative at this time. Similarly, changes in hydrologic regimes for a specific area are unknown at this time. Based on these reasons, BLM has determined that discussion of climate change on hydrological regimes and biological resources are not necessary in this analysis.

### **G.2.3 General Objection to Project (20000)**

**Comment Bauer-1:** My comment is negative on construction of this and any more building in this area as the fragile environment is too disrupted by large projects with all the accessory building and inadequate impact statements that are done to the benefit of companies rather than what is supposed to be eir/eis impartially reported by non-biased gov. studies.

**Response:** Your comment is included in the public record and will be taken into account by the authorized officer in the implementation of a Record of Decision for the project. We appreciate your input and participation in the public review process.

### **G.2.4 General Support for Project (65000)**

**Comment Brittian-1:** As president of the Newberry Chamber, I am delighted with the positive economic impact this project will bring to our community. You have my full support and I will help you with anything I am able to do.

**Response:** Your comment is included in the public record and will be taken into account by the authorized officer in the implementation of a Record of Decision for the project. We appreciate your input and participation in the public review process.

### **G.2.5 NEPA Adequacy (20940)**

**Comment CBD-10:** 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, 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). BLM has failed to properly identify and analyze impacts to the resources. As detailed below, the BLM’s failure in this regard violates the most basic requirements of NEPA and in addition undermines the BLM’s ability to ensure that the proposal does not cause unnecessary and undue degradation of public lands.

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). Where complete data is unavailable, the EIS also must contain an analysis of the worst-case scenario resulting from the proposed project.

**Comment Jackson-18:** The SA/DEIS does not comply with the National Environmental Policy Act (NEPA) in that it does not address the impact the Project will have on the sensitive, scenic, natural, scenic, ecological, cultural and biological resources of the adjacent privately owned lands, some of which the Applicant has acquired or intends to acquire for use in conjunction with the Project.

**Comment Jackson-21:** To comply with NEPA, the SA/DEIS must be supplemented to address the impact the Project will have on the sensitive, scenic, natural, ecological, cultural and biological resources on all the adjacent privately owned lands

**Comment Jackson-26:** The Draft Environmental Impact Statement (DEIS) for the Calico Solar Project does not comply with Section 102 [42 USC § 4332] of the National Environmental Policy Act (NEPA) which requires the BLM to comply with Section 552 of Title 5, United States Code (Freedom of Information Act (FOIA)), and the BLM is not complying with the FOIA.

In December 2009, I requested the BLM provide "all records the Bureau of Land Management has on Hector Road" under the Freedom of Information Act (FOIA). The records were requested under FOIA as the BLM refused to docket its response to my September 5, 2009 and October 25, 2009 letters regarding Hector Road as required by Section 1712(c) of Title 20, California Code of Regulations. I requested the BLM docket its responses and the BLM responded,

“The BLM does not 'docket' responses to the public; however, these decisions are available to the public under FOIA. The BLM is a Federal agency and except under special circumstances as determined by the BLM, the California Code does not apply.”

The BLM's refusal to docket its response was arbitrary and capricious as:

- (a) I was an Intervenor at the time of the denial.
- (b) As a Party to the Application For Certification, the BLM is required to comply with Section 1712(c) of Title 20, California Code of Regulations.
- (c) The BLM is withholding records requested under FOIA.

Records on Hector Road are not protected from release under the nine BLM exemptions. In January, February and April 2010, the BLM provided various documents on Hector Road. The BLM did not provide all the records it has on Hector Road and was notified of this fact in April, 2010. On May 3, 2010, William Quillman of the BLM notified me through my attorney the BLM was not going to provide the requested documents, confirming Roxie C. Trost's March 18, 2010 declaration the BLM considered the matter closed.

On May 5, 2010, I notified Jim Stobaugh, Rich Rotte, Alan Stein, Roxie C. Trost and William Quillman (BLM personnel involved in the AFC) I intended to file a FOIA appeal. On May 8, 2010, I filed a Freedom of Information Act Appeal with the FOIA Appeals Office, Department of the Interior, Office of the Solicitor. The appeal is ongoing.

The DEIS does not meet NEPA requirements as the BLM is withholding relevant and material information on Hector Road requested under FOIA. NEPA requires the BLM to provide information requested under FOIA. The DEIS and FEIS will not comply with NEPA until the BLM provides records requested under the Freedom of Information Act.

**Comment Jackson-27:** The Draft Environmental Impact Statement (DEIS) for the Calico Solar Project does not comply with Section 102 of NEPA which requires the BLM to comply with the FOIA and the BLM is not complying with the FOIA. In December 2009, I requested the BLM provide all records the Bureau of Land Management has on the following projects:

Stirling Existing Water . . . Well Quantity Testing CACA-50393 . . . SES Solar One 1-2 . . . Water Wells for Testing Depth/Quantity of Groundwater; CX: 516 DM 11.9 E(19) . . .

Water well records are not protected from release under the nine BLM exemptions. The BLM did not acknowledge my December 2009 FOIA request and I requested the records a second time. In April 2010, the BLM provided various water well documents. The BLM did not provide all the records it has on the water well testing and water well sites and was notified of this fact in April, 2010. On May 3, 2010, William Quillman of the BLM notified me through my attorney the BLM was not going to provide the requested documents confirming Roxie C, Trost's March 18, 2010 declaration the BLM considered the matter closed.

The existing water well in T9N, R5E, Section 32 is known as the Crows Nest Well. Public access to records on the Crows Nest Well is relevant, material and necessary to determine the Project's environmental impact on underlying groundwater and the Lavic Valley Groundwater Basin. Only the BLM and the Applicant have the records on the water well quantity testing performed on the Crows Nest Well. I asked the Applicant to provide information of the water well quantity testing performed on the Crows Nest Well at the April 16, 2010, Energy Commission Staff Workshop on the Staff Assessment/ Draft Environmental Impact Statement for the Calico Solar Project. On May 4, 2010, the Applicant docketed the Applicant's Submittal of Additional Information. The docketed letter states in pertinent part:

Information on Crow's Nest Well: The Applicant, as part of initial site assessments, did evaluate the Crow's Nest Well, however, it was found to be dry, possibly obstructed, and approximately 133 feet deep. The Applicant recorded photographs of the well and those are provided as Attachment C. [Emphasis in text]

The nearby private property owners have information and belief the Crows Nest Well was not "found to be dry." In part:

- (a) The Applicant's May 4, 2010 response contradicts the Applicant's 2009 response to Data Adequacy Request 49, which states, in pertinent part:

The two groundwater wells present within the immediate site vicinity include: one in the central portion of the site in an area of private land; and another (the 'Crow Nest Well') about 1.5 miles north of the westernmost point of the project. Both wells are shown in attachment WR-1. According to the BLM, the Crow Nest Well was approximately 170 feet deep and historically used to support the grazing of livestock. It was associated with two 4,500-gallon above ground water tanks (Personal communication with Rich Rotte, 2008). URS measured depth to water in this well to be about 130 feet and the total well depth to be approximately 138 feet. [Emphasis added]

- (b) The Applicant April 2009 response to Data Adequacy Request 49 is almost identical to the Applicant's response to Data Request 69.

Information of water tests performed at the Crows Nest Well is relevant and material to determine existing groundwater conditions and the impact the proposed Project will have on groundwater, the Lavic Valley Groundwater Basin, and the Pisgah Fault, a designated Alquist-Priolo Earthquake Fault Zone which traverses the southern part of the Project.

The DEIS does not meet NEPA requirements as the BLM is withholding relevant and material records on water well tests requested under the Freedom of Information Act. The DEIS and FEIS will not comply with NEPA until the BLM provides all records requested under the Freedom of Information Act

**Comment Jackson-28:** IV. The DEIS does not comply with NEPA as the BLM's withholding of records prevents the public to be involved in the decision-making process

**Response:** BLM has reviewed and evaluated all public comments received on the SA/DEIS. This FEIS was specifically developed to address the comments including those associated with the range of alternatives, additional biological information, project impacts and mitigation. Other specific comments on cumulative impacts, project description, and incorporation of data from additional studies are addressed through text modification in their respective sections in the

FEIS. The FEIS does analyze impacts under FLPMA and NEPA and draws conclusions based on the data contained herein.

The FEIS contains additional information on the location, length, and jurisdiction of Hector Road and other roads and BLM routes in the project vicinity. The FEIS proposes mitigation for the closure of BLM routes in the project site, including development of a project site perimeter road to provide access to private properties and other destinations in the project vicinity.

The FEIS provides information on the effects on groundwater and wells in the Lavic Basin, the groundwater basin in which the proposed project water supply is located, that are expected from utilization of Well #3 as the project water supply.

### **G.2.6 Decisionmaking Philosophy (10200)**

**Comment DEF-1:** Defenders strongly support the emission reduction goals found in the Global Warming Solutions Act of 2006, AB 32 . . . However, we urge that in seeking to meet our renewable energy portfolio standard in California, project proponents design their projects in the most sustainable manner possible. This is essential to ensure that project approval moves forward expeditiously and in a manner that does not sacrifice our fragile desert landscape and wildlife in the rush to meet our renewable energy goals.

**Response:** Your comment is included in the public record and will be taken into account by the authorized officer in the implementation of a Record of Decision for the project. We appreciate your input and participation in the public review process.

### **G.2.7 Public Comment Process Comments (11500)**

**Comment WWP-2:** We are unable to provide full comments on the SA at this time for several reasons. First, two days ago (June 2, 2010), Tessera Solar (the Project Applicant) announced a new alternative layout for the project with a revised project boundary. This alternative has not yet been posted on the CEC webpage so that members of the public, including Western Watersheds Project, have been unable to review it prior to the close of the SA comment deadline. Unfortunately, this last minute submission of alternatives by Project Applicants appears to be becoming the norm for these so-called “fast-tracked projects” since it also occurred during the Ivanpah and Ridgecrest Solar Millennium Project processes. Second, as the CEC Staff note frequently throughout the SA, the materials provided by the applicant fail to fully cover important resources. For example, Staff references the Applicant’s failure to map microphyll woodlands on the site, its failure to document sensitive plant occurrences, and cites other issues of controversy including the inadequacy of the desert tortoise surveys.

**Response:** This FEIS describes the Agency Preferred Alternative, which is a modification of the Proposed Action to reduce environmental impacts. The FEIS also incorporates additional information on microphyll woodlands, botanical and desert tortoise field survey data, and other resource information for the project site. This FEIS will be available for public review for a minimum of 30 days before BLM issues a ROD.

### **G.2.8 Interagency Coordination (11100)**

**Comment CBD-1:** Because the project approval process includes a quasi-judicial process in the California Energy Commission, the Center hereby incorporates by reference all of the materials before the California Energy Commission regarding the approval of this project. BLM is a party to the CEC process, which is being conducted in concert with the BLM approval process, and BLM has access to all of the documents (which are also readily accessible on the internet), therefore, BLM should incorporate all of the documents and materials from that process into the administrative record for the BLM decision as well.

**Response:** All of the information docketed in the CEC review and approval process will be incorporated into the administrative record for the BLM decision.

### **G.3 Purpose and Need (20200)**

**Comment CURE-81:** The DEIS contains an arbitrarily narrow purpose and need statement that impermissibly promotes private objectives. The BLM's purpose and need statement for this Project is "to respond to the Application under the Title V of FLPMA for a ROW grant to construct, operate, and decommission the Calico Solar Project and associated infrastructure in compliance with FLPMA, BLM ROW regulations and other applicable federal laws." This narrowly defined statement implies that BLM stands to gain nothing more than a rubber-stamped document at the end of this process. It is nonsensical to think that the BLM would spend taxpayer money and impact the environment for such an inconsequential result.

The BLM's alternatives analysis fails as an analytical tool because the purpose and need is drawn so narrowly to only accommodate the Applicant's proposal rather than the policy goals at issue. The BLM omitted from analysis a number of reasonable alternatives that should have been studied in detail in the DEIS.

The Applicant's statement fits the BLM's goals and objectives better than the BLM's own statement. According to the DEIS, the Applicant has five purposes: (1) to provide 850 MW renewable energy, (2) to contribute to the achievement of 20% renewable portfolio standards, (3) to reduce greenhouse gas emissions from the electricity sector, (4) to meet California's electricity needs and, (5) to assist CAISO in meeting renewable integration goals. While it is

unclear what the BLM would gain from the Project based on the BLM's impermissibly narrow purpose and need statement, a ROW application rubber stamped "approved" would clearly help the Applicant meet its goals. Thus, the arbitrarily narrow purpose and need statement promotes the Applicant's objectives instead of the BLM's.

**Comment DEF-6:** BLM's purpose and need statement is unlawfully narrow, preventing a reasonable range of alternatives from being considered. BLM's stated purpose and need is to "respond to the application under Title V of FLPMA for a ROW grant to construct, operate and decommission the Calico Solar Project and associated infrastructure." DEIS, page B.2-10. Rather than presenting a purpose and need statement that reflects the larger foal of providing for the development of solar energy, and then evaluating different means to achieve that goal, BLM has instead defined the Calico Solar Project and other infrastructure construction itself as the goal. By so radically narrowing the scope of the project's purpose, BLM has impermissibly constricted the range of alternatives considered. Because the purpose has been defined as requiring the project to be of a certain size, configuration, slope, and location, the BLM has ensured that no alternative courses of action would be considered, regardless of whether such alternatives would also meet renewable energy goals without causing significant environmental impacts.

**Comment CBD-11:** Purpose And Need and Project Description are Too Narrowly Construed and Unlawfully Segment the Analysis

The DEIS notes that an amendment to the CDCA Plan is needed in order to approve the project but does not clearly identify the plan amendment as a part of the project being evaluated. Rather, the DEIS states: "The BLM will decide whether to approve, approve with modification, or deny issuance of a ROW grant to Calico Solar, LLC for the proposed Calico Solar Project. The BLM's actions will also include consideration of amending the CDCA Plan concurrently." DEIS at A-12. 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 is impermissibly narrow under NEPA for several reasons, most importantly because it foreclosed meaningful alternatives review in the DEIS. 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.

**Response:** Your comment has been noted and your concerns have been addressed in Chapters 1 and 2 in the FEIS.

## G.4 Alternatives (22500)

### G.4.1 Range of Alternatives (22500, 22900)

**Comment CURE-85:** The BLM's decision not to consider alternate offsite sites is impermissible because it is based on an arbitrarily narrow purpose and need statement. The BLM may not adopt private interests to draft a narrow purpose and need statement that excludes alternatives that fail to meet specific private objectives. Yet, that was the result of the process here. The BLM must consider reasonable offsite alternatives, even if the Applicant does not like the alternative or is incapable of implementing the Project on an alternative site. Thus, as drafted, the DEIS violates NEPA's basic requirement to consider reasonable offsite alternatives . . .

The BLM should consider an alternate site on disturbed land. Unlike the BLM, the Energy Commission analyzed an offsite alternative on private disturbed land, but the BLM declined to join that part of the analysis. The Commission concluded that the offsite alternative is likely to have "less severe cultural, visual, and biological resource impacts than the proposed site, as it is located on disturbed lands used for agriculture." The BLM must evaluate siting the Proposed Action on a disturbed alternate site, or risk failing to evaluate a viable alternative.

**Comment CURE-86:** CEQ and the courts have repeatedly declared that the duty to discuss alternatives in an EIS is no different when the action is initiated by a Federal agency or by private parties. The agencies here must therefore consider all alternatives that are reasonably related to the project and evaluate them in the EIS.

**Comment DEF-2:** The DEIS fails to analyze a reasonable range of alternatives, narrowly defining the project's objectives in such a way as to preclude assessment of many viable alternatives on private and public degraded land.

**Comment DEF-5:** The DEIS's analysis of proposed project alternatives is insufficient and violates the National Environmental Policy Act. Unfortunately, rather than looking for meaningful alternatives that avoid significant impacts to the desert tortoise and other biological resources, the Bureau of Land Management appears to have simply accepted the proponent's proposal and choice to build the proposed Project in heavily occupied desert tortoise habitat with a low level of mitigation, consisting of a 3:1 ratio for impacts north of the BNSF railroad tracks, and a 1:1 ratio for impacts south of the BNSF railroad tracks. This lack of reasonable range of alternatives is particularly troubling for this site, which has several potentially unmitigable impacts on wildlife.

**Comment DEF-7:** The DEIS considers only four alternatives – the proposed action, two site reconfigurations, and the no action alternative. BLM failed to consider other viable methods to effectively develop renewable energy while minimizing impacts to sensitive wildlife populations

and habitat, including alternative technologies, development on degraded private lands, and development on degraded public lands with lower quality habitat.

**Comment DEF-8:** As a result of arbitrarily limiting the purpose and need statement for the project, the BLM only considered four alternatives. Such a truncated alternatives analysis violates the agency's duty under NEPA to fully review "all reasonable alternatives." The DEIS must analyze project alternatives including (1) project modification; (2) private land development on disturbed lands; (3) alternative technologies; and (4) other reasonable alternatives outside the jurisdiction of the BLM.

**Comment DEF-11:** The comparison to the no action alternative does not hold water either. A private land alternative would facilitate the *broader* project purpose and need of generating renewable energy, whereas the no action alternative would generate no renewable energy, two completely different outcomes.

**Comment DEF-12:** Neither the "absence of discretionary authority" argument nor the no action alternative comparison will excuse the BLM from abdicating its obligation under NEPA to analyze reasonable alternatives even if they are outside BLM jurisdiction.

**Comment DEF-15:** Some of the potential alternative locations on federal land were eliminated from consideration due to other applicants, or in some cases, the same applicant having filed a ROW application with BLM to develop the site. While BLM has yet to review or act on these applications, it has inexplicably determined that such applications confer a property right in federal lands. Stating that "an active pending application for [an alternative site] commands priority in consideration for that site location just as an active pending application for the Calico Solar Project site commands priority for its site location." This policy statement appears to be without any regard to the ultimate viability of any such projects. Beyond the panoply of legal issues that this raises, the policy it promotes – encouraging a race to file applications in an effort to claim territory – is antithetical to efforts to responsibly develop solar energy projects while minimizing impacts to wildlife and other resources.

**Comment CBD-60:** 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." 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). Here, BLM too narrowly construed the project purpose and need such that the DEIS did not consider an adequate range of alternatives to the proposed project.

The alternatives analysis is inadequate even with the inclusion of multiple "no action" alternatives, a reduced acreage alternative, and an "Avoidance of Donated and Acquired Lands Alternative." Additional feasible alternatives should be considered which would avoid occupied

desert tortoise habitat and impacts to bighorn sheep habitat as well as to avoid impacts to the Mojave fringe-toed lizard. In addition a phased alternative should have been included which could allow a portion of the project that might 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 on previously degraded disturbed lands and also to explore other off-site alternatives.

The document also includes other alternatives that were stated as being “Site Alternatives Evaluated only under CEQA” including an alternative with some private and some BLM lands. The document eliminated from consideration other private land alternatives and distributed renewable energy alternatives. The BLM (as well as the CEC) should have also looked alternative siting on previously degraded lands such as nearby farmlands, distributed solar alternatives, and other alternatives that could avoid impacts of the proposed project as well as impacts of the associated transmission lines and substations.

The Center urges the BLM to revise the DEIS to adequately address a range of feasible alternatives and other issues detailed above and then to re-circulate a revised or supplemental DEIS for public comment.

**Response:** The SA/DEIS considered 24 alternatives and selected a reasonable range of alternatives for analysis. This FEIS describes the alternatives screening methodology, and explains the process by which the action alternatives, the No Action alternative, and two land use plan amendment alternatives were selected for detailed analysis.

#### **G.4.2 Action Alternatives (22510, 62000)**

**Comment CURE-83:** The BLM must consider an alternative design that reduces impacts to jurisdictional waters, as delineated by the California Department of Fish and Game and Energy Commission. The Project will severely impact the natural wash systems that run through the Project site through the placement of roads, utility lines, other infrastructure and SunCatcher units directly into active wash environments, which will, in turn, impact water quality and biological resources, as well as increase the potential for flooding on the Project site. The BLM should consider a site design that avoids, or significantly minimizes, these impacts.

**Comment CURE-84:** The Energy Commission considered alternative sites on BLM lands in the analysis under CEQA, but the BLM omitted all study of alternatives on BLM lands. The proposed project site is designated Class L, reserved for “Limited Use.” Class L protects sensitive, natural, scenic, ecological, and cultural resource values. Public lands designated as Class L are managed to provide for generally lower-intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished.

The BLM should have considered an offsite-BLM alternative that is not on BLM Class L lands. The Class L designation is reserved for areas “where judgment is called for in allowing consumptive uses only up to the point that sensitive natural and cultural values might be degraded.” There is no question that this Project will severely degrade the sensitive resources on this Project site for short term project operations. BLM should have evaluated whether any BLM land was available for the Project that was reserved for Class I —“Intensive Use”— or Class M — “Moderate Use.” Specifically Class I is preferable because it is designed to permit intensive and single uses such as the type of disturbance that will occur as a result of Project development.

**Comment SC-58:** Of [the three no project alternatives], we support the third alternative because it will provide the greatest protection to this immaculate landscape, will ensure that the character of the area is preserved for future generations, and will preserve options needed to ensure species and ecosystem sustainability into the future.

**Response:** The FEIS describes the Agency Preferred Alternative, a modification of the Proposed Action designed to reduce project impacts to wildlife resources, waters of the State of California and cultural resources. No multiple use Class L lands are within the Agency Preferred Alternative project site. The Agency Preferred Alternative includes fewer of the high-value washes that are located in the northern portion of the Proposed Action project site, thereby reducing impacts to those features and their associated habitat values.

**Comment SC-37:** The SA/DEIS asserted that the Reduced Acreage Alternative and Avoidance of Donated and Acquired Lands Alternative would substantially reduce impacts in comparison to the proposed project. SA/DEIS B.2-84. After concluding that these alternatives would meet the project objectives, Staff improperly dismissed them “because they would reduce the generation capacity, [and] may not attain the purpose and need for the project.” SA/DEIS B.2-84 Additionally, BLM considered, but dismissed from further evaluation without adequate substantial information and analysis, alternative renewable technologies, and the alternatives of distributed renewable energy generation, energy efficiency and demand response. In violation of NEPA, BLM only analyzed reduced project and “no project” alternatives in the SA/DEIS. Again, BLM’s use of an impermissibly narrow purpose and need statement confounds the entire Alternatives Analysis, and leads the public to believe that there is a pre-decisional bias towards siting the Project at this location.

**Comment CBD-61:** In addition, in order to meet the DOE’s purpose and need states that: “The two principal goals of the loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. The purpose and need for action by DOE is to comply with their mandate under EPAct by selecting eligible projects that meet the goals of the Act.” DEIS at B.2-10 to11. Assuming for the sake of argument alone that these are proper project objectives, the DEIS should have considered alternatives that would provide funding to other types of

projects. Such alternatives could include, for example, conservation and efficiency measures that both avoid and reduce energy use within high-energy use load-centers including the Los Angeles area and the Inland Empire.

Alternative measures could include funding community projects for training and implementation of 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 BLM's analysis of alternatives in the DEIS is inadequate.

**Response:** The SA/DEIS considered 24 alternatives and selected a reasonable range of alternatives for analysis. This FEIS describes the alternatives screening methodology, and explains the process by which the action alternatives, the No Action Alternative, and two land use plan amendment alternatives were selected for detailed analysis.

### **G.4.3 Private Land Alternatives (22510)**

**Comment SC-32:** In the SA/DEIS Alternatives Analysis, BLM did not consider the Private Land and other private offsite alternatives under NEPA on the basis that these alternatives would not accomplish the purpose and need of the proposed action. The decision not to examine these alternatives was incorrect because BLM's statement of purpose and need for the SA/DEIS is too narrowly drawn. BLM only looked to the Applicant's purpose and need. The SA/DEIS stated that the purpose and need is "to respond to Calico Solar, LLC's application under Title V of FLPMA, 43 U.S.C. § 1761, for a ROW grant to construct, operate, and decommission a solar thermal facility on public lands in compliance with FLPMA, BLM ROW regulations, and other Federal applicable laws." Based on this narrow statement of purpose and need, BLM has declined to examine any private land off-site alternatives (as well as dismissing alternative technologies, distributed generation, energy efficiency and demand response). In so doing, BLM impermissibly rejected reasonable alternatives on the basis of inconsistency with the applicant's purpose and need. Moreover, BLM did so in spite of numerous scoping comments requesting consideration of a private/disturbed land alternative as well as alternative methods to meet agency goals to ramp up renewable generation and/or reduce reliance on nonrenewable fuels.

The project purpose and need statement need not be so narrowly drawn as to preclude the consideration of alternative locations and technologies. To do so reflects the needs of the project applicant, not the needs of BLM, in violation of NEPA. In fact, an agency's refusal to consider an alternative that would require some action beyond that of its congressional authorization is counter to NEPA's intent to provide options for agencies.

**Comment DEF-9:** BLM must evaluate a reasonable range of alternatives, and a private land site alternative is very much within the bounds of reasonableness. See 50 C.F.R. § 1502.14(a). The discussion of alternatives need not be exhaustive, but it must “be sufficient to demonstrate reasoned decision-making.” . . . BLM dismissed the only private land alternative identified in the DEIS . . . BLM's strained reasoning is perplexing. It is well established that BLM must analyze *all* reasonable alternatives, regardless of whether the alternative is located on public or private land.

**Comment DEF-10:** Although a private land site alternative would not be within the jurisdiction of the BLM, section 1502.14 of the NEPA Guidelines requires the DEIS to examine all reasonable alternatives, including those outside of the jurisdiction of BLM. BLM cites the absence of “discretionary authority” as its reason for dismissing the private land alternative, which is essentially the same as an absence of jurisdiction.

**Comment DEF-13:** The California Energy Commission concluded that the private land alternative would be preferred to the proposed Calico Solar Project site for biological resources, cultural resources, visual resources, and potentially transmission system engineering and only less preferred in the areas of land use and noise. BLM has not offered a convincing argument for dismissing the private land site alternative analyzed by the CEC. It is reasonable, it is reasonable and it provides renewable energy for California without impacting biological resources on public land.

**Comment DEF-14:** Considering the overriding policy impetus toward siting renewable facilities on private degraded land, the permitting agencies have an obligation to fully consider a reasonable range of private land alternatives. BLM should not preclude a private land alternative or any other alternative from analysis because it is not within the agency's jurisdiction.

**Comment SC-36:** The second rationale asserted for dismissing the Private Land Alternative was that “analysis of such an alternative, over which BLM has no discretionary approval authority, would not present impacts in a form that would define issues or provide a basis for choice in a manner any different than the no action alternative.” SA/DEIS B.2-18. The SA/DEIS fails to inform the reviewer how the BLM would be unable to analyze impacts of the Private Land Alternative -- impacts which the SA/DEIS identifies as being less adverse in most cases than the proposed project, by an order of magnitude, as explained below.

The SA/DEIS position on this matter directly conflicts with CEQ regulations to “[i]nclude reasonable alternatives not within the jurisdiction of the lead agency.” 40 C.F.R. 1502.14(c). The SA/DEIS even acknowledges that “[w]hile a project to be located on private land is not within the approval jurisdiction of the BLM as lead agency, if otherwise reasonable, it is still required to be analyzed by the BLM.” SA/DEIS B.2-18 (emphasis added). After reaching this conclusion, however, the SA/DEIS does not proceed to properly analyze a Private Lands Alternative.

**Comment SC-38:** . . . the Private Land Alternative (or for that matter, disturbed private land use alternatives) would greatly lessen the project’s significant impacts, including destruction of vast amounts of desert wash resources as well as habitat and habitat connectivity for desert tortoise, bighorn sheep and other sensitive, threatened and endangered species. Accordingly, it is impermissible for BLM to reject the Private Land alternative from consideration on the basis of a flawed statement of purpose and need statement and without substantive evidence to support their position. SA/DEIS B.2-18. In fact, it constitutes a violation of BLM’s mandate to “take any action necessary to prevent unnecessary or undue degradation of the lands.” 43 U.S.C § 1732(b).

Additionally, the SA/DEIS has failed to identify and analyze an even more feasible private land alternative site. Pursuant to CEQ regulations, all reasonable alternatives must be examined. Here, a feasible alternative exists that was not discussed, and one that does not have the feasibility concerns related to aggregating numerous landowners for site acquisition. It is the tens of thousands of acres of Cadiz Land Company land, which was publicly noticed as available for solar development in 2009. Much of this land is type converted; it is also in the Mojave desert of California, has excellent insolation, and is near existing transmission. The SA/DEIS had no valid reason to exclude consideration of this very viable alternative to the problematic Calico project site. NEPA and CEQA mandate that these environmentally preferable Private Land alternatives should be properly analyzed and adopted.

**Comment SC-58:** Sierra Club, recognizing the known very significant impacts this project poses to desert tortoise and the unknown but very likely impacts to a long list of other resources as enumerated above, supports a Private Land Alternative to the proposed project. We believe the option of siting such a project on Cadiz Land Company previously disturbed land is feasible and should be analyzed by BLM along with the SA/DEIS identified Private Land Alternative.

**Comment SC-39:** the SA/DEIS found that approval of a private land alternative would be “remote and speculative” if no application is pending, and that “The Energy Commission does not have the authority to approve an alternative or require Calico Solar to move the proposed project to another location, even if it identifies an alternative site that meets the project objectives and avoids or substantially lessens one or more of the significant adverse effects of the project because it would require a new Application for Certification (“AFC”) and environmental review might reveal more impacts.”(B.2-19) The lack of an application to develop an alternative site or an artificially constricted time frame for project approval are not recognized

under CEQA as justification to reject an otherwise feasible and environmentally preferred alternative.

The Recovery Act website states that “[i]f new information arises late in the process, analyses may have to be redone, significantly affecting the schedule.” This shows, contrary to the applicant’s and agencies’ assertion, that environmental regulations such as NEPA and CEQA must be complied with; application for stimulus funding does not allow a project to sidestep valuable environmental regulations.

**Response:** The environmental and other impacts of the Private Lands Alternative are extensively addressed in the SA/DEIS (Section B.2.7.2). The rationale for eliminating the Private Lands Alternative from detailed analysis is discussed in this FEIS.

A private land alternative is not a reasonable alternative to the BLM since analysis in this EIS of such an alternative, over which BLM has no discretionary approval authority, would not present an analysis of impacts in a form that would define issues or provide a basis for choice in a manner any different than the No Action Alternative, which is fully considered in this document. Impacts on public land resources would not occur if the project was located on private land just as impacts on public land resources would not occur if the No Action Alternative was approved (and the project was denied). In addition, since the BLM’s responsibility related to the Proposed Action in this EIS is whether to approve, or deny, or approve with modification an application for a Solar Project to be sited on public land, analysis of a private land alternative would be ineffective in that it does not respond to BLM’s purpose and need. Finally, approval of any specific private land alternative would be remote and speculative. The northern section of the Private Lands Alternative that was analyzed by the State is made up of approximately 64 parcels with 27 separate landowners. The southern portion of the Private Lands Alternative is made up of 45 parcels with 22 separate landowners. Due to the highly fragmented land ownership pattern, development of these sections would be impractical and economically infeasible. Because the BLM has no approval jurisdiction over such an alternative and since no application is before the CEC, and/or the County of San Bernardino, the BLM determined the private land alternative to be speculative and remote.

#### **G.4.4 Conservation/Alternate Technology Alternatives (22510)**

**Comment SC-35:** The potential of energy efficiency and distributed generation is significant (alone or in combination), even beyond current targets; and efficiency in particular is more than cost competitive. The feasibility of replacing the Project’s objective of 850MW in five years should be reviewed in light of the multiple environmental impacts of this Project. Accordingly, the responsible agencies have an affirmative duty to fully consider conservation and demand side management as a feasible alternative to reduce a project (and therefore its output) in order

to avoid severe unmitigable impacts, or even as a full alternative to an exceptionally impactful project. Message to decisionmakers,

**Comment SC-33:** The SA/DEIS Rejected Distributed Generation, Energy Efficiency and Demand Response Without Adequate Information and Analysis.

The SA/DEIS opines without foundation that achieving 850 MW of distributed solar PV or distributed solar thermal would “depend on additional policy support, manufacturing capacity, and lower cost than currently exists to provide the renewable energy required to meet the California Renewable Portfolio Standard requirements” Alternatives Table 1, SA/DEIS B.2-3ff. However, the SA/DEIS analysis of the distributed generation alternative and its potential to help meet the California Renewable Net Short is erroneous, conclusory, and not supported by substantial evidence in the record.

Black & Veatch, the consultants for the Commission’s own Renewable Energy Transmission Initiative (“RETI”), reported to CPUC regarding current distributed generation potential . . . Using GIS, Black & Veatch identified sites for ground-mounted PV and large commercial rooftops within 3 miles of distribution substations, and reported a wholesale distributed generation potential of 17,300 MW with no upgrades required. These figures indicate that larger scale distributed solar generation can provide a substantial portion of the 2020 RPS “Net Short,” and probably more than that.

**Comment SC-34:** The SA/DEIS also asserts that distributed PV must achieve lower costs to be competitive. Alternatives Table 1, SA/DEIS B.2-3ff However, RETI ascertained that PV is more cost-effective than solar trough at current thinfilm PV pricing of \$3,700/kW a/c15, and SCE has committed to CPUC that its distributed commercial rooftop program in Ontario, CA will cost \$3.50/watt d/c,16 or less than \$4,000/kW a/c. If the SA/DEIS asserts that distributed generation should not be considered because it is too costly, then it should provide Project costs, including operations, maintenance, plus transmission costs and losses for comparison.

**Response:** The rationale for eliminating the conservation and alternative technologies alternatives from detailed analysis is discussed in Chapter 2, Alternatives of the FEIS.

## **G.4.5 The Proposed Action (22000)**

### **G.4.5.1 Power Generation and Transmission (22300)**

**Comment Marcus-2:** The DEIS concludes that “the project will need to provide 300 MVAR of dynamic reactive support.” However, the DEIS does not identify where these dynamic reactive support projects would be located, or provide any description of them, or describe what the

environmental impacts of these projects would be. The DEIS must provide a description of these projects, which are necessary for the Calico Project to function.

**Comment Marcus-3:** The DEIS concludes that the Project will need 350 MVar of Reactive Support Facilities. I can only assume that the DEIS intended this to mean “Static” Reactive Support Facilities since the DEIS separately identified a need for 300 MVar of “Dynamic” Reactive Support Facilities. Dynamic and static reactive support are not the same, and are supplied by different kinds of devices. Although not clearly described, the DEIS appears to identify some of the facilities to supply the Static Reactive Support as part of the Project. The DEIS identifies six 45 MVar capacitor banks onsite, which adds up to 270 MVar, not 350 MVar. Therefore, the DEIS should identify where the facilities to provide the remaining 80 MVar of Static Reactive Support will be located and any environmental impacts that will result from the construction and/or operation of these facilities for the Project.

**Comment Marcus-5:** The DEIS includes Condition of Certification TSE-5 to ensure that the design, construction, and operation of the proposed transmission facilities is in full compliance with federal, state and local laws and regulations. This condition lays out equipment requirements at the on-site substation, but does not include either the 300 MVar of dynamic reactive power capability required for the Project, or the 270 MVar - 350 MVar of static reactive support facilities required for the Project.

**Response:** The specifics of the design of the SCE transmission facility upgrades would be discussed in a future environmental analysis in conjunction with applications filed by SCE with the BLM.

**Comment Marcus-6:** The DEIS does not include a condition of certification requiring the Applicant to provide a standard signed Large Generator Interconnection Agreement (“LGIA”) . . . Similarly, the DEIS does not require that environmental approval of the lines and other facilities required by such an LGIA as a condition of construction, transmission construction, or project operation.

It is typical with the siting of power plants in California for the Energy Commission to require a signed LGIA as a condition of certification. The BLM should likewise require a signed LGIA as a condition of Project approval. Furthermore, the BLM should require environmental review and approval of all facilities identified in the LGIA as a condition of Project approval since these facilities must be approved and built before the Calico Project can reliably operate . . .

Unless and until there is an approved LGIA for the proposed expansion of the Calico project beyond 275 Mw, there is no reason to believe Calico will be able to obtain financing for more than 275 Mw, and no certainty regarding what transmission facilities will be required to interconnect more than 275 Mw, or when they may be built. Thus the environmental

consequences of the interconnection facilities required to expand beyond 275 Mw cannot be known, and no permit should issue.

**Comment Marcus-7:** The DEIS concludes that the Project “should be designed and constructed with adequate reactive power resources to compensate [for] the consumption of Var by the generator step-up transformers, distribution feeders and generator tielines.” The DEIS fails to include a corresponding condition of certification for this DEIS-required mitigation.

**Comment CURE-11:** The Applicant has not yet informed the CEC where the new 500 kV transmission line that is required to enable the Project’s power to enter the grid or the new 100-acre substation will be located. Neither has the Applicant provided biological or cultural surveys of the areas that will be impacted by this transmission line and substation, as requested by Staff.

Moreover, the Large Generator Interconnection Agreement (“LGIA”) filed by the Applicant on February 26, 2010 explained that a full ten mile section of the transmission line will not be located in an existing Southern California Edison right of way and a new right of way must be established. Further, 100 acres may be needed for a new substation in an unknown location. Because the location and description of these transmission upgrades have not been provided by the Applicant, the environmental impacts of these facilities and the necessary mitigation cannot be determined.

