

CHAPTER 5

Consultation, Coordination and Public Involvement

5.1 Interrelationships

BLM's authority for the proposed action includes Federal Land Policy and Management Act (FLPMA) of 1976 [43 United States Code (U.S.C.) 1701 et seq.], Section 211 of the Energy Policy Act of 2005 (119 Stat. 594, 600), and BLM's Solar Energy Development Policy of April 4, 2007. The FLPMA authorizes BLM to issue right-of-way (ROW) grants for renewable energy projects. Section 211 of the Energy Policy Act of 2005 states that the Secretary of the Interior should seek to have approved a minimum of 10,000 megawatts of renewable energy generating capacity on public lands by 2015.

The BLM coordinates its fire management activities with the actions of related federal and state agencies responsible for fire management. The Federal Wildland Fire Policy is a collaborative effort that includes the BLM, USFS, National Park Service (NPS), USFWS, Bureau of Indian Affairs, the National Biological Service, and state wildlife management organizations. The collaborative effort has formulated and standardized the guiding principles and priorities of wildland fire management. The National Fire Plan is a collaborative interagency effort to apply the Federal Wildland Policy to all Federal Land Management Agencies and partners in state forestry or lands departments. Operational collaboration between the BLM, USFS, NPS, and USFWS is included in the Interagency Standards for Fire and Fire Aviation Operations 2003. This federally approved document addresses fire management, wildfire suppression, fuels management and prescribed fire safety, interagency coordination and cooperation, qualifications and training, objectives, performance standards, and fire management program administration.

5.1.1 Department of Defense

BLM coordinates with Department of Defense prior to approval of rights-of-way for renewable energy, utility, and communication facilities to ensure that these facilities would not interfere with military training routes. A letter received from a Department of Defense representative indicates that the project will pose no conflicts for military over flights (see, AFC Appendix K).

5.1.2 U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (USACE) has jurisdiction to protect the aquatic ecosystem, including water quality and wetland resources under Section 404 of the Clean Water Act. Under

that authority, USACE regulates the discharge of dredged or fill material into waters of the United States, including wetlands, by reviewing proposals to determine whether they may impact such resources and, thereby, are subject to Section 404's permit requirement. The USACE may grant authorization under either an individual permit or a nationwide permit to address operations that may affect the ephemeral washes on the project site. Throughout the PA/DEIS process, the BLM has provided information to the USACE to assist the agency in making a determination regarding its jurisdiction and need for a Section 404 permit. The evaluation for jurisdictional waters that was performed on the site determined that the ephemeral drainages did not conform to the requirements for designation as jurisdictional waters of the U.S., and discussions with the USACE indicated that the drainages would not be considered jurisdictional waters of the U.S.

5.1.3 California Energy Commission

The Energy Commission has exclusive authority to certify the construction, modification, and operation of thermal electric power plants 50 megawatts (MW) or larger. Energy Commission certification is in lieu of any permit required by state, regional or local agencies and by federal agencies to the extent permitted by federal law (Cal. Pub. Res. Code §25500). The Energy Commission must review power plant applications for certification to assess potential environmental impacts including potential impacts to public health and safety, potential measures to mitigate those impacts (Pub. Res. Code §25519), and compliance with applicable governmental laws or standards (Pub. Res. Code §25523 (d)). Energy Commission staff analyses were prepared in accordance with Public Resources Code section 25500 et seq.; Title 20, California Code of Regulations, section 1701 et seq.; and CEQA (Pub. Res. Code § 21000 et seq.; 14 Cal. Code Regs. §15000 et seq.). These analyses include the March 2010 Staff Assessment and Draft Environmental Impact Statement prepared jointly with the BLM; September 2010 Revised Staff Assessment Parts 1 and 2; November 2010 Presiding Member's Proposed Decision, including errata; and December 2010 Commission Decision.

5.1.4 California Department of Fish and Game

The California Department of Fish and Game (CDFG) protects fish and aquatic habitats within the State through regulation of modifications to streambeds, under Section 1602 of the Fish and Game Code. CDFG regulates activities that could divert, obstruct or change the natural flow or the bed, channel, or bank of any river, stream, or lake in California that the agency has designated as one that is used by or provides benefit to a fish or wildlife resource. The agency also evaluates potential impacts to vegetation and wildlife resulting from disturbances to waterways during its permitting process. The BLM and the Applicant have provided information to CDFG to assist the agency in its determination of the impacts to streambeds, and identification of permit and mitigation requirements. The Applicant filed a Streambed Alteration Agreement with CDFG in November 2009. Compliance with the requirements of Streambed Alteration Agreement provisions is included as a recommended Condition of Certification/Mitigation Measure (see, e.g., Section 4.19.4, *Summary of Mitigation Measures*, and SOIL&WATER-12 in Appendix B).

CDFG also has the authority to regulate potential impacts to species that are protected under the California Endangered Species Act (CESA) (Fish and Game Code §2050 et seq.). Accordingly,

the Applicant filed an application for a California Endangered Species Act Section 2081 (B) Incidental Take Permit and Revised Desert Tortoise Technical Report in January 2010. Evaluation of compliance with the requirements of incidental take authorization would be evaluated as recommended in Condition of Certification/Mitigation Measure BIO-11 (see Section 4.21.4, *Summary of Mitigation Measures*).

5.1.5 South Coast Air Quality Management District

The project site is located in the Mojave Desert Air Basin¹ and is under the jurisdiction of the South Coast Air Quality Management District (District). The District issued a Preliminary Determination of Compliance (PDOC) for the project on March 5, 2010; provided public notice with a 30 day comment period that began on April 15, 2010, and then provided a Revised Determination of Compliance (RDOC) on October 21, 2010. A 30-day public review period also was provided for the RDOC. The District issued a Final Determination of Compliance (FDOC) on December 1, 2010, after resolving agency comments and issues raised by the public. Compliance with District rules and regulations would be accomplished via the implementation of Conditions of Certification/Mitigation Measures AQ-1 through and including AQ-51 (see Section 4.2.4, *Summary of Mitigation Measures*).

5.1.6 California Department of Transportation

The California Department of Transportation (Caltrans) has jurisdiction over encroachments to Caltrans facilities and related easements and rights-of way. Caltrans approval would be required prior to the installation of a locked gate in the I-10 right-of-way fence, for maintenance of the I-10 fence and gate, for the installation of desert tortoise exclusion fencing along I-10 within the Caltran's right-of-way, and potentially also for the transport of hazardous materials or other deliveries. Compliance with Caltrans requirements would be required by the implementation of recommended Conditions of Certification/Mitigation Measures (see, e.g., BIO-9 [desert tortoise fencing], TRANS-1 [roadway use], TRANS-2 [hazardous materials transport], TRANS-4 [oversized load permits]).

5.1.7 Riverside County

The County of Riverside has jurisdiction to issue building permits to the project. Building permits issued by the County are ministerial. The County also has jurisdiction to issue discretionary approvals for any easements, rights-of-way and or encroachment permits where County facilities are concerned.

¹ The Mojave Desert Air Basin lies inland southeast of the San Joaquin Valley Air Basin, and northeast of the South Coast Air Basin. The desert portions of Kern, San Bernardino, Riverside, and Los Angeles counties are within its boundaries.

5.2 Description of Consultation Processes for ESA Section 7, NHPA Section 106, and Indian Tribes

5.2.1 U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over threatened and endangered species listed under the Endangered Species Act (ESA) (16 U.S.C. §1531 et seq.). Formal consultation with the USFWS under Section 7 of the ESA is required for any federal action that may adversely affect a federally-listed species. This consultation will be initiated through the preparation and submittal of a Biological Assessment (BA), which would describe the proposed action to the USFWS. Following review of the BA, the USFWS would be expected to issue a Biological Opinion (BO) that specifies mitigation measures, which must be implemented for any protected species.

5.2.2 Tribal Consultation and Section 106 Compliance

The BLM consults with Indian tribes on a government-to-government level in accordance with several authorities including NEPA, Section 106 of the National Historic Preservation Act of 1966 (NHPA) (16 U.S.C. 470), as amended; the American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996), as amended; and Executive Order 13007 (May 24, 1996), concerning Indian Sacred Sites. For the PSPP, in coordination and cooperation with the CEC, BLM expanded its consultation to include Native American groups not recognized by the federal government.

Adverse effects that the PSPP could have on cultural resources will be resolved through compliance with the terms of a Programmatic Agreement (PA) reached on September 21, 2010, pursuant to NHPA Section 106 (16 USC Section 470; 36 CFR Section 800.14) in consultation with the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, Indian tribes, and other interested parties. Implementation of the terms of the Programmatic Agreement is identified as a recommended mitigation measure (see Section 4.4, *Cultural Resources*). The PA is provided in Appendix H, *Programmatic Agreement*.

In accordance with 36 CFR Section 800.14(b), PAs are used for the resolution of adverse effects for complex project situations and when effects on historic properties, resources eligible for or listed in the National Register of Historic Places (NRHP), cannot be fully determined prior to approval of an undertaking. For the PSPP, the BLM prepared a PA in consultation with the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, Indian tribes, and other interested parties. The PA would govern the conclusion of the identification and evaluation of historic properties (eligible for the NRHP), as well as the resolution of any adverse effects that may result from the proposed action or alternative actions.

Treatment plans regarding historic properties that cannot be avoided by project construction will be developed in consultation with stakeholders as stipulated in the PA. Analysis of impacts in this document and implementation of the terms of the PA would provide evidence of BLM's compliance with NHPA Section 106 and NEPA.

The BLM initiated consultation in the early stages of project planning by certified letter on July 1, 2009. Tribes were invited to a general scoping meeting and project site visit held on January 25, 2010. On February 10, 2010, the BLM Palm Springs/South Coast Field Office Manager and Archaeologist met with the Fort Yuma Quechan Tribal Council. They provided information on several solar energy projects, including the project, and answered questions. Letters requesting consultation among tribes, the Energy Commission, the Applicant, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation to develop a PA for the PSPP were mailed out to the below-listed tribes on March 3, 2010.

An initial meeting regarding the PA was held on April 23, 2010 in Palm Desert, to which all interested tribes were invited. They also were notified of a workshop on the PSPP SA/DEIS, held on April 29, 2010, in the BLM Palm Springs/South Coast Field Office, where, the BLM also held an informational meeting for the tribes on May 25, 2010. The BLM issued a draft PA for the PSPP on June 17, 2010, allowing 30 days for public and Native American comment. Appendix I of the draft PA included a log-to-date of BLM's consultation with specific individuals and groups.

Most recently, BLM held a meeting in Palm Desert on August 11, 2010, to review and discuss the revised draft PA; some Native Americans were in attendance. At this meeting, representatives of two organizations (California's for Renewable Energy and La Cuna de Aztlan Sacred Sites Protection Circle) expressed concern over geoglyphs and other sacred sites and ancient trails that solar development in the Chuckwalla Valley and on Palo Verde Mesa could affect. As a result of consultation efforts, Native Americans identified no additional cultural resources relative to those analyzed in the SA/DEIS that could be affected by the project.

Thirteen tribes or related entities were identified and invited to consult on the project, including:

1. Ramona Band of Mission Indians
2. Torres-Martinez Desert Cahuilla Indians
3. Augustine Band of Cahuilla Mission Indians
4. Agua Caliente Band of Cahuilla Indians THPO
5. Morongo Band of Mission Indians
6. Twentynine Palms Band of Mission Indians
7. Fort Yuma Quechan Indian Tribe
8. Colorado River Indian Tribes
9. Chemehuevi Reservation
10. Colorado River Reservation
11. San Manuel Band of Mission Indians
12. Quechan Indian Tribe
13. Fort Mojave Indian Tribe

5.3 Implementation, Monitoring and Enforcement

BLM will continue to involve and collaborate with the public during implementation of this project. Opportunities to become involved during implementation and monitoring could include development of partnerships and community-based citizen working groups. BLM invites citizens and user groups within the project area to become actively involved in implementation,

monitoring, and enforcement of decisions. BLM and citizens may collaboratively develop site-specific goals and objectives that mutually benefit public land resources, local communities, and the people who live, work, or play on the public lands.

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

5.4 Scoping

The BLM solicited internal and external input on the issues, impacts, and potential alternatives to be addressed in this EIS for the project, as well as the extent to which those issues and impacts would be analyzed in the document. This process is called “scoping” (40 CFR 1501.7). Internal input was provided by BLM and cooperating agency staff, as an interdisciplinary process, to help define issues, alternatives, and data needs. External scoping involved notification and opportunities for feedback from other agencies, organizations, tribes, local governments, and the public. Formal public scoping begins following publication of a Notice of Intent (NOI) to prepare an environmental impact statement for a proposed action.

The Notice of Intent to prepare an environmental impact statement for the project was published in the *Federal Register* on November 23, 2009 (74 Fed. Reg. 61169). Publication of the NOI began a 30-day public comment period, which ended on December 23, 2009. BLM provided a website with information about the project that also described the various methods of providing input on the project, including an email address where comments could be sent electronically (CAPSSolarPalen@blm.gov). Twenty comment letters were received within the comment period.

On December 11, 2009, the BLM held a Scoping Meeting at the University of California-Riverside, Palm Desert Campus. Seventy-five attendees were documented by signing in on a voluntary sign-in sheet.

A draft scoping report was released for public review and comment in January 2010. (See Appendix D, *Results of Scoping*). Three general categories of comments were received: i) issues or concerns that could be addressed by effects analysis; ii) issues or concerns that could result in an alternative and/or a better description or qualification of the alternatives; and iii) issues or concerns outside the scope of the EIS. Issues analyzed in this PA/FEIS are summarized in Section 1.5, *Issues Analyzed in this EIS*.

The BLM also gave a presentation at and participated in the CEC’s January 25, 2010, Informational Hearing in Blythe, California, and Site Visit for the project. In addition to property owners and persons on the general project mail-out list, notification was provided to local, state and federal

public interest and regulatory organizations with an expressed or anticipated interest in this project. Also, elected and certain appointed officials were similarly notified of the hearing and site visit.

5.5 Public Comment Process

5.5.1 Introduction

The CEC and the BLM distributed the joint Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) for the project for public and agency review and comment on March 18, 2010. The comment period ended on July 1, 2010. Eight comment letters were received. Table 5-1 lists all individuals, agencies and organizations that provided written comments on the SA/DEIS.

**TABLE 5-1
COMMENTERS ON THE PALEN SOLAR POWER PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Comment Letter	Commenter	Letter Available in Appendix K, Page
1	Joshua Tree National Park	K-3
2	Brendan Hughes, Individual	K-11
3	Center for Biological Diversity	K-12
4	California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)	K-46
5	The Wilderness Society and the Natural Resources Defense Council (NRDC)	K-60
6	California Unions for Renewable Energy (CURE)	K-73
7	Western Watersheds Project	K-334
8	Metropolitan Water District of Southern California	K-346

Upon receipt, each comment letter/e-mail was assigned a unique number. Individual comments within each letter/e-mail were numbered individually as well. For example, comment 1-01 is the first substantive comment in Comment Letter 1. “1” represents the commenter; the “01” refers to the first comment in that letter. Comment, so delineated, are provided in Appendix K, *Agency and Public Comments on SA/DEIS*.

Section 5.5.2, *Common Responses*, provides common (consolidated) responses for topics regarding which a number of similar or related comments were received. In turn, Section 5.5.3, *Individual Responses*, provides responses to all individual comments.

5.5.2 Common Responses

A number of the comments received on the SA/ SA/DEIS discussed the same issues or environmental concerns. Rather than repeat responses, the Common Responses identified here and set forth below were prepared:

- Common Response 5.5.2.1: Consistency of the Proposed Action with the CDCA Plan, NECO Plan and other Plans
- Common Response 5.5.2.2: Consistency of the PA/FEIS with NEPA and FLPMA

- Common Response 5.5.2.3: Adequacy of Data Relied Upon
- Common Response 5.5.2.4: Purpose and Need
- Common Response 5.5.2.5: Alternatives
- Common Response 5.5.2.6: Supplementation / Recirculation
- Common Response 5.5.2.7: Biological Resources
- Common Response 5.5.2.9: Air Quality
- Common Response 5.5.2.8: Climate Change / Greenhouse Gases
- Common Response 5.5.2.10: Water Resources
- Common Response 5.5.2.11: Cultural Resources
- Common Response 5.5.2.12: Public Health and Safety

Each of the Common Response sections lists the Comment Letter and specific Comment Number for each comment that pertains to the issue or environmental concern that the Common Response addresses.

5.5.2.1 Consistency of the Proposed Action with the CDCA Plan, NECO Plan and other Plans

Commenters and Comments Addressed

Commenter	Comments
Center for Biological Diversity	3-001, 3-012, 3-016, 3-025, 3-026, 3-025, 3-027, 3-028, 3-029, 3-032, 3-033, 3-034, 3-053
California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)	4-18, 4-24
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-01, 5-02, 5-03
California Unions for Renewable Energy (CURE)	6-002, 6-026, 6-117

Summary of Issues Raised

1. ***Relationship with Master Plans and Policies:*** Comments question the relationship of the proposed action to the goals and policies of the BLM's master planning documents (e.g., the CDCA Plan and NECO Plan)
2. ***Adequacy of Analysis and Land Use Considerations:*** Comments question the adequacy of analysis, including analysis of resource impacts.

Response

A land use plan is a set of decisions that establish management direction for land within a BLM administrative area, as prescribed under the planning provisions of Federal Land Policy and Management Act (FLPMA); it is an assimilation of land-use-plan-level decisions developed through the planning process outlined in 43 CFR Part 1600, regardless of the scale at which the

decisions were developed. BLM land use plans, including the California Desert Conservation Area Plan (CDCA Plan) and Northern and Eastern Colorado Desert Coordinated Management Plan (NECO Plan), are designed to provide guidance for future management actions and development of subsequent, more detailed and limited-scope plans for specific resources and uses.

Long-range plans that cover large geographic areas such as the California Desert provide a framework for decision-making; they are “living” documents with the flexibility to address changing conditions over time as more detailed land use information is provided through amendments, special area plans, or other more focused planning documents. See., e.g., James B. Ruch, California State Director Bureau of Land Management, “Dear Reader” Letter [Introducing the CDCA Plan, as amended] (March 1999) (The CDCA Plan “is a statement of management guidance designed to be useful today and it contains an amendment process so that it is adaptable to tomorrow.”)

California Desert Conservation Area Plan (CDCA Plan)

The CDCA Plan is a comprehensive, long-range plan that was adopted in 1980; it since has been amended many times. As described in PA/FEIS Table 1-1, the CDCA is a 25-million-acre area that contains over 12 million acres of BLM-administered public lands within the area known as the California Desert. As described by BLM’s California State Land Director in his letter presenting the CDCA Plan:

The California Desert Plan encompasses a tremendous area and many different resources and uses. The decisions in the Plan are major and important, but they are only general guides to site-specific actions. The job ahead of us now involves three tasks: 1) Site-specific plans, such as grazing allotment management plans or vehicle route designation; 2) On-the-ground actions, such as granting mineral leases, developing water sources for wildlife, building fences for livestock pastures or for protecting petroglyphs; and 3) Keeping people informed of and involved in putting the Plan to work on the ground, and in changing the Plan to meet future needs.

The CDCA Plan initially was prepared and continues to provide guidance concerning the use of the California desert public land holdings while balancing other public needs and protecting resources. More specifically, it establishes goals and specific actions for the management, use, development, and protection of the resources and public lands within the CDCA. It is based on the concepts of multiple use, sustained yield, and maintenance of environmental quality. The CDCA Plan’s goals and actions for each resource are established in its 12 elements, each of which provides both a desert-wide perspective of the planning decisions for one major resource or issue of public concern and a more specific interpretation of multiple-use class guidelines for a given resource and its associated activities.

The Multiple Use Class (MUC) Guidelines in Table 1 of the CDCA Plan state that solar electrical generation facilities may be allowed in an MUC Moderate (M) area after NEPA requirements are met and the CDCA Plan is properly amended (see also PA/FEIS Table 3.9-2, *Multiple-Use Class-M Land Use and Resource Management Guidelines*). The proposed action, if approved, would amend the CDCA Plan following the process anticipated in the CDCA Plan to identify the site as suitable for the proposed solar energy use. The CDCA Plan amendment would only apply to the

BLM-administered land being evaluated for the project. Accordingly, the proposed CDCA Plan amendment and the overall amendment process would be consistent with the CDCA Plan.

The CDCA Plan anticipated that renewable power generation facilities would be proposed in the California Desert. Accordingly, it made allowances for the review of such applications, including a provision that all proposed applications “associated with power generation or transmission not identified in the [CDCA] Plan will be considered through the Plan Amendment process.” (See also, PA/FEIS Section 1.3.2, *Land Use Plan Conformance and Consistency*). The intention of this provision was to ensure that the BLM would take a planning view of all of the renewable energy applications proposed and that such projects would require an amendment to the CDCA to maintain consistency throughout the plan. Amendments to the CDCA Plan can be site-specific or global, depending on the nature of the amendment.

Concerns from the public regarding the multiple use mission of the BLM and the loss of this large section of public land to a single use are addressed in the strict enforcement of mitigation measures for habitat and other measures that ensure a one-to-one replacement of lands lost to a single use. Implementation of these mitigation measures similarly address concerns that the current process is a piecemeal approach inconsistent with the goals and purposes of the CDCA Plan, as amended by the NECO Plan. Regarding claims that the range of alternatives analyzed failed to adhere to the CDCA Plan requirement, particularly when viewed in light of NEPA, see Common Response 5.5.2.5.

CDCA Plan Amendment Process

The BLM received a number of comments expressing concerns about the scope, nature and specifics of the proposed amendment to the CDCA Plan. The proposed CDCA Plan amendment is described in PA/FEIS Section 1.3.2, *Land Use Plan Conformance and Consistency*. As noted above, amendments to the CDCA Plan can be site-specific or global, depending on the nature of the amendment.

The construction and operation of a solar energy generating project on the proposed site would require the BLM to amend the CDCA Plan specifically to identify the site as suitable for such use; for the project, the requisite amendment would identify the proposed site as suitable for the proposed action, i.e., the project. The CDCA Plan amendment for this project would not result in changes to the Class M (Moderate Use) land use designation; instead, it would be site-specific, limited to the allowance of a solar energy use on the proposed site. Nonetheless, the PA/FEIS acknowledges an adverse cumulative impact on approximately one million acres of desert lands that are proposed for possible solar and wind energy development in the southern California Desert (see, e.g., Section 4.8.3, *Discussion of Cumulative Impacts [relating to Multiple Use Classes]*). The proposed CDCA Plan amendment for the project would be limited by the accompanying ROW grant. The CDCA Plan amendment, if adopted, would not result in any change in land use designations or authorized uses of land anywhere else in the CDCA.

Northern and Eastern Colorado Desert Coordinated Management Plan (NECO Plan)

The NECO Plan amended the CDCA Plan in 2002 to make it compatible with desert tortoise conservation and recovery efforts. As described in PA/FEIS Table 1-1, *General Laws*,

Ordinances, Regulations and Standards (LORS), the NECO Plan is a landscape-scale planning effort that covers most of the California portion of the Sonoran Desert ecosystem, including over five million acres and two desert tortoise recovery units. No NECO Plan amendments are recommended or proposed as part of the proposed action or alternatives.

California Desert Renewable Energy Conservation Plan (DRECP)

The DRECP is a Natural Community Conservation Plan that will help provide for effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects. The DRECP will provide long-term endangered species permit assurances, facilitate the California Renewables Portfolio Standard, and provide a process for conservation funding to implement the DRECP. It is anticipated that the DRECP also would serve as the basis for one or more habitat conservation plans (HCPs) under the Federal Endangered Species Act (FESA) and provide biological information necessary for consultation under FESA Section 7.

The DRECP is intended to advance federal and State conservation goals in the California desert region while facilitating the timely permitting of renewable energy projects under applicable federal and State laws. However, because the DRECP process remains underway, it does not govern the BLM's consideration of the proposed action and alternatives.

Other Land Use Planning Areas

The PA/FEIS considered impacts of the proposed action at an appropriate geographic scale; recognizing that existing land use plans apply in geographic contexts of various sizes. Analyzing impacts within too large an area tends to dilute the consequence of the impact; similarly, analyzing impacts within too small an area could tend to magnify them. In either instance, the impacts of the proposed action would be inaccurately characterized, which would lead to uninformed decision-making.

For each issue area considered in the PA/FEIS, the BLM analyzed the direct, indirect and cumulative impacts of the proposed action and alternatives at the land use planning scales that provide the most meaningful context (see PA/FEIS Ch. 4, *Environmental Consequences*). In some cases the proper geographic scope of analysis (i.e., the area within which analysis neither overstates nor understates impacts) consists of the CDCA planning area; in other cases, it is the Mojave Desert Air Basin, eastern Riverside County, along the I 10 corridor, or elsewhere.

Solar PEIS

The BLM generally prefers to develop programmatic NEPA documentation and, thereafter, to use it as a basis for site-specific projects. When final, the Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development (Solar PEIS) will serve this function. However, the Solar PEIS remains in draft form. Because it has not been fully vetted by the requisite and appropriate agency and public review processes, and has not been approved as a formal, final decision by the BLM through the issuance of a Record of Decision, the draft Solar PEIS bears on the BLM's consideration of the project only as a reasonably foreseeable probable future aspect of the cumulative scenario.

Because the Solar PEIS is under development, it, and any decisions the BLM ultimately makes based on its analysis, will not govern BLM's decision-making efforts for the project. The BLM has a responsibility to perform a timely environmental review in response to individual applications. For this reason, the BLM will consider the project pursuant to FLPMA, NEPA, and applicable planning documents, in accordance with the BLM's existing Solar Energy Development Policy. Nonetheless, additional information about the Solar PEIS is provided below.

In response to direction from Congress under Title II, Section 211 of the Energy Policy Act of 2005, as well as Executive Order 13212, Actions to Expedite Energy-Related Projects, the BLM and the DOE are collaborating to prepare the Solar PEIS pursuant to NEPA and CEQ regulations. The draft Solar PEIS evaluates utility-scale solar energy development in a six-state area, including that portion of the CDCA that is open to solar energy development in accordance with the provisions of the CDCA Plan. The proposed planning area for the Solar PEIS does not include lands within the CDCA that have special designations, such as National Monuments, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, National Historic and Scenic Trails, Areas of Critical Environmental Concern, or other special management areas that are inappropriate for or inconsistent with extensive, surface-disturbing uses. The proposed planning area for the Solar PEIS also does not include lands within the National Landscape Conservation System.

A Notice of Intent to Prepare the Solar PEIS was published in the Federal Register on May 29, 2008. The Draft Solar PEIS was published, and the related 90-day comment period was initiated, on December 17, 2010. Public meetings are scheduled in February and March 2010. The first such meeting was held in Washington, DC on February 2, 2011; the last in the series of meetings is scheduled to be held in Salt Lake City, Utah on March 10, 2011. The BLM will consider all comments on the Solar PEIS that are received or postmarked by March 17, 2011. Thereafter, the BLM will evaluate the draft Solar PEIS in light of comments received, will develop responses to those comments, and will determine whether to approve, deny or modify the proposal. The schedule to complete the Final Solar PEIS or adopt the ROD is not yet known (Solar PEIS, 2011).

5.5.2.2 Consistency of the PA/FEIS with NEPA and FLPMA

Commenters and Comments Addressed

Commenter	Comments
Center for Biological Diversity	3-006, 3-008, 3-025, 3-026, 3-027, 3-030, 3-032, 3-033, 3-034, 3-035, 3-037, 3-050, 3-053, 3-071, 3-086, 3-087, 3-088
California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)	4-16, 4-17, 4-18, 4-20, 4-23
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-27, 5-28, 5-31
California Unions for Renewable Energy (CURE)	6-001, 6-002, 6-003, 6-009, 6-016, 6-017, 6-020, 6-026, 6-028, 6-029, 6-030, 6-031, 6-032, 6-033, 6-117, 6-167
Western Watersheds Project	7-07

Summary of Issues Raised

1. **Consistency with NEPA:** Several comments question whether the environmental review process for the proposed action complies with NEPA requirements, including about segmentation, the scope of analysis, the identification of impacts (including cumulative impacts), the identification of adequate mitigation measures, and other requirements of NEPA.
2. **Compliance with FLPMA:** Several comments question whether the proposed action is consistent with the mandates of FLPMA.

Response

Consistency with NEPA

In an EIS, NEPA requires the BLM to take a “hard look” at the impacts of the proposed action and alternatives. This means that the effects analysis provides a level of detail that is sufficient to support reasoned conclusions by comparing the amount and the degree of change (impact) caused by the proposed action and alternatives (40 CFR 1502.1). As explained in Section 6.8.1.2 of the BLM’s NEPA Handbook H-1790-1, “A “hard look” is a reasoned analysis containing quantitative or detailed qualitative information.”

Public Participation. The Council on Environmental Quality (CEQ) regulations require that agencies “make diligent efforts to involve the public in preparing and implementing their NEPA procedures” (40 CFR 1506.6(a)). There are a wide variety of ways to engage the public in the NEPA process. During preparation of the environmental analysis for the project, the BLM and CEC invited public participation in the following ways:

- Through a website set up specifically to keep interested parties apprised of the project; and by
- Holding noticed public workshops on December 9, 2009, and on January 7, April 28 and 29, and May 7, 2010;
- Holding a public scoping meeting on December 11, 2009, at the University of California-Riverside, Palm Desert Campus;
- Holding an Informational Hearing and Site Visit for project, which included a joint presentation by the BLM and the Energy Commission, on January 25, 2010;
- Holding resource-specific workshops, including the April 16, 2010, Biological Workshop;
- Mailing information and inviting participation of tribes and others interested in potential impacts of the proposed action and alternatives on cultural resources (see PA/FEIS Section 5.2.2, *Tribal Consultation and Section 106 Compliance*);
- Circulation of the SA/DEIS to numerous State and local libraries for public comment; such libraries include the Energy Commission’s Library in Sacramento and the California State Library in Sacramento; public libraries in Eureka, Fresno, Los Angeles, San Diego, and San Francisco; and local libraries in the vicinity of the project, including the Riverside Main Library, Palo Verde Valley District Library, Lake Tamarisk Library, Coachella Branch Library, and Cathedral City Branch Library;

- Circulation of the AFC to all state and local agencies that would have had permitting responsibilities except for the exclusive siting authority of the Energy Commission (members of the public could review that document at agency offices);
- Federal Register notices on November 23, 2009 (74 FR 61169-02) and April 7, 2010 (75 FR 17765-02). An additional Federal Register notice was published for the PSPP by the Environmental Protection Agency on April 2, 2010 (75 FR 16786-01).
- These responses to comments.

Further, members of the public had opportunities to review and comment on aspects of the project that have been developed since publication of the DA/DEIS, including the addition of evaporation ponds and an on-site concrete batch plant. See, e.g., the CEC's September 2010 Revised Staff Assessment and December 2010 Commission Decision. In addition, receipt of comments about these elements as part of the BLM's post-SA/DEIS environmental review process indicates that interested parties availed themselves of the opportunities presented.

Moreover, the public is being given an additional opportunity to review and comment on the environmental review following publication of the PA/FEIS. As indicated in the Dear Reader letter accompanying the issuance of the PA/FEIS, the BLM will accept comments for a 30-day period after the PA/FEIS notice is published in the Federal Register to allow the public and agencies additional time to consider and provide comments on the PA/FEIS. Comments received during this time will be reviewed, analyzed and responded to if necessary in the Record of Decision (ROD).

Scope of Analysis/Segmentation. Segmentation can occur under NEPA when an action is too narrowly defined or broken down into small parts in order to minimize the significance of potential impacts. The proper scope of environmental review of an action considers connected, cumulative and similar actions. The PA/FEIS for the project considers these elements, resulting in an adequate analytical scope.

Connected actions, including Southern California Edison's proposed Red Bluff Substation Project are described in PA/FEIS Section 2.3, *Connected Actions*. These closely-related actions are not part of the proposed action (e.g., they are not proposed by the PSPP Applicant and do not in all cases require BLM approval). However, these connected actions are discussed and analyzed in the PA/FEIS. See, e.g., PA/FEIS Section 4.1.7, *Incorporation of the Analysis of the Red Bluff Substation Project by Reference*. The anticipated development of these components was identified in the SA/DEIS (see, e.g., March 2010 Executive Summary, p. 4). However, final locations and other details were not available at that time (see, e.g., SA/DEIS § B.1.4.2, "Although the route has not been finalized, the gen-tie line is expected to proceed. . ."). This PA/FEIS provides further detail in relation to the information previously known with additional information developed since publication of the SA/DEIS.