Without this information about the Project’s proposed (and required) transmission upgrades, Staff simply cannot provide an adequate basis for the Committee to make the findings required for certification of the Project (e.g., compliance with all laws and regulations, and adequate mitigation of impacts); nor can Staff issue a valid SA.

**Comment CURE-18:** The SA fails to analyze many of the Project’s potentially significant impacts associated with these transmission facilities that are required for the Project to function. Therefore, the SA must be revised to include this analysis, and be circulated for public review and comment.

**Comment CURE-23:** The SA must include a project-level analysis of the transmission line upgrades that includes adequate baseline data, a stable and accurate description of the Project and specific measures to mitigate all significant impacts. This must be included in the Revised SA that is circulated for public review and comment.

**Comment CURE-66:** The DEIS fails to accurately or fully describe the transmission upgrades necessary for the Project and the environmental impacts that will occur as a result of the construction and operation of these transmission upgrades. The transmission upgrades for the Project are connected actions and therefore must be analyzed as a part of the Project. The transmission upgrades required for this Project to operate were independently analyzed in a

comment letter from David Marcus that is attached and should be reviewed separately by BLM . . .

Government agencies, the public, tribes and consulting parties have not been given adequate information about Project impacts because the transmission line has not been adequately analyzed as a part of the Project. NEPA was designed to avoid exactly this kind of piecemealing that leaves the public unaware of the true extent of environmental impacts that will occur if the Project is approved.

**Comment CURE-71:** The 850 MW Project cannot deliver 575 MW of its power to market without the construction of a number of substantial transmission upgrades that include a 67-mile Pisgah to Lugo 500kV transmission line, an expansion of the Pisgah substation from 5 acres to 40 acres, a new 100 acre substation in an undetermined location, marshalling yards and material staging areas. The transmission upgrades are an indispensable part of the Project and, therefore, impacts associated with these upgrades must be analyzed as a connected action under NEPA. Additionally, the DEIS omitted analysis of a number of other transmission upgrades that are associated with other Projects but are also required for this Project to operate. These upgrades are described in more detail in the attached comment letter of power plant expert David Marcus. The BLM should reply separately to the comments of David Marcus which are incorporated by reference herein.

Thus, the DEIS fails to analyze many of the Project's potentially significant impacts associated with transmission facilities that are required for the Project to operate. The DEIS must be revised to include this analysis, and be circulated for public review and comment.

**Comment CURE-80:** Following a generic description of the transmission upgrades needed for the Project to function, the DEIS concludes that the transmission line will result in less than significant impacts, in most resource areas, with the employment of standard mitigation measures.

Because the analysis in the DEIS is cursory at best and is not based upon adequate baseline data, the impacts are not adequately evaluated, and it is not possible to adequately identify appropriate mitigation. The DEIS attempts to explain the half-hearted attempt to mitigate impacts by stating repeatedly that the transmission line upgrades will be reviewed in a full EIS/EIR process with the CPUC and BLM.

However, the Project is entirely dependent on the transmission line, substation and transmission upgrades. It cannot function without these integral connected actions. The DEIS must include a complete analysis of the transmission line upgrades that includes adequate baseline data, an accurate description of the connected actions and specific measures to mitigate all significant impacts. This must be included in the Revised DEIS that is circulated for public review and

comment. Only by doing so will the public be afforded its right under NEPA to review and comment on proposed mitigation measures for the Project and connected actions.

**Response:** The upgrades to the Southern California Edison electrical transmission grid are discussed in this FEIS as a reasonably foreseeable future action. The LGIA for the project is also discussed in the FEIS. Because SCE has not yet submitted completed applications (ROW or other) to the BLM for system upgrades, the project is not yet a proposal. The designs and specific details of the upgrades would be discussed in future separate environmental documentation. In the future environmental documentation, consideration of the two projects cumulatively would occur with the Calico Solar project being considered either a cumulative/connected action or in the cumulative effects analysis. In this way, all environmental impacts of both projects will be analyzed under NEPA.

#### **G.4.6 The Reduced Acreage Alternative (2215)**

**Comment CURE-82:** During the CEC workshops following the release of the DEIS, the Applicant expressed concern regarding the feasibility of the Reduced Acreage Alternative . . .

The BLM must not eliminate this alternative without revising the DEIS to include a detailed analysis of the economic feasibility of this alternative. The BLM should also consider that the 275 MW alternative may be the only legally viable alternative since the 67-mile transmission line and other upgrades required for any additional Project output beyond 275 MW is a connected action that was not adequately studied in this DEIS.

**Comment Poff-28:** Based on my review, and in consideration of Section 4 findings, the Reduced Acreage alternative should be further mitigated for the following reasons:

- (1) While the solar dishes were removed from the primary washes, access road cutoff walls remained intact. As described in Section 4, the sediment basins and vague maintenance schedule would result in onsite and offsite degradation of the washes based on the unwarranted and unjustified desire to control natural sedimentation processes onto, through, and off of the project site.
- (2) While the solar dishes were removed from the primary washes, several secondary washes have solar dishes in the washes of unstated consequence to onsite and offsite resources. These consequences should be analyzed.
- (3) While there would be considerably less SunCatcher units on the project site, disruption of the desert pavement and cryptobiotic crust and the associated erosion and sedimentation would still occur, even though to a lesser extent. Analysis of an offsite disturbed alternative should be included in future BLM analysis.

- (4) Access road cutoff walls and the proposed culverts create artificial grade controls and sediment discontinuities that can degrade onsite and offsite washes,
- (5) The technical analyses, to varying degrees, were inadequate to support the DEIS assessment of impacts until they are corrected.

A modified Reduced Acreage alternative may be the environmentally preferred alternative depending on the outcome of the analysis of other environmental impacts analyzed in the DEIS (i.e., biological, transmission, and cultural impacts of the Project).

**Response:** BLM has reviewed and evaluated all public comments received on the SA/DEIS. This FEIS was specially developed to address the comments including those associated with the range of alternatives, additional biological information, project impacts and mitigation. The Reduced Acreage Alternative has not been eliminated from consideration and is evaluated in detail in this FEIS. Other specific comments on cumulative impacts, project description, and incorporation of data from additional studies are addressed through text modification in their respective section in the FEIS.

#### **G.4.7 The Avoidance of Donated and Acquired Lands Alternative (2215)**

**Comment SC-40:** The Analysis of the Donated Lands Alternative is Inadequate and Contains Serious Policy Implications that Should Be Addressed.

The SA/DEIS acknowledges that in the Project would violate an “interim” policy promulgated by the BLM State Director which requires LWCF lands to be managed as avoidance/exclusion areas for land use authorizations that could result in surface disturbing activities (BLM 2009a).

The commitment to preservation of and public use of the donated Catellus lands which was asserted at the highest levels of government goes far beyond the SA/DEIS’s characterization of an “interim” state BLM policy. The industrialization of these donated lands must be analyzed and weighed in light of the assurances given by the federal government. This issue has serious implications for future land conservation in the US.

**Response:** The Agency Preferred Alternative is configured to avoid surface disturbances to some of the donated and acquired lands within the project site. It also is configured to avoid potential impacts to biological resources. The north boundary of the project footprint has been redesigned to avoid 1,770 acres of habitat for desert tortoises, bighorn sheep and rare plants. And, within the project boundary there are 6.65 acres of environmentally sensitive areas which would exclude project development to protect rare plants.

## G.5 Cumulative Impacts - Reasonably Foreseeable Future Actions (20940)

### G.5.1 Transmission Upgrade Projects Comments

**Comment CURE-87:** As the above discussion demonstrates, what constitutes agency action and the scope of environmental review required for agency action is virtually the same under NEPA and ESA. Both statutes require the BLM to broadly consider actions related to the proposed action. The Draft Biological Assessment submitted by the Applicant, however, fails to accurately describe the transmission upgrades required for the Project, much of which is in desert tortoise habitat. Consequently, the Draft Biological Assessment fails to address the associated impacts to listed species such as the desert tortoise.

**Comment Cashen-32:** The Project is entirely dependent on the transmission line upgrades and substation construction proposed by the Applicant in the AFC. Because these activities are part of the Project, the DEIS must provide bat impact avoidance and minimization measures that apply to transmission line and substation upgrade activities.

The DEIS notes the presence of potential bat habitat (i.e., mine shafts, rock outcrops, lava tubes, railroad trestles, bridges)<sup>130</sup> within the proposed transmission line route, and information provided by the Applicant states that the transmission line ROW runs east along the Mojave River, which represents potential riparian habitat for Townsend's big-eared bat. Significant roosts of this species have been recorded along the Mojave River. A complete survey of all suitable bat habitat according to protocol established by the WMP must be conducted for any Project activities that occur in the WMP Area. The avoidance and mitigation measures established in the WMP must then be implemented if bat roosts are present.

**Comment Cashen-33:** The Description of the Affected Environmental is Unreliable. The Project requires construction of approximately 67 miles of 500kV transmission line between the existing Pisgah and Lugo substations. In addition, the existing Pisgah Substation would be relocated and expanded, and the Lugo Substation would be upgraded and expanded. New telecommunication facilities would be installed between the Gale and Pisgah substations as well as between the Lugo and Pisgah substations. Although all these are reasonably foreseeable activities, the DEIS does not depict them on a map or otherwise specify their boundaries.

The applicant conducted a reconnaissance-level habitat assessment to characterize the vegetation within the Pisgah-Lugo corridor and to determine potential habitats for sensitive species in 2007 and 2008. To date, no surveys have been conducted along the Gale-Pisgah telecommunication corridor.

The Pisgah-Lugo transmission corridor encompasses a wide range of terrain and elevation, and according to the Applicant, it crosses 17 native vegetation types (some of which are sensitive natural communities) and three non-native or disturbance-related vegetation types. The DEIS states the transmission corridor would cross through the Ord- Rodman Desert Wildlife Management Area (DWMA), the Pisgah Area of Critical Environmental Concern (ACEC), and the Upper Johnson Valley Yucca Rings ACEC. Information provided by the Applicant suggests the transmission line would also pass through the Juniper Flats ACEC.

Ten special-status plant and animal species were detected during the Applicant's reconnaissance-level surveys of the transmission corridor. However, numerous other special-status species have the potential to occur along the route. This was not articulated clearly in the DEIS, nor did the DEIS list all of the special-status species that might be affected by activities associated with the transmission line and substation upgrades.

**Comment Cashen-34:** The DEIS concludes the transmission line and substation upgrades would create significant impacts to biological resources due to the permanent loss of habitat and the disturbance to sensitive plant and wildlife species during construction. However, the DEIS further concluded mitigation is available and feasible, and would likely reduce most impacts to biological resources to less-than-significant levels under CEQA. The DEIS does not provide sufficient information to assess whether transmission line and substation upgrade activities would comply with the West Mojave Plan.

The DEIS lacks support for the conclusion that mitigation is available and feasible, and that it would likely reduce most impacts to biological resources to less-than significant levels. The Upper Johnson Valley Yucca Rings ACEC contains a unique assemblage of ancient vegetation. Impacts to this feature would be significant and unmitigable.

White-margined beardtongue occurs along the transmission line route. This species has an extremely limited distribution in California, with most known occurrences in the immediate Project area. The continued existence of white-margined beardtongue in California is threatened by the Project. Because the species is known to occur along the transmission line route, upgrade activities would exacerbate the threat, and might not be mitigable.

The DEIS references "mitigation such as the measures described above" to justify its conclusion that mitigation to reduce impacts is available and feasible. The mitigation measures described "above" were originally recommended by the Applicant in Appendix EE to the AFC. The DEIS has demonstrated that some of these measures are actually infeasible. For example, the Applicant proposed relocation for impacts to white-margined beardtongue, which the DEIS explicitly states is infeasible as mitigation.

**Comment Marcus-1:** Six transmission upgrade projects are identified that would need environmental review prior to Calico operations that were not studied in the DEIS:

- (1) Upgrade of the Inyo 115kV Phase-Shift transformer;
- (2) Inyokern substation conversion to 230kV;
- (3) New Lugo-Kramer Transmission Line project;
- (4) Construction of a third Lugo 500/230kV Transformer Bank;
- (5) Mountain Pass-El Dorado 115kV line reconductor; and
- (6) El Dorado 230/115kV transformer Bank.1

The DEIS acknowledges that it is reasonably foreseeable that some or all of these transmission projects may become part of the Calico Solar Project if higher queued projects withdraw their applications. However, the DEIS does not include any environmental analysis for any of these Projects. Further, the DEIS does not provide any analysis of the likelihood of these other interconnection Projects being approved. These six transmission upgrade Projects are reasonably foreseeable interdependent parts of this Project, without which the Calico Project could not operate.

**Comment Marcus-4:** The DEIS concludes that environmental impacts of downstream transmission facilities associated with the Project will be evaluated in a future EIR/EIS . . .

These upgrades needed for the Calico Solar Project to operate will require significant ground disturbance. This is especially true for the “Full Build-Out Option.” The DEIS omits analysis of these upgrades as a part of the Calico Project.

**Comment SC-31:** The SA/DEIS states that the “SCE upgrades are a reasonably foreseeable event if the Calico Solar Project is approved and constructed as proposed,” yet goes on to state that the “projects will be fully evaluated in a future EIR/EIS.” SA/DEIS C.2-113. This is an improper segmenting of a connected action and rendered the SA/DEIS inadequate under NEPA.

**Response:** The SA/DEIS considered 24 alternatives and selected a reasonable range of alternatives for analysis. This FEIS describes the alternatives screening methodology, and explains the process by which the action alternatives, no action alternative, and two land use plan amendment alternatives were selected for detailed analysis. The SCE transmission system upgrades are included as reasonably foreseeable future actions for cumulative impacts analysis in the FEIS. Because SCE has not yet submitted any applications (ROW or other) to the BLM for system upgrades, there is not currently a project and the designs and specific details of the upgrades would be discussed in future separate environmental documentation.

The project would be constructed in phases. The initial phase would generate up to 275 MW and the balance of the energy production capabilities would be brought online in the second phase. Timing of the SCE system upgrades and phasing is addressed in this FEIS.

### **G.5.2 Other Future, Foreseeable Projects**

**Comment SC-29:** the analysis relies on an artificially limited subset of foreseeable future projects. This limited definition of a reasonably foreseeable future action may improperly limit the scope of review.

**Comment DEF-34:** The DEIS does not contain a comprehensive list of projects in the area that may have cumulative impacts. NEPA requires analysis of significant cumulative impacts of the proposed project when combined with other past, present and reasonably foreseeable future projects. 40 C.F.R. § 1508.27 requires that the significance of actions be analyzed in several contexts such as society as a whole, the affected region, the affected interest, and the locality. This section also requires that the severity of impact be considered and evaluated in determining significance using 10 stated criteria. 40 C.F.R. § 1508.27. The seventh criterion addresses “[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. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.” Therefore, the EIS must analyze the other proposed renewable energy projects in this region, any foreseeable growth in this area, the foreseeable impacts of climate change, and any other reasonably foreseeable future projects.

**Comment CBD-8:** The DEIS fails to adequately address the proposed project in the context of other connected projects (including multiple renewable energy projects, substations and additional transmission lines) and the ongoing PEIS planning process for solar development in six western states undertaken by BLM and DOE which does not identify this area as a proposed solar energy study area. Direct, indirect and cumulative impacts of the proposed project in conjunction with others may lead to sprawl development in the area and undermine the planning for renewable energy industrial zones that BLM has undertaken.

The BLM cannot lawfully piecemeal this project approval. Moreover, the BLM has failed to explain how this site specific approval would interface with, or alternatively undermine, the solar programmatic planning by federal agencies for the western states. This critical issue regarding planning on public lands is not adequately addressed in the DEIS which only mentions the PEIS process briefly (DEIS at B.2-21), and then includes the PEIS as a foreseeable future project with no explanation (DEIS at B.3-13). The BLM does not analyze how the PEIS could be affected by the approval of this and other projects in the area. Such analysis after the fact is not consistent with the planning requirements of FLPMA or, indeed, any rational land use planning principles.

**Comment CBD-59:** The DEIS 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 unfinished, the cumulative impacts analysis cannot be complete. For example, the identification of plant communities on site is unfinished and are other elements of the analysis, the cumulative impacts are also therefore inadequate.

The DEIS also fails to consider all reasonably foreseeable impacts in the context of the cumulative impacts analysis. The DEIS 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. The cumulative impacts to the resources of the California deserts or the Western Mojave planning area have not been fully identified or analyzed, and mitigation measures have not been fully analyzed as well.

**Response:** The FEIS identifies existing renewable and non-renewable energy projects, other past and existing projects, and energy and non-energy related reasonably foreseeable future actions as the context for cumulative impacts analysis. The FEIS also provides additional information on resource impacts for all of the analyzed alternatives to supplement the cumulative impacts analysis.

The Office of Energy Efficiency and Renewable Energy and BLM are preparing a Solar Energy Development Programmatic EIS (PEIS) to develop utility-scale solar energy development; develop and implement agency-specific programs that would establish environmental policies and mitigation strategies for solar energy projects; and amend relevant BLM land use plans with the consideration of establishing a new BLM solar energy development program. The PEIS included lands within the CDCA which are open to solar energy development in accordance with the provisions of the CDCA Plan. The Calico Solar Project site is located within the boundaries of the Pisgah solar energy zone. The BLM is processing active solar applications while the PEIS is being prepared.

### **G.5.3 Mitigation for Cumulative Impacts**

**Comment DEF-35:** The cumulatively significant impacts of the project, or its contribution to cumulative impacts, must be mitigated. The DEIS concludes that without mitigation, the Calico Solar Project would be a substantial contributor to the cumulatively significant loss of the Mojave Desert's biological resources, including the State and federally threatened desert tortoise and other special-status species. DEIS, page C.2-7. However, the DEIS does not address which existing measures would address the cumulatively significant impacts of the project, or whether additional measures are necessary to deal with the project's contributions to cumulative impacts.

**Response:** The FEIS provides mitigation measures for direct and indirect impacts to many of the resources that would be affected by the Calico Solar Project. Mitigation of cumulative effects would be proportionate to the mitigation of the direct and indirect impacts to those resources.

## G.6 General Mitigation

**Comment Poff-1:** Elements of the environmental setting were grossly inadequate, and as such, limited the description of the project impacts, hindered the impact analyses, and ultimately undermined the adequacy of the proposed mitigation. More specifically:

- (1) Desert pavement and its influence of hydrologic and sedimentation processes was not acknowledged or analyzed;
- (2) Cryptobiotic crust and its influence on hydrologic and sedimentation processes was not acknowledged; and
- (3) Climate change and its influence on hydrologic and sedimentation processes was not acknowledged.

**Comment CBD-15:** Moreover, BLM must look at reasonable mitigation measures to avoid impacts in the DEIS 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.

**Comment DEF-4:** Defenders would ultimately like to see this project's impacts avoided if possible or mitigated to the greatest extent practicable.

**Response:** The FEIS addresses mitigation for all of the resource impacts identified. Specifically, additional information on climate change impacts and soils has been included in the analysis. Since the proposed project will result in a net beneficial impact on GHG emissions and climate change, it therefore does not contribute meaningfully to this cumulative effect. The understanding of how and when climate change may result in noticeable effects on the different species and habitats within the Mohave Desert is unknown and speculative at this time. Similarly, changes in hydrologic regimes for a specific area are unknown at this time. Based on these reasons, BLM has determined that discussion of climate change on hydrological regimes and biological resources are not necessary in this analysis. The mitigation strategies that are outlined in Section 4.3.4 Mitigation, Project Design Features, BMPs, and Other Measures provide a framework for the future development of site-specific and activity-specific monitoring and management plans. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS

Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies. The performance criteria and reporting requirements that are identified as part of the project mitigation measures would allow for BLM's continued oversight of the development and implementation of these plans and the minimization of impacts resulting from the project.

The Plan of Development will be available for review concurrently with the FEIS. It can be viewed online at <https://tesseractosolar.box.net/shared/j09n6g20f6> or at the BLM Barstow Field Office. A 30-day public comment period will be provided for both the Plan of Development and the FEIS.

**Comment CURE-19:** We agree with Staff that the Project's "overall effects to wildlife within the project perimeter are expected to be severe." However, the SA improperly defers the development of mitigation measures to future plans that will identify measures to mitigate these significant impacts. The following conditions of certification are examples of improper deferral of mitigation that deprive the public of any opportunity to review and submit comments on feasibility: BIO-7 . . . BIO-10 . . . BIO-11 . . . BIO-12 . . . BIO-13 . . . BIO-16 . . . BIO-17 . . . BIO-18 . . . BIO-21 . . . BIO-22b . . . BIO-27 . . .

Until the above-listed mitigation measures are identified and evaluated, the Energy Commission lacks substantial evidence to make a finding that each of the mitigation measures listed above will reduce the particular impacts to a less than significant level. The Commission will also not know if it must consider making findings of overriding considerations. Thus, these plans and measures must be developed now, during the environmental review process, and be included in the Revised SA that is circulated for public review and comment.

**Comment CURE-75:** We agree with the DEIS that the Project's "overall effects to wildlife within the project perimeter are expected to be severe." However, the DEIS does not discuss mitigation in sufficient detail to ensure that environmental consequences to these resources have been fairly evaluated. The following conditions of certification are examples of mitigation that is so preliminary and lacking in detail or conclusion that it deprives the public of any opportunity to review and submit comments on the adequacy of the Applicant's mitigation: BIO-7 . . . BIO-10 . . . BIO-11 . . . BIO-12 . . . BIO-13 . . . BIO-16 . . . BIO-17 . . . BIO-18 . . . BIO-21 . . . BIO-22(b) . . . BIO-27 . . .

The DEIS fails to identify mitigation for each of the above-listed impacts with any specificity until after approval of the Project. Until the above-listed mitigation measures are identified, it is not possible to determine whether significant environmental impacts have been mitigated. Thus, these plans and measures should be developed now, during the environmental review process, and be included in a Revised DEIS that is circulated for public review and comment.

**Comment CBD-3:** At minimum, the BLM needs to consider increased conservation strategies that would mitigate the impacts of this proposed project and provide it for public review in a supplemental DEIS. In that strategy, the BLM should also provide for ongoing monitoring of existing conservation areas as well as any new conservation acquisition areas and reporting to ensure that all conservation actions (including any route closures) are implemented and any new protective measures have the intended effect.

**Comment CBD-55:** Because the DEIS 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 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 must discuss mitigation in sufficient detail to ensure that environmental consequences have been fairly evaluated."

Here, the DEIS 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.

One way to analyze impact to the environment used by a sister agency (NOAA) is to perform a Habitat Equivalency Analysis (HEA). This process is used to determine compensation for injuries to the public trust environmental resources including the lost services that the ecosystem provides. While the HEA was developed for determining compensation from impacts primarily from oil spills, this methodology has been used to determine compensation for other types of impacts including development projects. It is a useful method to determine compensation for impacts to the public trust resources including migratory birds that will occur if the proposed project is implemented. It also provides a basis for analyzing the equivalency of compensation lands at least from the resources services perspective. This analysis would be in addition to mitigation for the impacts to threatened and endangered species. We suggest that this methodology utilized to more accurately analyze and assess the impacts from the proposed project and the alternatives.

**Comment CBD-56:** The DEIS fails to include key plans for public review. Plans relied upon for adequate mitigation but which are unavailable include (from Table 19 C.2-203):

- Worker Environmental Awareness Plan
- Biological Resources Mitigation Implementation and Monitoring Plan

- Revegetation Plan (Reclamation Plan are required by BLM at 43 CFR 3809.550 et seq. including cost estimates 43 CFR 3715 and should be incorporated into the Revegetation Plan)
- Weed Management Plan
- Special Status Plant Protection and Monitoring Plan
- Special Status Plant Remedial Action Plan
- Seed Collection Plan
- Protected Plant Salvage Plan
- Desert Tortoise Relocation/Translocation Plan
- Raven Monitoring, Management and Control Plan
- Burrowing Owl Relocation Area Management Plan
- Burrowing Owl Monitoring and Mitigation Plan
- Bighorn Sheep Mitigation Plan
- Evaporation Pond Design, Monitoring and Management Plan
- Channel Decommissioning and Reclamation Plan

Plans that are not currently required but need to be included:

- Revegetation plan for temporary disturbance (or included in the missing revegetation plan above)
- Decommissioning and Reclamation Plan (for permanent closure)
- Avian and Bat Protection Plan
- Plan for restoring sheet flow to the terrain downslope of the Project boundaries
- Desert Tortoise Management Plan for Mitigation Lands
- Project Hazardous Materials Plan
- Management Plan for Sand Dune/Fringe-toed Lizard

- Fire Plan

**Response:** The mitigation strategies that are outlined in Section 4.3.4 Mitigation, Project Design Features, BMPs, and Other Measures provide a framework for the future development of site-specific and activity-specific monitoring and management plans. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies. The performance criteria and reporting requirements that are identified as part of the project mitigation measures would allow for BLM's continued oversight of the development and implementation of these plans and the minimization of impacts resulting from the project.

The Plan of Development, which contains plans that have already been developed, will be available for review concurrently with the FEIS. It can be viewed at the BLM Barstow Field Office or online at <https://tesseractosolar.box.net/shared/j09n6g20f6>. A 30-day public comment period will be provided for both the Plan of Development and the FEIS.

## **G.7 CDCA Plan Amendment (20930, 20940)**

**Comment CURE-89:** The BLM is considering amending the CDCA Plan to allow for solar power development on the Project site. This is fundamentally incompatible with the BLM's Class L designation because the solar power plant will severely impact the topsoil and biological resources on the site by covering it with a network of paved and unpaved roads, SunCatcher dishes and other infrastructure. The fragile desert pavement will be destroyed and the site will not likely recover for centuries or longer. The Project will not be designed to accommodate sensitive, natural, scenic, ecological, and cultural resource values on the project site, as is required by the CDCA Limited Use designation. The Project is incompatible with the CDCA Plan designation adopted after a comprehensive planning effort and the BLM should not override the wisdom of this planning effort for the short-term benefits that may or may not accrue from the siting of this experimental power plant.

**Comment CURE-90:** Moreover, because the CDCA was developed as a concerted effort with many federal and state agencies and enormous public input, it is improper to amend the Plan in such a piecemeal fashion. This is especially true because of the large number of applicants vying for CDCA amendments for renewable power plants right now. There are a number of large solar and wind projects proposed on BLM land along the Interstate 40 corridor within a few miles of the Calico Solar Project site and more than 70 applications for solar projects covering over 650,000 acres pending with BLM in California. These applications should be considered on a programmatic basis to uphold and foster the planning goals embodied in the CDCA and to meet the requirements of FLPMA.

**Comment SC-52:** BLM Does Not Adequately Analyze the Project Under the Requirements of FLPMA and the CDCA.

FLPMA mandates the BLM to “take any action necessary to prevent unnecessary or undue degradation of the lands.” 43 U.S.C § 1732(b). To ensure the overall maintenance of environmental quality, the CDCA Plan must provide a desert-wide perspective of the planning decisions for each major resource or issue of public concern. Neither of [the existing ] amendments nor the CDCA Plan contemplated cumulative industrial development which could be as high as 500,000 to 1,000,000 acres as reflected in renewable energy development applications on public land in the California desert. Thus, there is no desert-wide planning perspective for land conversion of this scale and intensity . . . the proposed CDCA Plan Amendment does not take into account a desert-wide perspective; rather it simply proposes that “[p]ermission [is] granted to construct solar energy facility (proposed Calico Solar Project).” SA/DEIS A.6. Moreover, this action is proposed without any appropriate planning level guidance.

**Comment SC-53:** The Project is located in public lands that are designated as Class L. According to the CDCA Plan, “[m]ultiple-Use Class L (Limited Use) protects sensitive, natural, scenic, ecological, and cultural resource values. Public lands designated as Class L are managed to provide for generally lower intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished.” CDCA Plan 13. As such, the Plan should not be amended to allow for large scale industrial development unless “sensitive values are not diminished.” Here, however . . . the project has severe impacts, some of which are acknowledged by the SA/DEIS and some of which the SA/DEIS has failed to identify.

**Comment SC-54:** Under FLPMA BLM must “[p]repare and maintain on a continuing basis an inventory of all public lands and their resource and other values.” The inventory must be kept current “so as to reflect changes in conditions and to identify new and emerging resource and other values.” 43 U.S.C. § 1711(a). FLPMA requires that this inventory form the basis of the land use planning process. 43 U.S.C. § 1701(a)(2). BLM is violating its mandate by proposing a one-sentence Plan Amendment without adequately identifying the species and resources that will be affected by the Amendment.

**Comment SC-55:** Multiple areas of the SA/DEIS state that surveys are still ongoing or are concurrent with the public comment period; not only is the deferral of surveys contrary to NEPA, but it also violates the BLM’s responsibilities under FLPMA and the CDCA . . . vital data gaps illustrate that BLM cannot adequately show that they are preventing unnecessary degradation of public lands.

**Comment SC-56:** FLPMA requires that when the BLM is amending a land use plan, they must “use a systematic interdisciplinary approach to achieve integrated consideration of physical,

biological, economic, and other sciences . . . consider the relative scarcity of the values involved . . .” 43 U.S.C. § 1712(c). Here, the SA/DEIS has not assembled enough information and analysis and the responsible agencies do not have adequate guidance to determine: 1) the level of cumulative impacts to habitats, species and ecosystems, especially in the context of likely climate-change-necessitated habitat and species migration; 2) the limits of acceptable change, or; 3) how to avoid significant cumulative impacts that would foreclose future opportunities to sustain desert ecosystems and species.

**Comment SC-57:** BLM does not look into any alternative plan amendments, and appears to have looked at this amendment in isolation. However, under CDCA requirements, the BLM must determine “if alternative locations within the CDCA are available which would meet the applicant’s needs without requiring a change in the Plan’s classification...” and evaluate “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 121 . . . As the CDCA was designed to provide broad, regional guidance (CDCA Plan 11), the BLM should examine this project not only as to the effects on the Western Mojave, but also on the Mojave ecosystem and the CDCA as a whole. Without this analysis the overarching planning principles inherent in FLPMA and CDCA will be undermined. As such, this CDCA Plan Amendment should not be approved until the missing information is provided and the BLM provides a region-wide assessment per CDCA and FLPMA.

**Comment CBD-2:** The sum total of the plan amendment to the CDCA plan is one sentence: “Permission granted to construct solar energy facility (proposed Calico Solar Project).” DEIS at A-6. The DEIS then lists the criteria for consideration of the plan amendment and right of way application and BLM’s responses to each issue. DEIS at A-6 to A-9. While the Center appreciates BLM’s effort in this regard (which were absent in some earlier environmental documents prepared for large-scale solar projects), 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 appears 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. For example, such amendments were discussed in other DEISs for solar projects (including the Palen solar project) that would have increased protections for species and habitats as part of the mitigation for the project. Any plan amendments that are contemplated as part of a mitigation strategy should have also be explored by the BLM in this environmental review.

**Comment CBD-4:** Overall BLM has still failed to take a comprehensive look at the proposed plan amendment for the ROW to determine: 1) whether industrial scale projects are appropriate for any of the public lands in this area; 2) if so, how much of the public lands are suitable for such industrial uses given the need to balance other management goals including preservation of habitat and water resources; and 3) the location of the public lands suitable for such uses.

The BLM has also failed to explain how this proposed project would interface with the Solar PEIS process that is already under way and was intended to consider these questions. The Center remains concerned that the result of the current process is a piecemeal approach to project review with site-specific approvals made before planning is completed which threatens to undermine the “bioregional” approach in the CDCA Plan as a whole as well as violate the fundamental planning principles of FLPMA.

**Comment CBD-5:** The DEIS Fails to Adequately Address the Plan Amendment in the Context of the CDCA Plan. 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 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). 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. See DEIS at A-8.

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 multiple “no action” alternatives, a reduced acreage alternative, and an “Avoidance of Donated and Acquired Lands Alternative” as part of the NEPA analysis failed to cure this omission. 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. See DEIS at A-8. 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 multiple “no action” alternatives, a reduced acreage alternative, and an “Avoidance of Donated and Acquired Lands Alternative” as part of the NEPA analysis failed to cure this omission.

**Comment CBD-6:** The DEIS Fails to Adequately Address Impacts to Multiple Use Class M and L Lands and Loss of Multiple Use in Favor of a Single Use for Industrial Purposes. The proposed project is a high-intensity, single use of resources that will displace all other uses and that will significantly diminish (indeed, completely destroy) over 8,000 acres of habitat including high density occupied desert tortoise habitat and other resources and values. This use is clearly incompatible with class L lands and may also be incompatible with Class M lands at this scale. Although the DEIS does consider alternative configurations that would lessen impacts to some resources, it still fails to consider how the loss of this large amount of important habitat will affect the biological resources of this area. 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.

**Response:** The FEIS contains descriptions of the current guidelines and elements of the CDCA Plan, procedures and standards for Plan amendment, and descriptions of how the Proposed Action and alternatives would affect and be affected by the CDCA Plan. The guidelines for management of Multiple Use Class L and M lands are discussed. Amendments to the CDCA Plan, including the Western Mojave (WEMO) Plan are also discussed in relation to resource management and the Calico Solar Project.

## **G.8 Air Quality**

**Comment CBD-58:** The DEIS also fails to adequately address other air quality issues most importantly PM10 both during construction and operation which is of particular concern in this area which is already in nonattainment for PM10.

The DEIS also fails to analyze the impacts to air quality and GHG emissions should a fire occur due to the extensive on-site hydrogen system. Of particular concern is that plans to minimize air quality impacts from construction, operations, and decommissioning are all deferred to later development with no clear standards.

**Comment Brock-5:** [What is the] plan for continuing dust abatement resulting from disturbance of land?

**Comment CBD-43:** While desert pavements are mentioned extensively as occurring on the proposed project site (DEIS at in the cultural section), quantitative acreage of pavement are not

identified. No discussion of the impact to air quality from the removal of those naturally occurring desert pavement is provided.

**Response:** Emissions control, including fugitive dust (PM10) during construction, operation and decommissioning of the Calico Solar Project is discussed in Section 4.2. of the FEIS. Additional information on Greenhouse Gas (GHG) emissions is also contained in Section 4.4 of the FEIS.

### **G.8.1 Climate Change (40500)**

**Comment CURE-62:** The DEIS failed to consider the role that climate change will have in shaping and exacerbating the Project's impacts on the environment. Intense summer storms are responsible for a majority of the runoff that occurs at the project site. Climate change is likely to lead to significant increases in rainfall quantity, intensity and erosivity. These significant increases in rainfall quantity, intensity, and erosivity will have a profound impact on the landscape, especially on the morphology of the washes where solar dishes are proposed. This would significantly impact the structural stability and flood conditions for the solar dishes placed in the washes. The large scale erosion caused by the Project construction and operation will be exacerbated by conditions resulting from climate change. Additionally, the erosion will subsequently have significant air quality impacts to downwind resources. The DEIS must analyze the reasonably foreseeable impacts to the affected environment over the life of the Project and how the Project's impacts are likely to be exacerbated by regional processes that will result from climate change.

**Comment Poff-4:** Climate change can have an influential role in shaping the project's impacts on the environment in terms of hydrologic response and soil erosion. Provided that intense summer storms are responsible for a majority of the runoff that occurs at the project site, the Nature Conservancy Climate Wizard (<http://www.climatewizard.org/>) would suggest that summer rainfall in southeastern California may increase by as much as 50% by 2080 in the summer, which could be accompanied by significant increases in rainfall intensity and erosivity (Angel et al. 2005). Significant increases in rainfall quantity, intensity, and erosivity will have a profound impact on the landscape, especially on the morphology of the washes where solar dishes are proposed. Changes to the morphology of the washes would significantly impact the structural stability and flood preparedness of the solar dishes placed in the washes. This large scale erosion will subsequently have significant air quality impacts to downwind resources if project design and implemented BMPs were not adaptively managed to deal with these future changes in the climate.

While rainfall intensity is predicted to increase, at the same time recharge is predicted to decrease for several reason. (1) Aquifer recharge in the Mojave Desert occurs mostly in the winter when rainfall events are low in intensity and long in duration. However, the shift from precipitation events occurring less in the winter and more in the summer will lead to more run-off

and less infiltration, which equals less recharge. (2) Increased temperatures will lead to increased evapotranspiration, even if precipitation remains unchanged (Seager et al. 2007, Diffenbaugh 2008, Kerr 2008) . . . the increase in variability in precipitation patterns are already noticeable. While there have been distinct wet (1910s and 1940s) and dry (1920s and 1950s) periods over the past century, the wettest and driest year have already occurred this century (within the past 10 years).

**Comment Poff-8:** Climate change, and its potential to amplifying project-related impacts as described in Sections 2.33, 3.1.1, 3.1.2 and 3.1.3, was not considered in the DEIS. Especially for Section 3.1.3, this could mean that the estimates for the aquifer recharge should be approximately 50% lower by the end of the project lifespan.

**Comment Poff-13:** Climate change, and its potential to amplify downstream project -related impacts as described in Sections 3,2.1 and 3.2.2 was not considered in the DEIS. Neither were the implications of less aquifer recharge by the predicted decrease in precipitation/infiltration. Amplification of project-related impacts means the impacts will be more severe and long-lasting under potential climate change scenarios.

**Comment Poff-16:** Climate change, and its potential to amplifying cumulative project-related impacts, was not considered in the DEIS.