The cumulative scenario is identified in PA/FEIS Section 4.1.4, *Cumulative Scenario Approach*; cumulative impacts are analyzed on a resource-by-resource basis throughout Chapter 4, *Environmental Consequences*. As described in Section 6.5.2.3 of the BLM's NEPA Handbook,

similar actions are proposed or reasonably foreseeable federal actions that have similarities that provide a basis for evaluating their environmental consequences together with the proposed action (see also, 40 CFR 1508.25(a)(3)). Common timing or geography can provide a basis for determining that actions are similar. Multiple utility-scale solar and other renewable development projects recently have been approved or are under consideration in the California desert. These projects are considered, and the potential for their environmental impacts to combine with those of the proposed action, are analyzed as part of the cumulative scenario (see, PA/FEIS Section 4.1.4, *Cumulative Scenario Approach*).

The CEC's Revised Staff Assessment Part 2 Biological Resources Appendix B for the project identified three NECO Plan land use plan amendments and stated, "Except for the No Action Alternative, the following proposed Northern and Eastern Colorado Desert Coordinated Management Plan (NECO) amendments would apply to all alternatives." This was an error in the CEC document. The BLM is not, as part of this proposed action, proposing any NECO land use plan amendments. Therefore, no analysis of such a change is required in this PA/FEIS. Because the connected actions are described and analyzed by the BLM in the PA/FEIS, the PA/FEIS does not improperly segment the review of associated impacts (see, e.g., PA/FEIS Section 2.3, *Connected Actions*, and Section 4.1.7, *Incorporation of the Analysis of the Red Bluff Substation Project by Reference*).

Cumulative Impacts. Several comments question the adequacy of the PA/FEIS's assessment of cumulative impacts. A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7; see also, BLM NEPA Handbook H-1790-1 § 6.5.2.2, *Cumulative Actions*. The PA/FEIS considers the potential for incremental impacts resulting from construction, operation and maintenance, and closure and decommissioning of the project to cause or contribute to a cumulative effect in each of the issue areas for which the project could cause an impact.

The PA/FEIS for the project identifies cumulative projects and provides quantified and detailed information about them. See Table 4.1-1 (Cumulative Scenario). On an issue-by-issue basis, Chapter 4, *Environmental Consequences*, identifies the geographic and temporal scope of the cumulative impacts analysis area, provides a basis for the boundaries of each, identifies existing conditions within each cumulative impacts assessment area, identifies the direct and indirect effects of the proposed action and alternatives, and identifies past, present and reasonably foreseeable future actions making up the cumulative scenario. See, for example, PA/FEIS Water Resources Table 4.19-6, and PA/FEIS Wildlife Resources Table 4.21-2, *Cumulative Impacts to Selected Wildlife Resources from the PSPP*. The several renewable energy (solar and wind) projects being considered by the BLM's California Desert District are identified in Table 4.1-2, including the number of projects, acreage and total megawatts under consideration in the Palm Springs, Barstow, El Centro, Needles, and Ridgecrest Field Offices. Renewable energy projects on State and private lands are identified in Table 4.1-3. Also part of the cumulative scenario,

existing projects along the I-10 corridor in eastern Riverside County are identified in Table 4.1-4 and future foreseeable projects in this area are identified in Table 4.1-5. The PA/FEIS's analysis of cumulative impacts is adequate. The PA/FEIS analyzes cumulative impacts of past, present and reasonably foreseeable future actions, including utility-scale renewable and other development projects, on each of the resource areas in Chapter 4, *Environmental Consequences* including mitigation measures to address cumulative impacts.

Mitigation Measures. NEPA requires that an EIS include consideration of mitigation measures to reduce adverse environmental impacts. See, e.g., 42 U.S.C.A. § 4321 (purposes of NEPA include "to promote efforts which will prevent or eliminate damage to the environment. . ."). As described in Section 1508.20 and the CEQ's January 14, 2011, *Memorandum for Heads of Federal Departments and Agencies concerning Appropriate Use of Mitigation and Monitoring [etc.]*, mitigation includes:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

Although NEPA does not impose any substantive requirement that mitigation measures be implemented, the BLM discusses mitigation measures in the PA/FEIS in sufficient detail to ensure that environmental consequences have been fairly evaluated. See, for example, the summaries of mitigation measures recommended on a resource-by-resource basis throughout Chapter 4, *Environmental Consequences*; see also, PA/FEIS Appendix B. The BLM is not required to formulate and adopt complete mitigation plan: to comply with NEPA the mitigation plans proposed or recommended in connection with a project need not be legally enforceable, funded, or even in final form. The final mitigation measures that will be implemented as part of the project will be disclosed in the ROD.

The SA/DEIS and the PA/FEIS include extensive mitigation measures addressing the potential adverse project impacts of the proposed action and alternatives. Many of these are measures have been developed in coordination with the agencies primary authority over the resource area and/or have produced the anticipated results when implemented for other projects elsewhere in the State. Consequently, the recommended mitigation measures are anticipated to effectively address the adverse project impacts. In addition, many of the measures include standards or other requirements that, if not met, would trigger the need for additional mitigation. Many of the mitigation measures require the preparation of detailed plans during final design and prior to any activity on the project site. This is consistent with the requirements of NEPA because these

measures identify the impacts intended to be addressed by those plans and key activities that would be included in those plans to mitigate the identified impacts. In summary, the mitigation measures recommended in the PA/FEIS are adequate to address the adverse project impacts. Where there are adverse impacts that mitigation measures cannot entirely mitigate, these impacts have been identified as unavoidable adverse impacts of the proposed action and other alternatives, as applicable.

Consistency with FLPMA

As indicated in PA/FEIS Sections 1.2.1, *Major Authorizing Laws and Regulations [BLM]*, Table 1-1, *General Laws, Ordinances, Regulations and Standards (LORS)*, and elsewhere, the BLM processes applications for commercial solar energy facilities as right-of-way grants under Section 501(a)(4) of FLPMA and Title 43, Part 2804 of the CFR. FLPMA establishes public land policy; guidelines for administration; and provides for the management, protection, development and enhancement of public lands. In particular, the FLPMA's relevance to the proposed action is that Title V, Section 501, establishes BLM's authority to grant rights-of-way for generation, transmission and distribution of electrical energy. The BLM is processing the Applicant's application within the FLPMA framework.

5.5.2.3 Adequacy of Data Relied Upon

Commenters and Comments Addressed

Commenter	Comments
Center for Biological Diversity	3-007, 3-013, 3-014, 3-017, 3-018, 3-019, 3-034, 3-035, 3-037, 3-038, 3-042, 3-043, 3-045, 3-057, 3-066, 3-072, 3-098
California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)	4-04, 4-14, 4-16
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-13, 5-17, 5-27, 5-30,
California Unions for Renewable Energy (CURE)	6-003, 6-004, 6-006, 6-009, 6-010, 6-025, 6-027, 6-031, 6-076, 6-077, 6-078, 6-080, 6-081, 6-123, 6-167, 6-171

Summary of Issues Raised

1. ***New Significant Information Available:*** Some comments suggest that the PA/FEIS is inadequate because new information has become available since issuance of the SA/DEIS, including the Energy Commission's RSA and a number of surveys.
2. ***More and Updated Information Required for Analysis:*** Other comments suggest that the PA/FEIS is inadequate because more information is needed to establish existing conditions (e.g., for sensitive species, habitat and connectivity corridors, including MFTL, desert tortoise, MFTL, Western burrowing owl, the golden eagle, Coachella Valley milk-vetch, other special-status wildlife, as well as for the Palen Dune system, and vegetation and cultural resources) or to update references used to define the need for the project.

Response

NEPA requires the disclosure of relevant environmental considerations that were given a hard look by an agency, and thereby to permit informed public comment on agency's proposed action and alternatives that could be pursued with less environmental harm. To take the required "hard look" at the impacts of a proposal, an agency must rely on information that is of "high quality" (40CFR § 1500.1). Such information may include, for example, accurate scientific analysis, expert agency comments and comments resulting from public scrutiny. The requisite hard look does not require relevant data to be complete in all respects or to be generated if it is unavailable. Instead, a "hard look" under NEPA consists of a reasoned analysis containing quantitative or detailed qualitative information. See, BLM NEPA Handbook H-1790-1 (Jan. 30, 2008). The data and analyses provided should be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced (40 CFR 1502.15).

The SA/DEIS and PA/FEIS rely on quantitative data where possible, and detailed qualitative data under other circumstances. The BLM may rely on the best available information (even if it is not all the information that could be generated with unlimited time and funding about a resource or type of impact) provided that it is sufficient to allow a reasoned analysis of particular impacts, and the BLM need not necessarily postpone its consideration of a proposal while additional data is being developed –the endless loop of analysis that might otherwise result surely would lead to significant regulatory delays. Data and other information relied upon in preparing the PA/FEIS are identified in the individual sections as well as in the References section.

Energy Commission's RSA

The Energy Commission issued an RSA for the PSPP in September 2010. The RSA is neither a substantial change in the proposed action nor significant new information. Instead, it is the State's functional equivalent of this PA/FEIS. The BLM and Energy Commission cooperatively prepared the draft environmental analysis for the project in accordance with NEPA and CEQA; they agreed to prepare stand-alone final documents, one for NEPA (this PA/FEIS) and one for CEQA (the RSA). The BLM reviewed and relied on the RSA in the preparation of this PA/FEIS because the substantive analysis and conclusions of the federal and State environmental review processes are substantially similar even though the format of the documentation is different. For example, because the BLM and Energy Commission developed mitigation measures for the project in concert with one another, the resulting measures apply equally to the Energy Commission's process as "conditions of certification" and the BLM's process as "mitigation measures." The CEC's analysis of environmental impacts of the proposed action is not a "change in the proposed action" at all, much less a substantial one.

Similarly, "new information" is only "significant new information" such as may trigger a need to supplement a draft EIS only if it could alter the results of an agency's original environmental analysis or, in other words, shows that the proposed action would affect the quality of the human environment in a new or more intense way than already considered. While it is true that the RSA was issued after the SA/DEIS was circulated for agency and public review, the RSA does not identify a new or more intense effect than those previously analyzed. Accordingly, the RSA is not "significant new information" under NEPA.

Subsequent Studies and Reports

A number of comments stated that new data in the form of reports, studies and plans that are required in the SA/DEIS were not available or were insufficient at the release of the draft document. The BLM acknowledges that it anticipated that additional reports, studies and plans would be prepared and completed after the SA/DEIS was issued for agency and public input. As noted above, NEPA does not require mitigation plans proposed or recommended in connection with a project to be in final form, or even funded or legally enforceable. No studies or reports have become available subsequent to issuance of the SA/DEIS that has caused a substantial change in a proposed action or is “significant” for purposes of NEPA. To the contrary, any such studies or reports have merely clarified or complimented earlier understandings or assumptions.

Additional surveys are anticipated to be required or completed as a result of other agencies’ statutory or regulatory obligations, or within specific areas of expertise. For example, the FWS Endangered Species Act Section 7 consultation remains in progress. This process is independent of and separate from the NEPA process for the project, and will be prepared in accordance with the schedule and procedures established in the relevant regulatory regime. Studies required or completed in satisfaction of other agencies’ requirements that become available before the ROD is issued will be evaluated by the BLM prior to its decision on the PSPP. BLM is making every effort to complete these processes in coordination with NEPA, and to finalize these other processes before the issuance of the ROD. Other agencies and the public would have the opportunity to review such reports to the full extent of the relevant governing law.

Mitigation Measures and Further Study

As explained in Section 6.8.4 of the BLM NEPA Handbook H-1790-1, “Mitigation includes specific means, measures or practices that would reduce or eliminate effects of the proposed action or alternatives.” Mitigation may be used to reduce or avoid adverse impacts, whether or not they are significant in nature. Reasonable, relevant mitigation measures that could improve the project are provided in Appendix B, *Conditions of Certification*, and are called out on an issue-by-issue basis throughout Chapter 4, *Environmental Consequences*, regardless of agency jurisdiction. BLM-specific mitigation measures, developed consistent with CEQ guidance, also are identified and generally work in coordination with the Energy Commission’s conditions of certification. Mitigation measures are identified to reduce or eliminate adverse effects to biological, physical, or socioeconomic resources even in instances where the precise extent of impacts is somewhat uncertain because of the complexity of the issues or variability (see, e.g., 4.19.4, *Summary of Mitigation Measures [relating to Water Resources]*).

Multiple mitigation measures would require surveys. Surveys serve myriad purposes, including refining baseline information, defining parameters, assessing compliance, and identifying areas where adaptive management may be appropriate. As noted above, the BLM has used the best available science in the PA/FEIS, including site-specific data collected over appropriate timeframes, under the proper protocol, by the proper experts in the field, and recommends additional survey work to confirm assumptions and inform adaptive management. The purpose of such surveys is to avoid or more effectively mitigate possible impacts on the human environment.

Mitigation measures that would require supplemental plans would be developed in consort with the appropriate resource and regulatory agency. The Tortoise Relocation/Translocation Plan required by BIO-10, for example, would be developed in accordance with the performance standards established in the mitigation measure, would be consistent with current USFWS approved guidelines, would include all revisions deemed necessary by BLM, USFWS, CDFG and Energy Commission staff, and would be subject to agency approval. The information provided in the PA/FEIS about the Tortoise Relocation/Translocation Plan is detailed and of high-quality. In any event, other agencies and the public would have an opportunity to comment on the proposed plan pursuant to the approval process.

Similarly, where a mitigation measure allows for the acquisition of lands, any required studies would be performed according to FWS and CDFG protocol at the time that specific land is proposed for evaluation as habitat for mitigation. It would not be possible to provide such studies for agency or public review until the land has been identified.

Some comments suggest that the BLM should require the Applicant to develop additional information after project approval, in the form of pre-construction surveys, in order to avoid or further reduce impacts. In the context of the desert tortoise, the Energy Commission has recommended that additional areas be surveyed; however, the Applicant instead may elect, consistent with requirements, to presume that desert tortoises are present, forgo the survey, and acquire sufficient mitigation lands.

In this context, mitigation measures that predicate future actions and obligations on data, analysis and results of future studies do not improperly defer mitigation or deprive the public of a meaningful opportunity to comment on the adequacy of the mitigation measures. To the contrary, the mitigation measures proposed in the PA/FEIS provide performance standards that are sufficiently detailed to allow for meaningful agency and public review. Requirements for the timing, coverage and contents of the surveys are established, as are standards for Surveyor Qualifications and Training. Requirements for operational plans that have yet to be developed also are established in great detail. See, e.g., BIO-13 (requiring the development and implementation of a Raven Monitoring and Control Plan) and BIO-14 (requiring the development and implementation of a Weed Management Plan).

5.5.2.4 Purpose and Need

Commenters and Comments Addressed

Commenter	Comments
Center for Biological Diversity	3-039, 3-040, 3-089, 3-096
California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)	4-21, 4-22, 4-23
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-16, 5-19
California Unions for Renewable Energy (CURE)	6-008, 6-158, 6-162, 6-166

Summary of Issues Raised

1. **Narrow BLM Statement:** Several comments suggested that the BLM's statement of Purpose and Need is too narrow.
2. **DOE's Statement:** Other comments provided input concerning the DOE's statement of purpose and need.

Response

The BLM's Statement of Purpose and Need

BLM has discretion in defining the purpose and need of the proposed action (40 CFR 1502.13). As explained in Section 6.2.1 of the BLM NEPA Handbook H-1790-1, a carefully crafted purpose and need statement can "increase efficiencies by eliminating unnecessary analysis and reducing delays in the process." The statement of purpose and need dictates the range of alternatives, because action alternatives are not "reasonable" if they do not respond to the purpose and need for the action. As correctly noted in several comments on the project, the narrower the purpose and need statement, the narrower the range of alternatives that must be analyzed; the converse also is true. Guidance provided in BLM Instruction Memorandum 2011-059, *National Environmental Policy Act Compliance for Utility-Scale Renewable Energy Right-of-Way Authorizations* (Feb. 8, 2011), states:

For most renewable energy projects the BLM's purpose and need for action will arise from the BLM's responsibility under the Federal Land Policy and Management Act (FLPMA) to respond to a right-of way application requesting authorized use of public lands for a specific type of renewable energy development. The purpose and need statement should also describe the BLM's authorities and management objectives with respect to renewable energy and public lands (see example below). Additionally, offices should include a description of the BLM's decision(s) to be made as part of the purpose and need statement to help establish the scope of the NEPA analysis (BLM NEPA Handbook Section 6.2). In responding to a right-of-way application the BLM may decide to deny the proposed right-of-way, grant the right-of way, or grant the right-of-way with modifications. In accordance with the right-of-way regulations, modifications may include modifying the proposed use or changing the route or location of the proposed facilities (43 CFR 2805.10(a)(1)).

Several comments requested that the BLM substantially expand its statement to address more broad (and less specific) purposes in order to allow for consideration of a broader range of alternatives. However, the BLM's purpose and need for the proposed action, as stated in Section 1.1.1, *BLM Purpose and Need*, of the PA/FEIS, is consistent with applicable law and BLM policy. It is based on two key considerations: (i) the potential action the BLM could or would take on the specific proposed action; and (ii) the response of the BLM in meeting specific directives regarding the implementation of renewable energy projects on federally-managed lands. The primary action that BLM is considering is a response to a specific ROW grant application from the Applicant to construct and operate a specific solar project on a specific site managed by the BLM. As a result, the BLM determined that a key purpose of this project was to determine whether to approve, approve with conditions, or deny that ROW application for the total 500 megawatt (MW) PSPP (two units of 250 MW each). A statement of this breadth led the BLM to consider three additional "build" or "action" alternatives on the same site (Reconfigured Alternatives 1 and 2 and a Reduced

Acreage Alternative), one no action alternative (No Action Alternative A) and two no project alternatives pursuant to which the CDCA Plan would be amended but the PSPP would not be approved (CDCA Plan Amendment/No Action Alternative B and CDCA Plan Amendment/No Action Alternative C) (see PA/FEIS Section 2.4.3, *Alternatives Considered*).

The BLM declined requests to expand the statement to include “implement[ing] Federal policies, orders and laws that mandate or encourage the development of renewable energy sources ... and the Federal policy goal of producing 10% of the nation’s electricity from renewable resources by 2010 and 25% by 2025... and to support the State of California’s renewable energy and climate change objectives....” The purposes in this statement are outside the purview of the BLM because the need for increased energy from renewable sources is not BLM’s responsibility. However, the BLM can respond, within the context of specific directives under which it operates, to those needs by considering ROW grant applications for projects that would produce renewable energy on federally-administered lands. As a result, the BLM purpose for the project responds in part to the specific directives related to renewable energy production that are summarized in PA/FEIS Section 1.1.1, *BLM Purpose and Need*. As noted there, these directives authorize the BLM to act expediently in increasing the production of nonrenewable energy within the bounds of its other authorities regarding the management of federal lands. The BLM is not in the business of developing and operating energy production facilities; its responsibilities are to consider and to approve, approve with modification, or deny issuance of a ROW grant to any qualified individual, business, or government entity and to direct and control the use of rights-of-way on public land in a manner that:

1. Protects the natural resources associated with public lands and adjacent lands, whether private or administered by a government entity;
2. Prevents unnecessary or undue degradation to public lands;
3. Promotes the use of rights-of-way in common considering engineering and technological compatibility, national security and land use plans; and
4. Coordinates, to the fullest extent possible, all BLM actions under the regulations with State and local governments, interested individuals and appropriate quasi-public entities.

As directed by Secretarial Order 3285, the BLM has identified renewable energy projects on federally-administered lands as a priority throughout the lands it manages. As a result, the BLM is considering ROW grants for various renewable energy projects throughout California and other western states. Each of these projects is considered by the BLM on its own merits and with consideration of the impacts of the specific project on a specific site. Therefore, the statement of purpose and need for each project, including the project, is specific to each project within the broader scope of the directives prioritizing renewable energy development on federally managed lands. The PA/FEIS considers other applications for energy projects in the cumulative impacts analyses provided in PA/FEIS Section 4.1.4, *Cumulative Scenario Approach*.

The BLM believes that the purpose and need for the PSPP is consistent with the directives described above and the requirements of Title V of FLPMA, and satisfies the requirements of

NEPA. Therefore, the purpose and need for this project was neither revised in response to these comments nor replaced wholesale in favor of replacement statements proposed in comments.

Other comments suggest that, in light of the DOE’s statement of purpose and need, the SA/DEIS should have considered alternatives that would provide funding to other types of projects. It did so. The full range and variety of alternatives considered in the SA/DEIS is described in PA/FEIS Section 2.4, *Alternatives Development and Screening Process*, including other solar technologies, types of renewable energy, and alternative methods to generate electricity.

5.5.2.5 Alternatives

Commenters and Comments Addressed

Commenter	Comments
Joshua Tree National Park	1-18
Brendan Hughes, Individual	2-04
Center for Biological Diversity	3-002, 3-004, 3-005, 3-007, 3-010, 3-011, 3-090, 3-091, 3-092, 3-093, 3-094, 3-095, 3-096
California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)	4-11, 4-13, 4-21, 4-25
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-08, 5-10, 5-11, 5-20, 5-21, 5-22, 5-23, 5-24, 5-25, 5-26
California Unions for Renewable Energy (CURE)	6-006, 6-043, 6-085, 6-144, 6-145, 6-160, 6-161, 6-162, 6-163, 6-164, 6-165, 6-166, 6-199, 6-210
Western Watersheds Project	7-01, 7-02

Summary of Issues Raised

1. ***Range of Alternatives:*** Several comments suggested that the range of alternatives was unreasonably narrow and should be expanded to address impacts, specifically and generally.
2. ***Alternatives Selection and Analysis:*** Other comments allege that the SA/DEIS failed to provide a sufficient foundation for rejecting alternatives from further consideration and proposed that certain of the alternatives should have been carried forward for more detailed analysis.

Response

NEPA directs the BLM to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources” (NEPA § 102(2)(E)). As explained in BLM Instruction Memorandum 2011-59, “the BLM must explore alternative means of meeting the purpose and need for the action. For a renewable energy right-of-way application, alternatives will include denying the application (the No Action Alternative) and granting the application as submitted by the applicant following the pre-application process (the Proposed Action). The BLM must consider other reasonable alternatives through the NEPA process, including modifications to the right-of-way application as submitted, that meet the purpose and need for the action and provide a clear basis for choice

among options (40 CFR 1502.14).” A discussion of alternatives need not be exhaustive. What is required is information sufficient to permit the BLM to make a “reasoned choice” among alternative so far as environmental aspects are concerned (40 CFR 1502.14; see also, BLM NEPA Handbook H-1790-1 § 6.6).

In order to establish the reasonable range of alternatives to be considered, the defined project purpose and need functions as the first and most important screening tool. Thereafter, the range of alternatives is based on the applicant’s proposed action, alternatives that would reduce or avoid adverse impacts of the Applicant’s project, and appropriate No Action Alternatives. The full range of possible alternatives may be narrowed to a “reasonable number” that covers the full spectrum of alternatives. In determining the alternatives to be considered, the emphasis is on what is “reasonable” rather than on whether the proponents or others like or are capable of implementing the alternative. See BLM NEPA Handbook H-1790-1 § 6.6.1 and BLM Instruction Memorandum 2011-59.

Alternatives Considered

The number and range of alternatives considered in the EIS is reasonable. In total, 24 alternatives to the proposed action were considered by the BLM. Six were carried forward, in addition to the proposed action, for more detailed review. Three of the six are action alternatives (Reconfigured Alternatives 1 and 2 and the Reduced Acreage Alternative); one is a “no action” alternative, under which no project and no CDCA Plan amendment would be approved (No Action Alternative A); and two are “no project” alternatives under which the CDCA Plan would be amended but the PSPP would not be approved (CDCA Plan Amendment/No Action Alternatives B and C).

Alternatives Eliminated from Further Consideration

Alternatives that were considered but eliminated from detailed analysis, as well as the rationale for their elimination (40 C.F.R. 1502.14(a)), are described in SA/DEIS Section B.2.8, *Alternatives Considered but Not Evaluated in Further Detail*, and PA/FEIS Section 2.4.5, *Alternatives Considered but Eliminated from Detailed Analysis*. The BLM believes the number of alternatives described to be reasonable in light of the breadth of the statement of purpose and need. Further, the alternatives carried forward for more detailed consideration in the PA/FEIS sufficiently cover the full spectrum of alternatives because the scope of impacts assessed went from none (no action) to some (reduced acreage) to lessened in some respects (reconfigured).

Because the range of alternatives considered in the EIS is reasonable and covers the full spectrum of concerns, NEPA does not require the BLM to consider additional alternatives. Nonetheless, the BLM agrees that additional detail could have been provided explaining the rationale for eliminating some alternatives from further consideration (40 CFR 1502.14(a)). Consequently, PA/FEIS Section 2.4.5, *Alternatives Considered but Eliminated from Detailed Analysis* has been clarified to provide additional details.

For example, some comments suggested that the BLM should consider an *all-private-lands* or *public-private lands* alternative. However, the BLM did not carry forward such an alternative for

further consideration because the BLM's role in managing its lands includes facilitating land uses on its lands while appropriately balancing and responding to multiple interests concerning federal mandates, collaborating agencies' directives, and BLM's own interests. As a result, the alternatives considered in the SA/DEIS and the PA/FEIS focus on alternatives that would require an action by the BLM and that respond to the specific application for a ROW grant received by the BLM for the PSPP (see, e.g. BLM NEPA Handbook H-1790-1, § 6.6.1, *Reasonable Alternatives*). Further, an all-private-lands or a public-private lands alternative, would present considerable challenges, including difficulties associated with obtaining sufficient site control from a number of different landowners who may or may not be motivated to allow utility-scale energy generation facilities to be developed on their property, the large number of acres that would be required for a viable project of this type, and the absence of any clear environmental benefit associated with development on private versus public land. Accordingly, BLM declined to accept suggestions that it consider the placement of the proposed utility-scale renewable energy projects, such as the project, on private lands or a combination of public and private lands other than the combinations analyzed in the PA/FEIS. Suggestions that Applicants must provide additional evidence of efforts to obtain site control on private lands are dismissed, since such evidence would not meaningfully inform or expand the range of alternatives.

Other comments suggested that sites *closer to urban areas* or on *previously disturbed lands* should have been considered. The BLM did not consider such alternatives in the SA/DEIS because the consideration of the three alternative sites described above was adequate in identifying and considering alternative sites. Further, locating a utility-scale renewable energy generating facilities in an urban area or on previously disturbed lands would present considerable challenges, such as those described above, relating to site control, negotiations with numerous landowners, and overall acreage needs. *Alternative sites on other BLM managed lands* were not considered because the BLM is responding to the application for the specific parcel identified in the Applicant's ROW grant application. In addition, there are many other renewable energy projects that have submitted applications for the use of BLM-administered lands. Consequently, other possible BLM-administered lands in the vicinity of the site already are subject to applications from other applicant and, thus, are not considered by the BLM to be available for alternative projects until those applications are considered and either approved or rejected by the BLM. Finally, many of the areas that previously have been disturbed or are closer to urban areas are not within the jurisdiction of the BLM and, therefore, would require no action by the BLM.

In addition, the PA/FEIS discusses, and in some cases includes more information, with respect to the following alternatives that specifically were identified in comments on the SA/DEIS: conservation and demand side management; a distributed generation solar alternative; and alternative technologies, e.g. linear Fresnel technology. A reduced power alternative and a reduced acreage alternative each were considered in the analysis, as were alternative sites. The BLM has declined to consider alternative locations for the Red Bluff Substation Project because this connected action is not part of the proposed action (see Common Response 5.5.2.2, *Consistency of the PA/FEIS with NEPA*). Other comments suggested alternatives that would provide *funding to other types of projects*, such as community projects for training and implementation of conservation measures and reduce the need for additional power sources and

provide GHG offsets. Again, this alternative was not considered because the BLM is responding to the application for the specific parcel identified in the Applicant's ROW grant application. A suggested alternative that would involve *less grading area of the site* (e.g., leaving strips of vegetation) was explored in Solar Power Tower Technology alternative in the PA/FEIS.

Although the PA/FEIS provides additional information about potential alternatives that were identified in the SA/DEIS, such information is not "significant" under NEPA (40 CFR 1502.9).

5.5.2.6 Supplementation / Recirculation

Commenters and Comments Addressed

Commenter	Comments
Center for Biological Diversity	3-007, 3-031, 3-035, 3-036, 3-038, 3-042, 3-054, 3-057, 3-058, 3-066, 3-072, 3-076, 3-095, 3-098
California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)	4-020
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-17, 5-19, 5-27, 5-30, 5-31
California Unions for Renewable Energy (CURE)	6-003, 6-007, 6-008, 6-009, 6-010, 6-011, 6-012, 6-014, 6-015, 6-016, 6-017, 6-018, 6-019, 6-020, 6-021, 6-022, 6-023, 6-024, 6-025, 6-027, 6-033, 6-034, 6-073, 6-102, 6-139, 6-171
Western Watersheds Project	7-08

Summary of Issues Raised

1. ***Need to Supplement and Recirculate SA/DEIS.*** Comments suggest that supplementation and recirculation of the EIS is required for a variety of reasons.

Response

As explained in Section 5.3 of the BLM NEPA Handbook H-1790-1, supplementing an EIS is required only in the following limited circumstances:

1. When substantial changes to the proposed action are made and are relevant to environmental concerns (40 CFR 1502.9(c)(1)(i));
2. When a new alternative is added that is outside the spectrum of alternatives already analyzed (see Question 29b, CEQ Forty Most Asked Questions Concerning CEQ's NEPA Regulation, March 23, 1981); and
3. When there are new significant circumstances or information relevant to environmental concerns and have bearing on the proposed action or its effects (40 CFR 1502.9(c)(1)(ii)).

Substantial Changes to Proposed Action. Changes in elements of the proposed action that have been made since issuance of the SA/DEIS include the following: a minor refinement of the daily construction schedule, proposed use by the waste water system of two 4-acre evaporation ponds per power block; and the use of an on-site concrete batch plant. The revised construction schedule and

descriptions and analyses of the evaporation ponds and concrete batch plant were provided in the CEC's September 2010 RSA and December 2010 Commission Decision. No modification has been made to the configuration of the project. The development and refinement of Southern California Edison's proposal for the Red Bluff Substation (including associated access roads and spur roads) are not part of the proposed action (see PA/FEIS Section 2.3, *Connected Actions*, and Section 4.1.7, *Incorporation of the Analysis of the Red Bluff Substation Project by Reference*). Drainage facilities have not been redesigned for the project site. These changes, and the CEC's analysis of related impacts, have been independently reviewed by BLM.

These changes are not "substantial" under NEPA. As explained in Section 5.3.1 of the BLM NEPA Handbook, "'substantial changes' in the proposed action may include changes in the design, location, or timing of a proposed action that are relevant to environmental concerns (i.e., the changes would result in significant effects outside of the range of effects analyzed in the draft or final EIS)." None of the minor changes identified since the issuance of the SA/DEIS would result in significant effects outside of the range of effects analyzed in the DEIS:

Refinement of the Daily Construction Schedule. The resource areas potentially affected by the clarification in the daily work schedule are primarily noise and air quality. Noise impacts could be different because the additional work hours would occur outside normal work hours and include nighttime hours where ambient noise levels are lower than during the day. Also, the impacts of project emissions on ambient air quality are affected by meteorological conditions. There are calm atmospheric conditions during non-daylight hours including the hours around dawn and dusk that must be taken into account when analyzing the impacts of construction activities in those times of the day. With respect to noise impacts, the Applicant has agreed to limit construction activities outside the previously proposed work hours, consistent with the intent of Riverside County Noise Ordinance. This ordinance prohibits construction activities outside of specified hours when within 0.25 mile of an existing residence. The proposal to refine and limit work hours in this way would not cause noise impacts that are substantially different than those previously analyzed. Air quality impacts associated with the limited additional nighttime operations proposed have been modeled and conclude that adverse air quality impacts would not result. Based on the results of the ambient air quality impacts analysis, the project would not have an adverse impact to air quality resources given the constraints outlined within this discussion. Accordingly, refinement of the daily construction schedule would not cause impacts that are substantially different than those previously analyzed.

Newly Proposed Evaporation Ponds for Wastewater. The resource areas that could be affected by the use of evaporation ponds include water resources (groundwater) and wildlife (birds and other creatures that could be attracted to the ponds as a source of drinking water or landing surface). Operation of the ponds would be regulated heavily by waste discharge requirements to reduce and mitigate environmental impacts. Consistent with the analysis conducted by the CEC, the BLM has determined that the implementation of mitigation measures such as SOIL&WATER-4 (compliance with waste discharge requirements issued Groundwater Level Monitoring, Mitigation and Reporting), BIO-26 (Evaporation Pond Netting and Monitoring) and others would reduce potential impacts associated with the evaporation ponds to an insubstantial level.

New on-site Concrete Batch Plant. The construction-related use of a concrete batch plant could cause air quality concerns from dust, water supply concerns associate with demand, water quality concerns from wash water runoff, and waste concerns from piles of improperly mixed or leftover concrete. Consistent with the analysis conducted by the CEC, the BLM has determined that the additional emissions, water demand and other impacts would be similar to those already analyzed and, with the implementation of mitigation measures, would not cause new or different, more intense impacts than those already identified.