**Comment DEF-36:** The DEIS does not analyze the impacts climate change will have on species, and the effects of climate change on habitats that would be required to sustain viable populations of at-risk species. This “hard look” requirement of NEPA requires federal agencies to consider climate change in NEPA documents. BLM must consider the effect of the proposed action on climate change, the effect of climate change on the proposed action and the effect of climate change on the affected environment. Analysis of the potential impacts of climate change on a proposed action and the environment is necessary to assess and reduce the vulnerabilities of the proposed action to climate change, to integrate climate change adaptation into the proposed action and alternatives and to produce accurate predictions of environmental consequences of the proposed action and alternatives. It will aid BLM in adequately preparing the proposed action or planning area for the inevitability of climate change.

**Comment DEF-37:** BLM should expand the analysis of the effects of the proposed project and each alternative on biological resources and their ability to adapt to climate change, such as occupation and use of habitat on a regional scale that may be essential in sustaining at-risk species. Such an expanded analysis should include cumulative effects and mitigation measures, including those associated with climate change. Although the DEIS addressed climate change, we encourage a more in-depth analysis of the importance of the habitats and habitat connectivity in sustaining species diversity and landscape level movements as temperatures in the Southwestern U.S. rise significantly over the next several decades, as predicted in numerous studies. BLM should include observed and projected impacts of climate

change in the region – assess whether climate change has affected, is affecting, or will foreseeably affect each resource and incorporate that information into the analysis of each resource.

**Comment DEF-38:** BLM must consider the following impacts of climate change on the affected environment:

- Fish and Wildlife: habitat, composition, shifts to higher elevation/latitudes, reduced vegetation food sources, altered migration routes, less available water sources, streamflow change impacts on migratory aquatic species;
- Increases in the frequency, severity, duration and extent of extreme events such as drought, flooding, storms and heat waves;
- Soil: erosion, impacts to soil moisture, fugitive dust concentrations;
- Threatened and Endangered Species: effects of moisture stress on species, changes to migration patterns;
- Vegetation: Preferential CO<sub>2</sub> metabolites, species migration, establishment of invasive species, pathogens, warm/cool season plants, growing season;
- Water: changes to availability, quality, quantity, precipitation patterns, flow regimes dilution, water temperatures, elevation of snow pack, annual snow pack longevity, groundwater elevations, water rights;
- Wildfire: fire frequency, fuel load quantity and composition, fuel temperatures, relative humidity, water availability (e.g. for suppression), tree mortality due to drought and infestations, increased severe precipitation/soil loss; and
- Invasive species.

**Comment CBD-13:** In its discussion of the need for renewable energy production the DEIS fails to 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, 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 major washes and fragile desert resources

could undermine a meaningful climate change adaptation strategy with a poorly executed climate change mitigation strategy. Moreover, the project itself will emit greenhouse gases and the DEIS contains no discussion of ways to avoid, minimize or offset these emissions although such mitigation is clearly feasible and other technologies have far less or no GHG emissions during operations are also likely to have fewer emissions when calculated on a lifecycle basis.

**Comment CBD-57:** There is no discussion of reducing these sources by using alternative fuels or highly efficient vehicles and equipment. The DEIS fails to state the actual amount of SF6 that is estimated to leak from equipment and provides only that 384.42 MTCO<sub>2</sub>E is expected in emissions each year. No information is provided on the calculation. Moreover, the DEIS does not analyze any alternatives to avoid or minimize the long-term emissions of this powerful GHG from operations and no mitigation measures are provided.

BLM fails to identify any significant GHG emissions and therefore does not provide for avoidance, minimization, or mitigation. BLM has also failed to include the loss of carbon sequestration from soils in its calculations or to provide a lifecycle analysis of GHG emissions that include manufacturing and disposal. Moreover, it is undisputed that in the near-term GHG emissions will increase emissions during construction, and in the manufacturing and transportation of the components. BLM fails to consider any alternatives to the project that would minimize such emissions or to require that these near-term emissions be off set in any way.

**Response:** The FEIS provides additional discussion of the Calico Solar Project and climate change impacts. In addition, impacts associated with habitat fragmentation and connectivity are included in Section 4.2.2. Air quality mitigation and BMPs would help reduce criteria pollutants which contribute to the formation of GHGs. Since the proposed project will result in a net beneficial impact on GHG emissions and climate change, it therefore does not contribute meaningfully to this cumulative effect. The understanding of how and when climate change may result in noticeable effects on the different species and habitats within the Mohave Desert is unknown and speculative at this time. Similarly, changes in hydrologic regimes for a specific area are unknown at this time. Based on these reasons, BLM has determined that discussion of climate change on hydrological regimes and biological resources are not necessary in this analysis.

## **G.9 Biological Resources (30000)**

### **G.9.1 Biological Resources Generally (30000)**

**Comment CURE-13:** Staff recognizes that although it attempted to analyze impacts to the vegetation in the jurisdictional drainages, rare plants, desert tortoise and burrowing owl on the

project site, results from upcoming surveys may alter its analysis. Moreover, the SA could not fully analyze impacts to Nelson's bighorn sheep, golden eagle, and MFTL. Although the SA attempts to analyze the impacts and formulate mitigation measures for these species, this analysis may bear little resemblance to the analysis and mitigation that will be required after significant impacts are actually identified through an adequate survey effort. Hence, the SA fails to provide an adequate analysis and identification of mitigation for biological resources. Once the Applicant submits the results of the surveys and all parties have an opportunity to review this analysis, the SA must be revised and recirculated for public review and comment.

**Comment CURE-67:** The DEIS explained that results from upcoming surveys may alter its impact analysis on vegetation in the jurisdictional drainages, rare plants, desert tortoise and burrowing owl on the project site. Moreover, the DEIS could not fully analyze impacts to Nelson's bighorn sheep, golden eagle, and MFTL because the baseline data had not been provided by the Applicant. Although the DEIS attempts to analyze the impacts and formulate mitigation measures for these species, this analysis may bear little resemblance to the analysis and mitigation that will be required after significant impacts are actually identified through an adequate survey effort. Hence, the DEIS fails to provide an adequate analysis and identification of mitigation for biological resources. Once the Applicant submits the results of the surveys and the BLM has an opportunity to review and analyze this data, the BLM's analysis must be incorporated into a revised DEIS that is recirculated for public review and comment.

**Comment WWP-1:** Western Watersheds Project submitted timely scoping comments for the project on July 7, 2009. In the comments, we reviewed a number of issues of concern posed by this massive project. This included ranges of alternatives, direct, indirect and cumulative impacts on biological resources including desert tortoise, desert bighorn sheep, Mojave fringe-toed lizard, the white-margined beardtongue, and other sensitive and at risk species including the Mohave ground squirrel.

**Comment DEF-17:** As a general matter, Defenders is greatly concerned that BLM and CEC are publishing environmental assessments for solar projects without appropriate biological resource survey information. This is contrary to the most basic purpose of NEPA and CEQA, which is to facilitate the availability of information for agency actions that may significantly affect the environment. Defenders urges BLM to only release a DEIS when the requisite informational needs have been satisfied.

**Comment SC-1:** The following are a sample of the acknowledged areas where there is missing data in the SA/DEIS.

- The translocation effort for the desert tortoise is "the critical path for commencement of construction activities." SA/DEIS C.2-6. Yet, the translocation plan is still outstanding. *Id.*

- The Applicant has not completed desert tortoise surveys of the entire project area. SA/DEIS C.2-6.
- The Applicant first characterized the project site as supporting 60-70 desert tortoises (SA/DEIS C.2-63). Staff originally believed there to be at least 100 tortoises on the project site. SA/DEIS C.2-27. Recent studies, however, identify as many as 340 tortoises on the site.
- Information related to translocation of the tortoise, specifically the disease testing limit of 5km, is missing and as such the efficacy of that program cannot be assessed. SA/DEIS C.2-7.
- Staff asserts that bighorn sheep move through the project site to access a guzzler in the Cady Mountains, and that this access must remain open; however, no information as to how that will occur is given. SA/DEIS C.2-90.
- No focused bighorn sheep surveys have been conducted, therefore there is little to no information as to the available movement corridors. SA/DEIS C.2-89.
- The Applicant did not conduct wintering bird surveys. SA/DEIS C.2-75.
- A complete survey for golden eagle nesting sites has not been conducted. SA/DEIS C.2-79.
- The Applicant “has not provided specific mitigation to avoid impacts to golden eagles or to mitigate the loss of foraging habitat.” SA/DEIS C.2-79.
- The Applicant has not completed a final survey of the number of burrowing owls on the project site, and has not determined their breeding status. SA/DEIS C.2-81.
- The Applicant has not prepared any specific mitigation measures for significant impacts to State waters. SA/DEIS C.2-97.
- Staff noted “many defined drainages,” in the project area, but the Applicant has not yet prepared a Streambed Alteration Agreement. SA/DEIS C.2-10.
- Although the Applicant reported on vegetation and habitat found on site, it “did not indicate the vegetation mapping methodology or minimum mapping units.” SA/DEIS C.2-13.
- The Applicant also failed to conduct vegetation mapping of the jurisdictional drainages, or botanical surveys of the entire project area. SA/DEIS C.2-6. In fact,

according to Staff, there was vegetation present that had not been mapped by the applicant. SA/DEIS C.2-13.

- The Applicant has yet to provide “information necessary to complete development of requirements for dredge and fill in waters of the state.” SA/DEIS C.7-2.
- Waste Discharge Requirements have not been developed. SA/DEIS C.7-2.
- Biological Resources Mitigation and Monitoring Plan, Revegetation Plan, Decommissioning Plan, Drainage Erosion and Sedimentation Control Plan, Groundwater Level Monitoring and Reporting Plan, Programmatic Agreement, and other essential Project elements have not been developed due to missing critical data. These and other omissions and data gaps violate both NEPA and CEQA.

The amount of missing, incomplete, or incorrect data requires the BLM and the Commission to deny the Applicant’s proposal, or at the very least, complete the SA/DEIS with all of the necessary information and recirculate for public review and comment.

**Comment CBD-9:** here BLM has failed to compile an adequate inventory of the resources of the public lands that could be affected by the proposed project before preparing the DEIS (including, e.g., desert tortoise, rare plant surveys including late-summer/early-fall flowering plants, Mojave fringe-toed lizard, desert bighorn sheep and other biological resources) which is necessary in order to adequately assess the impacts to resources of these public lands in light of the proposed plan amendment and BLM has also failed to adequately analyze impacts on known resources... a revised DEIS or supplemental DEIS must be prepared to include the new information including new survey data about the resources of the site and potential impacts of the project on resources of our public land and water, and that document must be circulated for public review and comment.

**Comment CBD-14:** The DEIS fails to provide adequate baseline information and description of the environmental setting in many areas including in particular the status of rare plants, animals and communities.

The baseline descriptions in the DEIS are inadequate particularly for the areas where surveys are ongoing...Because of the deficiencies of the baseline data for the proposed project area, the DEIS fails to adequately describe the environmental baseline. Many of the rare and common but essential species and habitats have incomplete and/or vague on-site descriptions that make determining the proposed project’s impacts difficult at best. Some of the rare species/habitats baseline conditions are totally absent, therefore no impact assessment is provided either. A supplemental document is required to fully identify the baseline conditions of the site, and that baseline needs to be used to evaluate the impacts of the proposed project

**Response:** Additional information on biological resources is provided in the FEIS. These comments identify multiple issues; each of these items is also the subject of specific comments to which responses are provided in the following species and issue-specific subsections.

### **G.9.1.1 Consultation (30000, 11100, 11220)**

Comment CURE-88: The DEIS fails to disclose the details of BLM's required consultation under the ESA with the USFWS for the federally and State threatened desert tortoise. In fact, at the time the DEIS was issued, the Biological Assessment had not been accepted as complete. The DEIS should be revised to incorporate USFWS's biological opinion and incidental take permit under Section 7 of the ESA. Without this analysis, the DEIS is inadequate. The BLM must disclose and analyze this analysis in a revised DEIS that is circulated to the public for review and comment . . .

In sum, the DEIS must disclose the status of BLM consultation with the USFWS and must incorporate the terms and conditions imposed by the USFWS. Without this information, it is impossible for the public to meaningfully assess the environmental effects and mitigation for impacts to the desert tortoise. Furthermore, without full public disclosure and opportunity for comment, USFWS will be required to conduct further environmental review under NEPA.

**Response:** The BLM has initiated formal consultation under the Endangered Species Act to address adverse impacts to the desert tortoise and its designated critical habitat. Upon the completion of the Endangered Species Act consultation, the BLM will incorporate the terms and conditions of the US Fish and Wildlife Service's Biological Opinion, as well as the terms and conditions of the California Department of Fish and Game's Incidental Take Permit, into the project mitigation requirements.

### **G.9.2 Wildlife (30200)**

#### **G.9.2.1 Wildlife Habitat (30214)**

**Comment WWP-4:** The SA does reveal some troubling issues specific to the project site. The project site includes habitat acquired as compensation for other projects. We are extremely concerned about the implications of this to achieving the fully mitigated standard since this requires protection of replacement habitat for CESA listed species in perpetuity.

**Comment DEF-3:** The DEIS does not adequately address the significant loss of habitat and cumulatively significant impacts of a project that spans more than 8,000 acres of relatively

undisturbed desert land. Many of these impacts have been determined to be “significant even with the application of mitigation.”

**Response:** The donated and acquired lands that occur within the project footprint were not acquired as compensation for other projects; however, impacts to these donated and acquired lands would be addressed through the requirement for additional compensatory mitigation.

### **G.9.2.2 Mojave Fringetoed Lizards (30213)**

**Comment CURE-7:** The SA fails to establish an accurate baseline for impacts to Mojave fringetoed lizard (MFTL). Although the Applicant surveyed portions of the 8,230 acre site from June 2, 2008 through June 6, 2008 and found 16.9 acres of MFTL habitat, “Staff believes the applicant has underestimated the amount of habitat that can be used by the species.” Staff bases this conclusion on Staff’s reconnaissance survey of the Project site in January 2010.

The Applicant’s inadequate survey of the site (based upon incorrect assumptions about what constitutes habitat available for use by MFTL) coupled with Staff’s one day reconnaissance survey of a nearly thirteen square mile site is not sufficient information to establish a baseline for project impacts under CEQA.

Thus, the SA is inadequate because it does not establish an adequate baseline to determine the level of mitigation for impacts to MFTL. The mitigation in the SA is arbitrary and is not based upon data due to the Applicant’s failure to provide sufficient data to establish a baseline. The Applicant must conduct additional surveys and circulate the results of those surveys so that all parties have an opportunity to review this analysis. Until that occurs, the Staff has not established a scientifically or legally defensible baseline and the SA fails as an informational document.

**Comment CURE-54:** The DEIS fails to establish an accurate baseline for impacts to Mojave fringe-toed lizard (“MFTL”). Although the Applicant surveyed portions of the 8,230 acre site from June 2, 2008 through June 6, 2008 and found 16.9 acres of MFTL habitat, the DEIS explains that “the applicant has underestimated the amount of habitat that can be used by the species.” The Applicant’s inadequate survey of the site (based upon incorrect assumptions about what constitutes habitat available for use by MFTL) is not sufficient information to establish a baseline for project impacts under NEPA.

Thus, the DEIS is inadequate because it does not adequately establish the affected environment to measure the level of mitigation for impacts to MFTL. The mitigation proposed in the DEIS is arbitrary and is not based upon data due to the Applicant’s failure to provide sufficient data to establish a baseline. The Applicant must conduct additional surveys and circulate the results of those surveys so that all parties have an opportunity to review this

analysis. Until that occurs, the BLM has not established a scientifically or legally defensible baseline, and the DEIS fails as an informational document.

**Comment Cashen-12:** The Applicant considers the 8,260-acre project site to support approximately 16.9 acres of Mojave fringe-toed lizard habitat. However, staff conducted a reconnaissance survey of the Project site and believes the Applicant has underestimated the amount of habitat that can be utilized by this species. The DEIS reports “[f]ine-grained friable sand occurs in many areas adjacent to the identified dune complex, both within the numerous drainages that cross the project site and in small patches of windblown sand. Similarly, soft friable sands with small patches of micro dunes occur within the creosote bush scrub habitat across much of the lower project site.”

The DEIS concluded implementation of staff’s proposed mitigation would compensate for the underestimation of suitable habitat. Proposed mitigation includes acquisition of compensation lands at a 5:1 ratio (i.e., 84.5 acres). However, the DEIS lacks support for the conclusion that compensation at a 5:1 ratio would accurately account for the Applicant’s underestimation of fringe-toed lizard habitat. Specifically, the DEIS lacks information on how staff conducted its reconnaissance survey, including the areas that were evaluated, and whether any quantitative data were collected. Information obtained through a site investigation conducted by members of Basin and Range Watch suggests the Project would directly impact more than 84.5 acres of fringetoed lizard habitat.

**Comment Cashen-13:** The DEIS concluded “[p]roject construction, including the SunCatchers, fences, and drainage structures would likely alter the aeolian transport of sand across the site to downwind habitat within the adjacent Pisgah Crater ACEC, immediately east of the project boundary, though available data are insufficient to quantify this potential impact.” Because Mojave fringe-toed lizards are dependent on aeolian sand, any Project-induced changes to sand transport would constitute a potentially significant impact. As noted in the DEIS, there currently are insufficient data to quantify this impact. Yet, the DEIS has no provisions for attainment of these data, and thus it appears the environmental consequences of the Project on downwind habitat (which also provides habitat for sensitive plant species) would remain unassessed and unmitigated.

**Comment Cashen-14:** The local, regional, and rangewide significance of the Project’s indirect impacts to Mojave fringe-toed lizards and their habitat is not articulated in the DEIS. Furthermore, despite the numerous indirect impacts of the Project on Mojave fringe-toed lizards and their habitat, and despite the potential severity of these impacts, the DEIS does not propose any mitigation for indirect impacts.

In contrast, the DEIS does propose mitigation for direct Project impacts to Mojave fringe-toed lizards and their habitat. This includes acquisition of compensation lands and several criteria for land selection. Of particular importance is the criterion that compensation lands be suitable

habitat connected to lands currently occupied by Mojave fringe-toed lizards (i.e., the compensation lands need not be currently occupied). Thus, the DEIS suggests acquisition of unoccupied habitat would mitigate direct impacts to occupied habitat. This approach requires justification. Cablk and Heaton (2002) provided scientific evidence that many other factors, besides habitat variables that can be measured, play an important role in presence of Mojave fringe-toed lizards. This leads to the logical inference that if suitable habitat is unoccupied, there is a reason. Unless the reason is identified (and possibly mediated), the DEIS cannot presume unoccupied compensation lands would mitigate Project impacts.

**Comment WWP-10:** The revised CEQA document should fully analyze impacts to Mojave fringe-toed lizard in compliance with the West Mojave Plan’s conservation strategy and other applicable governing plans. This requires full documentation of Mojave fringe-toed lizard occurrences. The analysis must include full consideration of blowsand habitat, sand movement in the area, and the impacts of project structures that are required to protect the Pisgah Mojave fringe-toed lizard populations (West Mojave Plan at 2-186).

**Comment SC-7:** The Applicant originally asserted that out of the over 8,000 acres for the project, only about 16.9 acres had suitable habitat for the Mojave fringetoe lizard. SA/DEIS C.2-29. Staff, however, believes the Applicant has underestimated the amount of habitat that is available to this species. Staff proposes a mitigation ratio of 5:1, requiring the acquisition and dedication in perpetuity of 84.5 acres of suitable dune habitat. There is no information verifying that this mitigation habitat even exists. The SA/DEIS fails to provide any information addressing potential locations of mitigation habitat. This fails for information purposes under NEPA . . .

**Comment SC-8:** the SA/DEIS fails to address the potential for the Project to block fluvial and aeolian sand transport to downstream and downwind dunes. This could cause significant offsite impacts to Mojave fringe-toed lizard habitat, resulting in a much larger impact than is examined in the SA/DEIS. The SA/DEIS must be revised and this pertinent information must be provided to the public.

**Comment CBD-27:** The DEIS fails to identify the actual amount of acres of habitat onsite for the Mojave fringe-toed lizard. The Center understands that there may be approximately four times as much habitat for this species as disclosed in the DEIS, particularly when connectivity between the more evident sand dune areas is taken into account.

**Comment CBD-28:** The DEIS also notes that “The project would interfere with both aeolian and fluvial sand deposits on and near the site, which would result in habitat loss and degradation for this and other sand-associated species and would result in direct impacts to occupied habitat.” (DEIS at C.2-4). No impact analysis of this proposed project on this important sand transport process was included in the DEIS. No mitigation was proposed to off-set impacts to this unique habitat type that supports the Mojave fringe-toed lizard (and other dune species).

Other large-scale solar projects are also proposed on or around dunes that support Mojave fringe-toed lizards and the sand transport systems on which they rely. Studies of Aeolian transport evaluations have been done for other projects and projects have been redesigned to avoid and minimize impacts to these important sand transport systems and dune habitats.<sup>9</sup> Mitigation has also been proposed for impacts to the sand transport systems. This DEIS completely fails to adequately address impacts to dunes and importantly the sand transport systems that sustain them. These important issues must be clearly addressed in a revised or supplemental EIS.

**Comment CBD-29:** The DEIS fails to evaluate the impacts of the proposed project on Mojave fringe-toed lizard outside of the project site. As Barrows et al. (2006) 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.

**Response:** There has been a more refined estimate of the acreage of potentially suitable Mojave fringe-toed lizard habitat within the project footprint since the publication of the SA/DEIS. This information can be found in Section 3.3.5.4 Special-Status Species. Impacts to Mojave fringe-toed lizards are discussed for each alternative in Section 4.3.2 Direct and Indirect Impacts. Mitigation measures for the Mojave fringe-toed lizard have been revised; the revised measures can be found in Section 4.3.4 Mitigation, Project Design Features, BMPs, and Other Measures. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

### **G.9.2.3 Bighorn Sheep (30213)**

**Comment CURE-8:** The SA fails to establish an accurate baseline for impacts to Nelson's bighorn sheep because the Applicant failed to provide sufficient information on Nelson's bighorn sheep in the area including the number of sheep and the extent of the use on the Project's site for forage and movement. The Applicant detected 62 sheep within 10 miles of the proposed project site during golden eagle surveys. Surveys for bighorn sheep were reported after the SA was published. Although the SA attempts to minimize and mitigate impacts to Nelson's bighorn sheep, this mitigation may not be adequate to mitigate impacts to Nelson's bighorn sheep to a level that is less than significant. During the SA workshop, a member of the Society for the Conservation of Bighorn Sheep explained that the mitigation was inadequate and the Applicant offered that additional mitigation may be provided.

Thus, the SA is inadequate because it does not establish an adequate baseline to determine the level of mitigation for impacts to Nelson's bighorn sheep. The mitigation in the SA is arbitrary

and is not based upon data due to the Applicant's failure to provide sufficient data to establish a baseline. Once the Applicant submits the results of the surveys and all parties have an opportunity to review this analysis, the SA must be revised and recirculated for public review and comment.

**Comment CURE-55:** The DEIS fails to establish an accurate baseline for impacts to Nelson's bighorn sheep because the Applicant failed to provide sufficient information on Nelson's bighorn sheep in the area, including the number of sheep and the extent of the use on the Project's site for forage and movement. The Applicant detected 62 sheep within 10 miles of the proposed project site during golden eagle surveys, but these surveys for bighorn sheep were reported after the DEIS was published. Although the DEIS attempts to minimize and mitigate impacts to Nelson's bighorn sheep, it does so arbitrarily without the baseline data needed to evaluate the significance of the impacts. This mitigation may not be adequate to mitigate impacts to Nelson's bighorn sheep to a level that is less than significant. In fact, during a workshop to discuss the newly released DEIS, a member of the Society for the Conservation of Bighorn Sheep explained that the mitigation diverged from what the Applicant had initially committed to and was inadequate to mitigate Project impacts to Nelson's bighorn sheep. At that workshop, the Applicant offered that additional mitigation may be provided.

Thus, the DEIS is inadequate because it does not establish an adequate baseline to determine the significance of the impact or the level of mitigation necessary to mitigate impacts to Nelson's bighorn sheep. To clarify, the DEIS is not based upon inadequate data because data could not be obtained, but because the Applicant failed to provide it and the BLM sought to rush the release of the DEIS to qualify the Project for stimulus funding. Thus, the mitigation in the DEIS is arbitrary and is not based upon available data. Once the Applicant submits the results of the surveys and all parties have an opportunity to review this analysis, the DEIS must be revised to incorporate this data and recirculated for public review and comment.

**Comment Cashen-8:** The Project site is located on a broad alluvial fan. According to the DEIS, bighorn sheep use alluvial fans for breeding and feeding activities. The DEIS concluded approximately 458.3 acres of suitable habitat is potentially being utilized by bighorn sheep along the foothills at the northeast boundary of the Project site with an additional 404.5 acres of suitable habitat within the 1000-foot buffer around the Project site. These acreage values were based on a subjective opinion, and were never substantiated by methods, data, or analyses. Based on the scientific literature, the amount of potential bighorn sheep habitat that would be lost as a result of the Project is likely much greater than what is reported in the DEIS.

**Comment Cashen-9:** First, the rationale for the proposed location of the mitigation water source is uncertain, and very likely would not serve to draw sheep away from the Project site as suggested. In fact, it does not appear that the location for the guzzler has been identified beyond "the eastern part of the Cady Mountains." To enhance the potential for effective mitigation, the DEIS must provide scientific (rather than arbitrary) rationale for what it stipulates

would reduce significant impacts. A detailed, long-term investigation of habitat selection and demography of bighorn sheep should be initiated, and those data then used to implement meaningful mitigation.

Second, mitigation in the form of a single guzzler is inadequate to offset the loss of foraging, breeding, and dispersal habitat impacted by the Project. In particular, water does not replace food. Research has shown that forage biomass did not differ between control washes and washes with catchments used by mule deer and desert bighorn sheep.<sup>8</sup> The time period surrounding lambing and nursing is very demanding in terms of the energy and protein required by bighorn ewes. Failure to acquire sufficient nutrients during the last two months of gestation and during nursing can adversely affect the survival of newborn ungulates. Elimination of forage obtained during the critical late gestation period is a significant impact that is not offset by provision of an artificial water source.

Third, construction of a guzzler as mitigation is not appropriate unless success criteria are established, and funds for its continued functionality are dedicated prior to Project development.

Fourth, the DEIS does not indicate whether installation of a guzzler would require NEPA review, and whether it would be permissible within the Cady Mountains Wilderness Area.

Finally, viable metapopulation dynamics are known to be essential in the recovery of bighorn sheep populations. Additional information is needed to make an inference on whether the Project will impact these dynamics. In addition to potentially impacting sheep movement between the Cady and Bristol Mountains, the Project would impact opportunities for sheep movement between the Cady Mountains and mountains to the south of Interstate 40 (the railroad and interstate are not impenetrable barriers to sheep movement).

**Comment WWP-9:** The Cady Mountains WSA has a native population of bighorn sheep that use the site on a seasonal basis for foraging, drinking, and movement. The West Mojave Plan's conservation strategy calls for protecting springs used by bighorn sheep and calls for providing methods for crossing freeways and other barriers to dispersal. The revised CEQA document should review all direct, indirect and cumulative impacts to this species including impacts to linkage habitat and connectivity issues, and compliance with the WMP's conservation strategy. It should include mitigation measures such as land bridges to compensate for impacts to connectivity.

**Comment DEF-30:** Defenders also urges BLM to assess impacts to Nelson's bighorn sheep, a BLM sensitive species. Bighorn sheep are well documented in the Cady Mountains where there is a substantial population of at least 300 individuals. There is evidence showing that bighorn sheep use the project area as foraging habitat. The project would entail loss of at least 458.8 acres of foraging habitat. Of perhaps greater concern is the project's impact on wildlife corridors for bighorn sheep. Therefore, we strongly urge that this project analyze and address impacts to

bighorn sheep and their ability to move across the project site. On one site visit, Defenders staff observed several locations under I-40 that were large enough for sheep to pass through easily. Sheep may be using those underpasses to migrate to the Ord Mountains (Dr. John Wehausen, pers. comm.). Construction and operation of the Calico Solar Project could reduce both foraging opportunities for bighorn and narrow or completely obstruct movement corridors between the Cady Mountains and the Ord Mountains.

**Comment DEF-31:** The mitigation proposed in the DEIS is limited to construction of an artificial water source. This measure will not mitigate impacts to bighorn sheep foraging habitat and wildlife corridors and may have the negative effect of attracting ravens. Acceptable mitigation requirements are those that avoid, minimize, rectify, reduce or compensate for an impact. The artificial water source accomplishes none of these benefits in connection with the potential habitat loss. The EIS should clarify the manner in which water sources will effectively mitigate for habitat loss and impacts to movement corridors. Defenders believes that compensatory mitigation for bighorn sheep should consist of habitat acquisition and enhancement.

**Comment SC-9:** The SA/DEIS provides almost no information as to how the construction of the project will affect the bighorn sheep, and simply reaches the conclusion that the effects of the project will be less than significant. SA/DEIS C.2-90. Even with the small amount of data provided in the SA/DEIS, this conclusion is not supported . . . “Bighorn sheep are known to move from the Cady Mountains to winter ranges in the Bristol Mountains in the East.” SA/DEIS C.2-88. The only analysis of this information is that “there is a paucity of solid data documenting the movement of sheep in this area.” SA/DEIS C.2-89. Even with relocating part of the project perimeter, staff still acknowledged “that human activities may limit use of the site by bighorn sheep.” *Id.* This concern is especially important because ewes with lambs are particularly sensitive to disturbance, and ewes with lambs were detected near the project site. *Id.* The SA/DEIS does not go on to analyze this information or suggest mitigation measures to address these facts. Under NEPA and CEQA, an agency must present the public with useful information, (42 U.S.C. § 4332, 14 Cal. Code Regs. §§ 15151, 15144.); therefore, the incomplete data on the impacts to the bighorn sheep renders the document deficient as a matter of law.

**Comment SC-10:** Proposed mitigation for bighorn sheep is also inadequate: only a guzzler is proposed, which may have little or no impact on mitigating impacts such as loss of foraging habitat or blocking migration between the Cady and Bristol Mountains. Clearly a new guzzler alone doesn’t mitigate direct, indirect and cumulative impacts to bighorn and habitat connectivity to a level of insignificance. However, absent thorough survey data it is impossible to design mitigation measures for impacts that cannot be estimated.

**Comment CBD-22:** The DEIS fails to comprehensively assess the impacts from of the proposed project on the local desert bighorn sheep population. Without this basic information about the use of the proposed project site and adjacent areas by bighorn it is impossible to assess the extent of the impacts to the bighorn population in this area from the proposed

project. Without site-specific data on the details of habitat use patterns of the bighorn in the area, the DEIS cannot properly assess the importance of the alluvial fan and wash habitat to the bighorn population or the impact of its loss on the population.

**Comment CBD-23:** The proposed project may affect foraging areas and movement corridors for bighorn, as well as fragmenting currently intact habitat. The DEIS proposes a wildlife drinker as a mitigation measure. However, the DEIS provides no information documenting the need for the proposed wildlife drinker. Is the Cady range lacking in available water sources accessible to bighorn sheep? Moreover there is no discussion of how, if at all, this mitigation proposal could actually mitigate for the loss of forage and movement areas and fragmentation of habitat by the construction of the proposed solar project on over 8,000 acres.

For other rare species addressed in the document the mitigation involves the purchase and future protection of an equal amount of acreage or more that is being impacted. No such suggestion is listed for bighorn, although even the purchase of lands elsewhere will do nothing for the foraging area along the base of the Cady mountains. The mitigation measure proposed does not relate to the loss of alluvial fan foraging habitat where the Project would be constructed.

**Comment CBD-24:** The DEIS identifies that noise levels from the 34,000 SunCatcher Stirling engines operating on site would affect off-site resources “which would be expected to adversely affect Nelson’s bighorn sheep” (DEIS at C.2-2), yet no mitigation is specifically identified for this impact.

**Comment CBD-25:** Additional field study needs to be conducted by a knowledgeable researcher in the Cady Mountains and on the proposed solar site. Absent any real information in the field, any suggested mitigation or perceived impacts are pure conjecture.

**Comment CBD-26:** Other standard mitigation measures that are not mentioned in the DEIS include not using barbed wire fencing in this location, and ensuring invasive plants have not taken over the springs are valid minimization measures that should be evaluated. All of the above issues need to be addressed in a supplemental EIS.

**Response:** Helicopter surveys for Nelson’s bighorn sheep were conducted in the nearby Cady Mountains in March 2010; the results of these surveys are provided in Section 3.3.5.4, Special-Status Species. Impacts to Nelson’s bighorn sheep are discussed for each alternative in Section 4.3.2, Direct and Indirect Impacts. The mitigation measures that address project-related impacts to Nelson’s bighorn sheep have been revised and can be found in Section 4.3.4, Mitigation, Project Design Features, BMPs, and Other Measures. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the

Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

#### **G.9.2.4 Golden Eagles (30213)**

**Comment CURE-6:** In response to agency prompting, the Applicant conducted surveys for golden eagles in March, 2010, but survey reports were not provided prior to the release of the SA. Staff requires that the Project comply with the Bald and Golden Eagle Protection Act as a condition of certification, but acknowledges that the condition proposed in the SA will likely require substantial revision. Therefore, the SA does not make a finding regarding the significance of the impacts from golden eagle or provide an analysis of the mitigation required to reduce the impact to less than significant. Finally, the SA does not (and cannot) make a finding regarding consistency with the Bald and Golden Eagle Protection Act, as required by the Warren-Alquist Act. Hence, the SA fails to provide an adequate description of the environmental setting, analysis and identification of mitigation for the golden eagle. Once the Applicant submits the results of its surveys and all parties have an opportunity to review this analysis, the SA must be revised and recirculated for public review and comment.

The DEIS also failed to describe the environmental setting for determining impacts to golden eagles, a BLM sensitive and California fully protected species. The Applicant neglected to provide sufficient information to enable BLM to determine the Project complies with the Bald and Golden Eagle Protection Act . . .

**Comment CURE-53:** In response to agency prompting, the Applicant belatedly conducted surveys for golden eagles in March, 2010, but survey reports were not provided until after the release of the DEIS. The DEIS requires that the Project comply with the Bald and Golden Eagle Protection Act as a condition of certification, but acknowledges that the condition proposed in the DEIS will likely require substantial revision. Therefore, the DEIS does not disclose the significance of the Project impacts to golden eagles or provide a complete analysis of the mitigation required to reduce the impact to less than significant. Finally, the DEIS does not (and cannot) conclude that the Project complies with the Bald and Golden Eagle Protection Act. Hence, the DEIS fails to provide an adequate description of the environmental setting, analysis and discussion of mitigation for impacts to golden eagles. Once the Applicant submits the results of its surveys and all parties have an opportunity to review this analysis, the DEIS must be revised and recirculated for public review and comment.

**Comment Cashen-10:** The USFWS has established minimum inventory and monitoring efforts that “are essential components” to avoiding and minimizing disturbance and other kinds of take of golden eagles. The USFWS reports “[t]hese field efforts are the mutual responsibility of agencies authorizing activities and their permittees.” I concur with the USFWS that inventory data are essential to evaluating the impacts of a proposed activity and for avoiding and

minimizing take of eagles. Consequently, data that conform to the minimum inventory requirements specified by the USFWS need to be provided before the DEIS's impact assessment and proposed mitigation measures can be fully evaluated. The DEIS should be revised and recirculated to agencies and the public when these data are available.

**Comment Cashen-11:** The DEIS concluded Condition of Certification "BIO-21" (documentation of compliance with the Bald and Golden Eagle Protection Act) "will likely require substantial revision." The DEIS further concluded the compensatory mitigation plan for desert tortoise would offset the Project's contribution to a cumulatively significant habitat loss.

I have the following comments related to these statements:

First, the DEIS has little basis to make any conclusions on the significance of Project impacts until robust inventory data have been provided. This is especially true considering the knowledge that wildlife populations are dynamic, and that golden eagle pairs may rotate between numerous (up to 14) alternate nest sites.

Second, acquisition of compensatory mitigation for desert tortoise does not necessarily mitigate Project impacts to golden eagles. This is especially true because the recommended selection criteria for compensation lands do not require the lands to be suitable for golden eagles, or be within the foraging territory of any actual golden eagle nest sites.

Third, research indicates golden eagles selectively use available habitat, and that they concentrate their foraging activities in select "core" areas. In a study on spatial use and habitat selection of golden eagles in Idaho, Marzluff et al. (1997) concluded that there was substantial variation in home range size and habitat use among eagles, and that if such variation was ignored (by focusing on population averages), conservation strategies and biological descriptions will be inaccurate and rarely effective. During the breeding season, eagles in Marzluff's study had home ranges as small as 480 acres, with 95% of the activity concentrated in core areas as small as 74 acres. Home range size and behavior were a function of the types and configuration of prey habitat in the vicinity of the nest, and perhaps individual eagles.