New Alternative Added. One new alternative was identified after the SA/DEIS was issued but before the CEC issued its RSA and Commission Decision: Reconfigured Alternative 2.

Reconfigured Alternative 2 is within the spectrum of alternatives already analyzed: it proposes a reconfiguration of the proposed site (like the Reconfigured Alternative analyzed in the SA/DEIS) that would reduce potential impacts of the proposed action on targets resources (like Reconfigured Alternative 1 and the Reduced Acreage Alternative, each of which were analyzed in the SA/DEIS).

The same as the proposed action, this alternative would be developed primarily BLM-administered public land and could include some privately-owned land. Reconfigured Alternative 2, inclusive of Options 1 and 2, is proposed in the same general location as the proposed action: there would be significant areas of overlap between the respective footprints. Also the same as the proposed action, Reconfigured Alternative 2 would have a nominal output of 500 MW and consist of two independent 250 MW power plants. Unit 1 would be reconfigured under either Reconfigured Alternative 1 (which was analyzed in the SA/DEIS) or the new Reconfigured Alternative 2, although the shape of the reconfigurations would be different. The purpose of the reconfiguration in both instances would be to reduce impacts to the sand dune habitat and the Mojave fringe-toed lizard in the northeastern portion of the site. Unit 2 would be the same under Reconfigured Alternative 2 as it would be under the proposed action. Similar on- and off-site facilities would be required for the new alternative as would be required for the proposed action. Accordingly, NEPA does not require supplementation of the EIS on this basis.

New Significant Circumstances or Information. The NEPA process is designed to provide information to examine impacts and allow for the creation of mitigation measures and alternatives to identify ways to improve a project while further minimizing its impacts. The information disclosure and sharing process inherent in NEPA does not exist in a vacuum. Improvements, additional mitigation, and/or project design features frequently are added to a proposed action as a result of comments received on a draft EIS. The overall design of, and impacts related to, the project as analyzed in the PA/FEIS have not greatly changed since the SA/DEIS, and none of the information that became available after the SA/DEIS has been considered “significant” for NEPA purposes, after a thorough review.

The data relied upon in the SA/DEIS was adequate to inform the BLM’s consideration of the project and to allow a reasoned choice among alternatives. Accordingly, the additional information requested in various comments is not necessary for NEPA adequacy and therefore would not trigger a need to supplement. Further, for example, although the Energy Commission’s RSA and additional studies have become available since the issuance of the SA/DEIS, this

information merely compliments or clarifies prior understandings or confirms earlier assumptions. Additional rationale for the elimination of alternatives from further consideration similarly compliments or clarifies information already provided. None of the new information identified by comments and addressed in the PA/FEIS, as appropriate, is considered “significant,” including new survey results including data from special-status plant and golden eagle surveys conducted this year; CEC’s Revised Staff Assessment or final Commission Decision for project, neither of which was available in the SA/DEIS; revised impacts to cultural resources in the reconfigured alternative; confirmed and consistent project disturbance area (amount of disturbed acreage); and confirmed and consistent estimated amount of cut and fill for the project. NEPA does not require supplementation or recirculation under these circumstances.

Accordingly, it is not necessary to affirmatively establish compliance with LORS in the FEIS. Therefore, the allegation is unfounded that supplementation and recirculation of the EIS would be required on this basis.

The SA/DEIS and the PA/FEIS contain sufficient information, including information regarding resources on the BLM-administered lands on the project site, and analyses to understand and document the effects of the project, the Agency Preferred Alternative, the other action alternatives, and the no action alternatives and, therefore, supplementation and recirculation of the environmental document is not required.

5.5.2.7 Biological Resources

Commenters and Comments Addressed

Commenter	Comments
Brendan Hughes, Individual	2-05, 2-06, 2-07
Center for Biological Diversity	3-001, 3-002, 3-011, 3-020, 3-021, 3-030, 3-032, 3-042, 3-045, 3-046, 3-048; 3-049, 3-050, 3-051, 3-052, 3-053, 3-054, 3-055, 3-056; 3-057, 3-058; 3-060, 3-061; 3-062; 3-063, 3-064; 3-065; 3-068, 3-069
California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)	4-02, 4-03, 4-05, 4-06, 4-07, 4-08, 4-09, 4-10; 4-12; 4-14, 4-15, 4-17, 4-18, 4-19
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-06, 5-08, 5-09, 5-28, 5-30
California Unions for Renewable Energy (CURE)	6-005, 6-026, 6-027, 6-035, 6-036, 6-037, 6-038, 6-039, 6-040, 6-041, 6-042, 6-044, 6-045, 6-046, 6-047, 6-048, 6-049, 6-050, 6-051, 6-052, 6-053, 6-054, 6-055, 6-056, 6-057, 6-058, 6-059, 6-060, 6-062, 6-063, 6-064, 6-066, 6-068, 6-069, 6-070, 6-071, 6-072, 6-073, 6-074, 6-075, 6-079, 6-083, 6-084, 6-086, 6-088, 6-089, 6-090, 6-091, 6-093, 6-094, 6-095, 6-096, 6-098, 6-117, 6-123, 6-124, 6-125, 6-169, 6-170, 6-171; 6-172, 6-173, 6-174; 6-175; 6-176; 6-177; 6-178, 6-179; 6-180, 6-181, 6-182, 6-183, 6-184, 6-185, 6-186, 6-187, 6-188, 6-189, 6-192, 6-194, 6-195, 6-197, 6-198, 6-200, 6-201, 6-202, 6-203, 6-204, 6-205, 6-206, 6-207, 6-209
Western Watersheds Project	7-02, 7-03, 7-05, 7-07, 7-08

Summary of Issues Raised

1. **Adequacy of Baseline Data and Resulting Analysis:** Various comments question the adequacy of analysis, including whether: baseline information or surveys are adequate and, therefore, whether the impact analyses reliant upon them are adequate; the identification of affected special-status species is adequate and, therefore, whether the impact analyses based on these identifications, are adequate; and the cumulative impact analysis is adequate.
2. **General Biological:** Various comments express opinions about general biological issues, including: whether impacts can be fully mitigated; concerns with adequacy of compensation mitigation; concerns with toxic compounds to be used for weeds; concerns that recovery from the proposed action would be slow, over longevity of mitigation; about the adequacy of commitments for mitigation implementation and flexibility.
3. **Vegetation:** Comments state that special-status plants were not adequately evaluated or surveyed.
4. **Wildlife:** Comments express concern about bighorn sheep surveys, impacts and mitigation; about insects; about badgers and kit foxes, including relocation concerns; about surveys, impacts and mitigation of burrowing owl; concern about impacts and mitigation identified for MFTLs, particularly connectivity and movement; desert tortoise monitoring, impacts, movements, relocation; other special-status wildlife besides desert tortoise; lasting effects to wildlife; the impacts of proposed evaporation ponds and mirrors, including whether the proposed mitigation of such impacts are adequate; and Golden eagles, including about the adequacy of the impact analysis and proposed mitigation for impacts on foraging habitat.

Response

Adequacy of Baseline Data and Resulting Analysis

The SA/DEIS and PA/FEIS based upon it adequately analyze impacts on biological resources, including vegetation and wildlife. The Applicant and consultants coordinated with BLM, USFWS, CDFG and CEC on the requirements for species-surveys and survey protocols, if any. A great deal of current baseline information was acquired for the project study area, including that presented in the Application for Certification (AFC), SA/DEIS, and the CEC's RSA and Commission Decision. See PA/FEIS Section 3.18, *Vegetation Resources*; Section 3.22, *Wildland Fire Ecology*; and Section 3.23, *Wildlife Resources*, which describe these respective affected environments. Most biological data relevant to the project study area were collected in the last three years. Additionally, reports regarding fall 2009 and spring 2010 surveys for rare plants and wildlife (CEC RSA, 2010) were used in preparation of the RSA and the PA/FEIS. Protocol surveys were reviewed and approved by appropriate agencies. Further, surveys have necessary limitations inherent in their designs, but the designs are to maximize detection for the unit of effort expended.

Mitigation Measure and CEC Condition of Certification BIO-19, *Special-Status Plant Impact Avoidance, Minimization and Compensation*, requires the Applicant to complete late-season botanical surveys for special-status plants that could have been missed by spring surveys; surveys are consistent with BLM and CDFG plant survey protocols. The protocols specify floristic surveys and qualifications for surveyors to ensure that any new species not previously anticipated

are detected. If late-season rare plants are detected during the surveys, BIO-19 also specifies detailed performance standards for when mitigation would be required and the measures required to compensate for those impacts. BIO-19 has been revised to include a requirement for triggers and performance standards for mitigation based on the results of late-season botanical surveys, off-site mitigation through compensation (acquisition) or restoration and enhancement, site design modifications to avoid peripheral occurrences of special-status plants, and other impact avoidance and minimization measures for rare plants. BIO-19 is summarized in PA/FEIS Section 4.17.4, *Summary of Mitigation Measures [relating to Impacts on Vegetation Resources]*, and set forth in full in Appendix B, *Conditions of Certification*.

More survey information, whether for special-status plants or endangered animals, is always preferable when doing environmental analysis for NEPA, CEQA, or the federal and State endangered species acts. Even so, the special-status plant surveys for the project were extensive, professional, consistent with agency protocol, covered multiple years, and are by any standard a legally sufficient analysis. The survey data were entirely sufficient for reviewing agencies to determine that the project's impacts to late-season special-status plants are significant, that avoidance and other mitigation are required, and to allow decision makers to make intelligent judgments about the project.

The desert tortoise surveys conducted by the Applicant provide an adequate basis for assessing impacts of the project and BLM concurs with the characterization of the project site as having low tortoise densities. The Applicant conducted updated, spring 2010 protocol-level surveys for desert tortoise within the project area, and the results have been included in the CEC's RSA and Commission Decision and BLM's PA/FEIS. PA/FEIS Section 4.21, *Impacts to Wildlife Resources*, provides a detailed analysis of the impacts of the project on desert tortoise.

In response to other specific comments regarding biological resources data, a full census of all individuals of the whole kit fox population is not necessary to analyze impacts of the proposed action and alternatives and to formulate appropriate mitigation measures. Underreporting the amount of active western burrowing owls on the project site and within the buffer area would not serve the interests of the Applicant as pre-construction surveys are required and mitigation measures are required of all western burrowing owl locations in the project disturbance area. Also, the presence of burrowing (fossorial) mammals, such as badgers, can be detected while performing other surveys for other focal burrowing species, such as desert tortoises and western burrowing owls. Badger population size and dynamics are not necessary to determine if the proposed action could impact badgers, or by what means any such impacts would manifest themselves. The PA/FEIS acknowledges at least two pairs of resident western burrowing owls within the project disturbance area in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*. Incidental sightings of MFTL matched the distribution of suitable habitat, and all suitable habitat is considered occupied. The impact analysis was performed on that basis.

Avian point counts were conducted at the project site in spring 2009, providing some quantitative information about resident and migratory birds at the site. Additional information from more bird surveys during project operation would not improve the impact analysis for bird-mirror collision

potential. Information about current bird use at the site would provide little insight as to the number of birds that might occur in a barren, graded solar field, or the likelihood of those birds colliding with mirrors. Mitigation Measure BIO-16, *Avian Protection Plan*, requires data to be collected to determine if such impacts occur, and requires development and implementation of adaptive management to avoid and minimize avian deaths or injuries should they occur.

Further, more analysis went into determination of special-status plants to be surveyed than one person's opinion. PA/FEIS Table 3.18-2, *Vegetation Resources*, identified Coachella Valley milk-vetch as having potential to occur in the project study area. The analysis includes the direct, indirect and cumulative impacts of the project on Harwood's milkvetch, ribbed cryptantha and other special-status plants in PA/FEIS Section 4.17, *Impacts to Vegetation Resources*.

The baseline information and surveys conducted for and reported in the SA/DEIS and PA/FEIS are adequate, as is the analysis of direct, indirect and cumulative impacts that was conducted based on that baseline information.

General Biological

Impacts and Mitigation Measures. PA/FEIS Section 4.17, *Impacts to Vegetation Resources*, Section 4.21, *Impacts to Wildlife Resources*, and Appendix I, *Biological Resource-related Cumulative Impacts*, address the impacts to vegetation and wildlife resources, as well as discuss residual impacts and unavoidable adverse impacts from the proposed action and alternatives.

The PA/FEIS identifies residual impacts and unavoidable adverse impacts at the ends of Sections 4.17, *Impacts to Vegetation Resources*, and 4.21, *Impacts to Wildlife Resources*. These would constitute lasting impacts to biological resources even after mitigation measures are implemented.

Compensatory habitat will be acquired to address project-related habitat loss for desert tortoise, burrowing owl and MFTL among other sensitive plant and wildlife species. Designated critical habitat for Desert tortoise would be compensated at the maximum ratio of 5:1 or replaced via the deposit of funds into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF) (see, BIO-12 as summarized in PA/FEIS Section 4.21.4, *Summary of Mitigation Measures*, and set forth in full in Appendix B, *Conditions of Certification*). The SA/DEIS does not include any evidence demonstrating there is adequate, private compensatory land in the region available for mitigation of impacts to not only the Desert Tortoise, but the MFTL, western burrowing owl, and other special-status species. Agencies have determined that sufficient compensatory mitigation lands are available in the appropriate areas to fulfill this acquisition requirement. Sufficient controls and criteria are included in the mitigation measure to ensure that appropriate habitat is found.

Uncertainty is a common factor in predictions of environmental effects, whether natural or anthropogenic. Several of the mitigating measures have monitoring and adaptive management components in case predictions do not match reality. In the development of weed or fire management plans, for instance, adaptive management components deal with issues of

uncertainty. Mitigation measures have become more specific and refined since the SA/DEIS. Details such as schedules for plans or implementing various measures were developed, methods for verification of implementation were specified, and funding mechanisms and flexibility were explored. Mitigation measures are recommended for the identified losses of species and special habitats identified in the WHMAs.

The proposed action and any action alternative would be required to comply with the requirements detailed in the Decommissioning Plan. Mitigation Measure and California Energy Commission Conditions of Certification BIO-23 states that no fewer than 30 days prior to the start of project-related ground disturbing activities the Applicant shall provide a draft Decommissioning and Reclamation Plan. The plan would be finalized prior to the start of commercial operation and reviewed every five years thereafter. It is recognized that recovery of the site would be measured in decades, not years.

Cumulative Effects and Connectivity. The analysis of cumulative effects related to vegetation and wildlife, including wildlife movement and connectivity, is provided in PA/FEIS Section 4.17, *Impacts on Vegetation Resources*, Section 4.21, *Impacts on Wildlife Resources*, and in Appendix I, *Biological Resources Cumulative Impacts*. The analysis of cumulative impacts is not an exercise in determining current conditions and trends, but rather evaluates the combined effects of past, present and reasonably foreseeable probable future actions.

Local resource agencies were consulted on the occurrences of wildlife movement corridors in the project area in determining the effects of the project on sensitive plant and wildlife species. Scientific literature also was consulted, including data available in the NECO Plan. As discussed in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*, the project would not directly affect habitat within any NECO Plan connectivity corridors or WHMAs and would not conflict with Desert Bighorn Sheep Conservation goals and objectives outlined in the NECO Plan.

Regarding effects of proposed fencing, Mitigation Measure BIO-9 includes criteria and specifications for desert tortoise exclusion and perimeter security fencing, including maintenance and repair at channels after flood/heavy rainfall events, as does Mitigation Measure Water-14 for channel, fence and gate maintenance. Impacts of fencing are discussed in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*, including the subsection on residual impacts.

Alternatives. As analyzed in PA/FEIS Sections 4.17, *Impacts on Vegetation Resources*, and 4.21, *Impacts to Wildlife Resources*, Reconfigured Alternative 1, Reconfigured Alternative 2 (under Option 1 or Option 2) and the Reduced Acreage Alternative would cause impacts to vegetation and wildlife resources, respectively. These impact differences are shown in Table 4.17.-1 for vegetation and Table 4.21-1 for wildlife resources.

Vegetation

As explained in Section 7.3 of the BLM NEPA Handbook, “significance” is a NEPA term of art: it is defined specifically to include effects that are of sufficient context and intensity to require an environmental impact statement; the meanings of “context” and “intensity” are provided in the CEQ regulations (40 CFR 1508.27). To determine the severity of an impact under NEPA, several

considerations, including those set forth in Section 7.3 of the BLM NEPA Handbook are evaluated. In the NEPA context, there are no “significance criteria” akin to those established under CEQA. Consequently, the number of sensitive plant species affected by a project does not alone determine whether the project would cause a “significant” impact under NEPA.