The results of this research have two important implications on the Project. First, in the absence of more appropriate empirical data, one should conclude Marzluff's results apply to the Project site, and thus the Project could eliminate a substantial amount of core habitat (perhaps all) used by at least one pair of breeding eagles. Second, whereas acquisition of compensation land may help conserve foraging habitat for some eagle(s), it may be of little consequence to the eagle(s) whose core habitat has been eliminated by the Project. This is important because not all eagles contribute equally to maintenance of the population. For example, if all the suitable nest locations are fully-occupied, impacts leading to abandonment of a territory (either through destruction of the nest substrate or through not being re-occupied by either the original nesting

pair or a new pair from the floater population) may have a significant negative impact to the area population. Available prey base or intra-species competition may be additional relevant factors.

Finally, the USFWS has indicated that implementation of its Interim Golden Eagle Inventory and Monitoring Protocol is required to “establish the baseline circumstances for evaluation of permit applications and foundation for permit conditions, as well as assist planners so they may conduct informed impact analyses and mitigation during the National Environmental Policy Act (NEPA) process.” Yet, the DEIS lacks any reference to the USFWS’s golden eagle protocol. To conserve the golden eagle population and ensure Project compliance with the Eagle Act, mitigation imposed through ROW issuance should require the Applicant to implement the USFWS’ golden eagle protocol.

**Comment SC-15:** Golden eagles are a BLM sensitive species and are a fully protected species in California. SA/DEIS C.2-4. The proposed project would remove 8,230 acres of foraging habitat for the species. Although golden eagles were observed by the Applicant in 2007 and 2008, the Applicant did not consider potential impacts to the species and presented no mitigation strategies. SA/DEIS C.2-78. After repeated requests by staff, a helicopter survey was completed. Initial results from this survey show that at least 16 raptor nests were found within a 10 mile radius of the project, two of which contained incubating golden eagles. SA/DEIS C.2-79. However, as the SA/DEIS acknowledges, this is only an initial result, and “as further information regarding potential nest sites becomes available, the data will be incorporated.” *Id.* This is inadequate under NEPA and CEQA; without an accurate count of animals potentially affected, the public and agencies cannot determine what the full environmental consequences of the project will be.

**Comment SC-16:** The Applicant has not provided specific mitigation plans to avoid impacts to the golden eagle. The lack of complete information related to nesting habitat and specific mitigation measures is another example of the inexcusable data gaps and inadequate “mitigation” plans found throughout the SA/DEIS. This does not meet the legal requirements of NEPA or CEQA.

**Comment SC-17:** The Fish and Wildlife Service recently adopted new regulations. 74 FR 46836. Under this statute, all activities that may disturb or incidentally take an eagle or its nest must be permitted . . . The SA/DEIS is clear that the status of golden eagles is uncertain, and therefore permits to “take” are unlikely to be issued. As such, siting this project within an area close enough to golden eagle nests as to disturb them will likely result in a take. The SA/DEIS is unclear as to whether this will effectively require reconfiguration of the project; however, without complete information related to the USFWS’s decision on permitting the take of the golden eagle, this entire portion of the SA/DEIS is lacking in any meaningful data. This is precisely the situation that NEPA was designed to protect; the Applicant must provide full survey information related to the golden eagle.

**Comment CBD-38:** Golden eagles are known to nest within 5 miles of the project site and have been observed foraging over the project area. (DEIS at C.2-4). While the DEIS acknowledges that Bio-21 may require substantial revision, Bio-21 as written fails to present exactly how mitigation will occur for foraging habitat for the golden eagle. The fact still remains that significant amounts of foraging habitat – over 8,000 acres - will decrease carrying capacity of the landscape and could result in a potential loss of habitat needed to support a nesting pair, which would impact reproductive capacity.

**Comment CBD-39:** Scientific literature on this subject is clear - the presence of humans detected by a raptor in its nesting or hunting habitat can be a significant habitat-altering disturbance even if the human is far from an active nest. Regardless of distance, a straight-line view of disturbance affects raptors, and an effective approach to mitigate impacts of disturbance for golden eagles involves calculation of viewsheds using a three-dimensional GIS tool and development of buffers based on the modeling. Golden eagles have also been documented to avoid industrialized areas that are developed in their territory. Additionally, the DEIS does not actually clearly analyze the impacts to and mitigations for the golden eagle under the Bald Eagle and Golden Eagle Protection Act, which prohibits, except under certain specified conditions, the take, possession, and commerce of such birds.

**Response:** Helicopter surveys for golden eagle nests were conducted in March 2010; the results of these surveys are provided in Section 3.3.5.4 Special-Status Species. Impacts to golden eagles are discussed for each alternative in Section 4.3.2 Direct and Indirect Impacts. Mitigation measures that have been developed to address potential impacts to golden eagles include requirements for pre-construction surveys, monitoring of active nests, and the use of adaptive management to avoid construction-related impacts. These mitigation measures can be found in Section 4.3.4 Mitigation, Project Design Features, BMPs, and Other Measures. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

### **G.9.2.5 Desert Tortoises (30213)**

Comment CURE-9: The SA did not establish an accurate environmental setting for determining impacts to desert tortoise because the Applicant failed to provide sufficient information on desert tortoise on the plant site and potential relocation sites. Thus, the Applicant is conducting additional surveys to determine the density of tortoises on the Project site and the density of tortoises and the amount of forage at potential relocation sites.

Although the SA attempts to analyze the impacts and formulate mitigation measures for desert tortoise, this analysis may bear little resemblance to the analysis and mitigation that will be

required after significant impacts to desert tortoise are actually identified through an adequate survey effort of the project site and potential relocation sites. Hence, the SA fails to provide an adequate description of the environmental setting, analysis and identification of mitigation for desert tortoise. Once the Applicant submits the results of the surveys and all parties have an opportunity to review this analysis, the SA must be revised and recirculated for public review and comment.

**Comment CURE-56:** The DEIS did not establish an accurate environmental setting for determining impacts to desert tortoise because the Applicant failed to provide sufficient information on desert tortoise on the plant site and potential relocation sites. The Applicant's estimate included in the DEIS is that 60-70 tortoises inhabit the Project site, and the DEIS estimated that the number is probably closer to 100. BLM's Biological Assessment issued on April 1, 2010 estimates up to 246 tortoises inhabit the Project site. Additional surveys have since been conducted increasing the estimate to up to 337 tortoises that will be impacted on the Project site.

Although the DEIS attempts to analyze the impacts and formulate mitigation measures for desert tortoise, this analysis is based on outdated and wholly inadequate population estimates. Since the release of the DEIS, the estimates have increased three-fold. The offsite populations that would be affected by relocation proposals also must be identified as part of the affected environment because the Project's effects will also impact these populations. The public has a right to be informed of the size and magnitude of the desert tortoise population that will be impacted by this Project in a revised DEIS. Hence, the DEIS fails to provide an adequate description of the environmental setting, analysis and identification of mitigation for desert tortoise. The DEIS should be revised to correct the quantitative data presented in the DEIS.

**Comment CURE-78:** The DEIS fails to describe the mitigation proposal for impacts to desert tortoise. The first part of the mitigation proposal is the desert tortoise relocation/translocation plan. The plan was not identified or described in the DEIS. These plans do not necessarily follow a set-formula. In fact, due to the high density of desert tortoise on the Project site, agencies have been scrambling to develop relocation/translocation guidelines that can be applied to this Project and others. Because the BLM failed to disclose the specifics of a translocation/relocation proposal to the public in the DEIS, the public has been deprived of the opportunity to comment on the details of this plan and whether the plan is likely to mitigate significant impacts.

**Comment Cashen-5:** There were numerous problems with the surveys used to establish desert tortoise density and distribution in the Project area. For example, the DEIS indicates that Energy Commission staff ("staff") and the California Department of Fish and Game (CDFG) concluded the tempo of the surveys would not have allowed the surveyors adequate time to detect all tortoise sign. In addition to this problem, there appears to be a statistically significant difference between the number of tortoises and tortoise sign that the Applicant detected through incidental

effort and those detected through protocol surveys. For example, within the AFC Assessment Area, 260% more tortoises and 800% more tortoise burrows were detected through incidental efforts than through protocol surveys. This appears to be the type of major difference the USFWS cautions may deem surveys inadequate. The Applicant has since conducted additional surveys, but the DEIS did not include this effort.

Construction of the Project would require the Applicant to translocate all the tortoises that occur within the proposed Project footprint. The adverse effects associated with translocating desert tortoises have received considerable attention in recent years, and several parties have challenged its validity as a form of “mitigation.” Regardless, if translocation will occur, there must be accurate estimates of the number of tortoises requiring capture, handling, transportation, and release. As an example, accurate estimates of tortoise abundance are needed to ensure sufficient availability of resources needed for survival at the translocation site.

The DEIS indicates the Applicant plans to “conduct 100% surveys of the project area in order to better evaluate the potential number of tortoises that would require relocation/translocation.” However, data from these surveys were unavailable and could not be evaluated when the DEIS was released. In order to give the public and agencies an opportunity to assess the validity of this survey effort, the DEIS should be revised to include these data.

**Comment Cashen-6:** The Desert Renewable Energy Conservation Plan and BLM’s Solar Energy Development Programmatic EIS have yet to be developed. Therefore, they cannot be relied on to provide a regional mitigation approach.

The DEIS does not provide any information on the demographics of the tortoises detected on the Project site and surrounding areas. Demographic data (e.g., ratio of adult to juvenile tortoises) can be used to infer whether a population is stable, increasing, or declining. Thus, demographic data are critical to estimating Project impacts on the regional population, and for recovery planning.

**Comment Cashen-7:** It is not possible for the public or interested agencies to evaluate the DEIS mitigation proposal for impacts to desert tortoise because the BLM and Applicant have not finalized the Draft Desert Tortoise Translocation Plan. The DEIS acknowledges that the BLM is unable to conclude whether the translocation plan would mitigate direct and indirect impacts to desert tortoises. However, the DEIS did conclude that “[t]he translocation of tortoise and other construction related impacts of the proposed project pose substantial effects to this species.”

The problems associated with the Ft. Irwin translocation effort highlight the need for a well-crafted plan based on the best available science. However, the DEIS lacks any information on translocation sites, the habitat suitability of those sites, and the monitoring that will accompany translocation. The Applicant needs to develop a detailed translocation plan that is thoroughly vetted before the BLM decides on ROW issuance.

At a minimum, the plan should contain:

- (1) An assessment of potential release sites, with special attention dedicated to evaluating the factors that limit the distribution and abundance of desert tortoises, as well as an appraisal of probable dispersal patterns.
- (2) An experimental, controlled trial, in which the initial translocation strategy is evaluated, then modified to improve the likelihood of success.
- (3) A detailed description of the monitoring and adaptive management measures that will be implemented after desert tortoises are released.

Further, the DEIS does not provide any performance standards associated with the translocation efforts. Consequently, there are no triggers for adaptive management techniques that would minimize desert tortoise mortality.

Finally, the location of the proposed mitigation lands have not been identified. The DEIS identifies this as an outstanding issue. Nonetheless, the DEIS concluded impacts to habitat loss would be minimized through compensatory mitigation, which the BLM has set at 1:1. Analysis presented in the DEIS cast doubt on the validity of this conclusion. Namely, the DEIS indicates that nearly 54% of the acreage comprised by future projects is within high quality desert tortoise habitat (i.e., rated between 0.8 and 1.0), and another 16% is within medium quality desert tortoise habitat. Presumably, only a portion of the land remaining is available for purchase (i.e., privately owned). This suggests a scant supply of potential compensation land of a quality comparable to the Project site. The BLM's ability to obtain adequate compensation land is in great doubt. Moreover, land that is high quality habitat is most likely already inhabited by desert tortoise and placement of additional tortoise in occupied habitat would result in additional significant impacts that were not considered in the DEIS. Thus, BLM's mitigation proposal for desert tortoise is not based on adequate data, is of questionable efficacy and would ultimately result in a net loss of high quality tortoise habitat.

**Comment WWP-6:** The projects site is occupied by a large number of desert tortoises. The SA estimates that over 100 individuals may be present – firm numbers are not available because of the inadequacy of the Applicant's surveys. The SA proposes to mitigate for direct impacts to desert tortoises through acquisition of compensation lands. At a high enough ratio, this may compensate for the direct loss of habitat. However, although the SA recognizes that the project site includes habitat that provides connectivity to adjacent natural lands the mitigations do not address how impacts to this connectivity will be mitigated.

**Comment WWP-7:** As we explained in our scoping comments, the WMP ROD signed March 2006 includes "Goal 3: ensures genetic connectivity among tortoise populations, both within the

West Mojave Recovery Unit, and between this and other recovery units. The SA does not explain how the project and proposed mitigations will meet this biological goal.

**Comment WWP-8:** The SA also discusses translocation of desert tortoises but provides no information on potential translocation sites. No translocation protocol is provided for public review. Despite the huge number of tortoises that will be impacted, Staff defer the details to some future translocation plan.

**Comment DEF-19:** The portion of the proposed project north of the railroad is classified by BLM as Category II desert tortoise habitat, the most protective category, which carries a goal to maintain stable, viable populations and halt further declines in tortoise habitat values. The importance of this area is evidenced by the number of tortoises that continue to occupy the site. According to survey results submitted to BLM and the CEC on May 18, 2010, the project proponent's consultants observed 104 desert tortoises on this site. Using the USFWS formula to estimate tortoise population based on 10 m transect survey data, approximately 176 tortoises (95 percent confidence range of 92 to 337 individuals) may occupy the 8,230-acre Calico Project site. This desert tortoise population is very significant due to its sheer number. Due to the numerous tortoises occupying the site, this area may be very important for recovery of species.

**Comment DEF-20:** NEPA requires agencies to include a discussion of the means to mitigate adverse environmental impacts of projects. Given the importance of this habitat, the high number of tortoises on the site, and the sheer loss of over 8,000 acres of habitat, we strongly recommend that the project proponent attempt to avoid the impacts of tortoises first, then minimize those impacts that cannot be avoided, and finally, if all else fails, adequately mitigate for those impacts. To that end, we strongly urge that the project follow the recommendations found in the current USFWS Desert Tortoise Recovery Plan for avoidance and minimization measures.

**Comment DEF-21:** Defenders is particularly concerned with the impacts on desert tortoise movement corridors. As the DEIS indicates, the project will result in obstruction to both east-west and north-south movement corridors. It is well documented that tortoises move through the north-south washes on the northern portion of the site. However, less is known about the east-west movement of the species and how this relates to their genetic makeup and viability. BLM should pay close attention to these movement corridors in assessing site alternatives and mitigation. Based on our field examination, we believe movements of desert tortoises through the project site in an east-west orientation occur more frequently in the lower and central area due to soil habitat characteristics that facilitate movement. North-south movements in the northern portions of the project site likely associated with the numerous braided washes that provide movement pathways. East-west movements in the northern portions of the project area are likely rare due to rough terrain features such as rock-covered terrain interspersed with drainage channels and steep banks.

**Comment DEF-22:** The DEIS is deficient in its analysis of potential movements of desert tortoises under Interstate 40 and Route 66, under bridges and through numerous culverts, and under the railroad through numerous trestles. These features may provide essential habitat connectivity and means of maintaining genetic diversity between populations in the Ord-Rodman, Piute-Eldorado and Superior-Cronese Critical Habitat Units.

**Comment DEF-23:** The DEIS proposes an overall 3:1 mitigation ratio to compensate for loss of desert tortoise habitat on a portion of the site north of the BNSF railroad. The portions of the site on donated and acquired land would trigger a 6:1 mitigation ratio. The CEC and BLM propose to “nest” the BLM’s 1:1 (or 6:1 for LWCF land) mitigation ratio within the CEC’s 3:1 mitigation ratio to fulfill both agencies’ requirements. According to CEC Condition of Certification BIO-17, the proponent would satisfy the nested mitigation requirement through an in-lieu fee mitigation program. BLM’s compensatory mitigation plan, serving as one-third of the 3:1 mitigation ratio required to satisfy the California Endangered Species Act, would include acquisition of up to 8,230 acres of high quality desert tortoise habitat, or desert tortoise habitat enhancement or rehabilitation activities that meet BLM, CDFG, USFWS and CEC approval, or some combination of the two. The proposed project footprint coincides with 775 acres of donated lands or lands acquired with Land and Water Conservation (“LWCF”) funds. Defenders is extremely concerned that LWCF lands are included in the site footprint and wary of the precedent it sets for future projects on BLM lands. The use of donated and acquired lands is not just bad policy, it is contrary to the intent of the land donors and the public, and a violation of BLM guidance. Because the proposed Calico Solar Project necessarily involves surface disturbing activities (construction of roads, buildings, transmission lines, and SunCatcher units), siting the facility on LWCF lands is inconsistent with BLM policy. The project should avoid LWCF lands.

**Comment DEF-24:** The “in-lieu fee” mitigation plan raises many questions. Because it is a joint or “nested” mitigation structure, and therefore must satisfy both State and Federal mitigation requirements, BLM should be aware of legal requirements at both the State and federal level. In California, the payment of fees must be tied to a functioning mitigation program to be adequate. In order to serve as an adequate substitute for traditional mitigation measures, an in-lieu fee program must be evaluated under the California Environmental Quality Act (“CEQA”), including the requirements to circulate the plan for public comment. It is in BLM’s interest to ensure that the in-lieu fees manifest into actual on-the-ground improvements to desert tortoise habitat. The DEIS does not currently contain adequate information to satisfy the public’s interest in ensuring that the required fees translate into benefits to the desert tortoise.

**Comment DEF-25:** According to BLM Instruction Memorandum No. 2008-204, “in-kind” mitigation is generally preferred to “out-of-kind” and BLM offsite mitigation may be performed on federal lands. BLM should strongly consider using its one-third mitigation requirement to acquire suitable desert tortoise habitat.

**Comment DEF-26:** The BLM must also consider the substantial risks posed by the Calico Solar Project translocation program. Other impacts to tortoises must be fully analyzed and addressed, such as new water sources that attract predators, impacts to tortoise water sources from proposed groundwater pumping, impacts from roads, and impacts from vegetation management. The applicant has not yet submitted a draft tortoise translocation plan. Such a plan includes the protocol for a translocation, including assessing the habitat quality of the receiving site and determining the potential for transplantee mortality. Those issues are central to a desert tortoise impacts assessment.

**Comment DEF-27:** The Biological Assessment identifies translocation as a mitigation measure. It is important to note that translocation is not mitigation. Translocation is a minimization measure for the take of desert tortoises on the site. However, the project will result in take of all desert tortoises on the site and cannot be mitigated by translocating individual tortoises. Additionally, the proponent's consultants observed at least 104 desert tortoises on the site during surveys. Based on those surveys, up to 176 desert tortoises are likely to be found on the site. Therefore, the estimated 36-66 desert tortoises on the site from the Biological Assessment is incorrect. Up to 176 tortoises will likely need to be translocated.

**Comment DEF-28:** BLM has not included an activity plan or land use plan amendment in the DEIS or the Biological Assessment. This documentation is required before a decision is made on the translocation. Additionally, BLM must ensure that the translocation lands are preserved in perpetuity. BLM must not allow right-of-way applications on areas that effectively become surrogate desert tortoise habitat due to a translocation program.

**Comment DEF-29:** Defenders does not believe that translocation, in and of itself, provides mitigation for desert tortoises. Instead, any translocation must be in conjunction with preservation of habitat. Defenders is greatly concerned by the statement in the Biological Assessment that the translocation plan will include disease testing only of individuals that will be translocated farther than five kilometers. This presumably signals that the BLM would allow relocations (a method of moving tortoises that does not require disease testing or pre-construction surveys) for less than five kilometers. This is a troubling departure from the previous limit on relocation, which was approximately 300 meters. Defenders strongly opposes the increase in relocation distance to five kilometers. Such a policy will leave tortoises vulnerable to disease, disorientation and predation. Further, the Translocation Plan should follow the recommendations of the USFWS Desert Tortoise Recovery Plan.

**Comment SC-2:** To determine the amount of desert tortoise that would be directly impacted by the proposed project, the Applicant implemented a modified survey protocol; however, based on the "pace of the survey, staff and CDFG conclude the tempo across the project site . . . would not have allowed the surveyors adequate time to detect all tortoise sign." SA/DEIS C.2-64. The publicly available SA/DEIS states that a minimum of at least 100 tortoise or more will be impacted . . .

Apparently, however, the Applicant has conducted another tortoise survey, with the result that nearly 340 tortoises may be present on the site. Applicant's Submittal of Results of 2010 Desert Tortoise Surveys, at p. 1 (May 17, 2010). This new information must be included in a revised SA/DEIS for public comment because it changes the scope and potential impact immensely . . .

The agencies must provide all new analyses and study results, including new alternatives and mitigation measures, to the public in one document for review and comment.

**Comment SC-3:** If there are multiple mitigation measures available, all should be discussed, and the basis for selecting a specific one should be discussed. Here, the proposed mitigation measure is translocation of the desert tortoise. Translocation, however, cannot be thought of as a mitigation measure; rather, it is a salvage mechanism designed to clear the land of tortoises occupying the proposed project site. Some individuals may survive translocation, many will not.

**Comment SC-4:** Additionally, not only is translocation itself fraught with uncertainty and risk for the tortoises, this SA/DEIS does not even provide information related to the proposed translocation . . . The Applicant has not submitted a final Translocation Plan for review by the public; the SA/DEIS tries to avoid this issue by stating that the plan "will be completed by the Spring of 2010." This is insufficient under NEPA and CEQA.

The SA/DEIS admits that the information provided that addresses translocation is insufficient, stating that a "final conclusion [regarding mitigation] can not be reached until the final plan is developed." SA/DEIS C.2-67. BLM is required to disclose mitigation measures in sufficient detail to ensure there has been a fair evaluation of environmental consequences.

Deferring the development of specific mitigation measures, including identifying the land for translocation of the tortoise, has precluded public input on the feasibility of the measures. Without the information related to the translocation plan and translocation sites, the SA/DEIS is legally inadequate.

**Comment SC-5:** Further, the SA/DEIS does not discuss the mitigation measures under the required California Endangered Species Act (CESA) "fully mitigated" standard. Under CESA, impacts to a listed species, such as the desert tortoise, must be minimized and fully mitigated. A risky and scientifically dubious measure such as translocation can not be said to be fully mitigating the impacts to the tortoise caused by this Project, therefore approving this project as currently proposed will result in a violation of the CESA.

**Comment SC-6:** Compounding the lack of appropriate mitigation measures is the danger that disease poses to translocated tortoises. Relocating tortoise without disease testing could imperil the health of both the relocated animals and the resident populations into which tortoises will be released. Failing to fully test animals proposed for relocation could result in the introduction of diseases into otherwise healthy populations. Any translocation should follow the Desert Tortoise

Council Guidelines for Handling Desert Tortoise During Construction. Moreover, to protect the health of the tortoises, any tortoises moved more than 1000 feet should be fully tested for disease and the host population should be similarly tested.

**Comment CBD-17:** This particular subpopulation of tortoise at the proposed project site are part of the Northern Colorado Recovery unit. Recent population genetics studies have further confirmed 1994 Recovery Plan conclusions the Northern Colorado Recovery unit is genetically unique. This particular recovery unit has also been documented to have the highest declines in desert tortoise population over the last two years – 58% decline. The DEIS fails to identify and consider the localized impact to this recovery unit that is already in steep decline.

**Comment CBD-18:** As the DEIS acknowledges, additional information for desert tortoise needed includes “desert tortoise surveys of the entire project area” (DEIS at C.2-6). Absent these basic data on on-site resources, impact analysis is impossible, as is appropriate avoidance, minimization and mitigation strategies. Clearly a supplemental DEIS is required to present these missing data.

**Comment CBD-19:** While Bio-16 requires a Desert Tortoise Relocation/Translocation Plan (DEIS at pg. C.2-184), no desert tortoise relocation/translocation plan was included in the DEIS. Recent desert tortoise translocations have resulted in significant short-term mortality up to 45% and unknown long-term survivorship. It is imperative to have this key plan available in the revised DEIS in order for the public and decision makers to be able to evaluate the effectiveness of the proposed strategies.

**Comment CBD-20:** It is unclear in the DEIS how the compensation acreage for desert tortoise acquisition was calculated. The DEIS states that 8,219 acres of desert tortoise habitat will be impacted (DEIS at C.2-185). Some unidentified acreage representing the acreage “below the railroad tracks” is to be mitigated at a 1:1 ratio, another unidentified acreage representing the acreage “above the railroad tracks” is to be mitigated at a 3:1 ratio. However, the BLM 1:1 mitigation will not be in acquisition, so it effectively eliminates any mitigation acquisition for the land “below the railroad tracks” and drops the mitigation ratio to 2:1 “above the railroad tracks. In addition, the previous lands acquired for mitigation but have now become a part of this proposed project are to be mitigated at 6:1 (or 5:1 if the BLM mitigation strategy is put in place). The DEIS indicates that only 14,018 acres will be sought for conservation (at C.2-185), which represents an effective mitigation ration of only 1.7:1. The supplemental EIS needs to clarify how acreages were calculated.

**Comment CBD-21:** Mechanisms need to be included to assure that any and all mitigation acquisitions will be conserved in perpetuity for the conservation of the desert tortoise. If those acquisitions are within existing Desert Wildlife Management Areas (DWMAs), higher levels of protection than are currently in place for DWMAs need to be put in place. 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. If tortoises are relocated, then the relocation areas need to be secured for tortoise conservation, to preclude moving the animals subsequently if additional projects are on the relocation site.

**Comment CBD-45:** The DEIS documents a problematic situation where 1,180 acres of land that were acquired and donated to the BLM as mitigation for impacts from development, are now slated for development themselves. While we support at a minimum the 6:1 ratio of mitigation for impacts to these mitigation lands, the BLM mitigation (of 1:1) will be not be land acquisition “but rather through implementation of region-wide management plans and land use planning as described in the West Mojave Plan (BLM et al. 2005; BLM 2006) and the Desert Tortoise Recovery Plan (USFWS 1994b)”. DEIS at C.2-3. This strategy effectively reduces the amount of actual habitat acquired for desert tortoise mitigation. Proposing to develop on-the-ground mitigation lands is, at best, an ineffective strategy for recovering a federally threatened species that is in significant decline. Careful selection of additional mitigation lands will be necessary in order to insure that high quality tortoise habitat is acquired.

**Comment Jackson-19:** Of utmost importance, the SA/DEIS does not address the impact the Project will have on the endangered desert tortoises on the adjacent privately owned lands.

**Response:** The Applicant conducted a 100 percent survey of the 8,230-acre project site in March/April 2010. The results of this survey are provided in Section 3.3.5.4, Special-Status Species. Impacts to desert tortoises are discussed for each alternative in Section 4.3.2, Direct and Indirect Impacts. The mitigation measures that address project-related impacts to desert tortoises have been revised and can be found in Section 4.3.4, Mitigation, Project Design Features, BMPs, and Other Measures. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

Impacts to desert tortoises occurring on the Not a Part parcels in the project vicinity have been considered as part of this FEIS. The revised project design provides for suitable desert tortoise habitat and east-west desert tortoise movement on the upper bajada, north of the project footprint and south of the toe slope of the Cady Mountains, improving connectivity, including genetic connectivity.

The BLM has initiated formal consultation under the Endangered Species Act to address adverse impacts to the desert tortoise and its designated critical habitat. Upon the completion of the Endangered Species Act consultation, the BLM will incorporate the terms and conditions of the US Fish and Wildlife Service’s Biological Opinion, as well as the terms and conditions of the

California Department of Fish and Game's Incidental Take Permit, into the project mitigation requirements.

The Office of Energy Efficiency and Renewable Energy and BLM are preparing a Solar Energy Development Programmatic EIS (PEIS) to develop utility-scale solar energy development; develop and implement agency-specific programs that would establish environmental policies and mitigation strategies for solar energy projects; and amend relevant BLM land use plans with the consideration of establishing a new BLM solar energy development program. The PEIS included lands within the CDCA which are open to solar energy development in accordance with the provisions of the CDCA Plan. The Calico Solar Project site is located within the boundaries of the Pisgah solar energy zone. The BLM is processing active solar applications while the PEIS is being prepared.

#### **G.9.2.6 Burrowing Owls (30213)**

**Comment CURE-10:** Burrowing owls are designated as BLM sensitive and a California Species of Special Concern. According to CDFG burrowing owl guidelines, a site should be assumed occupied if at least one burrowing owl has been observed occupying a burrow within the last three years. Because a burrowing owl was detected on the Project site within the last three years, the Applicant is to implement CDFG mitigation guidelines. The Applicant initially chose to not conduct protocol burrowing owl surveys and claimed that this decision was approved by all the relevant agencies. During a workshop on biological resources it became clear that the BLM, CEC and Fish and Game had NOT approved the Applicant's decision to not conduct protocol surveys for burrowing owls. At the time the SA was released, the Applicant had begun survey work and Staff had not received a complete draft of the survey report

Hence, the SA fails to provide an adequate description of the environmental setting, analysis and identification of mitigation for impacts to burrowing owls. Once the Applicant submits the results of its surveys and all parties have an opportunity to review this analysis, the SA must be revised and recirculated for public review and comment.

**Comment CURE-57:** Burrowing owls are designated as BLM sensitive and a California Species of Special Concern. According to CDFG burrowing owl guidelines, a site should be assumed occupied if at least one burrowing owl has been observed occupying a burrow within the last three years. Because a burrowing owl was detected on the Project site within the last three years, the Applicant is required to implement CDFG mitigation guidelines. The Applicant initially chose to not conduct protocol burrowing owl surveys and claimed that this decision was approved by all the relevant agencies. During a workshop on biological resources it became clear that the BLM, CEC and the California Department of Fish and Game had NOT approved the Applicant's decision to not conduct protocol surveys for burrowing owls. At the time the

DEIS was released, the Applicant had begun survey work and BLM had not received a complete draft of the survey report.

Hence, the DEIS fails to provide an adequate description of the environmental setting, analysis and identification of mitigation for impacts to burrowing owls. The BLM must incorporate data from the Applicant's surveys into the analysis in the DEIS. Once this occurs, the DEIS must be revised and recirculated for public review and comment.

**Comment DEF-32:** The project fails to address impacts to the burrowing owl. In addition to its status as a State Species of Special Concern, the burrowing owl is also protected under Fish and Game Code Section 3503.5 and the Migratory Bird Treaty Act. 16 U.S.C. § 703. Impacts to burrowing owls must be addressed in the EIS. The species has been well documented on the site. However, the DEIS did not identify compensatory mitigation measures for the burrowing owl. Despite its name, the Burrowing Owl Impact Avoidance, Minimization, and Compensation Measures (BIO-22), contains nothing that suffices as compensation or mitigation. It contains some pre-survey and minimization measures, but mitigation measure to assure the viability of the species is lacking. BLM should require that any mitigation lands acquired for desert tortoises be suitable habitat for burrowing owls as well.

BLM must independently determine whether burrowing owl impacts will be mitigated through BIO-22 or whether other compensatory mitigation is necessary. BLM must also identify mitigation measures for other migratory and resident bird species, such as golden eagles and Leconte's thrasher. Condition of Certification BIO-19, relating to migratory birds, only addresses avoidance and does not include mitigation measures.

BLM must adhere to the following measures in the EIS, as found in CDFG's Burrowing Owl Survey Protocol and Mitigation Guidelines.

**Comment SC-18:** As with nearly every other biological resource, the information related to the burrowing owl is insufficient to actually ascertain what the environmental impacts to this species will be. At least two burrowing owls have been detected on site; however, protocol surveys for the species have not been conducted. SA/DEIS C.2-81 . . . Preliminary data shows at least 2 owls on site with 11 active burrows. *Id.* However, "it is not possible to determine their breeding status . . . nor the number of owls that use the site for breeding." *Id.* This is unacceptable under NEPA. 40 C.F.R 1500.1(b). It is impossible to accurately ascertain the environmental effects of this project, when even the number of animals to be affected is unknown. There is no reason provided as to why this survey was not done earlier or at a time when it would have been possible to determine their breeding status. This flies contrary to NEPA and CEQA requirements, namely that information is presented to the public before decisions are made.

**Comment CBD-36:** The DEIS does not provide adequate information on burrowing owls on site. While 2 owls and 11 active burrows were noted on-site, the DEIS notes that "the applicant

must establish the breeding status of the owls onsite” (DEIS at C.2-4) and the lack of these data remain an “outstanding issue” (DEIS at C.2-6). Because of the lack of data, no evaluation of impacts or an appropriate mitigation strategy is proposed in the DEIS. Preliminary results from the 2006-7 statewide census identified that the eastern Mojave harbors few burrowing owls, while the western Mojave is home to some.<sup>13</sup> However, the DEIS fails to evaluate the potential impact of the proposed project on this regional distribution of owls.

**Comment CBD-37:** While “passive relocation” does minimize immediate direct take of burrowing owls, ultimately the burrowing owls’ available habitat is reduced, and “relocated” birds are forced to compete for resources with other resident burrowing owls and may move into less suitable habitat, ultimately resulting in “take”. While Bio-22 requires a Burrowing Owl Monitoring and Mitigation plan and a Burrowing Owl Relocation Management plan, neither of those plans are provided. Additionally, the requirements of the plans do not explicitly include long-term monitoring of passively relocated birds in order to evaluate survivorship of passively relocated birds.

**Response:** Protocol surveys for burrowing owls were conducted in January 2010; the results of these surveys are provided in Section 3.3.5.4, Special-Status Species. Impacts to burrowing owls are discussed for each alternative in Section 4.3.2, Direct and Indirect Impacts. The mitigation measures that address project-related impacts to burrowing owls have been revised and can be found in Section 4.3.4, Mitigation, Project Design Features, BMPs, and Other Measures. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

### **G.9.2.7 Desert Kit Foxes and Badgers (30210)**

**Comment SC-11:** The desert kit fox is found on the project site. SA/DEIS C.2-90. Although the Applicant has not surveyed for the kit fox, there is suitable habitat on site, and several burrows and scat were observed at the project site. *Id.* The SA/DEIS provides no information as to the number of kit foxes that will be affected. The SA/DEIS does acknowledge that “potential impacts to this species must be avoided” as kit fox is a California protected species. *Id.* Nevertheless, the SA/DEIS provides almost no information as to how the species will be avoided. The only suggestion is that a preconstruction survey should be done, and dens should be flagged. SA/DEIS C.2-91. Once again, this is insufficient under NEPA and CEQA as it provides virtually no scientific information for the public or agencies to use in determining the environmental impact because avoidance measures are not clearly articulated.

**Comment CBD-40:** Badgers and desert kit foxes were identified to occur throughout the project area (DEIS C.2-5. Literature on the highly territorial badger indicates that badger home

territories range from 340 to 1,230 hectares. 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 “take”. Excluding badger from the site is likely to cause badgers to move into existing badger’s territory. The same scenario of passive relocation for kit fox may also result in “take”. Studies need to be provided on both on- and off-site badger and kit fox territories if animals are to be passively relocated in order to increase chances of persistence. At a minimum, the revised or supplemental DEIS should identify suitable habitat nearby if the project is relying on passive relocation as a mitigation strategy.

**Response:** A total of 3 badger dens and 39 potential kit fox dens were documented on the project site during burrowing owl surveys that were conducted in January and February 2010. While it is difficult to estimate the actual number of badgers or desert kit foxes that currently occupy the project site, relatively few are likely to occur there based on the number of potential dens that were observed. Impacts to badgers and desert kit foxes are discussed for each alternative in Section 4.3.2 Direct and Indirect Impacts. The mitigation measures identified in Section 4.3.4 Mitigation, Project Design Features, BMPs, and Other Measures have been developed to reduce the potential project-related impacts to the extent possible. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

### **G.9.2.8 Gila Monsters (30210)**

**Comment CBD-41:** The strategy proposed in Bio-14 for the banded Gila monster proposes relocation as the mitigation strategy if the lizard is encountered. Relocation of banded Gila monster has been shown to be an ineffective strategy. Similar to desert tortoises, the Gila monsters try to return to their original sites despite relocation distances. Effective mitigation for this species needs to include strategies that will minimize mortality, not ensure it.

**Response:** As discussed in Section 3.3.5.4 Special-Status Species, the banded Gila monster has a low potential for occurrence on the project site based on its known distribution in the Mojave desert and the lack of incidental detections during the plant surveys and wildlife surveys conducted on the project site and in surrounding areas. If individuals are present, the potential impacts identified for each alternative in Section 4.3.2 Direct and Indirect Impacts would likely be unavoidable, but would be minimized and mitigated to the extent possible through the implementation of the project-specific mitigation measures identified in Section 4.3.4 Mitigation, Project Design Features, BMPs, and Other Measures. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the

Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

### **G.9.2.9 Other Birds (30210)**

**Comment SC-12:** the section of the SA/DEIS devoted to bird species is missing data, does not contain a meaningful analysis of effects of the project and potential mitigation measures, and as a whole provides little information for the public to comment on. First, the Applicant did not conduct wintering bird surveys, and did not provide any discussion for a variety of species that have a moderate to high potential for occurrence on the project area. SA/DEIS C.2-75.

**Comment SC-13:** Loss of active bird nests or young is regulated by the federal Migratory Bird Treaty Act and California Fish and Game Code § 3503. According to the SA/DEIS, due to the size and extended timeline for the project, “it [is] highly unlikely that nesting birds could be completely avoided if clearing and grubbing occur during the nesting season.” SA/DEIS C.2-77. As mitigation, the SA/DEIS proposes 500 foot buffer zones as a mitigation measure, and determines that this will be sufficient to reduce impacts to less than significant *Id.* Directly following this conclusion, however, staff admits that the project will most likely require relocation of active nests. Any relocation must comply with legal requirements under both the MBTA and Fish and Game codes. These requirements are not discussed in depth, and the analysis only states that the Applicant will coordinate with agencies to ensure the work is done properly. *Id.* The SA/DEIS does not provide information as to what types of birds may be affected and how the removal of nests does not increase the impacts to a significant level. Further, staff also proposes allowing variances on the 500 foot buffer but does not provide information related to the types of nests the variances would be granted for or any information related to the maximum number of variances granted. There is virtually no information that would allow the public to make informed comments as to the effects this project will have on many species found on site.

**Comment SC-14:** While the SA/DEIS does provide separate analysis for the Swainson’s Hawk, golden eagle, and the burrowing owl, these analyses are not sufficient for NEPA or CEQA purposes because they are all missing important data. Without the proper surveys done, the full environmental effects to these birds cannot be ascertained. The data gaps in the SA/DEIS are “essential to a reasoned choice.” 40 C.F.R. § 1502.22(a),

**Comment CBD-33:** While the DEIS discusses potential impacts to birds from collision with infrastructure and power lines and blinding from glare, it does little to actually avoid or mitigate those potential impacts. The supplemental DEIS needs to analyze likely impacts to birds from the proposed project mirror configuration, power lines and glare. The failure to provide the baseline data from which to make any impact assessment violates NEPA. This failure to analyze impacts is not only a NEPA violation, but for migratory birds, may also lead to a

violation of the Migratory Bird Treaty Act, 16 U.S.C. §§ 703 -711, because migratory birds may be “taken” if the proposed project is constructed.

**Comment CBD-34:** Monitoring impacts of solar technology on birds as described in Bio-23 will only provide monitoring data, not mitigate impacts (DEIS at C.2-193). Other large-scale solar projects have been required to develop an Avian Protection Plan which is proposed to “provide the information needed to determine if operation of the Project posed a collision risk for birds, and would provide adaptive management measures to mitigate those impacts to less than significant levels”. The Avian Protection Plan needs to be available to the public and decision makers in order to provide an

**Comment CBD-35:** The DEIS fails to adequately address the issue of impacts to migratory birds. Point counts for migratory birds were not mentioned as a survey protocol. The failure to provide the baseline data on which to base impact assessment violates NEPA. Failure to be able to analyze impacts is not only a NEPA violation, but for migratory birds, may also lead to a violation of the Migratory Bird Treaty Act, 16 U.S.C. §§ 703 -711, because migratory birds may be “taken” if the proposed project is constructed. Additionally Executive Order 13186 states “Each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations is directed to develop and implement, within 2 years, a Memorandum of Understanding (MOU) with the Fish and Wildlife Service (Service) that shall promote the conservation of migratory bird populations.” Furthermore the EO states that goals pursuant to the MOU include “(3) prevent or abate the pollution or detrimental alteration of the Environment for the benefit of migratory birds, as practicable;” and “(6) ensure that environmental analyses of Federal actions required by the NEPA or other established environmental review processes evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern;”. Clearly, the supplemental DEIR needs to adequately identify the migratory bird issues on site and evaluate the impact to those species in light of the guidance in Executive Order 13186.

**Response:** Incidental bird sightings and observations during focused, species-specific surveys over the past four years have provided the BLM with a substantial amount of information regarding the presence of both common and special status bird species. Additional bird surveys were conducted in the spring of 2010 to document the number and locations of burrowing owls on the project site and golden eagles within 10 miles of the project site.

Impacts to birds are discussed for each alternative in Section 4.3.2, Direct and Indirect Impacts. The mitigation measures identified in Section 4.3.4, Mitigation, Project Design Features, BMPs, and Other Measures have been developed to reduce the potential project-related impacts to the extent possible; however, even with the implementation of these measures, there would be impacts to birds as a result of the construction, operation, and decommissioning of the Calico Solar facility.

The BLM, through the implementation of project mitigation measures, would require the applicant to minimize impacts to birds and to follow state and federal regulations that protect birds and their nests.

### **G.9.2.10 Bats (30210)**

**Comment Cashen-29:** In order to mitigate adverse impacts on potential bat communities, the DEIS has recommended the implementation of Bat Impact Avoidance and Minimization Measures (“BIO-26”), which includes pre-construction surveys in all areas of suitable bat habitat (i.e., rock outcrops and railroad trestles). The survey methods provided in BIO-26 do not correspond with the guidelines established by the WMP. Whereas the DEIS requires roosting surveys to be conducted during the maternity season (1 March to 31 July), the WMP indicates that surveys must take place in both the summer and winter “to determine if bats utilize a potential roost for hibernation or for maternity colonies.” Additionally, “surveys that indicate a roost is used in one of the seasons should be repeated during the other season to determine if bats use the roost for both functions.” Because the DEIS does not provide mitigation that satisfies these survey requirements, the Project does not comply with the WMP.

**Comment Cashen-30:** In discussing the required mitigation steps in the event that an active roost is located within Project boundaries, BIO-26 fails to set significant roost levels in accordance with the WMP. Under the WMP, all maternity and hibernation roosts of Townsend's big-eared bat and California leaf-nosed bat are considered significant if more than 10 individuals are present. Roosts of the other four bat species are considered significant at populations greater than 25. Significant roosts may not be taken per the WMP, which must be incorporated into BIO-26 of the DEIS. Specifically, the DEIS contains ambiguous language on mitigation for an active maternity and/or hibernation roost on-site. It states, “[i]f active maternity roosts or hibernacula are found, the rock outcrop or trestle occupied by the roost shall be avoided (i.e., not removed) by the project, if feasible.” The mitigation measures must be modified so that an active, significant maternity and/or hibernation roost is completely avoided by all Project activities. Under the WMP, the presence of alternative maternity roosting sites in the area does not allow for disruption and/or take of “significant” roosts (as has been implied by the DEIS), nor is there a provision for take of “significant” roosts if alternative roosting sites are available.

**Comment Cashen-31:** Roosts that are not deemed significant by the thresholds discussed above qualify for incidental take following certain procedures outlined in the WMP. These apply to both non-significant maternity and hibernation roosts. The WMP recommends a temporary closing of roosts after the evening flight and entering the roost to remove any remaining bats. This process is to be repeated twice by a qualified biologist and in consultation with CDFG. The protocol for non-significant roost removal in BIO-26 must be modified to correspond with the WMP guidelines.

The timing of non-significant roost removals must also follow WMP protocol. BIO-26 states, “[i]f an active maternity roost is located in an area to be impacted by the project, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., prior to 1 March) or after young are flying (i.e., after 31 July).” However, the WMP also prohibits disturbance or removal of non-significant roosts during winter hibernation seasons, which is absent from the timeframe included in the DEIS. Per WMP guidelines, BIO-26 must include provisions to prevent roost disturbance or removal during both maternity and hibernation periods.

**Response:** Construction of the Calico Solar facility would not be expected to result in the loss of maternity colonies, day roosts, or hibernacula for bats. These features are not known to occur on the project site, and while bats will utilize large trees for day roosts, the habitat on the project site (primarily creosote bush scrub and windrows of sparse salt cedar) is generally not suited for this behavior; however, it may be possible that some areas of the project site that have rock outcrops or exposed lava formations may have limited potential to support small bat roosts. The mitigation measures that address project-related impacts to bats have been revised and the revised mitigation measures can be found in Section 4.3.4, Mitigation, Project Design Features, BMPs, and Other Measures. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

### **G.9.2.11 Cryptobiotic Soil Crusts (42200)**

**Comment CURE-61:** The BLM must establish the extent of cryptobiotic crust in the affected environment in order to analyze the effect that the destruction of this feature will have on the aquatic resources, biological resources and soil resources on and around the Project site. This information and analysis must also be disclosed to the public, and the Project’s impacts on the regional watershed must be analyzed as required by NEPA.

**Comment Poff-3:** Although a detailed surface soils assessment, including identification of the presence of a cryptobiotic crust, was not undertaken, it is highly likely that cryptobiotic crust is widespread across the site. Cryptobiotic crust, which is present at the surface of most desert soils, plays an important role in making nitrogen available to desert plants (Wohlfahrt et al. 2007). I have personally encountered cryptobiotic crust at similar elevations and in locations comparable and close to the project site as well as in other areas throughout the Mojave Desert. In my opinion the impacts to the cryptobiotic crust were not analyzed, nor were mitigation techniques provided.

The cryptobiotic crust is a highly specialized community of cyanobacteria, mosses, and lichen and are prevalent in the project area. The living organisms present in the desert soils create a

surface crust of soil particles bound together by organic material. The thickness of these crusts can reach up to 10 cm. The crusts are important members of the desert ecosystem and contribute to the well-being of other plants by stabilizing sand and dirt, promoting moisture retention, and fixing atmospheric nitrogen. Because of their thin, fibrous nature, cryptobiotic soils are extremely fragile systems. Some species in the soil can recover within a few years of disturbance, but slow growing species may require more than a century to recover.

Disruption of the crust will result in decreased organism diversity, soil nutrients, stability, and organic matter. The crusts significantly aid infiltration of precipitation, and anthropogenic disturbance can dramatically increase surface runoff and increase the rate of soil loss by an order of magnitude. These increases in sediment laden runoff could significantly impact the morphology of the existing washes. Also, wind erosion is substantially more prevalent with disruption of the crust. Crusts that may remain intact downstream of the project site will inevitably be buried (and therefore permanently impacted) through windblown and water transported erosion.

**Comment CBD-42:** While the DEIS briefly discusses the value of soil crusts and potential problems with removal (DEIS at C.2-41 and C.2-45, it does not describe the extent of 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 and trap soil moisture. The DEIS fails to provide a map of the soil crusts over the project site, and to present any avoidance or minimization measures. It is unclear how many acres of cryptobiotic soils will be affected by the project. The supplemental DEIS 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.

**Response:** Impacts to biological resources from the loss of biotic soil crusts are identified for each alternative in Section 4.3.2, Direct and Indirect Impacts; these impacts would occur across the entire project site, and the mapping of biotic soil crusts would not result in any additional information that is required to analyze these impacts.

### **G.9.2.12 Insects (30000)**

**Comment CBD-44:** The DEIS fails to address insects on the proposed project site. In fact no surveys or evaluation of rare or common insects are included in the DEIS. Dune habitats are notorious for supporting endemic insects, typically narrow habitat specialists.

**Response:** No special-status insects or species of concern have been identified as occurring or potentially occurring on the project site, and it is not common practice for BLM to survey for or evaluate impacts to common insect species.

### G.9.2.13 Cumulative Effects on Wildlife (30250)

**Comment SC-24:** Under NEPA, an EIS must provide a sufficiently detailed catalogue of past, present, and reasonably foreseeable future projects, and provide an adequate analysis of how these projects, in conjunction with the proposed action, are thought to have impacted or are expected to impact the environment. In addition to an adequate cataloging of past projects, NEPA also requires a discussion of consequences of those projects. However, the SA/DEIS fails to properly assess and address the severe cumulative biological and other impacts of the project.

The SA/DEIS fails to provide an adequate analysis of how these related projects, in conjunction with the proposed action, are thought to have impacted or are expected to impact the environment. The acreages and intent of the identified related projects are given, but actual cumulative impacts of these projects on the affected environment are not analyzed in adequate specificity. In particular, the cumulative biological context is deficient. The SA/DEIS fails to analyze the threshold questions about the cumulative context: What is the existing condition for the species at risk? What is the expected future condition for the species and biological processes at risk from the cumulative impacts of this and other existing and reasonably foreseeable actions? And what relative contribution to these impacts is the proposed project expected to make?

**Comment SC-25:** The SA/DEIS primarily relies on raw acreage information for its assessment of cumulative impacts. Critical factors that affect the ability of habitat to support species, such as existing and foreseeable fragmentation, edge effects, habitat connectivity, relationship to migration corridors needed for climate change adaptation, and other essential parameters were given scant analysis, leaving the reviewer with little understanding of the Project's real cumulative import. In so doing, the cumulative analysis also relies on the SA/DEIS's deficient biological resources analysis for the proposition that cumulative impacts are mitigated, partially or wholly.

**Comment SC-27:** . . . the biological assessment is severely lacking in basic data. It also contains no cumulative thresholds of significance, and is significantly deficient in purported mitigation (which usually consists of future surveys, yet-to-be-formulated plans, and/or future monitoring and adaptive management, for which the necessary funding has yet to be determined or secured).

**Comment SC-28:** the SA/DEIS found that "there may be cumulative effects remaining even after mitigation is implemented by all projects," SA/DEIS C.2-150, and "[l]oss or fragmentation of habitat, displacement, disruption of movement if these species occur in project area." SA/DEIS C.2-39. However, here again, the reader needs a context to understand the full extent and relative importance of the impact, and this the SA/DEIS fails to provide. Instead, the SA/DEIS notes that these residual cumulative effects "could be addressed through a regional and

coordinated planning effort aimed at preserving and enhancing large, intact expanses of wildlife habitat and linkages, including maintaining connections between wildlife management areas and other movement corridors” and that “ongoing collaborative efforts by federal and State agencies to develop a Desert Renewable Energy Conservation Plan and BLM's Solar Energy Development Programmatic EIS offer an appropriate forum for such planning.” SA/DEIS C.2-150.

**Response:** Cumulative impacts to wildlife and mitigation proposed are addressed in the FEIS, including wildlife corridors, habitat linkages, and continuity. The Agency Preferred Alternative provides for a habitat linkage in the northern portion of the Proposed Action project site. Since the proposed project will result in a net beneficial impact on GHG emissions and climate change, it therefore does not contribute meaningfully to this cumulative effect. The understanding of how and when climate change may result in noticeable effects on the different species and habitats within the Mohave Desert is unknown and speculative at this time. Based on these reasons, BLM has determined that discussion of climate change on biological resources is not necessary in this analysis.

#### **G.9.2.14 General Wildlife Movement/Connectivity (30210, 30214)**

**Comment Cashen-1:** The DEIS has two significant flaws related to wildlife movement corridors north of the Project . . . it failed to provide evidence that the area north of the Project site would be used by the target species, and that even if it was used as a corridor, that its use would mitigate the adverse effects of Project fragmentation . . .

The DEIS concluded the “northern portion of the project” supports wildlife movement corridors for the species addressed in the DEIS, and for common mammal, reptile, and avian species. This conclusion was based at least in part on the “vegetation, topography and connectivity to other open areas.” Although generalities of this nature may be useful, their application to specific cases is extremely risky . . .

Knowledge of the suitability of corridor habitats, the home ranges and movements of species of interest, and the effects of corridor width may not be sufficient to predict the use or occupancy of corridors by species; information on the surrounding landscape may also be required.

In addition to the corridor attributes mentioned above, there are several aspects of the landscape that may affect a species’ dispersal among suitable patches. The size, shape, spatial configuration, and context of habitat patches all have implications on dispersal. Yet, the DEIS provides no indication that any of these variables were even considered in analyses or to derive conclusions on impacts.

**Comment Cashen-2:** Adverse effects from habitat edges and fragments are not limited to desert tortoises. Changes in broad patterns of resource patches can insidiously disrupt resource availability and resulting population functions in ways that would not become evident by examining merely local expressions of habitat conditions and occurrence of species. Individual components and forces of landscapes do not act in isolation, rather they are mutually determining. As a result, disruptions to populations and habitats alike can “unravel” ecological processes, biotic communities, and natural disturbance regimes. Whereas the specific responses of most ecosystems that incur disturbances are difficult to predict, they need to be considered when formulating impact analyses and mitigation. The DEIS lacks these fundamental considerations.

**Comment Cashen-3:** In addition to information on vegetation, topography and connectivity to other open areas, the DEIS appears to have improperly relied on inferences provided by the Applicant to assess impacts and devise mitigation. Specifically, the DEIS states “the applicant identified general movement patterns, corridors, and culverts for desert tortoise and bighorn sheep in the project assessment area (SES 2009aa – Figures 9, 10, and 11).” This statement is misleading in many ways.

First, the information cited in the DEIS does identify culverts and general movement patterns for bighorn sheep. However, it does not identify general movement patterns for desert tortoise or any corridors.

Second, neither the DEIS nor the Applicant has presented a clear description of how the information cited in the DEIS was obtained. Consequently, its accuracy cannot be validated. To the contrary, there is evidence that the information presented is not valid. For example, the Applicant reported that Figure 11 “shows the patterns of USGS washes, drainage patterns, and drainage paths that are relict flood channels.” Figure 11 severely underestimated the number the hydrologic features on the Project site. The USGS 7.5-minute topographic map of the Project area does not support the accuracy of that figure, nor do the figures associated with the soils and water section of the DEIS. Additionally, the DEIS and the Applicant have suggested Figure 9 depicts bighorn sheep habitat and movement corridors. However, the information depicted on the figure is largely based on a subjective opinion, and not empirical data. Furthermore, neither the BLM nor the Applicant has addressed how bighorn sheep connectivity would be maintained between the Cady Mountains, and the Newberry/Rodman and Bullion Mountains. Division of bighorn sheep populations is not consistent with the West Mojave Plan, which states “[f]urther division of [bighorn sheep] metapopulations should not be allowed and historic habitat should be restocked to maximize connectivity and the number of populations in remaining metapopulations when reintroduction stock is available.”

The Biological Assessment (BA) prepared for the Project presents a map of modeled desert tortoise habitat and desert tortoise movement corridors in the vicinity of the Project. The BA provides no information on how the map was generated other than stating that USGS modeled

desert tortoise habitat was used to predict movement corridors. This is not supported by USGS's literature on its habitat model, which states "[b]oth from constraints on mobility and their inability to easily construct shelters, tortoises tend not to use rocky or shallow bedrock habitat, particularly on very steep slopes, in the Mojave Desert." Yet, this very type of rocky habitat is depicted as a desert tortoise corridor on the BA's map. It is also the habitat that the DEIS used to conclude would "remain available" for east-west movement of tortoises.

The "desert tortoise habitat and movement corridors" map presented in the BA depicts modeled desert tortoise habitat potential in the Project region. In particular, the map shows a large swath of land with a habitat score of 0.9 (out of a possible 1.0) centered on the Project site; few other large blocks of land with equivalent scores are predicted to occur in the region. The Project would eliminate a considerable portion of this high quality habitat, and it would completely sever its connectivity. An action of this magnitude would impede recovery of the species, and it could very easily lead to local extinctions.

**Comment Cashen-4:** The text of NEPA suggests that its authors envisioned an ecosystem-oriented approach to impact assessment. An ecosystem-level approach is especially warranted for Projects of this magnitude that have the potential to affect entire populations. Thus, to implement an ecosystem-oriented approach to impact assessment, the BLM should have considered the synergistic interactions among species and their environment. The DEIS fails entirely in this regard. The DEIS provides a flawed impact assessment, primarily because it lacks a scientific basis for the predicted wildlife responses, and because it did not consider how the Project would change the synergistic interactions among species and their environment. Maintaining the ability for animals to disperse within and among habitat patches is critical to long-term population viability. Fragmentation, such as the large-scale fragmentation that would be caused by the Project, affects dispersal. Further, the DEIS failed to adequately analyze the factors pertinent to wildlife use of corridors for the Project site. These include the attributes of the corridor itself (e.g., width), the lifehistory traits of the focal species (e.g., vagility), and various landscape variables (e.g., configuration of habitat patches). Moreover, corridor functions may not alleviate the adverse, ecosystem-level effects of the Project. The DEIS failed to predict, or even make an attempt to assess, the integrity of the ecosystem if the Project was constructed. Thus a significant amount of additional data and analysis is necessary to analyze the Project's impacts on wildlife movement and landscape connectivity.

**Comment SC-19:** The bighorn sheep forage in the mountainous regions of the project site, and also likely move across the flatlands of the project. These intermountain areas are important for the bighorn sheep to move from one area to another. Indeed, "intermountainous area of the floor that bighorn traverse between mountain ranges [are] as important to the long term viability of populations as the mountain ranges themselves." SA/DEIS C.2-94 (emphasis added). The SA/DEIS failed to provide adequate focused information on habitat connectivity to analyze this significant impact.

The project will also hinder both north-south and east-west movement of the desert tortoise. SA/DEIS C.2-94. The perimeter fencing will result in permanent movement barriers. Little information is provided discussing the effects this permanent limitation will have on the overall health of the species or on their genetic diversity. Even with the mitigation measures proposed, staff concurs that the project will limit movement, and nothing will offset the impacts to the north-south corridor. This is a significant burden for the desert tortoise, and as such, the habitat fragmentation of the project should be considered too high to approve.

**Response:** The BLM has considered the direct, indirect, and cumulative impacts of the proposed project on the desert tortoise, as well as other special status species and general wildlife. The BLM recognizes that the proposed project would impact wildlife movement and habitat connectivity, and has identified project alternatives that would reduce these impacts as well as appropriate mitigation measures that would minimize potential impacts under any of the project alternatives. Discussions of impacts to wildlife movement can be found in Section 4.3.2, Direct and Indirect Impacts. The mitigation measures that address project-related impacts to wildlife movement can be found in Section 4.3.4, Mitigation, Project Design Features, BMPs, and Other Measures. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

### **G.9.3      Vegetation (30100)**

#### **G.9.3.1    Vegetation Generally (30110)**

**Comment CURE-58:** Sensitive natural communities were noted to be present on the Project site in the DEIS, but were never mapped or otherwise quantified. “Staff found numerous smaller patches of vegetation associations not shown in the applicant’s vegetation map. The DEIS does not quantify species composition or map these smaller associations but notes that these associations are microphyll woodlands typically associated with dry desert washes and include catclaw acacia thorn scrub, lower elevation wash and sandfield vegetation, smoke tree woodland, and big galleta shrubsteppe.”

These sensitive natural communities are a part of the affected environment and, as such, must be analyzed as a part of the baseline. The type, quantity and quality of these communities should be quantified and analyzed in a revised DEIS.

**Comment Cashen-22:** In the Application for Certification (AFC), the Applicant determined that three vegetation communities are present within the Project area in accordance with the Holland (1986) Vegetation Classification System . . .

In the Draft Environmental Impact Statement (DEIS), [CEC] Staff agrees with this general landscape characterization of dominant vegetation communities, but emphasizes that it is incomplete in regards to smaller vegetation alliances present throughout the Project area . . .

However, “[s]taff did not quantify species composition or map these smaller associations,” and information on special natural communities and associations has not been provided by the Applicant.

**Comment Cashen-23:** Several of the vegetation communities and alliances identified by Staff as occurring within the Project boundaries are classified as rare or sensitive in the State of California. The DEIS lacks baseline data on these resources . . .

The DEIS states smoke tree woodland has no special conservation status ranking. However, the DEIS’s statement does not appear to be consistent with recent information released by the CDFG, which indicates the Smoke Tree Woodland alliance may be considered a “Special Stand.” The DEIS lacks information on the distribution and abundance of smoke trees within the Project site, and an assessment of Project impacts to them.

Creosote rings are also protected by San Bernardino County. According to the DEIS, staff is not aware whether the applicant conducted any surveys or analyses to determine the potential occurrences of creosote rings on the site.

**Comment Cashen-24:** CDFG recognizes several vegetation associations in the central Mojave Desert as “communities either known or believed to be of high priority for inventory.” The DEIS presents a list of 10 vegetation associations that are of high inventory priority. All 10 listed vegetation associations potentially occur within the Project site, but “due to mapping scale, none of the associations were mapped on the proposed project site.”

The BLM is party to a Memorandum of Understanding with the CDFG to collect information for inclusion in the California Natural Diversity Data Base. The BLM’s survey protocol guidelines for NEPA compliance indicate “[p]lant communities should be described and mapped to at least the alliance level using the vegetation classification system of the California Department of Fish and Game (CDFG).” To ensure compliance with NEPA, the DEIS needs to provide baseline information on the “special” vegetation communities and alliances that may be affected by the Project.

**Comment CBD-32:** While plant communities were mapped on the proposed project site, the DEIS noted that “staff found numerous smaller patches of vegetation associations not shown in the applicant’s vegetation map.” (DEIS at C.2-1). Furthermore, “Staff did not quantify species composition or map these smaller associations but notes that these associations are microphyll woodlands typically associated with dry desert washes and include catclaw acacia thorn scrub, lower elevation wash and sandfield vegetation, smoke tree woodland, and big galleta

shrubsteppe.” (DEIS at C.2-1). Particularly in the central Mojave desert, many of these associations are rare plant communities. The failure to map them, identify their acreage, and evaluate avoidance, minimization and mitigation measures fails to comply with NEPA. These missing data and analyses need to be included in the supplemental EIS.

**Comment CBD-46:** Desert lands are notoriously hard to revegetate or rehabilitate and revegetation never supports the same diversity that originally occurred in the plant community prior to disturbance. The task of revegetating almost thirteen 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 is met post project closure, it will be necessary to bond the project, so that all revegetation obligations will met and assured. The bond needs to be structured so that it is tied to meeting the specific revegetation criteria.

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 West Mojave Plan’s rehabilitation strategies 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”. These requirements fail to truly “revegetate” the plant communities to their former diversity and cover even over the long term. While Bio-10 requires the development of a Revegetation Plan, that plan is not available for public review. While BLM’s own regulations 43 CFR 3809.550 et seq. require a detailed reclamation plan and a cost estimate, they need to be included in the revised EIS.

**Response:** The FEIS describes vegetation communities to the extent that is necessary to determine 1) the magnitude and context of project-related impacts and 2) the extent to which mitigation measures are required to avoid, minimize, or mitigate for those impacts. Information regarding the vegetation communities that are present on the project site can be found in Section 3.3.3.1, Vegetation. Impacts to vegetation, including unavoidable adverse impacts, are discussed in Section 4.3.2, Direct and Indirect Impacts.

### **G.9.3.2 Special Status Species (30117)**

**Comment CURE-5:** The SA failed to establish an accurate environmental setting for determining impacts to a host of rare plant species, including small-flowered androstephium, Emory’s crucifixion thorn, foxtail cactus, winged cryptantha, Utah vine milkweed, crowned muilla, white-margined beardtongue, Coves’ cassia, and small-flowered sand-verbena. The SA explains that the Applicant did not map, quantify or address impacts to these species in the Application for Certification or the Biological technical reports. Thus, the Applicant’s rare plant survey effort does not provide an adequate basis for determining impacts to rare plants on the Project’s impact area. The SA requires that the Applicant complete focused botanical surveys in

the spring of 2010 and submit updated vegetation and rare plant occurrence maps. These maps and reports are needed in order to establish the environmental baseline for the Project site.

Although the SA attempts to analyze the impacts and formulate mitigation measures for these species, this analysis may bear little resemblance to the analysis and mitigation that will be required after significant impacts to rare plants are actually identified through an adequate survey effort. Hence, the SA fails to provide an adequate description of the environmental setting, analysis and identification of mitigation for these rare plants. Once the Applicant submits the results of the spring 2010 rare plant surveys and all parties have an opportunity to review this analysis, the SA must be revised and recirculated for public review and comment.

**Comment CURE-52:** . . . the DEIS failed to accurately describe the affected environment for determining impacts to a host of rare plant species, including small-flowered androstephium, Emory's crucifixion thorn, foxtail cactus, winged cryptantha, Utah vine milkweed, crowned muilla, white-margined beardtongue, Coves' cassia, and small-flowered sand-verbena. The DEIS explains that the Applicant did not map, quantify or address impacts to these species in the Application for Certification or the biological technical reports. Thus, the Applicant's rare plant survey effort does not provide an adequate basis for determining impacts to rare plants on the Project's impact area. The DEIS requires that the Applicant complete focused botanical surveys in the spring of 2010 and submit updated vegetation and rare plant occurrence maps. These maps and reports are needed in order to establish the environmental baseline for the Project site.

Although the DEIS attempts to analyze the impacts and formulate mitigation measures for these species, this analysis may bear little resemblance to the analysis and mitigation that will be required after significant impacts to rare plants are actually identified through an adequate survey effort. Hence, the DEIS fails to provide an adequate description of the environmental setting for rare plants. As a result, the DEIS does not, and in fact cannot, provide an adequate impact analysis and identification of mitigation for these rare plants. Once the Applicant submits the results of the spring 2010 rare plant surveys, the DEIS must be revised and recirculated for public review and comment.

**Comment Cashen-15:** The DEIS lacks the information necessary to conduct a reliable assessment of Project impacts to special-status plant resources. This is primarily due to the Applicant's failure to conduct surveys during the summer/fall season or provide reliable data from surveys conducted during the spring. The DEIS does not contest this argument . . .

Without reliable information on the species that occur—and as a result, the level and types of Project impacts on those species—the DEIS cannot conclude proposed mitigation would reduce Project impacts to less than significant levels. A conclusion of this nature would rely on the presumption that all impacts can be mitigated to a less than significant level. Such a presumption is unrealistic for two reasons. First, it is difficult to predict the outcomes of surveys

due to the new and unexpected discoveries that have been occurring in the desert (and thus the inability to pre-assign mitigation). Second, the flora of the Desert Floristic Province is poorly understood and therefore surveys may yield completely unexpected results that cannot be mitigated by standard conditions.

**Comment Cashen-17:** Staff concluded that “adverse impacts to small-flowered androstephium would be less-than-significant per CEQA due to numerous additional occurrences documented elsewhere in California in recent years, including new occurrences documented by the applicant on public lands to the west and east, including many in the Pisgah ACEC.” However, the DEIS noted that (a) a large percentage (85%) of the occurrences documented in the California Natural Diversity Database (82 occurrences as of Apr 2010) is threatened by development (solar energy projects and Fort Irwin expansion); and (b) the Project could have a significant impact on downwind habitat within the Pisgah Crater ACEC. These factors support the conclusion that the Project may have a potentially significant impact on small-flowered androstephium.

**Comment Cashen-18:** Staff concluded that impacts to white-margined beardtongue are cumulatively considerable and likely to remain significant even after project-specific mitigation. However, staff concluded the project-specific effects to other special-status species and habitats have been mitigated to less-than-significant levels with general and species specific measures for avoidance, minimization, and compensation, detailed monitoring and reporting requirements, and funding mechanisms to ensure implementation and accountability. This conclusion lacks foundation, as described below.

**Comment Cashen-19:** Surveys of the compensation lands would occur after they are acquired, thus this aspect of the mitigation cannot be relied on to offset Project impacts. Pre-construction surveys of the Project site will be useful in guiding mitigation, but the act of conducting the surveys does not offset impacts. On-site avoidance and minimization is a mitigation strategy. However, meeting the measure’s requirement to avoid all white-margined beardtongue occurrences and 75% of the occurrences of all CNPS List 1B or List 2 taxa is problematic, particularly if pre-construction surveys reveal widespread distribution and abundance . . .

The goal of the Special-Status Plant Protection and Monitoring Plan is to “maintain the special-status plant species within the Special-Status Plant Protection Areas,” which would be located within the Project footprint. As previously stated, maintaining all white-margined beardtongue occurrences and 75% of the occurrences of all CNPS List 1B or List 2 taxa may not be feasible, which would make the Special- Status Plant Protection and Monitoring Plan rather irrelevant. This leaves development of a detailed Special-Status Plant Remedial Action Plan as the only reliable action for offsetting Project impacts. However, the DEIS eliminated this option when it concluded “[t]he remedial measures described in the Plant Remedial Action Plan shall not substitute for plant protection or other mitigation measures.”

**Comment Cashen-20:** The West Mojave Plan (“WMP”) provides conservation measures to minimize and mitigate the take for each species for which take has been authorized. It does not appear that the Project complies with these conservation measures.

First, the WMP has established the allowable amount of incidental take of white-margined beardtongue for maintenance of existing facilities within the BLM utility corridor and on private land within the species’ range. The authorized amount of incidental take is limited to 50 acres of occupied and potential habitat. Additionally, the WMP calls for the conservation of all known occurrences of the species within washes south of the Cady Mountains. Due to limitations of the botanical field surveys, the DEIS could not evaluate the total extent of habitat or numbers of white-margined beardtongue within the proposed Project area. However, it concluded white-margined beardtongue occurs, and that it has the potential to occur anywhere in the lower elevation wash and sandfield vegetation.

Second, the WMP calls for the conservation of all known occurrences of crucifixion thorn on public land. Take is allowed on private land within the species’ range (as long as it does not degrade the conservation areas), but it is not authorized for public lands.

Third, the WMP restricts the construction of windbreaks upwind of occupied Mojave fringe-toed lizard habitat. The Project would be located directly upwind of occupied habitat within the Pisgah ACEC, which was specifically designated for conservation of the Mojave fringe-toed lizard.

**Comment Cashen-25:** The DEIS outlines a variety of potential adverse consequences from Project construction and maintenance, including “likely” habitat conversion, increased sedimentation, alteration of soil type, loss of native seed bank, increased dust and a high risk of non-native weed invasion. These impacts will directly affect habitat used by local wildlife species. The DEIS states “[s]taff considers the direct and indirect construction impacts to vegetation to be significant under CEQA.” Yet the impact analysis and subsequent mitigation measures remain incomplete due to the substantial lack of data on vegetation communities and alliances in the Project area.

#### 1. Impact Avoidance and Minimization

The DEIS recommends a series of impact avoidance and minimization measures (“BIO-8”) “to manage the construction site and related facilities in a manner to avoid or minimize impacts to biological resources.” Whereas avoidance measures are discussed for certain wildlife species (e.g., desert tortoise), there is no mention of impact avoidance for any sensitive vegetation community (or alliance). The DEIS must provide information on the avoidance measures that will be implemented for sensitive vegetation communities and alliances.

#### 2. Revegetation and Compensation

The DEIS discusses a Revegetation Plan (“BIO-10”) to mitigate adverse impacts on natural vegetation communities as a result of temporary project disturbance. However, BIO-10 does not require the Applicant to restore any special vegetation communities or alliances that are impacted. The DEIS has demonstrated that the Project site contains a variety of observed and potential vegetation associations, some designated as protected or of high-inventory priority. BIO-10 should incorporate this vegetation heterogeneity into its mitigation activities in order to accurately return the temporarily impacted land back to pre-Project conditions. As it stands, BIO-10 could allow a substantial loss of natural vegetation biodiversity and wildlife habitat function.

**Comment WWP-11:** The proposed project site provides important habitat for the white-margined beardtongue (*Penstemon albomarginatus*), and other sensitive and at risk species. The supplemental CEQA document should fully document all occurrences on the site so that the impacts of the project can be determined. The supplemental CEQA document should also provide full documentation of other rare plant species present.

**Comment DEF-33:** The DEIS details impacts to some plant species, particularly the white-margined beardtongue and an undescribed species of lupine. However, as previously mentioned, the applicant has released the results of two botanical surveys since the DEIS was published. These surveys show particular impacts to the white-margined beardtongue. The white-margined beardtongue is extremely rare. The occurrences on the Calico site are among the last in the State of California, posing a potential extinction scenario. Defenders disagrees with Staff’s conclusion that a 250-foot buffer around each plant will minimize the project’s impact. DEIS, C.2-55. This strategy will simply delay the species’ ultimate demise. Defenders strongly suggests that BLM consider reconfigurations or alternative sites which will avoid the white-margined beardtongue altogether. BLM is also required under the West Mojave Amendment to the California Desert Conservation Plan to limit incidental take of this species. Defenders believes that much of the habitat in the section of the site immediately north of the BNSF railroad is potential habitat for the species and that therefore the applicant is unable to comply with the above provision in the West Mojave Plan.

**Comment SC-20:** . . . the Federal government is currently being petitioned to add the White-margined Beardtongue as a federally-listed endangered species. The White-margined Beardtongue must be fully considered during this SA/DEIS in order to comply with CEQA requirements. Staff concludes that the direct and indirect impacts to vegetation to be significant under CEQA. SA/DEIS C.2-41. We concur. Further, as a state-listed species, any impacts to this plant would have to be fully-mitigated under CESA.

**Comment SC-21:** The SA/DEIS states “[d]ue to limitations of the botanical field surveys described above, staff can not evaluate the total extent of habitat or numbers of the white-margined beardtongue or other List 1B plants within the proposed project area.” SA/DEIS C.2-49. This missing information is in violation of NEPA and CEQA; both staff and the public needs

to know if a given species is on a proposed site in order to determine the potential environmental significance of the action.

**Comment SC-22:** Staff proposes avoidance of the plant species on site as a mitigation measure and concludes that this will work for both the white-margined beardtongue and the Emory's crucifixion thorn because only one occurrence is known within the project site. SA/DEIS C.2-55. However, as discussed above, the surveys were inadequate to determine the actual number of these species on the site. As such, this mitigation measure seems to fail on its face. Further, staff does not know if the measure will work for Coves' cassia or small-flowered sand verbena, because although they were documented on the site, they were not "mapped or inventoried and no analysis of potential project impacts to them were provided by the applicant." *Id.* Without the actual number of listed plants that are going to be affected, the agency cannot conclude that the impacts to the species will be less than significant under CEQA. Proper vegetation surveys must be conducted and included in a supplemental SA/DEIS.

**Comment CBD-30:** Nine species of rare plants are noted to occur on the project site (DEIS at C.2-19-20). However, the DEIS acknowledges that comprehensive surveys for rare plants were not done (DEIS at C.2-46), and in fact, requires comprehensive surveys to be performed for rare plants in 2010 (DEIS at C.2-174). The results of those surveys are not available. Additionally, a number of the rare plant species identified to occur on site "were not mapped, quantified (i.e., numbers of occurrences) or addressed by the applicant in their Application for Certification or Biological technical reports" (DEIS at C.2-2). Absent these basic data on on-site resources, impact analysis is impossible, as is appropriate avoidance, minimization and mitigation strategies. Clearly a supplemental DEIS is required to present these missing data.