Differing alternatives avoid different amounts of habitat. The relative intensity of impacts to Desert Dry Wash Woodland and Unvegetated Ephemeral Dry Wash are set forth in Table 4.17-1. A detailed cumulative impact analysis is found in Appendix I, *Biological Resources Cumulative Impacts*.

Toxic compounds are not intended to be used to suppress dust. For example, AQ-SC-3, *Construction Fugitive Dust Control*, would allow the use only of “appropriate dust suppressant compounds,” which may include chemical dust suppressants. Weed control would be accomplished via implementation of BIO-14, which would require a Weed Management Plan to be finalized in accordance with the Safe Use of Herbicides provision of the mitigation measure. The BLM’s *Final Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic EIS* and relevant federal, State and local regulations also would apply.

Wildlife

PA/FEIS Section 4.21, *Impacts to Wildlife Resources*, and Appendix I, *Biological Resources Cumulative Impacts*, discuss the direct, indirect and cumulative effects of the proposed action and alternatives to bighorn sheep. As discussed in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*, the project would not directly affect habitat within any NECO Plan connectivity corridors or WHMAs and would not conflict with Desert Bighorn Sheep Conservation goals and objectives outlined in the NECO Plan.

Kit fox and badgers. All habitat surrounding the project site is potentially suitable for kit fox and badger, and biological studies showed suitable habitat is found throughout the study area and outside the disturbed areas of each of the action alternatives. However, any relocation/ translocation effort is likely to entail risk to the translocated animal, be it badger or kit fox. It is recognized that translocation is an imperfect means to address impacts. When animals such as badgers or kit fox are moved into new areas already occupied by individuals of the same species, conflicts for food, water, cover and space can, and do, occur. Additional studies on translocated animals would be impractical given the small numbers of animals involved. “Take” is a recognized type of impact and as such, is not a trigger for studies of the nature suggested. Mitigation Measure BIO-17 requires that the pre-construction surveys for badger and kit fox dens in and near the project area and requires implementation of passive relocation measures to protect them from direct construction impacts. This measure was developed in close consultation with CDFG. The BLM disagrees with the suggestion that passive relocation would cause take as defined by CDFG.

Insects. During the scoping period no issues were raised relative to insects. The Applicant and consultants coordinated with BLM, USFWS, CDFG and CEC on the requirements for species-surveys and survey protocols and checked with the California Natural Diversity Database for occurrences of special-status species in or near the project study area. Additionally, reviews of

literature and databases for special-status species revealed no special-status insects within the project study area. No special-status insects occur in the project study area. PA/FEIS Sections 3.18, *Vegetation Resources*, and 3.23, *Wildlife Resources*, discuss the unique biota adapted to sand dunes, noting that sand dune habitats support a number of endemic species which are unique, sensitive to disturbance, and at high risk of species-level extinction. While we are not aware of any dune-endemic insect species listed as endangered or threatened that might occur at the project site, BLM's analysis of impacts to sand dunes in PA/FEIS Section 4.17, *Impacts to Vegetation Resources*, and Section 4.21, *Impacts to Wildlife Resources*, were based on the assumption that sand dunes are unique and threatened habitat types that support unique and unusual species, whether or not those species had been formally petitioned for threatened or endangered status, or identified on the site.

Desert Tortoise. Both the SA/DEIS and the PA/FEIS show that the desert tortoise is one of many native species that would be adversely affected by the project. Direct, indirect and cumulative impacts to its critical habitat and movement, including habitat fragmentation and movement barriers, are discussed in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*, and Appendix I, *Biological Resources Cumulative Impacts*. Neither the SA/DEIS nor the PA/FEIS means to imply a lack of forage resources for desert tortoises. A comprehensive set of mitigation measures, including compensation, are proposed to address impacts to the desert tortoise. These are summarized in Section 4.21, *Impacts to Wildlife Resources*, and set forth in full in Appendix B.

Considerable coordination occurred between CEC, BLM, USFWS and CDFG on the best options for avoiding impacts to desert washes and ultimately avoiding impacts of the project on regional desert tortoise connectivity and movement. These alternatives were analyzed in the CEC's RSA and final Commission Decision, as well as in this PA/FEIS. Following publication of the SA/DEIS, CEC staff requested additional data from the Applicant on how the project would not impair wildlife movement, primarily desert tortoise movement and connectivity, in the project area. The Applicant provided "Wildlife Movement and Desert Tortoise Connectivity" (CEC RSA, 2010), which CEC staff and BLM used in their respective analyses of impacts to wildlife movement and connectivity (primarily in relation to desert tortoise). With 24 undercrossings under Interstate 10 over a distance of 32 miles, the BLM and CEC each concluded that adequate opportunities would remain for desert tortoise movement and connectivity north and south of I-10.

Mitigation Measure BIO-10, *Desert Tortoise Relocation/Translocation Plan*, requires the Applicant to develop and implement a final plan that is consistent with current USFWS approved guidelines no later than 30 days before site mobilization. It is recognized that translocation is an imperfect method to address impacts because any relocation/translocation effort is likely to entail risk to the translocated animal. All modifications to the approved Plan shall be made only after approval by BLM's Authorized Officer and the CPM, in consultation with USFWS and CDFG.

In consultation with USFWS and CDFG, mitigation at a 5:1 ratio (critical habitat) and at a 1:1 ratio (outside critical habitat) through land acquisitions or an assessed financial contribution based on the final construction footprint would address habitat loss within the project disturbance area. This compensatory mitigation is consistent with measures in Incidental Take Permits issued by CDFG for projects in the region, and with requirements described in the NECO Plan.

Mitigation Measure BIO-12 (Desert Tortoise Habitat Compensation) was developed to reflect these ratios (BIO-12 is set forth in full in Appendix I, *Conditions of Certification*).

Extirpation of the desert tortoise from the cumulative impacts of solar projects is not predicted.

Mojave fringe-toe lizard (MFTL). Considerable coordination occurred between CEC, BLM, USFWS and CDFG on the best options for avoiding impacts to sand dune habitat and ultimately avoiding impacts of the project on regional MFTL, connectivity and movement. These alternatives were analyzed in the CEC's RSA and final Commission Decision, as well as in this PA/FEIS. Reconfigured Alternative 2 (including Options 1 and 2) was developed to reduce the severity of impacts to the MFTL relative to the proposed action.

The 3:1 mitigation ratio recommended for stabilized and partially stabilized sand dunes is consistent with the NECO Plan. Non-dune habitats occupied by MFTL (sand fields vegetated with sparse creosote bush scrub) are mitigated at a ratio of 1:1; and indirect effects to MFTL habitat at a ratio of 0.5:1 as reflected in Mitigation Measure BIO-20, *Sand Dune/Mojave Fringe-Toed Lizard Mitigation*, which is summarized in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*, and set forth in full in Appendix B, *Conditions of Certification*. Off-site and edge effects were analyzed for MFTL and other species in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*, including edge effects such as fragmentation, increased road kill hazard from operations traffic, harm from accidental spraying or drift of herbicides and dust suppression chemicals, and increased access for avian predators due to new perching structures.

The PA/FEIS analyzes impacts beyond the edges of the project footprint for MFTL in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*.

Migratory birds. Impacts to migratory birds and migratory bird habitat in desert dry washes was analyzed in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*. Concave mirrors that track the sun are unlike other mirrors for which bird strikes have been documented. Uncertainty over the scale of impacts (such as bird strikes on mirrors) prompted the development of BIO-16, which includes preparation of an Avian Protection Plan with adaptive management features. As a performance standard of Mitigation Measure BIO-16, data must be collected to determine if impacts occur and, if so, other measures would be developed and implemented to avoid or minimize avian deaths or injuries. A draft Avian Protection Plan is not needed to conclude that such a plan would be sufficient to reduce impacts. BIO-16 requires that a final Avian Protection Plan that has been reviewed by CDFG and USFWS to be submitted before commercial operation of any of the power plant units. Mitigation Measures BIO-16 and BIO-26, *Evaporation Pond Netting and Monitoring*, both summarized in PA/FEIS Section 4.21.4, *Summary of Mitigation Measures*, and set forth in full in Appendix B, would address impacts to migratory birds from evaporation ponds and other hazards. Additionally, the evaporation ponds are discussed in PA/FEIS Section 4.11, *Public Health and Safety*, and Section 4.19, *Water Resources*.

One comment suggested that the chemical constituents of the heat transfer fluid (HTF) could pose a hazard to birds. Proposed leak detection would trigger prompt response in the event of an HTF leak: Visual inspection would occur throughout the solar field on a daily basis to detect leaks occurring at

ball joints or other connections; the configuration of the looped system would allow different sections of the loops to be isolated if necessary; and remote pressure sensing equipment and remotely actuated valves would detect and isolate any large leak in the piping system. Nonetheless, some HTF leaks can be expected to occur. The two solar fields to be installed at the project site each would include an approximately 4-acre land treatment unit (LTU) (for a project total of 8 acres) to bioremediate soil contaminated by an HTF release. The LTUs would be designed in accordance with Colorado River Basin Regional Water Quality Control Board requirements and utilize indigenous bacteria to metabolize hydrocarbons contained in non-hazardous² HTF-contaminated soil. A combination of nutrients, water, and aeration would facilitate the bacterial activity where microbes restore contaminated soil within two to four months.

Golden eagle. The PA/FEIS describes the golden eagle resource in the vicinity of the project in Section 3.23, *Wildlife Resources*. PA/FEIS Section 4.21, *Impacts to Wildlife Resources*, and Appendix I, *Biological Resources Cumulative Impacts*, analyze direct, indirect and cumulative impacts to the golden eagle from the proposed action and alternatives. Additionally, Mitigation Measure BIO-25, *Golden Eagle Inventory and Monitoring*, is recommended to address impacts to golden eagle: it is summarized in Section 4.21, *Impacts to Wildlife Resources*, and set forth in full in Appendix B, *Conditions of Certification*. Also, Mitigation Measure BIO-12, *Desert Tortoise Compensation*, would compensate with like habitat in the same area for the lost golden eagle foraging habitat.

Golden eagles were surveyed in 2010 concurrently with the surveys for Blythe and Genesis projects, and that survey information is current as of the publication of this PA/FEIS. The Applicant's report, entitled *Golden Eagle Survey Results for the Palen Solar Power Project*, is dated September 13, 2010 (Solar Millennium, 2010). The report summarizes golden eagle survey results completed in 2010 and clarifies and confirms prior assumptions and understandings.

The SA/DEIS and PA/FEIS consider all species mentioned in the comments and many others. A full list of vegetation and wildlife resources considered in the affected environment is found in PA/FEIS Section 3.17, *Vegetation Resources*, and 3.23, *Wildlife Resources*.

5.5.2.8 Climate Change / Greenhouse Gases

Commenters and Comments Addressed

Commenter	Comments
Center for Biological Diversity	3-081, 3-082, 3-084, 3-085
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-18, 5-29
Western Watersheds Project	7-04

² The California Department of Toxic Substances Control (DTSC) has determined for a similar thermal solar power plant that soil contaminated with up to 10,000 mg/kg of HTF is classified as a non-hazardous waste.

Summary of Issues Raised

1. **Air Quality:** Whether the analysis adequately identifies GHG emissions impacts.
2. **Biological Resources:** Whether the analysis of effects of global climate change on the affected environment is adequate, including with respect to the importance of wildlife movement corridors and habitat connectivity and identification of strategies to monitor climate change effects on groundwater or special-status species.
3. **Carbon Sequestration:** Whether the analysis of effects of global climate change is adequate, including to what extent the proposed action would result in reduced carbon sequestration and/or emission of carbon stored in soil organic matter and vegetation currently located on site.
4. **Hydrology:** Whether the analysis of effects of global climate change is adequate, including to what extent climate related changes to hydrologic resources could affect the proposed action or be exacerbated by the proposed action. Specific issues include drainage, flooding and water supply.
5. **Hazards:** Whether the analysis of effects of global climate change is adequate in terms of potential hazards, including increases in potential heat-related hazards, as a result of climate change.
6. **Soils:** To what extent the climate change analysis provided in the EIS should address potential changes in erosion patterns as a result of changes in flooding frequency and other drainage issues that could be exacerbated by climate change.

Response

A discussion of climate change, including the effects of the proposed action on climate change, was included in SA/DEIS Chapter C.1, Air Quality. The BLM acknowledges that additional discussion is warranted given recent federal directives regarding the consideration of climate change in planning documents promulgated by the United States Department of the Interior. Therefore, PA/FEIS Section 4.3, *Impacts on Global Climate Change*, provides updated, supplementary information relative to the SA/DEIS, including a review of the potential contribution of GHGs by the project, the potential climate change-related benefit that would be provided by the project, and the potential impacts of climate change-related effects (such as increases in flooding or decreases in water supply) on the project.

Air Resources

Air resources, including fugitive dust and GHG emissions are discussed in SA/DEIS Chapter C.1, Air Quality, and PA/FEIS Sections 3.2 and 3.3 (*Affected Environment*, air quality and climate change, respectively) and PA/FEIS Sections 4.2 and 4.3 (*Environmental Consequences*, impacts to air quality and climate change, respectively). Concerning impacts to air resources, PA/FEIS Section 4.2, *Impacts on Air Resource*, includes a detailed dispersion modeling analysis of PM10 and ozone emissions for the construction phase and operation phase of the project, including those emissions that would occur as a result of fugitive dust. The implementation of Mitigation Measure AQ-SC3, *Construction Fugitive Dust Control*, would be required during construction.

The Applicant also would implement similar fugitive dust controls during the operations phase of project, as discussed PA/FEIS Section 4.2, *Impacts on Air Resource*.

Mitigation Measure AQ-SC7, *Operations Dust Control Plan*, would mitigate operation period fugitive dust emissions to ensure compliance with State and local regulations and requirements. Although climate change could result in some degree of reduction of soil moisture, as discussed below, soil moisture is already very low under current conditions. Any further reduction in soil moisture would be minimal in terms of the absolute amount of water contained in soils on the proposed site. Therefore, any potential further reductions in soil moisture associated with climate change are not anticipated result in a substantial increase in fugitive dust emissions. AQ-SC7's Operations Dust Control Plan and other air quality-related mitigation measures recommended in the SA/DEIS and PA/FEIS would be sufficient to meet federal, state and local requirements regarding fugitive dust.

Sulfur hexafluoride (SF₆) emissions would be associated with incidental leakage from the circuit breakers proposed as part of the high voltage power transmission facilities for the PSPP, as discussed in PA/FEIS Section 3.3, *Global Climate Change*. SF₆ and the other GHGs analyzed in PA/FEIS are measured in units of carbon dioxide equivalent (CO₂e). Emissions calculations relied upon in the PA/FEIS were provided in the sources identified in Section 4.3, *Impacts on Global Climate Change*. As demonstrated by the analysis in that section, the action and action alternatives would result in a substantial net reduction of GHG emissions by replacing conventional high GHG-producing energy sources with low GHG-producing renewable solar power. Therefore, there is no need to provide additional GHG emissions offsets for construction emissions. Short-term GHG construction emissions associated with the project easily would be offset by project operations within the first several months of project operations. Further, given the operation-related net reduction in GHG emissions, no additional mitigation measures are recommended.

GHG emissions associated with water use and the life-cycle of building materials are not included in the analysis. It is acknowledged that there would be additional indirect emissions associated with these sources; however, the emissions related to water use would not significantly change the emissions totals presented in PA/FEIS Table 4.3-1, *PSPP Construction-related Greenhouse Gas Emissions*, or Table 4.3-2, *PSPP Operating Greenhouse Gas Emissions*. The assumptions that would be required to analyze life-cycle emissions of the building materials would be speculative; guesses would not likely provide an accurate representation of such emissions.

Biological Resources

Biological resources could be affected by climate change. Distribution patterns of species generally are expected to shift according to regional changes in temperature and precipitation. The location of wildlife migration corridors and the extent of invasive species also may be altered.

Concerning fisheries, the project does not contain any perennial or other surface waters that contain fisheries resources. Therefore, there would be no direct, indirect or cumulative contribution to climate change by the project, and climate change-related impacts on fisheries resources would not affect the project.