**Comment CBD-31:** Several rare plant species identified on site are "range extensions" into the central Mojave (Cove's cassia and small-flowered sand verbena), having not been documented in the general area previously. Neither species locations were mapped. These extensions not only represent new data on the distribution of the species, but also represent locations at the edges of the species range, which are very important in plant conservation strategies.

**Response:** Two additional rounds of rare plant surveys were conducted in April and May 2010; the results of these surveys are provided in Section 3.3.5.4 Special-Status Species. The proposed project would adversely impact small-flowered androstephium; however, under the Agency Preferred Alternative, other special status plant species including white-margined beardtongue, Emory's crucifixion thorn, and an unnamed lupine species would be avoided during construction and operation of the Calico Solar facility. Impacts to special status plant species are discussed in Section 4.3.2, Direct and Indirect Impacts. The mitigation measures that address project-related impacts to special-status plant species have been revised and can be found in Section 4.3.4, Mitigation, Project Design Features, BMPs, and Other Measures. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification,

additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

## **G.9.4 Biological Resources Mitigation (30000)**

### **G.9.4.1 General Biological Mitigation (30170/30270)**

**Comment SB County-1:** The County supports project development in a manner that optimizes future economic opportunity by minimizing land set-asides and instead focusing on funding conservation, habitat restoration, and species recovery efforts. The Staff Assessment is consistent with our approach by firstly, requiring avoidance of impacts via several mitigation measures, including rehabilitation in BIO-29 and invasive plant removal in BIO-11. Mitigation measure BIO-17 discusses compensatory mitigation and sensibly allows financial security for the procurement of land suitable for desert tortoise, as well as funding for the enhancement and long-term management of these lands. The County strongly supports the option to provide adequate mitigation fees in lieu of providing mitigation land, especially when the replacement involves multiples (e.g. 3 to 1) of the project acreage.

**Comment SB County-2:** This is only one of many renewable energy projects being planned for construction within San Bernardino County, presumably all of which will require biological mitigation. The cumulative impacts of requiring mitigation lands are not addressed in terms of economic impacts to the host jurisdiction.

**Comment CURE-20:** Several of the mitigation measures identified in the SA may not be feasible, which renders them unenforceable. Therefore, many of the significant impacts to biological resources remain unmitigated. For example, BIO-13 requires the Applicant to acquire compensation lands to mitigate for the direct and indirect impacts to Mojave fringe-toed lizard habitat . . .

However, there is no evidence that qualifying lands exist. Thus, the mitigation measure may not be “capable of being accomplished in a successful manner....” The compensation lands must be identified now in order to ensure that significant impacts to Mojave fringe-toed lizards are adequately mitigated.

Similarly, BIO-16 requires the Applicant to acquire compensation lands to mitigate for potential impacts to desert tortoise . . .

However, again there is no evidence that qualifying lands exist. Thus, the mitigation measure may not be “capable of being accomplished in a successful manner....” The compensation lands

must be identified now in order to ensure that significant impacts to desert tortoise are adequately mitigated.

**Comment CURE-76:** Many of the mitigation measures identified in the DEIS are not appropriate and are not likely to be effective. For example, BIO-13 requires the Applicant to acquire compensation lands to mitigate for the direct and indirect impacts to Mojave fringe-toed lizard habitat . . .

However, there is no evidence that qualifying lands exist. Thus, the mitigation measure may not be appropriate or enforceable, as is required by NEPA. The compensation lands must be identified now in order to ensure that significant impacts to Mojave fringe-toed lizards are adequately mitigated.

Similarly, BIO-16 requires the Applicant to acquire compensation lands to mitigate for potential impacts to desert tortoise . . .

However, again there is no evidence that qualifying lands exist. Thus, the mitigation measure may not be appropriate or enforceable. The compensation lands must be identified now in order to ensure that significant impacts to desert tortoise are adequately mitigated.

**Comment CURE-21:** Several of the mitigation measures required by the SA are worded ambiguously, which renders them unenforceable as a practical matter. For example, BIO-12 requires the Applicant to develop a plan for special status plant impact avoidance and minimization BIO-12 is vague and uncertain. It is vague and uncertain because it only requires avoidance and minimization of disturbance to rare plants “to the extent feasible.” Moreover, the condition requires that a qualified botanist delineate the boundaries of these special-status plant occurrences at least 30 days prior to the initiation of ground-disturbing activities. It may be impossible to delineate the boundaries of emergent plants during certain times of year. Recommend boundaries be delineated during time of year when each target species is most identifiable. There is no evidence that the measure will in fact reduce impacts to biological resources to a less than significant level . . .

In sum, identification and analysis of feasible mitigation measures to reduce impacts to biological resources to a less than significant level must occur now, and be included in the Revised SA that is circulated for public review and comment so that the public has a meaningful opportunity to evaluate and comment on the proposed mitigation. As proposed, Project impacts on numerous biological resources remain significant and unmitigated.

**Comment CURE-77:** Several of the mitigation measures required by the DEIS are worded ambiguously, which renders them unenforceable as a practical matter. For example, BIO-12 requires the Applicant to develop a plan for special status plant impact avoidance and minimization. BIO-12 is vague and uncertain. It is vague and uncertain because it only requires

avoidance and minimization of disturbance to rare plants “to the extent feasible.” Moreover, the condition requires that a qualified botanist delineate the boundaries of these special-status plant occurrences at least 30 days prior to the initiation of ground-disturbing activities. It may be impossible to delineate the boundaries of emergent plants during certain times of year. Boundaries must be delineated during the time of year when each target species is most identifiable. There is no evidence that the measure will in fact reduce impacts to biological resources to a less than significant level.

In sum, identification and analysis of feasible mitigation measures to reduce impacts to biological resources to a less than significant level must occur now, and be included in the revised DEIS that is circulated for public review and comment so that the public has a meaningful opportunity to evaluate and comment on the proposed mitigation. As proposed, Project impacts on numerous biological resources remain significant and unmitigated.

**Response:** The mitigation measures are consistent with current state and federal policies and guidelines, and have been developed through extensive coordination with the California Energy Commission, California Department of Fish and Game, and US Fish and Wildlife Service. The BLM has initiated formal consultation under the Endangered Species Act to address adverse impacts to the special-status species and designated critical habitat. Upon the completion of the Endangered Species Act consultation, the BLM will incorporate the terms and conditions of the US Fish and Wildlife Service’s Biological Opinion, as well as the terms and conditions of the California Department of Fish and Game’s Incidental Take Permit, into the project mitigation requirements. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

#### **G.9.4.2 Recommendations for Mitigation Measures**

##### **Comment CURE-24:**

BIO-2:

1. Verification: *If actions may affect biological resources during operation a Designated Biologist shall be available for monitoring and reporting.*

a. Recommend defining “shall be available”.

##### **Comment CURE-25:**

BIO-7:

2. Verification: *Within 30 days after completion of project construction, the project owner shall provide to BLM's Wildlife Biologist and the CPM, for review and approval, a written construction termination report identifying which items of the BRMIMP have been completed*

a. The Condition lacks an enforcement mechanism in the event the BLM's Wildlife Biologist or the CPM do not approve the report.

**Comment CURE-26:**

BIO-8:

3. *The boundaries of all areas to be disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to construction activities in consultation with the Designated Biologist.*

a. Recommend adding a mechanism for approval/verification.

4. *Vegetation shall be placed along the northern fence line to act as a screen for wildlife.*

a. Recommend performance and verification standards associated with the condition.

5. *Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged and/or staked) prior to the onset of construction.*

a. Recommend adding a mechanism for approval/verification.

6. *Design the retention basins to facilitate the passage of tortoise. Retention/detention basins located at the northern fence line near the foothills of the Cady Mountains shall be designed to allow for the passage of tortoise.*

a. Recommend provision of standards (or guidelines) for tortoise passage.

b. Condition appears to lack means of verification.

**Comment CURE-27:**

BIO-9

7. *During operation of the project, fence inspections shall occur at least once per month throughout the life of the project, and more frequently after storms or other events that might affect the integrity and function of desert tortoise exclusion fences. Fence repairs shall occur within two days (48 hours) of detecting problems that affect the functioning of the desert tortoise exclusion fencing.*

a. Recommend defining "more frequently."

b. The condition enables potentially multiple days or weeks of tortoise ingress (if something happens to the fence). Recommend adding a provision to the condition, whereby the applicant would notify the USFWS of any problems with the fence, and the USFWS would determine whether new clearance surveys are appropriate.

**Comment CURE-28:**

BIO-10

8. *all temporarily disturbed areas shall be restored to pre-project grade and conditions.*

a. Recommend specifying the “conditions” that must be restored. As written, it’s unclear what conditions would require restoration.

9. *The following measures shall be implemented for the revegetation areas not subject to the facility Landscape Plan.*

a. Recommend the SA cite the Landscape Plan being referenced.

10. *If the mitigation fails to meet the established performance criteria after the 10-year maintenance and monitoring period, monitoring and remedial activities shall extend beyond the 10-year period until the criteria are met or unless otherwise specified by the Energy Commission and BLM.*

a. Recommend the condition establish the circumstances under which the 10-year maintenance and monitoring period would need to be reset (or extended for an ecologically relevant duration). As currently written, the condition could be met even if the intent of the condition is not met. For example, new plantings at Year 10 could be used to satisfy the cover requirement, even though some of the plantings would likely die (and thus not satisfy the intent of the condition, which is to provide long-term cover).

11. *If a second fire occurs, no replanting is required, unless the fire is caused by the owner’s activity.*

a. Recommend specifying the mechanism for determining whether the fire is caused by the owner’s activity.

**Comment CURE-29:**

BIO-11

12. *The draft Noxious Weed Management Plan submitted by the applicant shall provide the basis for the final plan.*

a. Although the draft Plan discusses the need to meet success criteria, it does not provide the criteria, nor does it specify triggers for remedial actions. Recommend providing success criteria and triggers for remediation.

13. *Reestablish vegetation quickly on disturbed sites with native seed mixes.*

a. Recommend specifying interpretation of “quickly.”

b. Recommend establishing success criteria for reestablishing vegetation.

14. *Monitoring and rapid implementation of control measures to ensure early detection and eradication for weed invasions.*

a. Recommend specifying interpretation of “rapid.”

b. Recommend specifying areas that should be covered by the Weed Management Plan. If the Project results in weed infestations, nearby locations outside of the Project area may become subject to infestation. As a result, we recommend the Plan encompass any areas that may become infested by weeds as a result of the Project.

15. *Prohibit disposal of mulch or green waste from mown weed infestations around the solar generators to prevent inadvertent introduction and spread of invasive plants beyond the immediate vicinity of the project area and possibly into rare plant populations off-site.*

a. Recommend specifying acceptable disposal methods for mulch or green waste.

16. *From the time construction begins until 5 years after construction is complete, surveying for new invasive weed populations and the monitoring of identified and treated populations shall be required within the project area. Surveying and monitoring for weed infestations shall occur annually. Treatment of all identified weed populations shall occur at a minimum of once annually. When no new seedlings or resprouts are observed at treated sites for three consecutive, normal rainfall years, the weed population can be considered eradicated and weed control efforts may cease for that impact site.*

a. Recommend monitoring and treatment include a buffer zone around the Project area.

b. There appears to be a potential conflict between the requirement for monitoring (of identified and treated populations) for five years after construction is complete, and the requirement for monitoring for three consecutive, normal rainfall years.

c. Recommend defining interpretation of “normal.”

d. Recommend weed monitoring and treatment continue for the life of the Project given vectors for weed establishment (sources and periodic ground disturbance) will occur for the life of the Project.

**Comment CURE-30:**

**BIO-12**

17. *The project owner shall avoid and minimize disturbance to all white-margined beardtongue occurrences on the project site and within a 250 foot buffer area, and, to the extent feasible, shall avoid and minimize disturbance to 75% of all Emery's crucifixion thorn, Coves' cassia, small-flowered sand-verbena, and any other CNPS List 1B or List 2 taxa (excluding small-flowered androstephium) occurring on the site.*

- a. Recommend clarifying what is considered "feasible."
- b. Recommend defining how 75% will be calculated.
- c. Recommend including small-flowered androstephium given most known occurrences are threatened.

18. *The purposes of the surveys shall be (1) to document biological resource values of the compensation lands.*

- a. Recommend specifying the biological resource values that should be documented.

19. *If these species are documented on compensation lands, then they [sic] occurrences may serve to replace requirements for on-site avoidance.*

- a. To conclude occurrences on compensation lands replace on-site avoidance, we recommend the condition incorporate measures of abundance, health, and threats.

20. *The project owner shall implement all feasible measures to protect 75% of the occupied habitat of white-margined beardtongue, Emery's crucifixion thorn, Coves' cassia, small-flowered sand verbena, and any other CNPS List 1B or List 2 taxa.*

- a. Recommend specifying how occupied habitat will be defined.

21. *A qualified botanist shall delineate the boundaries of these special-status plant occurrences at least 30 days prior to the initiation of ground-disturbing activities.*

- a. It may be impossible to delineate the boundaries of emergent plants during certain times of year. Recommend boundaries be delineated during time of year when each target species is most identifiable.

22. *Provide any available information about microhabitat preferences and fecundity.*

a. Recommend clarification of what is considered “available” (e.g., extent of literature review).

23. *No more than 30 days following the publication of the Energy Commission Decision the project owner shall submit draft versions of the Special-Status Plant Protection and Monitoring Plan, the Special-Status Plant Remedial Action Plan, the Seed Collection Plan, and the Protected Plant Salvage Plan for review by the CPM, BLM’s Authorized Officer, and CDFG.*

a. The condition appears to lack a mechanism for enforcement, given draft versions of the plans are not required until after the Energy Commission decision.

24. *Submittal of survey reports shall continue until the same number of occurrences and areal extent of occupied habitat impacted by the project for small-flowered androstephium, white-margined beard-tongue, and any other special-status plants identified on these off-site lands as were impacted by the project.*

a. Recommend the condition be revised to clarify that Project impacts cannot occur to white-margined beardtongue (see BIO-12 #2).

b. Recommend the condition be revised to clarify Project impacts to 75% of known occurrences of the specified species on the Project site cannot occur until compensation lands with documented occurrences of the species have been acquired.

**Comment CURE-31:**

BIO-13

25. *Be connected to lands currently occupied by Mojave fringe-toed lizard;*

a. Compensation lands should be occupied by Mojave fringe-toed, commensurate with Project impacts.

26. *Not have a history of intensive recreational use or other disturbance that might make habitat recovery and restoration infeasible*

a. Recommend clarifying the party responsible for restoration.

27. *Be on land for which long-term management is feasible.*

a. Recommend requiring compensation land have reliable and protected access to source sand.

28. *Within six months of the land or easement purchase, as determined by the date on the title, the project owner, or an approved third party, shall provide the CPM, BLM’s Wildlife Biologist,*

and CDFG with a management plan for the compensation lands and associated funds. The CPM and BLM's Wildlife Biologist shall review and approve the management plan, in consultation with CDFG. Within 90 days after completion of project construction, the project owner shall provide to the CPM and BLM's Wildlife Biologist an analysis with the final accounting of the amount of sand dune/stabilized sand dune habitat disturbed during project construction.

a. The condition appears to lack a mechanism for ensuring the management plan is scientifically valid, and implemented.

b. The condition appears to lack a mechanism for additional compensation if final accounting of disturbed sand dune exceeds projected disturbance.

**Comment CURE-32:**

BIO-14

29. CURE comment: The applicant should have at least a basic gila monster translocation plan so that it is prepared if any gila monsters are encountered during Project construction.

**Comment CURE-33:**

BIO-15

30. *A major rainfall event is defined as one for which flow is detectable within the fenced drainage.*

a. Recommend establishing a more reliable means of identifying what constitutes a "major" rainfall event.

31. *If a desert tortoise is located on the second survey, a third survey shall be conducted.*

a. Recommend additional surveys until tortoises are no longer detected.

32. *Verification: Within 30 days after completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to BLM's Authorized Officer, the CPM, USFWS, and CDFG describing implementation of each of the mitigation measures listed above.*

a. The Condition allows ground disturbance prior to verification that surveys were implemented properly. Recommend verification occur before ground disturbance.

**Comment CURE-34:**

BIO-16

33. *The Plan . . . shall include . . . contingency planning.*

a. Recommend specifying the contingencies for which planning should occur.

34. *Verification: Within 30 days after initiation of relocation and/or translocation activities, the Designated Biologist shall provide to BLM’s Wildlife Biologist and the CPM for review and approval, a written report identifying which items of the Plan have been completed, and a summary of all modifications to measures made during implementation of the Plan. Written monthly progress reports shall be provided to the BLM’s Wildlife Biologist and CPM for the duration of the Plan implementation.*

a. Shouldn’t all items of the Translocation Plan be completed within 30 days?

b. Recommend clarifying that written reports shall be provided to the BLM and CPM for the duration of the Plan implementation, including through duration of monitoring (of translocated tortoises).

**Comment CURE-35:**

BIO-17

35. *provide habitat for desert tortoise with capacity to regenerate naturally when disturbances are removed;*

a. Recommend requiring disturbances to be removed if they limit desert tortoise habitat.

36. *not be characterized by high densities of invasive species.*

a. Recommend clarifying what is considered “high densities” and providing the methods for which density should be assessed.

37. *costs of initial habitat improvements to compensation lands, calculated at \$250/acre.*

a. Because compensatory mitigation is based on increases in carrying capacity that can be achieved on the acquired lands, enhancement costs should be based on costs needed to increase carrying capacity. Installation of an exclusion fence (for OHV) alone would likely cost more than \$250/acre.

38. *The project owner, or approved third party, shall provide . . . biological analysis . . .*

a. Recommend specifying the type of biological analysis that should be provided.

**Comment CURE-36:**

BIO-18

39. *The project owner shall design and implement a Raven Monitoring, Management, and Control Plan (Raven Plan) that is consistent with the most current USFWS-approved raven management guidelines and that meets the approval of the USFWS, CDFG, and the CPM. The goal of the Raven Plan shall be to minimize predation on desert tortoises by minimizing project-related increases in raven abundance.*

a. Recommend the Condition cite the most current USFWS-approved raven management guidelines.

b. Recommend establishing how baseline abundance and “project-related increases in raven abundance” will be established.

40. *For the first year of reporting*

a. Recommend clarifying what constitutes the first year.

**Comment CURE-37:**

BIO-19

41. *The Designated Biologist or Biological Monitor conducting the surveys shall be experienced bird surveyors*

a. Recommend the surveyors have demonstrated experience conducting nest searches, and that they are knowledgeable of the nesting habitats of the species that may nest on the site.

42. *Surveys shall cover all potential nesting habitat in the project site*

a. The entire site constitutes potential nesting habitat. Therefore, surveys should cover the entire Project site.

43. *At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys shall be conducted within the 10 days preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed one week in any given area,*

a. Recommend specifying techniques and minimum level of effort that should be dedicated to the surveys. Recommend report described in the verification measure include information on survey techniques and level of effort that were implemented.

b. Recommend specifying when follow-up surveys will be required.

c. The timing of the condition (i.e., within 10 days) conflicts with the verification measure (i.e., at least 10 days).

44. *Nest locations shall be mapped using GPS technology and submitted, along with a weekly report stating the survey results*

a. It's unclear what would be surveyed (i.e., for which a weekly report is required).

45. *The Designated Biologist shall monitor the nest until he or she determines that nestlings have fledged and dispersed.*

a. Recommend specifying that monitoring should be designed to avoid disturbing the nest, and to avoid actions that may lead to an increased predation risk.

**Comment CURE-38:**

BIO-20

46. The timing of the condition (i.e., within 10 days) conflicts with the verification measure (i.e., at least 10 days).

**Comment CURE-39:**

BIO-22

47. The timing of the condition (i.e., no more than 30 days) conflicts with the verification measure (i.e., at least 30 days).

48. Recommend clarifying whether the surveys need to be conducted in accordance with CDFG guidelines or CBOC guidelines.

49. Recommend adding the following excerpt from CDFG guidelines: "If owls must be moved away from the disturbance area, passive relocation techniques . . . should be used rather than trapping. At least one or more weeks will be necessary to accomplish this and allow the owls to acclimate to alternate burrows."

50. Recommend requiring artificial burrows be installed before owls are evicted from the Project site.

51. *If artificial burrows are required, the project owner shall obtain by purchase the land required to support the burrows or ensure the burrows are located in an area such as the transmission line easement where construction/development would not occur.*

a. Recommend requiring artificial burrows be located on land that is permanently protected and acceptable to CDFG, as per CDFG guidelines.

b. The transmission line is scheduled for upgrades. Maintenance vehicles along the transmission line easement pose a hazard to burrowing owls. Therefore, the transmission line easement is not a suitable location for artificial burrow installation.

c. Recommend clarifying that amount of land that must be purchased per pair or unpaired owl impacted by the Project.

*52. The Burrowing Owl Relocation Area Management Plan shall include monitoring and maintenance requirements, details on methods for measuring compliance goals, and remedial actions to be taken if management goals are not met*

a. Recommend specifying the compliance goals being referenced.

**Comment CURE-40:**

BIO-23

*53. The Bird Monitoring Study shall include detailed specifications on data and carcass collection protocol and a rationale justifying the proposed schedule of carcass searches. The study shall also include seasonal trials to assess bias from carcass removal by scavengers as well as searcher bias.*

a. Recommend specifying the minimum frequency of carcass searches such that an effective monitoring program is implemented and enforceable.

b. Recommend that the Bird Monitoring Study incorporate information obtained by the wind industry, including (a) monitoring strategies; and (b) carcass removal results.

*54. Verification: quarterly reports . . . describing the dates, durations, and results of monitoring.*

a. Reports should also contain information on the monitoring methods.

*55. Verification: . . . analyzes any project-related bird fatalities or injuries*

a. Recommend discussion of the actions that shall be taken (e.g., medical treatment) for any injured birds that are detected on the Project site.

**Comment CURE-41:**

BIO-24

*56. Verification: Within 60 days of publication of the Energy Commission Decision the project owner shall submit . . . a Draft Bighorn Sheep Mitigation Plan identifying a proposed location for the artificial water source and providing plans for its construction and management.*

a. The likelihood that the proposed mitigation will offset impacts to bighorn sheep is highly contingent on the number and location(s) of artificial water sources. Consequently, the specific location(s) should be incorporated into the Condition of Certification.

57. Timing of the verification measure may preclude adequate review of the Mitigation Plan. As currently written, the BLM and CPM could be determining the Plan's acceptability on the day ground disturbance begins.

**Comment CURE-42:**

BIO-25

*58. If avoidance of a non-maternity den is not feasible, badgers shall be relocated by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more than 4 inches at a time) before or after the rearing season (15 February through 1 July).*

a. Recommend indicating how badgers will be relocated (out of the impact area) once a burrow is excavated.

**Comment CURE-43:**

BIO-26

*59. The project owner shall conduct a survey for roosting bats prior to any ground disturbance activities in all areas within 200 feet of rocky outcrops or the existing BNSF railroad trestles.*

a. Recommend including surveys of any suitable roosting substrates.

*60. Surveys shall include a minimum of one day and one evening visit.*

a. Recommend specifying acceptable survey techniques.

*61. If a maternity roost will be impacted by the project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the project site no less than three months prior to the eviction of the colony.*

a. Recommend defining "near" and "close."

b. Recommend specifying timing for eviction of the colony.

**Comment CURE-44:**

BIO-27

62. CURE Comment: The information identified in BIO-27 #1 (i.e., description of activities that cross or have the potential to impact jurisdictional habitats; impacts to special natural communities; best management practices that would be employed) is needed to evaluate the extent of Project impacts, and should not be deferred to 30 days prior to commencement of work (i.e., the verification measure).

63. *When any activity requires moving of equipment across a flowing drainage, such operations shall be conducted without substantially increasing stream turbidity.*

a. Recommend defining “substantially.”

64. *The project owner shall minimize road building, construction activities and vegetation clearing within ephemeral drainages to the extent feasible.*

a. Recommend defining what is considered “feasible.”

65. *The owner shall remove any non-native vegetation (Consistent with the Weed Management Plan) from any drainage that requires the placement of a bridge, culvert or other structure. Removal shall be done at least twice annually (Spring/Summer) during implementation of the Project.*

a. Recommend specifying whether non-native removal will be required for the entire drainage.

b. Recommend clarifying time period covered by “during implementation of the Project” (e.g., life of the Project).

**Comment CURE-45:**

BIO-29

66. Verification: *the project owner shall provide financial assurances to BLM’s Wildlife Biologist and the CPM to guarantee that an adequate level of funding would be available to implement measures described in the Channel Decommissioning and Reclamation Plan.*

a. Recommend specifying what is considered “adequate.”

**Comment CURE-46:**

BIO-30

67. *Methods for restoring wildlife habitat and promoting the re-establishment of native plant and wildlife species.*

a. The measure requires a monitoring component to ensure desired results.

68. *the project owner shall secure funding to ensure implementation of the plan.*

a. Recommend specifying minimum amount of funding that is required.

**Response:** The BLM has reviewed the recommended revisions and incorporated them as appropriate. Biological Resource mitigation measures are identified in Section 4.3.4, Mitigation, Project Design Features, BMPs, and Other Measures.

## **G.10 Cultural Resources and Paleontology (60000)**

**Comment CURE-14:** The SA only discusses impacts to archaeological and historical artifacts and completely omits any analysis of impacts to traditional cultural properties (i.e. properties of significance to tribes today that may or may not be tied to specific artifacts). After the SA was published, tribal members expressed a desire to bring Tribal elders out to the site to identify potential traditional cultural properties. Local tribes have not had an opportunity to participate in the review of the technical data from the survey efforts and so they have not had an opportunity to identify significant impacts to traditional cultural properties. Staff must give tribal members and knowledgeable individuals an opportunity to identify significant cultural resources on the Project site, and in areas near the site that would be impacted by Project development, as part of the analysis of the Project's potentially significant impacts under CEQA.

Moreover, some physical objects and locations have greater cultural resource value through associations with the surrounding resources. The SA must identify the traditional cultural properties on or around the Project site and analyze any associational value that may be attached to those resources through consultation with the tribes. It is improper for the SA to conclude that an adequate survey of cultural resources has been completed when a whole class of resources, traditional cultural properties, has not yet been studied.

**Comment CURE-15:** The SA indicates that all impacts to cultural resources will be mitigated through the preparation of a Programmatic Agreement (“PA”) pursuant to Section 106 of the National Historic Preservation Act (“NHPA”) . . . If a PA is developed to mitigate significant impacts to cultural resources, the PA must fully consider the impacts to cultural resources and propose mitigation for those impacts, PRIOR to the issuance of any license for the Project.

**Comment CURE-22:** Although the SA concludes that the Project will pose significant impacts to cultural resources, the formulation of mitigation for impacts to cultural resources is wholly deferred . . . This proposal defers all development of mitigation to after Project approval in violation of CEQA and NHPA. Thus, the SA fails to provide any analysis to substantiate that this measure would in any way mitigate impacts to cultural resources on the Project site. Significant impacts to cultural resources remain significant and unmitigated.

**Comment CURE-63:** At the time the DEIS was released, the cultural resource surveys had not been completed. The draft cultural resources report was only finalized in June, 2010, well after the release of the DEIS. There is still no final report. At a June 9, 2010 proceeding at the Energy Commission relating to the Calico project and several other solar power plant projects, Dr. Charlotte Hunter, the Cultural Resources Program Manager for the California State BLM Office, explained that relying upon a draft technical report is tantamount to relying upon incorrect information . . .

Nevertheless, the BLM solely relied upon an unpublished preliminary draft report for its conclusions and recommendations in the DEIS. A draft report was published after the DEIS was released. At this time, there is still no final technical cultural resources report. Although BLM may complete its report by September on this Project, it should not release the FEIS until the report is final and the analysis and conclusions in the report are integrated into a revised DEIS. If the BLM fails to revise and recirculate the DEIS and releases the FEIS without a final report, it will violate BLM's staff statements of not relying upon draft reports. The BLM must conduct adequate cultural resources surveys and complete its analysis prior to the release of a revised DEIS. Otherwise, BLM has not met its obligations to adequately describe the affected environment under NEPA.

**Comment CURE-68:** The DEIS only discusses impacts to archaeological and historical artifacts and completely omits any analysis of impacts to traditional cultural properties (i.e. properties of significance to tribes today that may or may not be tied to specific artifacts). After the DEIS was published, tribal members expressed a desire to bring tribal elders out to the site to identify potential traditional cultural properties. Prior to the release of the DEIS, local tribes had not had an opportunity to participate in the review of the technical data from the survey efforts. The BLM must give tribal members and knowledgeable individuals an opportunity to identify significant cultural resources on the Project site, and in areas near the site that would be impacted by Project development, as part of the analysis of the Project's potentially significant impacts under NEPA.

Moreover, some physical objects and locations have greater cultural resource value through associations with the surrounding resources. The DEIS must identify the traditional cultural properties on or around the Project site and analyze any associational value that may be attached to those resources through consultation with the tribes.

**Comment CURE-69:** The DEIS indicates that all impacts to cultural resources will be mitigated through the preparation of a Programmatic Agreement ("PA") pursuant to Section 106 of the National Historic Preservation Act ("NHPA"). The PA is an agreement that would be drafted prior to Project approval that would defer the resolution of Project impacts to after Project approval. This is contrary to the statutory requirements of Section 106 of NHPA . . .

The DEIS must be revised to identify, analyze and mitigate potentially significant impacts to all cultural resources on the Project site, including any traditional cultural properties that may be identified through consultation. The DEIS must also consider the associational value of cultural properties identified in the DEIS and those that are still to be identified. If a PA is developed to mitigate significant impacts to cultural resources, the PA must fully consider the impacts to cultural resources and propose mitigation for those impacts, PRIOR to the issuance of any license for the Project.

**Comment CURE-79:** Although the DEIS concludes that the Project will pose significant impacts to cultural resources, the formulation of mitigation for impacts to cultural resources is wholly deferred. The DEIS proposes to rely upon a PA that is yet to be written, as mitigation . . .

This proposed PA defers all development of mitigation to after Project approval in violation of NEPA and NHPA. Thus, the DEIS fails to provide any analysis to substantiate that this measure would in any way mitigate impacts to cultural resources on the Project site. Significant impacts to cultural resources remain unmitigated.

**Comment WWP-5:** The project site also includes significant and numerous historical and cultural resources that will be impacted.

**Comment SC-41:** The SA/DEIS is Inadequate Because the Cultural Impacts Analysis is Unlawfully Deferred.

The discussion of impacts to cultural resources is incomplete and inadequate. Assessment of the short and long term adverse impacts to cultural resources will be completed only in the “Programmatic Agreement currently under development.” SA/DEIS ES-20.

BLM has failed to satisfy its obligations under section 106 of the NHPA. 16 U.S.C. § 470(f). This section of the NHPA requires agencies to take into account the impact of effects of their actions on historical resources "prior to the issuance of any license." 16 U.S.C. § 470(f). Instead of completing this required process, BLM is opting to use a programmatic agreement to defer evaluation, mitigation, and treatment until after approval.

Although the standard intensity of the geographic coverage in a project area of analysis would be 100%, here the geographic coverage only includes a sample of 25% of the archaeological sites. SA/DEIS C.2-49 . . . it was intended that the remaining 75% of the sites within the APE would also be subject to rerecordation, but “due to time constraints” the remaining 75% re-recordation effort of sites in the APE will be addressed as part of the terms and conditions of the Programmatic Agreement. SA/DEIS C.2-87. Before committing to the permanent destruction of irreplaceable cultural resources for the sake of a temporary project, CEC and BLM must, at the very least, determine the nature and extent of the cultural heritage they are obliterating.

**Response:** The Agency Preferred Alternative includes a modification of the Proposed Action project site. The cultural resources located in the southern portion of the Proposed Action project site are located outside the boundaries identified for the Agency Preferred Alternative and would not be disturbed by the proposed project. It has been determined that a Programmatic Agreement (PA) will not be necessary for the Calico Solar Project. Tribal consultation was conducted for this project.

## **G.11 Fire and Fuels (67000)**

**Comment CBD-54:** Fire in desert ecosystems is well documented to cause catastrophic landscape scale changes and impacts to the local species. The DEIS mentions the impacts of fire via the proliferation of nonnative weeds (DEIS at C.2-42), it fails to analyze the impacts of fire on adjacent natural desert habitat. The DEIS fails to adequately analyze the impact that an escaped on-site-started fire could have on the natural lands adjacent to the project site if it escaped from the site. The DEIS also fails to address the mitigation of this potential impact. Instead it defers it to the Worker Environmental Awareness Program (WEAP) and only requires “a discussion of fire prevention measures to be implemented by workers during project activities” (DEIS at C.2-161). A fire prevention and protection plan needs to be developed and required to prevent the escape of fire onto the adjacent landscape (avoidance), lay out clear guidelines for protocols if the fire does spread to adjacent wildlands (minimization) and a revegetation plan if fire does occur on adjacent lands originating from the project site (mitigation) or caused by any activities associated with construction or operation of the site even if the fire originates off of the project site.

**Response:** As identified in Section 4.6.2, Direct and Indirect Impacts, a Non-Native Invasive Weed Management Plan is being prepared for the project area. In addition, Appendix M of the Emergency Action/Fire Prevention Plan of the Plan of Development addresses a wide range of action measures to reduce and react to onsite emergencies. The potential for a human-caused fire related to the project is minor

## **G.12 Geology, Soils and Mineral Resources**

### **G.12.1 General Soils Comments**

**Comment SB County-7:** The Lavic Lake fault partially underlies the site (Sections 12 and 15). The fault experienced surface ground rupture during the 1999 Hector Mine earthquake and was subsequently evaluated by the California Geological Survey and has been included within the Alquist-Priolo Earthquake Fault Zone. We do not see an adequate discussion of onsite faulting

in the SA/DEIS. Structural and safety requirements may be needed and should be analyzed further.

**Response:** A discussion on the Lavic Lake and Pisgah faults, both of which may extend on to the site, has been included in Sections 3.7 and 4.7 of the FEIS. The effect of seismic activity and ground shaking upon the project site can be effectively mitigated through facility design by incorporating recommendations contained in the project geotechnical report included in the POD. This has been identified for each alternative in Section 4.7.2 Geology and Soils Direct and Indirect Impacts of this FEIS.

**Comment Poff-31:** This mitigation measure, as proposed in the Reduced Acreage alternative in the DEIS, removes the solar dishes from the primary washes to avoid significant impacts to fluvial morphology and sediment transport. In lieu of detailed 2D sediment transport analyses that may suggest otherwise, removal of the solar dishes from the primary washes is a prudent precautionary measure to minimize significant impacts to onsite and offsite wash morphology and subsequent sedimentation and water quality impacts. To further this precautionary measure, within the extent practical, it may be necessary to avoid placing solar dishes in the secondary washes as well.

**Response:** Your comment is included in the public record and will be taken into account by the authorized officer in the implementation of a Record of Decision for the project. We appreciate your input and participation in the public review process.

### **G.12.2 Desert Pavement (42100)**

**Comment CURE-60:** Desert pavement is a desert surface that is covered with closely packed, interlocking angular or rounded rock fragments that acts as a barrier to erosion. The physical properties of the desert pavement at the site have neither been adequately nor correctly characterized in the DEIS . . .

The DEIS fails to quantify the extent of desert pavement in the affected environment and, as a result, fails to analyze or mitigate the effects that will result from the loss of this service provided by this landscape feature. The DEIS should be revised to include an analysis of the extent of desert pavement in the affected environment and how the destruction of this feature will impact onsite and offsite aquatic resources, biological resources and soil resources as a result of Project development.

**Comment Poff-2:** It is my opinion that the physical properties of the desert pavement at the site have neither been adequately nor correctly characterized. Any alterations to the desert pavement and distinct geomorphic surfaces across the project site have the potential to dramatically affect infiltration and runoff compared to the existing conditions (Sharifi et al. 1999,

Okin et al. 2000, Okin 2002) . . . The applicant is relying on information on the formation of desert pavement from a biology report (PWA 2010). This report incorrectly describes the formation of desert pavement as “fine sediment [that] has been selectively scoured away by wind or water action over time. “ Instead of erosion, desert pavement is created by the slow accumulation of soil below the evolving stone pavement (McFadden et al. 1987).

It is important to fully understand the existing conditions in order to be able to identify the potential impacts, which will be dramatically different in a “crust” that evolved from erosion compared to top layer that is created by accumulation. Further, the proper understanding of the evolution of desert pavement directly ties into the understanding of its resilience and self healing abilities to minor anthropogenic disturbances. Major disturbances, such as those related to construction and corresponding erosion may lead to the crossing of thresholds where desert pavement may never again recover. However, minor disturbances may restore themselves over centuries if the mature Av horizon (eolian material that accumulates at the surface of desert soils, most often beneath a desert pavement) remains intact (Pelletier et al. 2007). In the context of project construction and subsequent maintenance activities (i.e. servicing the Power Conversion Unit, monthly mirror washing, etc.), this is unlikely to occur. Even shallow grading, as proposed in this project, will disturb the desert pavement and leave the Av horizon exposed to erosion (Okin et al. 2000). Under such a condition, while it has been observed that there are no statistical differences in the short term runoff characteristics with the clast cover removed (Chen et al. 2009), it has been observed that sediment production from the impacted surface can be significant over time . . .

The increased sedimentation from the grading activities as well as from the solar arrays directly in the washes would significantly impact the morphology of the washes, and subsequent delivery of runoff laden with very fine sediments (i.e., clays and silts) farther downstream. There, this fine material is likely to be picked-up and transported off-site by winds (Okin et al 2000). Additionally, deep grading, another potential impact of the proposed project, will likely destroy the Av horizon and locally increase infiltration, decrease runoff, increase transmission losses, and significantly impact the movement of soluble salts from the leach zone beneath the desert pavement. Depending on the desert pavement type and the level of disturbance to the leach zone (climate change or human disturbance), increased infiltration and transmission losses could drive soluble salts downward into the groundwater, thereby increasing groundwater salinity (Graham et al. 2008). Furthermore, disturbance of the desert pavement could have significant indirect impacts on neighboring pavement types and established vegetation, since vegetation is linked to pavement type, clast cover, and influenced by proximity to leached soluble salts (Wood et al. 2005).

**Response:** Specific quantification of desert pavement types has not been conducted. Desert pavement does occur on the site and will be disturbed during construction. The Project is designed to detain runoff waters from areas that would be impervious after construction. Holding

capabilities of the detention basins would be capable of accommodating a 100-year flood. Most of the site would remain pervious. Surface flows leaving the site are anticipated to be slightly lower than existing conditions. The project design incorporates measures such as managing the grading, stabilizing surfaces, construction of berms and channels, etc. would aid in the management of surface water flows and limit sedimentation processes. Sedimentation control is addressed in Appendix F, Stormwater Pollution Prevention Plan and Appendix G Drainage Erosion and Sedimentation Control (DESCP) Report and through mitigation measures identified in Section 4.17.4, Mitigation, Project Design Features, BMPs, and Other Measures. Since the proposed project will result in a net beneficial impact on GHG emissions and climate change, it therefore does not contribute meaningfully to this cumulative effect. Changes in hydrologic regimes for a specific area are unknown at this time. Based on these reasons, BLM has determined that discussion of climate change on hydrological regimes is not necessary in this analysis.

### **G.12.3 Soil Erosion and Sedimentation Comments**

**Comment CURE-72:** The DEIS concluded that morphological impacts to the washes would be significant from site grading and scour generated at the construction of SunCatcher units. However, the DEIS failed to analyze a number of sedimentation impacts including (1) the potential for significant gully erosion to be initiated by interception of runoff in access road cuts (and trenches) and/or concentrated runoff directly beneath the bottom lip of the solar dishes during intense summer storms, and (2) the potential for significant degradation (i.e., incision) of the washes as a result of implementing the sediment basins . . .

Moreover, the DEIS failed to adequately address the impacts of hydromodification resulting from the proposed action, and its potential to significantly change hydrologic characteristics (i.e., runoff duration, frequency, volume), which, in turn, can significantly degrade the washes.

Further, the DEIS did not adequately analyze the impacts from the increases in effective percent impervious cover as a combination of site infrastructure (i.e., paved roads, building pads, solar disc footings), access road compaction, destruction of desert pavement and cryptobiotic crust, and application of soil binders. These aggregate changes to the impervious cover were not considered and can have a significant impact on the morphology of the washes. While the DEIS concluded that small increases were negligible, small changes, in the aggregate, can result in significant impacts to onsite and offsite resources.

**Comment CURE-73:** Potential sedimentation and morphology impacts downstream of the project site were only briefly addressed. The discussion suggested that changes in sediment supply from the project site could result in unwanted offsite sedimentation (e.g., deposition) and/or incision of the downstream washes. With respect to sedimentation, the scope and severity of the sedimentation impacts were not analyzed.

**Comment Cashen-21:** The DEIS Failed to Analyze the Significant Impacts from Vegetation Loss . . .

The Project would involve site grading, which would destroy vegetation. In addition, the Project would involve brush trimming between every other row of SunCatchers (i.e., the power generation units). Schlesinger and Pilmanis (1998) have reviewed field experiments in which shrubs have been removed by cutting, herbicides, or fire. These studies show variable rates of soil degradation, but in each case, “a loss of the local biogeochemical cycle associated with shrubs has allowed physical processes to disperse soil nutrients across the landscape.” Thus, the progressive reduction in fertility acts in tandem with the mechanical action of sand to further decrease shrub cover, which, in turn, increases the susceptibility of the land to wind and water erosion. The permanent removal of suspension-sized particles from the soil by erosion results in a change of the soil texture, which may also reduce soil-binding properties, resulting in increased erodibility. Whether by wind or water, the fine particles and soil organic matter that are removed by erosion are key to the healthy functioning of soils because they increase soil nutrient content, soil porosity, water-holding capacity, and cation-exchange capacity. Because new vegetation growth is inhibited by blowing sand, the ability of vegetation to stem erosion is limited. This results in a negative feedback loop that ultimately results in severe land degradation.

**Comment Poff-5:** The DEIS identified potential sedimentation impacts onsite from construction and operations (see pages C.7-15 to 19, C.7-27 to 31, and C.7-35 to 37). The DEIS concluded that morphological impacts to the washes would be significant due to increased sedimentation from the solar arrays from soil erosion due to grading impacts; and subsequent changes to the sediment transport character of the washes to include scour effects, created by the solar dish towers.

While I agree with this assessment of impacts, other sedimentation issues were not highlighted in the DEIS including: (1) the potential for significant gully erosion to be initiated by interception of runoff in access road cuts (and trenches) and/or concentrated runoff directly beneath the bottom lip of the solar dishes during intense summer storms, and (2) the potential for significant degradation (i.e., incision) of the washes as a result of implementing the sediment basins. Gully erosion has the ability to deliver significant quantities of sediment to the dendritic network of washes, which in turn can significantly impact the morphology of the washes. With respect to the sediment basins, subsequent analyses by Chang (2010) for the Imperial Valley Solar Project highlighted the significant impacts posed by implementation of the sediment basins (see Section 6.2), resulting in sediment starvation onsite (and offsite), which is then countered by incision and subsequent impacts to the morphology of the washes and the habitats supported by the washes. The sediment basins for the Calico Solar Project were redesigned after the DEIS was published. The BLM must analyze impacts of these reassigned sediment basins for the Calico Solar Project. The BLM should take into account Chang's comments on the Imperial Valley

Project because they likely apply, and should be analyzed, in the context of Calico Project impacts as well.

**Comment Poff-6:** Potential, increases in surface runoff were inadequately addressed because the Project environment (desert pavement and cryptobiotic crust as described in sections 2.1 and 2.2 above) as well as the consequences of its manipulation are either poorly understood or simply ignored by the applicant and the BLM. Hence, the DEIS failed to adequately address the impacts of hydromodification and its potential to significantly change hydrologic characteristics (i.e., runoff duration, frequency, volume), which, in turn, can significantly degrade the washes.

Additionally, the effective percent impervious cover (PIC) may increase under project conditions, in the aggregate, as a combination of site infrastructure (i.e., paved roads, building pads, solar disc footings), access road compaction, destruction of desert pavement and cryptobiotic crust, and application of soil binders. These aggregate changes in PIC were not considered and can have a significant impact on the morphology of the washes. While small increases in effective PIC were perceived to be negligible in the DEIS, small changes ineffective PIC can result in significant impacts to onsite and offsite resources if not properly accounted for in the analyses supporting the project.

**Comment Poff-9:** Potential sedimentation and morphology impacts downstream of the project site were briefly addressed (see pages C.7-15 to 19, C.7-27 to 31, and C.7-35 to 37). The discussion suggested that changes in sediment supply from the project site could result in unwanted offsite sedimentation (e.g., deposition) and/or incision of the downstream washes. With respect to sedimentation, the scope and severity of the sedimentation impacts were not discussed.

**Comment Poff-19:** Limited or no soil erosion and sediment yield investigations have been performed for the project nor incorporated into the DEIS. The assumptions for the preliminary debris/detention basin sizing along the northern project boundary do not take into consideration the potentially increased sedimentation due to the disruption of the desert pavement and cryptobiotic crust nor the increased variability in precipitation events as discussed in sections 2.1, 2.2 and 2.3 respectively.

Any analysis of existing conditions must account for the hiding function afforded by the desert pavement (i.e., the desert pavement clasts shields the highly erodible Av horizon). Depending on the type and extent of desert pavement, it is possible to treat the clasts as surface cover (e.g., rocks), which would significantly reduce soil erosion estimates under existing conditions and amplify project impacts relative to a more accurate representation of existing conditions.

The Desert Research Institute (DRI) (Young & Chen 2009, Chen et al. 2009) has provided anecdotal evidence that soil erosion appeared to be significant in rainfall/runoff plot experiments when the desert pavement clasts were removed, exposing the underlying Av horizon, when

applying a 100-year 1-hour rainfall rate (2.67 in/hr) for one hour. This observation further stresses the importance of understanding geomorphic (arid biologic) surfaces and their role in controlling hydrologic arid geomorphic processes, because the magnitude of project impacts are measured in terms relative to existing conditions.

**Comment Poff-20:** Road cuts, subsequent compaction, application of soil binders, and interception of upslope surface runoff could initiate gully erosion. Gully erosion is removal of unprotected soil along the flow line of concentrated runoff, which is further compounded by the processes of headcutting and sidewall slumping once the gully is started. Road fill could bury runoff generating areas to which downslope vegetated areas are dependent upon. These facts must be considered in the DEIS because gully erosion is a significant unmitigated impact that is likely to result from Project development.

**Comment Poff-21:** In intense storms, the dishes could concentrate runoff below the bottom lip of the dish and initiate gully erosion. This fact is not considered in the DEIS.

**Comment Poff-22:** In response to the summary in the previous sections, I have concluded that the current level and type of analysis in the DEIS is insufficient. Failure to undertake additional surveys, data collection and analysis, and design of appropriate mitigation actions as described below will result in significant unmitigated impacts to the desert pavement and cryptobiotic soils, with corresponding dramatic increases in sediment and wind erosion, and significant impacts:

- (1) Perform rainfall/runoff/sediment yield plot studies on different geomorphic surfaces (perhaps at multiple proposed solar sites) under existing and project (with and without BMPs) conditions.
- (2) Justify and/or quantify desert pavement, cryptobiotic crust, and BMP effectiveness (especially the soil binders given their proposed broad application) on stabilizing soils and runoff generation, using empirical data if available, site testing, or sensitivity modeling.
- (3) Revise the soil loss calculations, using a GIS-based approach (several examples exist in the literature), and use the information (from the above recommendations) as input into the sediment transport model.
- (4) Confirm whether solar dish runoff under intense runoff will not concentrate below the bottom lip of the solar dish and initiate gully erosion.
- (5) Confirm whether access road cuts will not intercept and concentrate runoff, inducing gully erosion, especially if they coincide with backfilled trenches.

**Comment Poff-29:** Soil binders are proposed to be used to treat soil erosion by wind and water. The erosion control plans in the DESCOP suggest extensive use of soil binders throughout

the project site with little specifics on the placement of linear sediment barriers. The potential impacts of the soil binders on the natural characteristics of the desert pavement (specifically soil infiltration, runoff generation, and soil erosion), in addition to specifics on binder deterioration and reapplication rates, and downslope flow convergence leading to gully erosion, were not investigated nor stated. As such, more information is needed pertaining to the use of soil binders,

It is noted here that placement of linear sediment barriers on a project of this scope is better left to the final phases of the design. However, the effectiveness of these treatments at controlling sediment needs to be quantified for use in the soil loss calculations.

**Response:** The Project is designed to detain runoff waters from areas that would be impervious after construction. Holding capabilities of the detention basins would be capable of accommodating a 100-year flood. Most of the site would remain pervious. Surface flows leaving the site are anticipated to be slightly lower than existing conditions. The project design incorporates measures such as managing the grading, stabilizing surfaces, construction of berms and channels, etc. would aid in the management of surface water flows and limit sedimentation processes. The Project would conform to all measures identified in project-specific the Stormwater Pollution Prevention Plan and Drainage Erosion and Sedimentation Control (DESCP) Report (Appendix F and G, respectively in the POD) and through mitigation measures identified in Section 4.17.4, Mitigation, Project Design Features, BMPs, and Other Measures.

## G.13 Land Use

**Comment Brock-1:** How long will [the project] be on public land?

**Comment Brock-2:** Is there any plan to transfer ownership of land to private property?

**Comment Brock-3:** I am concerned about negative impact on adjacent or nearby private property if any. Is there any plan to mitigate this impact??

**Comment Brock-4:** Is there any private land within the project?

**Comment Brock-7:** NAP = Not A Part – is private property, BLM needs to be sensitive to the impact on private citizens and have a plan to mitigate any negative impact.

**Comment Stearn-10:** If the applicant intends to bring high-speed internet availability to the project site, via hard line, can the local Newberry Community Services District be given a voice in the routing of that access line?

**Response:** Existing conditions and potential impacts associated with the Proposed Action are identified in Chapters 3 and 4 (respectively) of this FEIS.

## **G.14 Public Health and Safety and Hazardous Materials (63000)**

**Comment SB County-4:** The County Fire Department supports CEC staff on the determinations and conclusions provided in the Summary and Conclusions Section (C.15.1), but does not support the adequacy of the mitigation measures proposed to reduce those impacts to the level less than significant . . . as outlined in the Condition of Certification Worker Safety-6. However, the County Fire Department does not support the adequacy of the mitigation measures as outlined in Condition for Certification Worker Safety-6. With regard to adequately mitigating the impacts to fire and emergency response capacity, including but not limited to staffing, operations, equipment and facilities, we believe that additional mitigation is required and should be fully analyzed in the SA/DEIS.

**Response:** The Emergency Action and Fire Prevention Plan identifies the procedures that would be taken in the event of a fire or other emergency. This Plan is located in Appendix M of the Plan of Development which will be available for review during the 30-day review period for the FEIS. The Plan of Development will be available either at the BLM Barstow field office or online at <https://tesseractosolar.box.net/shared/j09n6g20f6>.

**Comment BNSF-1:** The portion of the BNSF mainline along which the Project is proposed to be built is curved, and an essential signal for rail traffic is located in the vicinity near Hector Road. Both daytime glint and glare from Project mirrors, as well as the spill of light from nighttime maintenance activities, either of which may occur on both sides of the track, may significantly impact BNSF engineers' ability to see the signal. The situation would be exacerbated by the site elevations which Calico Solar has proposed . . . While the SA/DEIS has begun to address glint and glare with respect to motorists on nearby roadways (SA/DEIS pp C.13-13 – C.13-22), and BNSF understands that Glint and Glare Study is currently being performed, neither currently addresses potential glare impacts to rail. BNSF requests that these concerns be studied and addressed.

**Comment BNSF-2:** The proposed Project would include over 5,000 feet of new transmission line and a new substation immediately adjacent to BNSF's mainline. BNSF has experienced interference with signals and its employees being shocked in similar situations in other locations, and is concerned that the proposed configuration of these Project elements may raise a safety issue . . . BNSF requests that these [safety] issues be studied specifically with respect to the proximity of the transmission line and new substation to the mainline, and that appropriate conditions on the locations of these facilities be required.

**Comment BNSF-3:** Calico Solar proposes an extensive underground pipeline system to provide hydrogen to the 34,000 SunCatchers proposed to be constructed on the 8,230 acre site surrounding the existing mainline. This pipeline system raises at least two safety concerns. First, if derailment were to occur, given the desert sands, train cars could come in contact with the shallow underground pipeline system. Second, it has been determined that the hydrogen pipeline will have uncontrollable leaks. BNSF understands that Calico Solar has tripled the amount of hydrogen the Project will require due to their greater understanding of the potential for hydrogen pipeline leaks.

. . . BNSF requests that the hazards posed by the location, extent and depth of the proposed underground hydrogen pipeline system, and the anticipated hydrogen leaks be analyzed with respect to rail operations. BNSF requests that the Risk Analysis being prepared with respect to hydrogen consider a possible derailment scenario. Additionally, BNSF requests that the exact location of hydrogen in relation to the signal cable be determined; that sensors be required to be placed to detect hydrogen leaks; that mitigation measures such as automatic shut-off valves along the hydrogen pipeline be considered; that the Spill Prevention, Control, and Countermeasures Plan require notification of the railroad of hydrogen releases; that an auto-dialer and/or other notification systems be established to promptly notify BNSF of hydrogen releases; and that BNSF be granted access to the Project site in the event of an emergency, including derailment.

**Comment BNSF-5:** BNSF is concerned that security for the proposed vehicle access over the bridge over the mainline be considered, and that the BNSF ROW be demarcated to notify Calico Solar employees and others of their proximity to the tracks. BNSF understands that maintenance will be performed at night.

**Response:** The Proponent will work closely with BNSF to ensure that BNSF's safety concerns are addressed and appropriate measures taken to ensure the safety of BNSF trains and personnel and Calico Solar personnel.

**Comment BNSF-4:** BNSF is concerned the potential drawdown of the groundwater basin by the newly proposed water well may cause subsidence which might adversely affect rail track alignment, creating a safety issue . . . BNSF suggests that the analysis be expanded. In addition, BNSF requests that a notification procedure be put in place for any noted subsidence, whereby BNSF maintenance teams would be alerted of the issue. BNSF also intends to preserve the option of replacing its abandoned wells in the Hector Road location.

**Response:** In some deep alluvial basins, groundwater withdrawal from confined aquifers can cause substantial dewatering (water level declines of 100 feet or more) and compaction of fine-grained sediment beds resulting in land surface subsidence. It is estimated the maximum water level decline from project groundwater use is less than 4 feet and therefore unlikely to cause

substantial dewatering and compaction of fine-grained sediment beds and land surface subsidence.

**Comment Jackson-15:** The proposed Project will have an impact on the public health and safety of the population, employees and visitors to the privately owned lands adjacent to the Project in terms of primary and emergency access; flood control; the Project's 34,000 SunCatchers and other permanent improvements and associated construction equipment. Of utmost importance is the Project's hydrogen supply system which "may cause partial demolition of houses and can result in serious injuries to any population present within the area of impact" reported to be 0.06 and 0.04 miles under offsite consequence Scenarios 2 and 3, respectively.

A hydrogen gas explosion could result in injuries to the population on the adjacent lands and those computing through the Project to access the privately owned lands.

**Response:** The potential consequences of an accidental release of hydrogen at the project site have been evaluated in Section 4.11 of this FEIS and it has been determined that there is no significant risk to nearby populations from a hydrogen explosion. There is no plausible scenario where an unconfined vapor cloud explosion of hydrogen could occur. The use of hydrogen at the proposed facility poses a risk of an on-site fire. A safety management program, which would include both engineering and administrative controls, would be implemented to mitigate the potential for accidents resulting from the release of hazardous materials. .

## **G.15 Socioeconomics and Environmental Justice**

### **G.15.1 Socioeconomic Impacts (65000)**

**Comment CURE-91:** The BLM must consider the economic and social impacts of granting or implementing the Applicant's request through the Plan Amendment process. Therefore, the BLM must consider the economic impacts associated with building the plant and the connected transmission line on CAISO transmission customers. At this time, the Larger Generator Interconnection Agreement ("LGIA") for an 850MW power plant (Proposed Project) provided to the BLM by the Applicant has been rejected by the Federal Energy Regulatory Commission ("FERC"). This occurred because a number of CAISO customers protested the large financial risk accruing to them as a result of the unorthodox LGIA drafted for this Project. FERC agreed that the LGIA departed from standard process and decided to only grant approval of the LGIA for a 275 MW Project.

The BLM failed to analyze the financial implications to CAISO transmission customers in considering the CDCA Plan Amendment in the DEIS. The BLM must consider this cost. Further,

the BLM should factor the FERC's April 26, 2010 decision (attached) to only approve a LGIA for a 275 MW Project into the feasibility considerations in the Alternatives analysis in the DEIS.

**Comment Stearn-5:** The project is just outside the Newberry Community Services District and in County Fire Department area of jurisdiction. Would the magnitude of this project proposal justify asking the applicant to partially or fully fund a County Fire Department station at or near the Hector Road Interstate 40 interchange?

**Comment Stearn-6:** How will the project's labor force impact existing school and recreational facilities in Newberry Springs and Silver Valley Unified School District? A LAFCO report recently made note of the lack of recreational acreage in Newberry Springs, by a accepted formula for making that determination.

**Response:** Most of the personnel that would be employed for the project are anticipated already reside in San Bernardino or Riverside counties. No substantial growth-inducing impacts are anticipated to occur as identified in Section 4.13.2 of this FEIS.

**Comment Stearn-9:** What steps will be taken to ensure that [at] the end of the project-life, the public won't be stuck with a clean-up bill.

**Response:** As identified in the POS and in Section 2, Alternatives Including the Proposed Action, the project would be decommissioned at the end of its useful life. Preliminary details of decommissioning are provided in Appendix X of the POD, Draft Closure, Decommissioning, and Reclamation Plan. In addition, the project is bonded to ensure that funding is available to cover the decommissioning and reclamation process.

**Comment Jackson-13:** The SA/DEIS is deficient in that it does contain sufficient information for the Presiding Member's Proposed Decision (PMPD) with respect to controlling population levels and land use development on adjacent privately owned lands.

**Comment Jackson-14:** The Project is adjacent to three sections of privately owned lands. "Although not part of the project, three adjacent tracts of private land are each surrounded on three sides by the proposed project.

The privately owned lands adjacent to the Project are under the jurisdiction of the County of San Bernardino (County) in a RC (Resource Conservation) zoning district. Single-family dwellings are allowed in the RC zoning district with a minimum lot area of 40 acres. The County-governed land adjacent to the Project is of sufficient acreage and zoning to allow for a significant population.

The owners of the privately owned land adjacent to the Project have the right to develop their lands in accordance with the County of San Bernardino 2007 Development Code amended March 25, 2010 (County's Development Code).

Chapter 84.29 of the County's Development Code allows renewable energy generation facilities in the RC zoning district.

**Comment Jackson-16:** The existing land use restrictions on the privately owned lands are not “of the type necessary and sufficient to guarantee the maintenance of population levels and land use development over the lifetime of the facility which will insure the public health and safety.”

The Presiding Member's Proposed Decision must address proposed development of the adjacent privately owned lands.

**Comment Jackson-17:** The SA/DEIS does not comply with Section 25528 of the Warren-Alquist State Energy Resources Conservation and Development Act (Public Resources Code Section 25000 et seq.) in that it does not provide sufficient information for the Commission to determine if the Applicant must acquire the development rights of the privately owned lands adjacent to the Project.

The existing land use restrictions on the adjacent privately owned lands are such the commission can not “waive the requirements of the acquisition of development rights by the applicant.”

The Applicant can not acquire the development rights of the privately owned lands without paying just compensation.

**Response:** The proposed project would not inhibit development of adjacent land. Land owners would be justly compensated for the use of any privately owned land.

### **G.15.2 Business Viability (65200)**

**Comment SB County-3:** With regard to addressing economic impacts to the County including infrastructure cost impacts and ongoing operations and maintenance costs, the County is developing a fiscal impact analysis to determine project-specific cost impacts that will be sought from project proponents.

**Response:** Your comment is included in the public record and will be taken into account by the authorized officer in the implementation of a Record of Decision for the project. We appreciate your input and participation in the public review process.

**Comment CURE-17:** The SA does not provide an analysis of the reliability of the Project and therefore its likelihood of operating profitably as projected for the life of the Project. At a status conference conducted on June 1, 2010, the Applicant clarified that the Applicant has additional information about the reliability of the SunCatcher units that may be provided to Staff. However,

this information was not provided at the time the SA was published. The SA should be revised to include an analysis of the Project's reliability and recirculated for public review and comment.

**Comment CURE-92:** The reliability of the technology employed for this Project is speculative at best. The DEIS analysis supports this conclusion . . . Thus, the DEIS does not provide an analysis of the reliability of the Project and therefore its likelihood of operating profitably as projected for the life of the Project.

At a status conference conducted on June 1, 2010, the Applicant clarified that the Applicant has additional information about the reliability of the SunCatcher units that may be provided to Energy Commission and BLM Staff. However, this information was not provided at the time the DEIS was published. The DEIS should be revised to include an analysis of the reliability of the Project's technology and recirculated for public review and comment. The long-term economic viability and reliability of this Project must be analyzed as part of the CDCA Plan Amendment analysis.

**Response:** Solar technology, including power tower technology, has been tested and operates commercially on dozens of sites throughout the world and in the U.S., although not at this scale. In any new technology, implementation of larger scales of development to achieve efficiency will be required, and the first of these, in all cases, will have uncertainties associated with it. What can be done is to identify where uncertainties exist, ensure that the project is monitored to obtain data regarding the uncertainty, and provide for response actions to respond to unexpected problems. In January 2010, Stirling Energy Systems and Tessera Solar launched the first commercial use of the SunCatcher technology in Peoria, Arizona in partnership with the Salt River Project (SRP). The Maricopa Solar Project is comprised of 60 SunCatcher dishes and provides 1.5 megawatts of renewable energy to SRP customers in Greater Phoenix, Arizona.

Although not discussed within the Purpose and Need Statement, several sections of the FEIS acknowledge the uncertainties associated with the fact that no solar project of this scale has ever been constructed in the U.S. Examples include the evaluation of potential stormwater damage to the facility, and the effect of power tower and heliostat glare on drivers on Interstate 40. In cases where uncertainties exist due to the lack of previous operational experience, mitigation measures have been developed that require monitoring of impacts, and response to impacts, if needed.

### **G.15.3 Net Public Benefit – Job Opportunities (65300)**

**Comment SB County-5:** County supports the creation of 393 construction jobs and the 180 full-time new permanent jobs created by the Project.

**Comment EME-1:** Need to hire MBE Contractor for work scopes

**Comment EME-2:** Hub Zone, DBE 8A Disable vets must be given [work] to help lower income citizens.

**Comment Stearn-8:** In re: project hiring practices, it is my impression that on some large local construction projects in the past, that union hiring halls in the San Bernardino, or even further away, were utilized, even though the work sites were in the Barstow area. Can anything be done to encourage local hiring, in Barstow or perhaps with a hiring office in Newberry Springs?

**Comment Wulf-1:** Please provide jobs for Hub Zone contractor.

**Response:** Your comment is included in the public record and will be taken into account by the authorized officer in the implementation of a Record of Decision for the project. We appreciate your input and participation in the public review process.

Scopes of work and hiring for this project are beyond the scope of this analysis but will be conducted in a manner consistent with local, state and federal regulations.

## **G.16 Special Designations (66000)**

**Comment CURE-64:** Senator Dianne Feinstein introduced legislation on December 21, 2009 to establish the Mojave Trails National Monument. The Mojave Trails National Monument proposed boundary is directly adjacent to the Project. The proposed monument would extend from the site's east boundary to near Needles. The Monument would constitute a major landscape linkage between Joshua Tree National Park and Mojave National Preserve. The Mojave Trails National Monument would include a number of National treasures such as the Pisgah Lava Flow – the most researched area in North America for the effects of volcanism on evolution, the Amboy Crater – a National Natural Landmark, and the Cady Mountains – the best area in the Mojave to see bighorn sheep. All of these resources are in the Project vicinity but the DEIS failed to analyze how the Project may adversely impact the values that this monument is proposed to protect.

**Comment CURE-93:** Finally, inclusion of Catullus Lands and land purchased with Land and Water Conservation funds (“LCWF”) as a part of the Project violates FLPMA’s mandate that the BLM will “adhere to the terms, conditions, and decisions of officially approved and adopted resource related plans.” These lands that make up a significant portion of the Project area were previously donated to, or purchased by, the Department of the Interior for conservation, and must be managed for the purposes of conservation and recreation, not single-use large-scale solar industrial development. Private parties and the federal government contributed large sums of money in the belief that these donated land will be protected and conserved by BLM. The BLM must not approve the use of these donated lands for Project development.

**Comment Stearn-11:** There has been some discussion that Senator Dianne Feinstein would seek to stop this project with legislation to expand the southern boundary of the Cady Mountains Wilderness Study Area by bringing that boundary south to the BNSF railroad tracks. This would be a boundary that was never proposed in the 1994 Desert Protection Act deliberations as evidenced by Map Sheet 14 of the California Desert Protection Act, which identifies what boundary was proposed and what boundary was adopted.

**Response:** The Calico Solar Project alternatives have been evaluated for compliance with Instruction Memorandum CA 2009 -020, Interim Policy on Management of Donated Lands and Lands Acquired with Lands and Water Conservation Funds. That evaluation is presented in the FEIS.

## G.17 Traffic and Transportation (50700)

**Comment CBD-7:** To the extent that the proposal would require changes in the route network resulting in several routes which would need to be moved, those changes to the route network are not adequately addressed in the DEIS (nor are the likely direct, indirect and cumulative impacts of changing those route designations adequately identified or analyzed . . . ). Any changes to routes would require BLM to amend the route designations in the area as well. When BLM does consider these issues, as it must, in a revised or supplemental DEIS, a range of alternatives must be considered in addition to the fact that such changes will undoubtedly change use of the previously existing nearby routes, most likely causing increased use on other nearby routes. Even if BLM attempts to simply reroute along the fence line for the proposed project a plan amendment would be required and BLM must then consider that new unauthorized routes to provide connections to the other routes, and/or entirely new unauthorized routes may be created by off-road vehicle users to avoid the industrial site entirely. 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 quite understandably a much more likely outcome and BLM should recognize this in analyzing the impacts of this project on the existing route network and any proposal to amend that network.

**Comment Stearn-1:** After . . . browsing through the DEIS, I can find only one reference therein (a solitary footnote) which references or documents or memorializes all of the many previous written comments and public statements at formal and informal meetings which protest the applicant's access obstructions to private land owners, in recent past and further proposed.

**Comment Stearn-2:** Based on what I've seen so far in my readings in the DEIS, it would appear that the CEC and BLM have not given serious consideration to all the complaints in re: Tessera's interference with previously existing access rights held by the owners of private land parcels north of the Hector Road railroad crossing.

**Comment Stearn-3:** In a March 8, 2010 filing with the CEC, the applicant . . . stated that Hector Road somehow no longer exists north of the BNSF railroad tracks. Doesn't that statement raise issues concerning the integrity of their entire application?

**Comment Stearn-7:** Due to increased vehicle traffic at the Hector Road interchange on Interstate 40, should applicant be required to provide overhead street lighting at that location?

**Comment Jackson-2:** In May 2008, SES Solar One, LLC, the original Applicant, entered into an Agreement for Private Crossing (Agreement) with BNSF (Burlington Northern Santa Fe) Railway Company and added gates and barricades at the railway crossing at Hector Road. The Agreement and gated crossing prevent others from using the public and private lands north of the BNSF railroad tracks and thereby violates the Unlawful Inclosures of Public Lands Act of 1885, the Federal Land Policy and Management Act of 1976 (FLPMA) and the California Desert Conservation Area (CDCA) Plan 1980 as amended.

The gated crossing prevents the public and private landowners from using Hector Road, a road that has been used for over fifty years, to access the public lands north of the BNSF railway tracks in direct violation of the Unlawful Inclosures of Public Lands Act of 1885. This Act regulates the fencing off of public lands (including fences and gates on private lands) and prohibits the obstruction of "free passage or transit over or through the public lands."

The Bureau of Land Management (BLM) claims, "The right of way, currently held by BNSF, was granted through act of Congress 14 Stat. 292, July 27, 1866. The area gated by BNSF is within the parameters of the right of way granted." This claim is not valid as the lands granted to the Atlantic and Pacific Railroad Company by the Act of July 27, 1866, 14 Stat. 292, c. 278, and by grant to the Southern Pacific Railroad Company by the Act of March 3, 1871, 16 Stat. 573, c. 122, were grants in praesenti and covered only the public lands grantable by Congress at that time. These Acts do not authorize either railroad company, or its successors, the right to other lands not granted at that time or the right to block access to public lands.

**Comment Jackson-3:** The Applicant claims the crossing was gated due to "additional safety standards." This claim is unfounded as there has never been an accident at the crossing and, "The existing average daily traffic (ADT) on Hector Road near the vicinity of the project site is 31 vehicles per day."

**Comment Jackson-4:** As to safety issues, the SA/DEIS does not address the alternative of the Applicant and BNSF removing the locked swing gates and installing an active warning system with crossing gate arms and flashing lights.

**Comment Jackson-5:** The Applicant claims, "The private crossing granted to Calico Solar/Tessera is for the purposes of establishing an access to the western side of the proposed project site." The SA/DEIS is deficient in that it does not note the gated crossing gives the

Applicant exclusive control over thousands of acres of BLM-administered land west of the Applicant's Calico Solar Project site. The SA/DEIS also does not note the gated crossing not only prevents people from using and enjoying the public lands west of the Calico Solar Project site but also prevents other renewable energy developers from accessing the public land even though the Applicant withdrew its Application for its Solar Three project for the area on December 3, 2009.

**Comment Jackson-6:** The SA/DEIS states:

In addition, at the December 22, 2009 Staff Workshop, BLM representatives stated that the crossing was established as a BNSF ROW for access to, and maintenance of, the rail line and, and therefore, the crossing is not a legal road with authorized access for the public (CEC 2009). As such, the crossing is a physical access and not a legal access, and has been used in a passive and unauthorized manner.

This statement is misleading as the crossing was not established by BNSF for its exclusive use. Hector Road and the crossing were constructed by BNSF's predecessor for the public to access the Hector siding telegraph and office depot north of the railroad tracks from the local road network, including Highway 66 south of the railroad tracks.

**Comment Jackson-7:** The SA/DEIS statement Hector Road "crossing is not a legal road with authorized access for the public" is misleading. BNSF's predecessors granted easements by necessity and implication across its right of way at Hector Road when:

- (1) Southern Pacific Land Company conveyed title to Sections 5, 9, 17, 21 and 33, Township 9 North, Range 5 East, to a private individual in 1958.
- (2) Southern Pacific Land Company conveyed title to Section 1, Township 8 North, Range 5 East, to a private individual in 1958.
- (3) SF Pacific Properties Inc., a Delaware Corporation, conveyed title to Section 5, Township 8 North, Range 5 East; Sections 13 and 25, Township 9 North, Range 5 East; Section 5, Township 8 North, Range 6 East; and other lands to the United States of America in 2002. These sections were acquired with Land Water Conservation Funds.

**Comment Jackson-8:** The SA/DEIS states on page C.8-12, "[T]he recent blockage of this [Hector] crossing does not result in a conflict with any applicable LORS." As noted herein, this statement is not true. Hector Road existed prior to the adoption of the Federal Land Policy and Management Act of 1976 (FLPMA) and the FLPMA recognizes existing rights of way.

**Comment Jackson-9:** The SA/DEIS states on page ES-29, “Presently open routes that traverse the project area would be closed if any of the Action Alternatives or CDCA Plan amendments are approved.”

Hector Road is a designated open route pursuant to the West Mojave Plan amendment to the California Desert Conservation Area (CDCA) Plan. The BLM and Applicant do not have the authority to amend the California Desert Conservation Area (CDCA) Plan to deprive private property owners of their right to use Hector Road or any of the other designated open routes established by the CDCA.

**Comment Jackson-10:** At the April 16, 2010 Energy Commission Staff Workshop on the Staff Assessment/Draft Environmental Impact Statement for the Calico Solar Project (formerly SES Solar One) (08-AFC-13) the Applicant submitted a figure of the project entitled Calico Solar Project Layout. This figure shows a proposed access road outside the project fenceline the Applicant claims private property owners can use to access their parcels. This proposed access road can not be constructed or used by private property owners to access their properties. This alternative route would not comply with the National Environmental Policy Act (NEPA) or 43 C.F.R. § 8342.1.

**Comment Jackson-11:** All of these figures show the proposed Calico Solar Project will eliminate Hector Road and thereby landlock the private properties in Section 1, Township 8 North, Range 5 East, and Section 36, Township 9 North, Range 5 East. The Applicant and the BLM do not have the authority to close existing valid rights of way or designated open routes. The Applicant and the BLM do not have the authority to designate alternative routes.

**Comment Jackson-12:** The Supplemental Staff Assessment/Final Environmental Impact Statement (SSA/FEIS) must acknowledge routes in existence when the CDCA was adopted and include Conditions of Certification which: (1) require the project to comply with all applicable LORS and court decisions, (2) prohibit the Applicant from closing CDCA designated open routes or substituting alternative routes and (3) mandate the Applicant can not prevent private property owners from using CDCA designated open routes to access their properties.

**Comment Jackson-25:** I. The Draft Environmental Impact Statement (DEIS) for the Calico Solar Project (Project) does not comply with Section 1500.1 of the National Environmental Policy Act (NEPA) as the DEIS does not contain sufficient information on Hector Road, a designated open route under the CDCA, or indicate if Hector Road will be closed by the proposed Project . . .

The closure of Hector Road and the other designated open routes that traverse the Project will have a significant environmental impact on the nearby privately owned lands . . .

The DEIS is deficient as it does not address the environmental impact of closing the designated open routes near the proposed Project.