Concerning mitigation value waterways to be acquired and protected, as discussed in SA/DEIS Chapter C.2 and PA/FEIS Sections 4.17, *Impacts on Vegetation Resources*, and 4.21, *Impacts on Wildlife Resources*, impacts of the proposed action could be avoided or reduced by the implementation of mitigation measures that would require the replacement or substitution of biological resource values that would be lost as a result of implementation of the project. Also as discussed, the proposed mitigation lands would be required to be equivalent in terms of habitat value, and at a replacement ratio of at least 1:1 (typically greater than 1:1, as specified in SA/DEIS Chapter C.2) for direct impacts. Unfortunately, climate change could result in adverse effects on biological resources located on these mitigation lands. However, given that mitigation lands must be similar in biological resources value as compared to lost resources on site, it is anticipated that climate-related effects for the mitigation lands would be similar to those located at the proposed site, if the project were never built. Therefore, potential reductions in the biological resources values of mitigation land values resulting from climate change are expected to be similar to on-site conditions in the absence of the project.

It would be extraordinarily difficult, if possible at all, to provide a broad-based climate analysis to a particular special-status species or habitat. Distribution patterns of species are generally expected to shift according to regional changes in temperature and precipitation, while the location of wildlife migration corridors and the extent of invasive species may also be altered. Project impacts on habitat fragmentation, habitat linkages, and cumulative impacts of multiple projects on corridors and connectivity are analyzed in the PA/FEIS and are only heightened in their importance by the effects of global climate change. As discussed in PA/FEIS Section 4.3, *Impacts on Global Climate Change*, adverse impacts of global climate change are expected to continue; however, international, national and regional efforts, as well as the proposed action, are expected to reduce the rate at which such change occurs, and, thereby, to benefit the environment by minimizing the environmental impacts of climate change. Appropriate climate data would be collected while groundwater monitoring and special-status species monitoring occurs. Analysis of monitoring resource and project effects would consider available climate data when evaluating trends.

Carbon Sequestration

Another comment raises the issue of potential loss or destruction of existing carbon sinks. These include losses of soil carbon from desert soils, loss of existing vegetation on site, and loss of carbon sequestration that would have occurred on site over the life of the project, if the proposed action and action alternatives were not developed. Potential carbon-related effects related to land use changes have been a subject of scientific, government, and interest group interest and research for the last several years, and many researchers have provided estimates of the amount of carbon contained in desert soils and vegetation, and the amount of carbon taken up annually by ecosystems in the Mojave Desert and similar climates. Estimates vary substantially based on the specific location of interest.

In response to comments on this topic, additional information has been included in PA/FEIS Section 4.3, *Impacts on Global Climate Change*. As indicated in that section, there has been much discussion regarding carbon capture sequestration (CCS) and its potential to reduce carbon

emissions from fossil power plants. However, to date, only pilot-scale CCS projects have been implemented in the U.S. Therefore, the fossil power that the proposed action would displace would not include CCS. Almost all of California's fossil-based electricity is supplied from natural gas without carbon capture, and carbon emissions California's existing grid mix of power would be many times higher than the IGCC with CCS case that is considered under the proposed action. Therefore, while the BLM acknowledges that the proposed action would result in increased carbon emissions due to land use changes on site, the total mass of carbon emitted due to these land use changes would be significantly less than the net carbon emission savings of the power plant, based on displacement of existing fossil power production.

Hydrology

A discussion of climate change, including the effect of the proposed action on climate change, as well as the effects of climate change on the proposed, was included in SA/DEIS Chapter C.1, *Air Quality*, and is included in PA/FEIS Section 4.3, *Impacts on Global Climate Change*. Given recent federal directives regarding the consideration of climate change in planning documents, PA/FEIS Section 4.3.2, *Direct and Indirect Impacts of the Proposed Action on Global Climate Change*, includes supplemental information addressing direct and indirect impacts of climate change.

As discussed in SA/DEIS Chapter C.9, *Soil and Water Resources*, the proposed action would include a series of engineered facilities, including rerouted drainage/flood channels, berms and on-site drainage facilities that would channel, retain and otherwise manage stormwater and flood flows on site and in the areas immediately surrounding the project. Also discussed in SA/DEIS Chapter C.9, the proposed action would be designed to account for stormwater drainage and flood flows. Energy Commission Conditions of Approval SOIL&WATER-11 through -13 (see PA/FEIS Appendix B) would require revisions to the proposed drainage report and plans, completion of a detailed FLO-2D analysis, and implementation of drainage channel design and channel erosion protection measures.

As discussed in SA/DEIS Chapter C.9 and PA/FEIS Section 4.19, *Impacts on Water Resources*, the project is not expected to affect Colorado River water; however, because some uncertainty remains, mitigation measures are recommended to avoid any impact should it occur. In the event that climate change results in reduced precipitation within the project area and its vicinity, some degree of associated reduction in groundwater recharge could occur. However, this situation would not result in increased water requirements by the project, and would not result in additional groundwater pumping during project construction or operations. Additionally, as discussed in SA/DEIS Chapter C.9 and PA/FEIS Section 4.19, *Impacts on Water Resources*, the rate of groundwater pumping for the PSPP would be minor in comparison to the total volume of groundwater contained in storage. Therefore, even with potential reductions in total precipitation volume associated with future climate change, the ability of the project to meet its water needs would not be reduced, and no increase in pumping would be required as a result of the effects of climate change.

Hazards

Potential risks associated with wildfire are discussed in SA/DEIS Chapter C.14, *Worker Safety and Fire Protection*, and PA/FEIS Sections 3.22 and 4.20, concerning wildland and fire ecology.

SA/DEIS Chapter C.14 and PA/FEIS Section 3.12 and 4.11, *Public Health and Safety*, discuss potential fire-related risks, and also ensure that adequate fire control personnel, infrastructure, and associated planning would be completed and/or available to the project, to ensure compliance with federal, state and local regulations, and to ensure worker safety.

Climate change would result in a small but general increase in temperature, and could also result in an increase in the frequency of extreme weather events that could generate wildfires, such as increased frequency of drought and heat waves, during operation of the project. In compliance with applicable regulations and mitigation proposed in SA/DEIS Chapter C.14 and PA/FEIS Chapter 4, *Environmental Consequences*, the Applicant would be required install a fire protection/control system on site including a fire water supply system and associated infrastructure, and to comply with State and federal regulations regarding worker safety and training. Additionally, under Energy Commission Condition of Certification WORKER SAFETY-7 (see, PA/FEIS Appendix B), the Applicant would be required to provide funding to the Riverside County Fire Department to ensure available resources to fight potential fires on site. Although the risk of wildfire that could affect the site could increase as a result of climate change, these potential increases in risk are expected to be offset by ongoing compliance with the worker safety and fire protection regulations and mitigation measures specified in SA/DEIS Chapter C.14 and PA/FEIS Sections 4.11, *Impacts on Public Health and Safety* and 4.20, *Impacts on Wildland Fire Ecology*. No additional mitigation is recommended.

Concerning heat waves, the frequency of occurrence and the severity of heat waves could increase as a result of climate change. Heat waves could result in increased potential risk to project employees. However, as discussed in SA/DEIS Chapter C.14 and, PA/FEIS Section 4.3, *Impacts on Global Climate Change*, Energy Commission Condition of Certification WORKER SAFETY-2 (see PA/FEIS Appendix B) would require implementation of an operation period heat stress protection plan that is based on and expands on Cal-OSHA requirements. This plan would provide measures to protect workers against the effect of heat-related hazards, whether or not those hazards are caused by climate change. Although the frequency and/or intensity of heat wave events could increase as a result of future climate change, the heat stress protection plan would meet State requirements for worker safety. No further mitigation measures are recommended concerning this concern.

Soils

As discussed in SA/DEIS Chapter C.9, *Soil and Water Resources*, and PA/FEIS Sections 3.15, *Soil Resources* and 4.14, *Impacts on Soil Resources*, concerning the affected soil resources environment and environmental consequences relating soils resources, respectively, almost all rainfall that occurs in this region of California is lost through evaporation and evapotranspiration. Soil moisture on the project site and in its vicinity is characteristically low. As discussed previously, although precise changes are impossible to predict, climate change could result in increases in extreme weather events, including droughts and heat waves, and an overall reduction in precipitation. These conditions could result in a concurrent reduction in soil moisture content at the proposed site and regionally. However, reductions in soil moisture content would not affect project operations, and would not require any change in water resources usage. Additionally, the

proposed facilities would in no way support additional drying of soils on site, or otherwise exacerbate potential changes in soil moisture associated with climate change. Therefore, no additional change would occur.

5.5.2.9 Air Quality

Commenters and Comments Addressed

Commenter	Comments
Joshua Tree National Park	1-19
Center for Biological Diversity	3-067, 3-083
California Unions for Renewable Energy (CURE)	6-021, 6-102, 6-103, 6-107, 6-108, 6-109, 6-110, 6-112, 6-113, 6-114, 6-115, 6-116

Summary of Issues Raised

1. **Construction-Related Impacts:** Whether the PA/FEIS adequately identifies construction-related impacts of construction exhaust emissions and fugitive dust and identifies adequate mitigation measures.
2. **Cumulative Analysis:** Whether the analysis of cumulative air quality impacts relies on an adequate cumulative setting.

Response

Adequacy of Mitigations for Construction-Related Emissions and Fugitive Dust

PA/FEIS Section 4.2, *Impacts to Air Quality*, summarizes mitigation measures to be implemented during the construction, operation and decommissioning of the project. Several of the mitigation measures in PA/FEIS Section 4.2, *Impacts to Air Quality*, are meant to reduce or treat exhaust (i.e., post-combustion emissions) from construction equipment. For example, AQ-SC6, *Emission Standards Vehicles*, and AQ-4, *Dust Plume Response Requirement*, states that tests shall be conducted to determine the oxygen levels in the exhaust; AQ-SC5, *Diesel-Fueled Engine Control*, states that all precautions must be made to reduce emissions from diesel-fueled engines. Fugitive dust mitigation measures that would substantially reduce potential fugitive dust emissions during construction also are identified in PA/FEIS Section 4.2, *Impacts to Air Quality*, and include AC-SC3, *Construction Fugitive Dust Control*, AC-SC4, *Dust Plume Response Requirement*, and AQ SC-7, *Operations Dust Control Plan*, which require the Applicant to develop and implement construction and operational fugitive dust control plans, respectively. The full text of these and other mitigation measures are set forth in full in PA/FEIS Appendix B.

A comment suggests many feasible mitigation measures to be used during commercial/industrial operations that have been identified by a number of California air districts. Some of these measures are accounted for in PA/FEIS Section 4.2, *Impacts to Air Quality*, and all mitigations identified are meant to reduce emissions during each phase of the project. For example, Mitigation Measure AQ-3, *Propane-fired Equipment*, discusses equipment that shall be fired exclusively with propane.

Mitigation Measure AQ-SC6, *Emission Standards Vehicles*, and AQ-SC7, *Operations Dust Control Plan*, also include the Applicant's stipulated operations emission mitigation, to limit exhaust emissions and fugitive dust emissions during project operation to the extent feasible. Mitigation Measure AQ-13, *Operating Time Limit*, addresses limitations on the construction activities that may be conducted beyond after standard workday hours. A revised construction schedule would result in a shift of some construction activity from daytime to nighttime hours, it does not propose extended operations that would result in a substantial increase in the overall hours of heavy-duty diesel powered construction equipment. Therefore, construction emissions would not be substantially different than those analyzed in the SA/DEIS.

A comment suggests implementing emission limits on new off-road engines that have been established by U.S. EPA and ARB. To be certain that there would be no risk to public health from construction NO_x, ROG and/or PM₁₀ emissions, off-road construction equipment should be mitigated by requiring the use of equipment that meets the latest U.S. EPA and ARB engine emission standards. Implementing appropriate off-road equipment emission control measures, such as those described in Mitigation Measures AC-SC5, *Diesel-Fueled Engine Control*, and AC-SC-6, *Emission Standards Vehicles*, would substantially reduce potential off-road equipment tailpipe emissions potential during project construction.

Cumulative Analysis

A list of projects considered in the cumulative scenario, which includes past, present and reasonably foreseeable probable future projects, is provided in PA/FEIS Section 4.1.4, *Cumulative Scenario Approach*. Specific to the air quality analysis, PA/FEIS Table 4.1-1, *Cumulative Scenario*, identifies the affected air basin as the geographic area of cumulative concern and the air resource-related issues of interest for the project, as well as a variety of BLM renewable energy projects (e.g., Chuckwalla Solar project, the Genesis Solar Energy Project and the EnXco project), other BLM-authorized actions and other known actions/activities (e.g., the Chuckwalla Valley Raceway). The cumulative analysis adequately considers the project's contribution to localized cumulative impacts. Mitigation measures summarized in PA/FEIS Section 4.2, *Impacts to Air Quality*, and set forth in full in Appendix B adequately would address localized cumulative air quality impacts.

5.5.2.10 Water Resources

Commenters and Comments Addressed

Commenter	Comments
Joshua Tree National Park	1-06, 1-08, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 1-17
Center for Biological Diversity	3-008, 3-073, 3-074, 3-075, 3-076, 3-077, 3-078
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-12
California Unions for Renewable Energy (CURE)	6-022, 6-026, 6-143, 6-148, 6-151, 6-152, 6-153, 6-154, 6-155, 6-156, 6-157
Western Watersheds Project	7-09
Metropolitan Water District of Southern California	8-04, 8-05, 8-06

Summary of Issues Raised

1. **Groundwater Resources and Water Supply:** Direct, indirect and cumulative impacts to groundwater and connectivity to the Colorado River; water balance, supply and usage (including during construction); cumulative context; and concerns about the effectiveness of proposed mitigation measures and the adequacy of the water model used and graphic representations of historical data.
2. **Streams and Other Water Resource Issues:** Water resources impacts to downstream flow and sedimentation, natural drainage channels and streambed effects, including geologic effects; and impacts to vegetation, biological resources and dune ecosystems.
3. **Water Use for Cooling:** How the proposed dry-cooled project will affect water resources.
4. **Water Rights:** Whether the Applicant has sufficient rights to water needed for construction and operation of the project, or whether such rights will be needed to be obtained; the necessary limitations of water rights contracts; and the extent of geographic area considered for the impacts of extracting Colorado River water.

Responses

Groundwater Resources and Water Supply

The impact assessment contained in PA/FEIS Section 4.19, *Impacts to Water Resources*, including the potential impacts to groundwater resources in the Chuckwalla Valley Groundwater Basin (CVGB), is an analysis of the anticipated direct and cumulative effects of the project, in comparison to the various alternatives, as required under NEPA. The analysis quantifies the extent of groundwater depletion that would be expected (see PA/FEIS Tables 4.19-1 and 4.19-7). The data that were used in support of the impact analysis, including level of significance designations, are included in this PA/FEIS for review. Comments refer to CEQA significance criteria, which are not incorporated into this PA/FEIS for the NEPA analysis.

A comment states concern with the long-term water level trends presented in the SA/DEIS (hydrographs). The purpose of these hydrographs is to illustrate historic groundwater levels in the vicinity of the project site, and also to disclose historic trends in water level, as data are available, from as early as the 1950s. Data collection at these wells was unfortunately sporadic. However, taken together, these data generally show relatively stable water levels in the basin until the 1980s, a period of decline in the 1980s, and then a resurgence in water levels during the 1990s. To the extent possible, similar scales were used along the vertical axes of each chart, in order to allow the reader to easily compare historic water levels among each of the ten well sampling sites. Updating the charts to show a more expanded vertical scale would limit the reader's ability to easily compare water levels at each of these well sites. Therefore, no update to the figure was made.

A comment suggests that the total recoverable amount of water within the CVGB could be limited to 75,000 or 3,000 acre-feet; however, this value appears to use an incorrect formula based on storativity and other parameters that were included in Table 7 in the SA/DEIS, which is the same as Table 4.19-2 in this PA/FEIS. Consequently, the proposed value is not an appropriate point of comparison.

A comment further proposes to use a basin storage value of 9.1 million acre-feet, as compared to 15 million acre-feet, citing that the 9.1 million acre-feet storage value is a more conservative estimate and is consistent with documentation from a pumped hydrologic storage project in the vicinity of the project. The studies completed in support of the project were completed as recently as 2010 with the most up-to-date data available at the time of printing that is directly relevant to the project. A comment uses groundwater storage documentation prepared in support of a separate project (Eagle Crest Energy), which is expected to include significantly different study and boundary assumptions. Use of the Eagle Crest Energy data is not anticipated to result in more accurate basin storage estimates relevant to the project and would not be consistent with other BLM documentation for regional solar power projects. Therefore, the BLM declines to rely on the Eagle Crest Energy reports.

As discussed in PA/FEIS Section 4.19.3, *Cumulative Impacts [relating to Water Resources]*, potential cumulative impacts to groundwater are considered in light of basin balance, levels and water quality. Cumulative impacts to the Colorado River are not expected; nonetheless, mitigation measures are recommended to address any remaining uncertainty. With the implementation of these measures, potential impacts related to Colorado River hydrology either would be avoided entirely or would be off-set by a requirement that the Applicant apply for and receive an allocation. Under either scenario (the expected no impact or potential impact avoided), the project would not contribute any impact to cumulative Colorado River water conditions.