**Response:** The Applicant has explained that, due to additional safety requirements, BNSF requires gates to be installed at all crossings where an entity other than BNSF (i.e., the Applicant) would have access. The private crossing granted to Calico Solar/Tessera Solar is for the purposes of establishing an access to the western side of the proposed project site. In addition to installation of the gate and barricades, the Applicant was required to acquire insurance for potential damage to BNSF property and attend a safety course. The Applicant complied with these conditions and was granted access, which established the need for gates and barricades. The crossing was established as a BNSF ROW for access to, and maintenance of, the rail line and, and therefore, the crossing is not a public road. Therefore, the installation of the gate at this crossing does not result in a conflict with any applicable laws or regulations.

## **G.18 Visual Resources (64000)**

**Comment SB County-6:** The County is in agreement with the required mitigation regarding setbacks and revegetation during restoration after operations cease . . . the project is not inconsistent with the County General Plan and Development Code, although it is still a significant impact as stated on page C.13-39 of the SA/DEIS.

**Comment Stearn-4:** The viewscape of the Cady Mountains from Interstate 40 and National Trails Highway, will likely be a major issue of concern with this project, as the Cady Mountains area is designated a Wilderness Study Area by an act of Congress in 1994.

**Response:** Your comment is included in the public record and will be taken into account by the authorized officer in the implementation of a Record of Decision for the project. We appreciate your input and participation in the public review process.

**Comment BRW-1:** Following participation in the April 16, 2010 Workshop in Barstow, Basin and Range Watch would like to submit suggestions for additional Key Observation Points for Visual Resources analysis. A map is included showing two potential viewpoints from the Rodman Mountains Wilderness southwest of the Project site. The area can be accessed from Interstate 40 by Box Canyon Road.

**Comment Jackson-20:** The SA/DEIS is deficient in that it does not determine the visual impact the Project will have on the adjacent privately owned lands. The SA/DEIS does not provide Key Observation Points (KOPs) from the privately owned lands.

**Response:** Additional KOPs were identified and analyzed, including a site selected to assess the visual impact from privately owned land and two sites from the Roadman Mountains

Wilderness. The description of the KOPs is provided in Section 4.16.1.3 and analysis of potential impact for each alternative is provided in Section 4.16.2 Direct and Indirect Impacts.

## G.19 Hydrology and Water Resources

### G.19.1 Water Resources Generally (43000)

**Comment Poff-25:** The forthcoming final hydrology report should include a modeling effort that considers project conditions hydrology and climate change impacts on the existing channels and washes as well as those on aquifer recharge.

**Response:** Since the proposed project will result in a net beneficial impact on GHG emissions and climate change, it therefore does not contribute meaningfully to this cumulative effect. The understanding of how and when climate change may result in noticeable effects on the hydrologic regime for a specific area is unknown at this time. Based on these reasons, BLM has determined that discussion of climate change on hydrological regimes is not necessary in this analysis.

**Comment Poff-18:** The current level and type of analysis in the DEIS is insufficient because the BLM failed to undertake additional surveys, data collection and analysis, and design of appropriate mitigation actions. As a result, the project design will result in significant unmitigated impacts to the desert pavement and cryptobiotic soils, with corresponding dramatic increases in sediment and wind erosion, and significant unmitigated impacts to downstream washes and downwind resources.

- (1) Determine if there are existing watershed studies that can be used as representative studies of the project site.
- (2) Revise the HEC-1 calibration used by the applicant to at least include use of the Curve Number (CN) method and document calibration parameters in a table. The Stantec (2008) approach (i.e., calibrating to local regional regression) used for the Imperial Valley Solar Project is a preferred method. The current analysts under-predicts the peak flows likely to occur. Under-prediction of hydrology results in under prediction of potentially significant impacts.
- (3) In developing the rainfall loss method (i.e., CN method), correlate loss parameters to distinct geomorphic surfaces using published data acquired through project specific experiments (see recommendations in Section 4), The current analysis likely under-predicts runoff, erosion and potential impacts.

- (4) Use an appropriate temporal rainfall distribution characteristic of the convective storms at the project site. An analysis of local rainfall data will be needed to confirm the selection of an appropriate temporal distribution as this informs the shape and timing of the flood hydrograph.
- (5) Generate hydrology modeling for existing and project conditions. Project conditions hydrology will require a better understanding of project impacts on the effective percentage of impervious cover through destruction of the desert pavement structure and compaction of access roads as a result of project impacts.
- (6) The DEIS failed to analyze or mitigate the resulting hydromodification impacts of project construction and operation. Hydromodification relates to the impacts on downstream washes due to changes in hydrologic characteristics (i.e., runoff duration, frequency, volume) as a result of increase in PIC. Effective PIC may increase under project conditions, in aggregate, as a combination of site infrastructure (i.e., paved roads, building pads, solar disc footings), access road compaction, destruction of desert pavement and cryptobiotic crust and application of soil binders. The DEIS should analyze project changes in PIC.

**Comment Poff-32:** The DESC/P/SWPPP and Conditions of Certification are overarching measures to ensure the project conforms to applicable laws, ordinances, regulations, and standards. However, these overarching measures, in particular the DESC/P/SWPPP, are draft conditions of conformance that are partially based on inadequate technical analyses and project elements that are in a state of flux (i.e., recent changes in the Project's Primary water supply), As such, these overarching, measures do very little to ensure that that project will not significantly impact the environment. Because the DEIS does not consider this water supply from the groundwater aquifer, additional information should be provided for public review. An additional opportunity to comment on this aspect of the project is warranted once a description and analysis is provided.

**Comment SC-48:** The SA/DEIS does not engage in a complete analysis of potential impacts associated with the Calico Project water use and discharge because critical relevant information has yet to be obtained. In addition, although the SA/DEIS acknowledged the lack of information, it did not any legal reason for its omission. Instead, the SA/DEIS goes on to make conclusions about impacts and alternatives based on this inadequate information, all in violation of NEPA. 40 C.F.R. § 1502.22(a).

According to the SA/DEIS, the applicant has yet to provide “information necessary to complete development of requirements for dredge and fill in waters of the state.” SA/DEIS C.7-2. This information is vital for the public’s understanding of the impacts of the proposed project, because waste discharge has the potential to seriously affect the delicate desert environment.

Further, the applicant has also failed to provide “information necessary to complete development of requirements for discharges of brine waters to evaporation ponds or sanitary septic systems.” SA/DEIS C.7-2. This information is also necessary for completion of the Waste Discharge Requirements.

**Comment SC-51:** The Avoidance of Donated and Acquired Lands Alternative is devoid of a serious water analysis. The SA/DEIS states: “Provided the redesign of the flood control and erosion/sedimentation control structures meet the same standards as for the Calico Solar Project, no change to the CEQA Level of Significance of impacts would occur between the proposed project and the Avoidance of Donated and Acquired Lands Alternative.” *Id.* C.7-46. Again, the BLM must require more information regarding the comparison between the Proposed Project and the alternatives in order to make a reasoned decision. There is no discussion as to how the mitigation strategies will be different or how the impact will be different or the same. As stated above, conclusory statements are not an acceptable substitute for analysis. Because of this deficiency, the analysis for this alternative is inadequate.

**Comment SC-49:** Four of the main conclusions of the SA/DEIS are based on adherence to requirements not yet created because of a lack of information. The SA/DEIS clearly states that development of these Waste Discharge Requirements is vital to the conclusions reached regarding environmental effects because compliance with these requirements will ensure: “no adverse alteration of drainage patterns”; “no violation of water quality standards or waste discharge requirements”; “that the project not create or contribute runoff water that exceeds existing or planned storm water-drainage system capacity or provides substantial additional sources of polluted runoff;” “no degradation of surface water or groundwater quality.” *Id.* C.7-42-44. The SA/DEIS concludes that all of these adverse impacts will be avoided, at least partially because of these requirements. *Id.* Without this information, it is impossible for the BLM to make a reasoned decision with regard to the Calico Project because of the enormous uncertainty associated with the hydrological environmental impact. These undeveloped Waste Discharge Requirements are essential to the BLM’s reasoned decision. The conclusions reached in the SA/DEIS lack the proper analysis required by NEPA, thus making the SA/DEIS inadequate.

**Comment CBD-52:** BLM must examine the federal reserved water rights within the area affected by the proposed project (including the Cadiz area where water is now proposed to be obtained) and other proposed projects in this area that may use significant amounts of groundwater. This examination must include a survey of the any water sources potentially affected by the proposed water use for 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.

**Response:** Additional information on hydrology, erosion control, water resources, wastewater discharge and jurisdictional waters has been included in Section 4.17 of this FEIS to more

thoroughly evaluate the differences in impacts among all of the alternatives. Mitigation is provided in Section 4.17.4 of this FEIS. The project-specific hydrology report, SWPPP, and DESCP are included in Appendices H, F, and G, respectively, of the Plan of Development. This Plan will be available for a 30-day public review period concurrently with the FEIS. The Plan will be available online at <https://tesseractosolar.box.net/shared/j09n6g20f6> or at the BLM Barstow Field Office. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

**Comment SC-50:** The water analyses for two of the alternative projects are also inadequate due to lack of information. The same information missing for the Proposed Project water analysis is also missing for the Reduced Acreage Alternative and the Avoidance of Donated and Acquired Lands Alternative. See *id.* C.7-44-46. This missing information would be enough to make the analyses of these alternatives inadequate, but the analyses go one step further and fail to even mention Waste Discharge Requirements for either of these two alternatives.

There is no further discussion of mitigation strategies or Waste Discharge Requirements, or which requirements will be lessened due to the decrease in size. The analysis is overly condensed and vague, making the water analysis for this alternative unacceptable.

**Response:** All of the potential impacts identified for the proposed project remain with the Reduced Acreage Alternative. However, due to the alternative's reduced physical size and reduction in number of SunCatchers, these potential impacts are proportionately reduced.

**Comment Brock-6:** I would be opposed to any water usage outside MWA guidelines and oversight.

**Comment Starn-12:** If the applicant has or will prepare a hydrology study for the proposed site, how may I obtain a paper copy of that study?

**Response:** Your comment is included in the public record and will be taken into account by the authorized officer in the implementation of a Record of Decision for the project. We appreciate your input and participation in the public review process.

## G.19.2 Surface Water/Stormwater

**Comment CURE-59:** However, as the DEIS explained, the drainage report failed to provide sufficient information to establish the post-project flooding conditions or to determine the potential impacts to vegetation outside the project area. The DEIS correctly concludes that all 1,099 acres of jurisdictional washes on the site will be impacted, but fails to take a hard look at offsite impacts on waters of the state caused by the Project. The DEIS vaguely concludes that

portions of the washes downstream of the project boundaries would be adversely affected by the proposed project without additional investigation into the type and extent of these offsite impacts.

Since the DEIS was published, the Applicant has altered the Project description to modify the design of the detention basins. These changes also are not reflected in the DEIS or analyzed. The DEIS' consideration of impacts to jurisdictional waters on the Project site, and impacts that extend off the Project site, is inadequate and must be revised.

**Comment CURE-74:** The DEIS did not consider the water quality impacts of runoff laden with sediment and soluble salts delivered downstream and offsite, as well as the potential for the increased sediments to be transported offsite by wind. This potentially significant impact was not addressed in the DEIS.

**Comment Cashen-26:** A baseline assessment of jurisdictional waters present on the Project site and subject to direct and indirect impacts has not been adequately presented or assessed in the DEIS. The DEIS states, "the applicant concluded that no streams or washes that would meet the definition State or federal waters occur on site. However, staff noted many defined drainages during site visits in January 2010, and the CDFG indicated that they would take jurisdiction over the drainages on the site, but for the Energy Commission's exclusive jurisdiction." The DEIS further elaborates on the findings of the field surveys by stating, "[s]taff identified numerous drainages with well defined banks and in some areas vegetation characteristic of desert washes. This included Catclaw acacia thorn scrub, smoke tree woodland and big galleta shrub-steppe."

Staff notes that the DEIS is incomplete and has listed "vegetation mapping of the jurisdictional drainages" as an outstanding issue necessary "for staff to be able to complete the staff analysis." Staff also states, "[t]he applicant has not yet proposed specific mitigation to reduce impacts to State waters during construction of the proposed project. However, it is expected that the applicant will submit a formal application to the CDFG that contains Best Management Practices designed to minimize the potential effects to State waters." An "expected" submission connotes uncertainty and suggests the Applicant might not submit a formal streambed alteration application to CDFG.

**Comment Cashen-27:** The values provided in the DEIS require clarification. First, the DEIS does not discuss how it was able to calculate the total acreage of State waters present on site, especially given that the Applicant's documents deny any State water exists. Second, the values presented in DEIS Biological Resources Table 4 are inconsistent with the values presented in the DEIS's section on impacts. Specifically, the cell values in the table do not add up to the "total" values.

The DEIS discusses a wide range of permanent, temporary, direct and indirect impacts to State waters, including the construction of retention basins, installation of SunCatcher units, diversion of channels, road construction, maintenance, vegetation mowing, attenuation of peak storm flows, alteration of channel structure and composition, the creation of favorable conditions for non-native weed species and habitat loss for dependent plants and wildlife. However, Staff fails to clearly identify how the distinctions between impacts were made.

Similarly, the DEIS is unclear in explaining which direct impacts are considered permanent or temporary as well as which indirect impacts are permanent or temporary. Language in the DEIS suggests that these distinctions have not been clarified by the Applicant: “[t]he applicant has provided general information regarding the type of project features that would result in permanent and temporary impacts to waters of the State. Currently, the applicant proposes to submit additional information to Energy Commission and CDFG clarifying these effects.” These distinctions must be clarified in order to assess impacts and develop the appropriate mitigation strategies. As stated in the DEIS, “[n]atural recovery rates from disturbance in these [desert] systems depend on the nature and severity of the impact”, as well as the species impacted. The NEPA review process cannot proceed until there is a coherent and comprehensive assessment of adverse Project effects on waters of the State and their associated plant and wildlife communities.

**Comment Cashen-28:** The DEIS requires the Applicant to implement Streambed Impact Minimization and Compensation Measures (“BIO-27”) to reduce the direct and indirect adverse impacts to jurisdictional waters to less-than-significant levels. BIO-27 requires the Applicant to acquire a minimum of 436 acres of compensation land (1:1 for permanently impacted State Jurisdictional waters and 0.5:1 for temporarily impacted waters) as well as off-site State waters at a rate of 3:1 for catclaw acacia thorn scrub and smoke tree woodland impacted by Project activities. The total acreage of State waters that would be impacted by Project activities remains ambiguous. This undermines the ability of the CEC and BLM to enforce (or specify) mitigation designed to reducing adverse impacts to less-than-significant levels.

The DEIS notes, “[o]f the 1,099 acres of State waters present on the project site construction activities would result in 356 acres of temporary impacts and 258 acres of permanent impacts respectively.” Yet the DEIS also indicates, “Staff and CDFG consider that all 1,099 acres of the ephemeral washes on the project site and portions of the washes downstream of the project boundaries would be adversely affected by the proposed project.” The DEIS’s rationale for requiring only 436 acres (less than 40%) of compensation for what it has stated would be a minimum of 1,099 acres of impacts is confusing and lacks foundation. If the multiple functions and values provided by 1,099 acres of ephemeral washes will be lost, the functions and values need to be replaced. Furthermore, if “portions of the washes downstream of the project boundaries would be adversely affected” by the Project, these “portions” need to be quantified

and mitigated, especially because some are located within a designated reserve (i.e., the Pisgah Crater ACEC).

Additionally, BIO-27 does not include remedial actions that would be required in the event of unmitigated adverse effects to jurisdictional waters and the associated vegetation and wildlife communities. Implementation of Best Management Practices does not preclude unforeseen consequences. Therefore, BIO-27 cannot be considered a complete mitigation measure without triggering thresholds and subsequent remedial actions that ensure impacts are mitigated.

**Comment Poff-10:** The DEIS did not consider the water quality impacts of runoff laden with sediment and soluble salts delivered downstream and offsite, as well as the potential for the increased sediments to be transported offsite by wind.

**Comment Poff-11:** Potential offsite impacts due to onsite hydromodification were not considered in the DEIS since the DEIS concluded onsite impacts were negligible. Significant offsite impacts stem from the ability of increased runoff, in terms of higher peaks and larger volumes, to do more work (or erosion) in the washes, thereby degrading the condition of the washes and conveying the eroded sediments downstream. Impacts are similar to those described in Section 3.1.2, and in addition to significant degradation of the morphology of the washes.

**Comment Poff-14:** The DEIS did not consider the cumulative impacts that regional projects could have on the sedimentation and water quality, as well as the potential for the increased sediments to be transported offsite by wind, potentially affecting the proposed Mojave Trails National Monument.

**Comment Poff-17:** Runoff from precipitation events affecting the project area and its vicinity was modeled by the applicant using the Army Corps of Engineers HEC-1 (USACE 2009) computer hydrology model. However, a final hydrology report has not been completed. I consider the current modeling method utilized in the DEIS inappropriate. HEC-1, which has been used in the previous modeling efforts, was not designed for desert environments and produces erroneous results. Campbell and Bowles (2010) provide some discussion on the merits of various recent modeling techniques applied to Southern California deserts and conclude that, while some are better than others, none of the current techniques are appropriate. Additional research into other more comprehensive hydrologic modeling software, such as DHI's MIKE SHE is recommended. MIKE SHE is a 3 dimension hydrologic modeling software that can be used in almost any environmental setting, and integrates modeling of groundwater, surface water, recharge and evapotranspiration, which, in turn, would provide more realistic and comprehensive predictive results (Graham and Butts 2005).

**Comment Poff-23:** The DEIS did not provide any hydraulic calculations to support the selection and sizing of onsite drainage network, diversion facilities and BMPs nor a sedimentation report nor scour analysis.

**Comment Poff-24:** The current level and type of analysis in the DEIS was insufficient. Failure to undertake additional surveys, data collection and analysis, relating to hydraulics, sediment transport, and scour as described below will result in significant impacts to the morphology of the desert washes, potential significant impacts to receiving waters downstream of the project site, and potential dangers to the solar dish towers:

- (1) The sediment transport modeling must be completed with the appropriate inputs. 2D or 3D sediment transport modeling should be undertaken for existing and project conditions to include all representative project elements (i.e., BMP effectiveness, solar dish towers in the washes, etc.). If this does not occur there is not sufficient modeling to conclude that impacts from the project will be less than significant with proposed mitigation.
- (2) Long-term changes in fluvial morphology should be assessed within and downstream of the project site as a result of the project and also as a result of climate change. Long-term hydrologic simulations may be required as short-term (or design flood) outcomes only provide a "snapshot" from the starting condition. The long term degradation of the project site as well as downstream washes is therefore likely to be underestimated.
- (3) Until further detailed sediment transport analyses suggest no significant impact, solar dish towers should not be constructed in the washes.

**Comment Poff-26:** With implementation of the project, and depending on the depth of grading and BMP effectiveness, sediments and salts could be carried with surface runoff from the extensively graded project site. Considering intense rainfall and subsequent runoff occur in the summer, these fine sediment could become airborne and affect local residences downwind and visitors to the proposed National Monument. These effects must be analyzed and mitigated.

**Comment Poff-27:** The current level and type of analysis in the DEIS is insufficient. Failure to undertake additional surveys, data collection and analysis relating to potential offsite impacts will result in significant impacts to the downstream and downwind resources of the project site.

**Comment Poff-30:** Sediment basins were proposed to control existing sediment movement onto, through, and off the project site by trapping it in varying sized sediment basins at property boundaries and road crossing internal to the project site. Sediment basins have the potential to starve the fluvial system within and downstream of the project site of sediment, leading to highly

detrimental changes in the morphology of the washes. As such, this mitigation solution is not recommended and will result in unanalyzed significant impacts.

**Comment SC-23:** Staff properly concludes that “direct and indirect impacts of the project to approximately 1099 acres of State jurisdictional waters to be significant.” SA/DEIS C.2-97. The public, and the agencies, have no way to ascertain how these impacts will be mitigated because “the applicant has not yet proposed specific mitigation.” *Id.* It is improper for the agency to “expect[ . . . ] that the applicant will submit a formal application to the CDFG.” *Id.* Under NEPA regulations, this information must be presented “before decisions are made.” 40 C.F.R. 1501.1(b). As such, the analysis as to impacts to state waters is insufficient.

**Comment CBD-47:** Over half of the existing 1,099 acres are Waters of the State that would either be temporarily or permanently impacted – 614 acres total. The U.S. Army Corps of Engineers has determined that there are no waters of the U.S. occurring on the project site. Once again, because of unavailable data, the DEIS concludes that “the drainage report does not provide sufficient information to establish the post-project flooding conditions or to determine the potential impacts to vegetation outside the project area” (DEIS at C.2-97). The DEIS continues that the attenuation of storm flows and loss of sediment to the system coupled with the level of maintenance expected to occur on the site, all 1,099 acres of the ephemeral washes on the project site and portions of the washes downstream of the project boundaries would be adversely affected by the proposed project. Bio-27 is proposed to offset impacts to these rare desert resources, and relies on acquisition (nested within the desert tortoise acquisition lands) to off-set impacts, with the only mitigation ratio identified being for catclaw acacia and smoke-tree plant communities at 3:1. It is unclear what the remaining mitigation ratio requirements are, and if those could be met on acquisition lands.

**Response:** Additional information on hydrology, erosion control, water resources, wastewater discharge and jurisdictional waters has been included in Section 4.17 of this FEIS to more thoroughly evaluate the differences in impacts among all of the alternatives. Mitigation is provided in Section 4.17.4 of this FEIS. The project-specific hydrology report, SWPPP, and DESCP are included in Appendices H, F, and G, respectively, of the Plan of Development. This Plan will be available for a 30-day public review period concurrently with the FEIS. The Plan will be available online at <https://tesseractosolar.box.net/shared/j09n6g20f6> or at the BLM Barstow Field Office. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

**Comment CBD-50:** Although no express reservation of rights has been made for many of the other public lands in the CDCA, the DEIS 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.

**Comment CBD-51:** 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.

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.

**Response:** The federal government has not asserted a federal reserved water right in the project vicinity. Impacts to surface and groundwater resources are identified and discussed in Section 4.17 of the FEIS.

### **G.19.3 Groundwater and Water Supply (43140)**

**Comment SB County-8:** The applicant (Calico Solar, LLC) proposes to purchase offsite groundwater from BNSF. The groundwater would be pumped from a currently idle well located 64 miles to the east in Cadiz Valley. The groundwater would be pumped to a railroad tanker car and sent via rail to the project site. The document indicates that there will be a 30 to 35 year water purchase agreement between BNSF and Calico Solar. Not only would this activity be subject to the San Bernardino County Desert Groundwater Management Ordinance, BNSF is not a licensed water purveyor and does not have a water district authority nor a district boundary. Several approvals would be necessary including an updated well permit and water purveyor permit from County Environmental Health Division, and possibly approval from the County Local Agency Formation Commission (LAFCO) to create a district boundary. All of this requires analysis to comply with CEQA. The export of large volumes of water via rail could require a County Conditional Use Permit. Calico Solar should be required to comply with all of the County requirements prior to utilizing a proposed water source. The SA/DEIS does not fully analyze the availability of water from the BNSF well. It also is not clear how the CEC will regulate the BNSF well usage.

**Response:** The water required for construction and operational use will be obtained from a well located on private property adjacent to the Project site.

**Comment SB County-9:** Although the SA/DEIS acknowledges the San Bernardino County Desert Groundwater Management Ordinance, Mitigation Measure Soil&Water No. 8 does not require the approval from the County but only review and comment, similar to the CEC conditioning for Bright Source.

**Response:** Mitigation measures will include development and approval of a Groundwater Level Monitoring Plan in accordance with the County of San Bernardino Code Title 3, Division 3, Chapter 6, Article 5 (Desert Groundwater Management Ordinance).

**Comment CURE-16:** The SA must fully describe and evaluate all potentially significant impacts associated with the Project's newly proposed groundwater supply. Because the Revised SA will contain information about a wholly new groundwater source for the Project, this missing information must be circulated for public review and comment.

**Comment CURE-65:** The new proposed offsite groundwater source is a connected action that necessitates recirculation of a supplemental EIS. A supplement filed by the Applicant on May 14, 2010, a full six weeks after the DEIS was published, explains that the Applicant has modified the Project's primary water supply from the Cadiz water to wells adjacent to the Project solar field . . .

The Applicant's supplemental document contains a very cursory examination of the environmental impacts associated with the use of groundwater in wells adjacent to the Project site. Dr. Boris Poff independently reviewed this supplemental document and concludes that the Applicant's testing and analysis is inadequate to determine that this is a reliable water supply for the Project. The Applicant's primary conclusions are based upon speculation rather than reliable data. BLM must conduct further independent evaluations of this water supply and provide this information to the public in a revised DEIS.

As with all development in the arid West, finding an assured water supply is one of the most important planning decisions that must be made before a Project can legally be approved. Because the water supply is a critical part of the Project without which the Project cannot proceed, impacts resulting from the acquisition of water for the Project are connected actions that must be analyzed in a revised DEIS that is circulated for public review and comment.

**Comment CURE-70:** On May 14, 2010, the Applicant filed an AFC Supplement with a change of the Project's "primary water supply to onsite wells." The AFC includes "an environmental assessment of the use of groundwater and transport of water from the well to the Project via an underground waterline." The DEIS does not include an analysis of the environmental impacts associated with using groundwater from this site because the DEIS was released six weeks before the Applicant informed the BLM of the new water supply. Because water is precious and scarce in the desert, there are likely to be a number of environmental impacts associated with its use for the Project site.

The DEIS must fully describe and evaluate all potentially significant impacts associated with the Project's newly proposed groundwater supply. A revised DEIS must contain information about this new groundwater source, and this missing information must be circulated for public review and comment.

**Comment Poff-7:** The DEIS did not adequately consider the water supply source suggested by the Applicant's Supplemental Report for Calico Solar dated May 14, 2010, in which the applicant, among other things, requests to change the primary water supply to adjacent wells. The applicant states in Environmental Information Section 2.5.2.1 and Appendix B that "...the aquifer penetrated by the well can support water demands for the Calico Solar site during construction and the lifespan of its operations, and pumping of the well at the prescribed rates will have no significant impact to water levels in the area." However, this statement is based on inadequate and insufficient testing and mere speculation . . .

Based upon the information provided by URS in Appendix B to Applicant's Supplemental Report for Calico Solar, it is my professional opinion that it is responsible to consider Well #3 a reliable and primary water source for the Calico Solar project until additional monitoring wells on and offsite, in addition to adequate pump tests - as described above - can confirm the assumptions made by the applicant. It is my opinion that there are serious questions regarding the long-term viability of this water supply. I would recommend that this Project not be permitted without a back-up water supply.

**Comment Poff-12:** The Applicant's filing after the release of the DEIS did consider impacts to the zone of influence from potential groundwater drawdown as a result of Project pumping, but did so using inadequate and insufficient data as described above. Although the Applicant concluded that water extraction would have negligible impacts on water quantity, the Applicant failed to look at impacts relating to long-term water availability in the region and the need for a back-up water supply. None of these issues have been considered under a climate change scenario. The DEIS does not consider any of these impacts.

**Comment Poff-15:** Potential cumulative impacts to the Colorado River Hydrologic Region due to regional hydromodification and groundwater extraction (e.g., solar projects, wind projects, urban development projects) were not considered in the DEIS.

**Comment SC-45:** The question of project impacts to percolation and groundwater received scant mention and virtually no analysis. The SA/DEIS mentions that the project debris basins may evaporate water that otherwise percolated, but there is no adequate quantification or analysis of that potentially significant impact to groundwater supplies, given the project footprint of nearly 13 square miles. SA/DEIS B.1-10.

**Comment SC-46:** The SA/DEIS Fails to Provide the Required Information Related to Groundwater Use at the Site.

The DEIS analyzes the impact of obtaining the groundwater from a Cadiz well and then transporting it 60 miles on rail cars to the project site. DEIS C.7-19. Staff concluded the impact would not be significant as recharge is expected to outpace pumping, and because the applicant would be required to comply with mitigation measures to assure that no significant environmental impact would occur. DEIS C.7-32. These conclusions are suspect as very little current information was provided on the capacity of the Cadiz well to serve the Project without affecting seeps and springs important to wildlife and the Mojave National Preserve. This is especially problematic in view of the cumulatively foreseeable (but inadequately analyzed) renaissance of the Cadiz Groundwater Storage and Dry-year Supply Program, a plan by Cadiz Land Company to sell massive amounts of groundwater out of the basin. SA/DEIS C.7-14.

**Comment SC-47:** The applicant recently submitted a supplement to the Application for Certification changing its source of groundwater to a new well drilled adjacent to the project site. Supplemental Application for Certification 1-3. The environmental impact associated with this well and the use of its groundwater was not included in the DEIS, nor has it been made available to the public. The environmental impacts associated with the main source of the project's water—not only for the construction, but for the indefinite future use of the project—have the potential to be severe. The pumping could drain the source, thus disrupting the delicate and thirsty environment. In fact, the SA/DEIS acknowledges that originally the intent was to use the local basin, but “concern over sufficiency of this water supply” lead to the requirement to use the Cadiz Valley well. SA/DEIS B.1-12. All of this must be analyzed by the BLM in order to allow them to make an informed decision on the approval of this project. If it is not in the DEIS and is not considered then the purpose of NEPA to inform the decisionmakers and the public of the environmental impact of the project will be undercut. 40 C.F.R. § 1502.1.

**Comment CBD-48:** The DEIS states that it will obtain needed from the Cadiz area and would “haul water from a well located at Cadiz, approximately 64 miles east southeast of the project site, by train to the project site.” DEIS at C.1-13. No alternate source of water is discussed although the DEIS does state that “The Applicant is also currently drilling wells and conducting aquifer testing to further assess groundwater conditions at the project site.” This appears to imply that the applicant may seek to use groundwater on site as well although such an action is not analyzed in the DEIS.

**Comment CBD-49:** At minimum, the BLM must ensure that if any groundwater on site is proposed to be used for the proposed project (and cumulative projects) over the life of the proposed projects such use 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).

**Comment CBD-53:** The Center is also concerned that the discussion in the DEIS 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 insure 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.

**Comment Jackson-22:** The SA/DEIS does not comply with the California Environmental Quality Act (CEQA) Guidelines (CCR 2006) in that it does not indicate if the Project:

. . . substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support land uses or planned uses for which permits have been granted.

**Comment Jackson-23:** The Applicant's Supplement states, "pumping of the well at the prescribed rates will have no significant impact to water levels in the area, as the ZOI is relatively small and will not affect wells that may be present in the basin that are approximately 10 miles away." The Applicant's Supplement does not quantify "significant" or described if "pumping of the well" will deplete groundwater supplies or interfere with the groundwater recharge beneath the adjacent privately owned lands.

**Response:** Additional information on groundwater resources and project water supply has been included in Section 4.17 of this FEIS to more thoroughly evaluate the differences in impacts among all of the alternatives. Mitigation is provided in Section 4.17.4 of this FEIS. The project-specific Well Installation Report and Hydrology Report are included in Appendices D and H, respectively, of the Plan of Development. This Plan will be available for a 30-day public review period concurrently with the FEIS. The Plan will be available online at <https://tesseractosolar.box.net/shared/j09n6g20f6> or at the BLM Barstow Field Office. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

The water required for construction and operational use will be obtained from a well located on private property adjacent to the Project site. Aquifer testing indicated the well is capable of producing at least 100 gpm over a 24-hour period without incurring excessive drawdown. The potential impacts of the project's proposed groundwater use on the basin groundwater levels

are addressed in this FEIS based on information from the literature, provided by the project applicant.

The project would not interfere with the quantity of groundwater recharge because in desert basins percolation on the valley floor is essentially zero. Ephemeral runoff would be redirected upon reaching the site, but not eliminated. Therefore, the opportunity for percolation of runoff would remain essentially unchanged.

#### **G.19.4 Floodplains (43160)**

**Comment SC-43:** The project is located on an alluvial fan. SA/DEIS C.7-1, 35, 37. The onsite debris and retention basins propose to capture only 100 year storm flows. SA/DEIS C.7-28, 35, 36. However, it is well known that alluvial fans present unique and severe flood hazards. Because of the location and enormous scale of the project actual impacts are unknown. This uncertainty is unacceptable under NEPA because it fails to provide the reviewer with an accurate project description or assessment of potential impacts.

One of the foremost recommendations of the [Alluvial Fan] Task Force was to plan for more than the normal 100 year flood. That recommendation was not followed here. But even if the responsible agencies decide to only require protection from the standard project flood (100 year event), they must then acknowledge the potential for catastrophic consequences of the Project.

**Comment SC-44:** The SA/DEIS relies on the development of future information and design of standard project flood protection to fully mitigate the project's flood hazard potential. SA/DEIS C.7-65-68. The SA/DEIS fails to identify, analyze and mitigate the hazards unique to alluvial fans, such as shorter duration localized storms, massive debris flows, increased flows after fire events, and so forth, instead of properly addressing this serious hazard.

**Response:** The detention/debris basins inside the northern boundary of the project site would be of sufficient size to completely retain flood flows resulting from a 100-year flood. Following significant storms, retained water would be released into the existing channels in a controlled and metered manner at a rate that is designed to not cause damage to SunCatcher pole foundations located within the channels. The project-specific Hydrology Report is included in Appendix H of the Plan of Development. This Plan will be available for a 30-day public review period concurrently with the FEIS. The Plan will be available at the BLM Barstow Field Office or online at <https://tesseractosolar.box.net/shared/j09n6g20f6>.

#### **G.19.5 Cumulative Effects (43400)**

**Comment SC-26:** Even where raw acreages are somewhat reliable parameters, the SA/DEIS's cumulative analysis is faulty. For instance, with regard to the project's cumulative impacts to

watershed streams, the SA/DEIS finds the cumulative effects to the Newberry Springs watershed streams from future projects to be significant (14%), with the Project's contribution nearly half (45%) of those impacts. SA/DEIS 3.2-129. The SA/DEIS claims to mitigate impacts to washes to less than significant by Condition of Certification BIO-27. SA/DEIS C.2-129. However, the proposed condition only requires that 436 acres of habitat be acquired to compensate for the 1000 acres of State jurisdictional waters onsite. SA/DEIS C.2-197. Additional mitigation which would require a more adequate compensation ratio is dependent on deferred surveys and a deferred Management Plan for the acquired compensation lands. SA/DEIS C.2-197. Additionally, the Project's impacts to the washes captured within the Project's deeply incised northern boundary and washes displaced along the Project's other boundaries are not accounted for in the acres of jurisdictional washes affected.

**Response:** The cumulative impacts of the Proposed Action and Alternatives are discussed for each resource element in Chapter 4 of the FEIS. Proposed mitigation is discussed in the FEIS and is summarized in Appendix D. In addition, when developing the Record of Decision for the proposed Calico Solar Project and CDCA Plan Amendment, the BLM may consider the SA/DEIS Conditions of Certification, additional Conditions of Certification from the Supplemental SA, and other mitigation measures developed by the BLM and other regulatory agencies.

## **G.20 Irreversible and Irretrievable Commitment of Resources**

**Comment SC-42:** The SA/DEIS Fails to Analyze the Project's Short Term Gains Versus its Long Term Commitment of Irretrievable Resources.

The SA/DEIS has failed to consider a major shortcoming of the project: its technology. The fact is that the use of Stirling engines for large scale solar power production is unproven at any scale approaching what is proposed here. The project technology has only been tested with 60 engines at 1.5 MW.

Unproven technology was a major issue identified in scoping. However, the SA/DEIS analysis give the issue short shrift. However, the SA/DEIS acknowledges: "Staff cannot determine whether the predicted power plant availability factor of 99%, as supplied by the Applicant, is achievable. Further, staff cannot predict what the actual availability might be, *given the demonstration status of the SunCatcher technology* and limited data on large-scaled deployments of SunCatchers" and "Staff believes it possible that the project may face challenges from considerable maintenance demands, reducing its availability." SA/DEIS ES-27 (emphasis added) In addition, over time this technology, with high maintenance requirements, may not be cost effective for power purchasers compared with other large scale solar thermal and PV models. This could result in an abandoned project, leaving a permanently degraded

desert ecosystem, without the benefit of the planned solar energy plant's contribution to reducing global warming.

Under CEQA, NEPA and FLPMA mandates, the project should be denied and should be sited in an alternative disturbed or degraded land location.

**Response:** Section 4.19 of this FEIS summarizes the Irreversible and Irrecoverable Commitment of Resources for the proposed project. In addition, resource area specific discussions of irretrievable and irreversible commitments of resources were identified for biological, cultural, geological and grazing and wild horse resources.

Solar technology, including power tower technology, has been tested and operates commercially on dozens of sites throughout the world and in the U.S., although not at this scale. In any new technology, implementation of larger scales of development to achieve efficiency will be required, and the first of these, in all cases, will have uncertainties associated with it. What can be done is to identify where uncertainties exist, ensure that the project is monitored to obtain data regarding the uncertainty, and provide for response actions to respond to unexpected problems.

Although not discussed within the Purpose and Need Statement, several sections of the EIS acknowledge the uncertainties associated with the fact that no solar project of this scale has ever been constructed in the U.S. Examples include the evaluation of potential stormwater damage to the facility, and the effect of power tower and heliostat glare on drivers on Interstate 40. In cases where uncertainties exist due to the lack of previous operational experience, mitigation measures have been developed that require monitoring of impacts, and response to impacts, if needed