Comments raise concerns regarding adherence to mitigation and monitoring and suggest oversight of monitoring by USGS or the California Department of Water Resources. However, requiring oversight of the groundwater level monitoring program by an outside agency such as those indicated would be inefficient in terms of agency coordination and cost. Additionally, the proposed mitigation monitoring plan is expected to be sufficient to meet such needs. Therefore, additional mitigation, including third party oversight, is not warranted to effectively mitigate potential impacts.

A comment states that geohydrologists sometimes assume that a “relatively undeveloped desert basin like the CVGB is in a quasi-equilibrium condition with respect to... water balance.” However, as discussed in PA/FEIS Section 3.20, *Water Resources*, this assumption, and the conclusions that the comment draws from it, are not correct. The basin had been overdrafted to support of historic agricultural production during previous decades and still appears to be in the process of recovering from that period. Using basin outflow as an indicator of basin budget for a basin that is recovering from overdraft would likewise result in a flawed analysis, wherein the total basin balance would be substantially underestimated due to reduced outflow under recovery conditions. Use of other substantially lower estimates of groundwater basin balance, as suggested by the comment, would therefore not be justified, and would run counter to the best available data and information regarding groundwater levels and basin balance for the CVGB system.

As discussed under the *Groundwater Levels* subsection of PA/FEIS Section 4.19, *Impacts to Water Resources*, the maximum predicted water table drawdown over the lifetime of the project would be 57 feet, in the area immediately adjacent to the pumping well, resulting in a radius of

approximately 2-3 miles from the project site where groundwater would be drawn down by up to 1 foot. Furthermore, the nearest potential halophyte communities to the project are located approximately 3-6 miles from the project site, and estimates of groundwater level drawdown in that area are expected to range from 0.2 to 0.6 feet. Additional detail regarding the extent of drawdown can be gained by reviewing groundwater level modeling documentation, as well as the figures included in the PA/FEIS. With implementation of the several recommended mitigation measures, these potential impacts would be reduced. Thus, the level of detail contained in the PA/FEIS is adequate under NEPA.

Text in the cumulative impacts analysis of PA/FEIS Section 4.19, *Impacts to Water Resources*, reflects the values shown in PA/FEIS Tables 4.19-6 and 4.19-7.

PA/FEIS Table 4.19-1 has been updated to show the following values for the net budget balance column: 2,128 acre-feet/yr during construction and 2,308 acre-feet/yr during operations.

PA/FEIS Table 4.19-7 has been updated to show 3,745 acre-foot/yr and -1,137 acre-foot/yr, respectively.

Groundwater modeling specific to the project was completed by AECOM (2010a as cited in the CEC RSA, 2010). PA/FEIS Table 4.19-2 provides a summary of numerical results from the groundwater model, including figures and tables drawn from that report, and a discussion of associated findings. This model is considered to be sufficient for the purposes of impact assessment under NEPA. For additional modeling details, including development, calibration, and additional results from the groundwater model used in support of the project, please refer to AECOM (2010a as cited in the CEC RSA, 2010).

The groundwater model used by AECOM is based on the United States Geological Survey (USGS) model developed by the USGS used to define the Colorado River accounting surface, and was modified slightly to account for project-specific properties. Additional documentation on the properties of this model, including the detailed technical characteristics relating to model calibration, results of modeling runs, sensitivity analysis, and other items, can be found in AECOM (2010a as cited in the CEC RSA, 2010) as well as the California Energy Commission's Revised Staff Assessment and supporting documentation for the project.

Water consumption needs analyzed in the PA/FEIS reflect water use associated with concrete batch plant operations (see PA/FEIS Section 4.19, *Impacts on Water Resources*). Total water consumption that would occur under the project is summarized in PA/FEIS Table 4.19-1, and amounts to 480 acre-feet/yr during construction (1,440 acre-feet total for construction over 3 years) and 300 acre-feet/yr during operation (9,000 acre-feet total for operation over 30 years). No additional water use is proposed.

Streams and Other Water Resource Issues

The PA/FEIS acknowledges the project's potential impact on existing washes located on site, as well as immediately downstream of the project area, including related potential impacts associated with loss or interference with biological habitats and dune ecosystems. Specifically,

discussion of groundwater use and groundwater pumping (including as it may affect the Colorado River as well as groundwater dependent ecosystems), natural springs, wildlife and fire ecology are provided in PA/FEIS Section 4.17, *Impacts on Vegetation Resources*, Section 4.20, *Impacts on Wildland Fire Ecology*, and Section 4.21, *Impacts on Wildlife Resources*. These sections disclose potential biological resources impacts, and recommend a suite of mitigation measures to address potential impacts associated with loss of habitat and other effects on biological resources. No further potential impact categories related to the use of groundwater were identified. Potential impacts to the sand transport corridors and the dunes themselves are evaluated in PA/FEIS Section 4.14, *Impacts on Soils Resources*, and Section 4.17, *Impacts on Vegetation Resources*. These sections recommend mitigation measures to address potential impacts of the project to the sand transport corridors and the dunes to minimize potential impacts on these sensitive resources. Additional analysis is not warranted.

The project would use only groundwater. The project would not require the use of surface water for construction or operation. Groundwater levels within the CVGB in areas potentially affected by or hydrologically downstream of the project are sufficiently below the ground's surface, such that no change in surface water infiltration rates would occur as a result of any potential project-related groundwater drawdown. Flood waters associated with desert washes in the vicinity of the PSPP would be routed around the project site and would not be captured or detained. Potential effects on the Colorado River would be mitigated as discussed in Chapter 4.19, *Impacts on Water Resources*.

As discussed in PA/FEIS Section 4.19, *Impacts to Water Resources*, the existing natural drainages that are located on site would be re-routed around the project, and the project would be sited to avoid interference with some larger washes. The potential changes that would result in downstream flow was assessed in the Project Drainage Report (CEC RSA, 2010), via HEC-HMS and FLO-2D modeling. The Applicant will be preparing additional drainage engineering and design work, including adherence to proposed mitigation measures requiring an updated drainage plan. Compliance with Riverside County guidelines for conveyance channels, revisions to preliminary grading and drainage plans, and implementation of a channel maintenance program during Project operations are also considered. However, the purpose of this work is to provide engineering-level details of project design for project drainage, within the scope of the drainage facilities that have been disclosed for the project within the PA/FEIS. The overall scope and nature of the drainage facilities proposed in the PA/FEIS will not change, and thus are adequate for assessing potential impacts associated with the project.

As discussed above, the maximum predicted water table drawdown over the lifetime of the project would be in the area immediately adjacent to the pumping well, resulting in a radius of approximately 2-3 miles from the project site where groundwater would be drawn down by up to 1 foot. The nearest potential halophyte vegetation communities to the project are located approximately 3-6 miles from the PSPP site, and estimates of groundwater level drawdown in that area are expected to range from 0.2 to 0.6 feet. Additional detail regarding the extent of drawdown can be gained by reviewing groundwater level modeling documentation, as well as the figures included in the PA/FEIS. As discussed in PA/FEIS Section 4.19, *Impacts on Water*

Resources, with application of recommended mitigation measures, potential impacts would be reduced. Thus the level of detail contained in the PA/FEIS is adequate under NEPA.

As discussed in PA/FEIS Section 4.19, *Impacts to Water Resources*, the potential for subsidence associated with groundwater withdrawal is anticipated to be remote, based on the geologic/sedimentary characteristics of the CVGB, and on a lack of measured subsidence during previous, historic drawdown events. Earth fissuring would not be supported by the sandy soils located on site. Potential for interference with wells is addressed in PA/FEIS Section 4.19, *Impacts on Water Resources*. As discussed therein, drawdown of groundwater levels associated with the project could result in reductions in water levels at nearby wells, causing various problems. These potential impacts would be mitigated via the incorporation of mitigation measures that are discussed in the PA/FEIS, including pump monitoring to ensure that the water usage rates proposed in this document, during construction and operation, are not exceeded over the life of the project; implementation of a groundwater level monitoring, mitigation and reporting plan during construction and operation; provisions for monetary or other reimbursement for potential impacts to wells; and provisions for groundwater production reporting.

In regards to modifications associated with transmission lines and access roads, potential effects of access roads to support access to the project site are included in the assessment of the main project site, while potential effects on drainage associated with proposed transmission lines and associated access roads are discussed separately within PA/FEIS Section 4.19, *Impacts on Water Resources*. Briefly, localized grading along these facilities could adversely affect offsite portions of existing drainages, if it is not stabilized properly. Mitigation measures are identified to reduce the intensity of this potential impact. Also, diversion or channelization of existing drainages would not occur as a result of installation of the proposed transmission line.

As discussed in PA/FEIS Section 4.19, *Impacts on Water Resources*, and above, the PSPP is not expected to affect the Colorado River; however, because uncertainty remains, mitigation measures are identified to address potential effects. As further discussed in PA/FEIS Section 4.17, *Impacts on Vegetation Resources*, Section 4.19, *Impacts to Water Resources*, and 4.21, *Impacts on Wildlife Resources*, the PSPP would not otherwise affect surface water, including springs or seeps, such that wildlife or other biological resources would be affected. As discussed in PA/FEIS Section 3.20, *Water Resources*, the only surface water features located on site or adjacent to the project are ephemeral desert washes. The project would not draw water from these washes, and would not otherwise require or use surface water in support of construction or operations.

Water Use for Cooling

As discussed in PA/FEIS Chapter 2, *Proposed Action and Alternatives*, the proposed action would include an air-cooled condenser that would provide air-based cooling for the power generation train of the plant. The incorporation of air cooling into the project was proposed by the Energy Commission as a potential measure to offset most of the water use requirements for the PSPP. As a result, dry cooling has been incorporated into project design, and thereby would substantially reduce the total groundwater withdrawal requirements that would occur as a result of the project as proposed.

Some auxiliary functions of the plant still would require water-based cooling (see, e.g., PA/FEIS Section 2.2.2, *Major Project Components*, which identifies one wet cooling tower to be installed in each power block for ancillary equipment, and Section 2.2.3, *Power Plant Civil/Structural Features*, describing the power plant's two cooling systems). Impacts associated with the proposed auxiliary cooling are analyzed in PA/FEIS Chapter 4, *Environmental Consequences* (see, e.g., Section 4.19, *Impacts to Water Resources*). As revised, the project would require substantially less water than would be required for a wet-cooling system. Further, with the implementation of dry cooling (which reduces the efficiency of power production), the amount of power generated per acre of solar thermal field is, in comparison to most utility scale photovoltaic (PV) systems being installed at present, more efficient in terms of the amount of power that can be generated per acre of land area.

Water Rights

As analyzed in PA/FEIS Section 4.19, *Impacts to Water Resources*, implementation of the project is not expected to draw water from the Colorado River or otherwise affect existing water rights allocations. Because some uncertainty remains about whether groundwater pumping for the project could affect the Colorado River and, therefore, implicate water rights concerns, the implementation of recommended mitigation measures would avoid any such effects. Accordingly, regardless of whether the recommended mitigation measures ultimately are triggered by the project, development of the project would not interfere with any existing water rights.

5.5.2.11 Cultural Resources

Commenters and Comments Addressed

Commenter	Comments
The Wilderness Society and the Natural Resources Defense Council (NRDC)	5-13, 5-14
California Unions for Renewable Energy (CURE)	6-023, 6-031, 6-126, 6-127, 6-128, 6-129, 6-130, 6-131, 6-132

Summary of Issues Raised

1. **Use of Programmatic Agreement:** Whether use of a Programmatic Agreement (PA) impermissibly defers evaluation, mitigation and treatment of potential impacts on cultural resources.
2. **Native Tribes Consultation:** Need to collaborate with Native peoples of the region, through government-to-government consultation to adequately consider potential impacts of these projects on Native peoples.
3. **Adequacy of Data to Determine Impacts and Mitigations:** Whether the analysis of cultural resources, including of the reconfigured alternative, is adequate, in light of the status of pending additional information and analysis on cultural resources.

Responses

Use of Programmatic Agreement to Comply with NHPA

Regulations implementing the National Historic Preservation Act (NHPA) (36 CFR Part 800) provide for the use of a Programmatic Agreement (PA) when effects on historic properties cannot be fully determined prior to approval of an undertaking. PAs commonly are used to comply with Section 106 of the NHPA on large projects like the PSPP.

As discussed in PA/FEIS Section 5.2.2, *Tribal Consultation and Section 106 Compliance*, adverse effects that the PSPP could have on cultural resources will be resolved through compliance with the terms of a PA reached on September 21, 2010, pursuant to NHPA Section 106 (16 USC Section 470; 36 CFR Section 800.14) in consultation with the Advisory Council on Historic Preservation (ACHP), the California State Historic Preservation Officer (SHPO), Indian tribes, and other interested parties. Implementation of the terms of the Programmatic Agreement is identified as a recommended mitigation measure (see Section 4.4, *Cultural Resources*). The PA is provided in Appendix H.

The approved PA will govern the conclusion of the identification and evaluation of historic properties (eligible for the NRHP), as well as the resolution of any adverse effects that may result from the proposed action or alternatives. Treatment plans regarding historic properties that cannot be avoided by project construction will be developed in consultation with stakeholders as stipulated in the PA. Analysis of impacts in this document and implementation of the terms of the PA would provide evidence of BLM's compliance with NHPA Section 106 and NEPA.

Cultural resources information for the alternatives, including Reconfigured Alternative 2, has been compiled and considered in the PA/FEIS: Direct, indirect and cumulative impacts on cultural resources identified within the Area of Potential Effects for the proposed action and alternatives are analyzed in PA/FEIS Section 4.4, *Impacts to Cultural Resources*.

Consultation with Native American Tribes

As stated in PA/FEIS Section 5.2.2, *Tribal Consultation and Section 106 Compliance*, the BLM initiated consultation in the early stages of project planning by certified letter on July 1, 2009. Tribes were invited to a general scoping meeting and project site visit held on January 25, 2010. On February 10, 2010, the BLM Palm Springs/South Coast Field Office Manager and Archaeologist met with the Fort Yuma Quechan Tribal Council. They provided information on several solar energy projects, including the project, and answered questions. Letters requesting consultation among tribes, the Energy Commission, the Applicant, the SHPO, and ACHP to develop a PA for the PSPP were mailed out to the below-listed tribes on March 3, 2010.

An initial meeting regarding the PA was held on April 23, 2010, in Palm Desert, to which all interested tribes were invited. They also were notified of a workshop on the PSPP SA/DEIS, held on April 29, 2010, in the BLM Palm Springs/South Coast Field Office, where, the BLM also held an informational meeting for the tribes on May 25, 2010. The BLM issued a draft PA for the PSPP on June 17, 2010, allowing 30 days for public and Native American comment. Appendix I of the draft PA included a log of BLM's consultation with specific individuals and groups. The

BLM also held a meeting in Palm Desert on August 11, 2010, to review and discuss the revised draft PA; some Native Americans were in attendance. At this meeting, representatives of two organizations (California's for Renewable Energy and La Cuna de Aztlan Sacred Sites Protection Circle) expressed concern over geoglyphs and other sacred sites and ancient trails that solar development in the Chuckwalla Valley and on Palo Verde Mesa could affect. As a result of consultation efforts, Native Americans identified no additional cultural resources relative to those analyzed in the SA/DEIS that could be affected by the project.

Thirteen tribes or related entities were identified and invited to consult on this project, including:

14. Ramona Band of Mission Indians
15. Torres-Martinez Desert Cahuilla Indians
16. Augustine Band of Cahuilla Mission Indians
17. Agua Caliente Band of Cahuilla Indians THPO
18. Morongo Band of Mission Indians
19. Twentynine Palms Band of Mission Indians
20. Fort Yuma Quechan Indian Tribe
21. Colorado River Indian Tribes
22. Chemehuevi Reservation
23. Colorado River Reservation
24. San Manuel Band of Mission Indians
25. Quechan Indian Tribe
26. Fort Mojave Indian Tribe

Adequacy of Data to Determine Impacts and Mitigations

Cultural resources within the Area of Potential Effects of the proposed action and alternatives have been identified and are discussed in PA/FEIS Section 3.4, *Cultural Resources*, Section 4.4, *Impacts on Cultural Resources*, and Appendix H, *Programmatic Agreement*. Palen Dry Lake ACEC is approximately 0.5 mile from the project site; no cultural resources within this ACEC are within the Area of Potential Effect. Class III cultural resource inventories of the proposed action, including the solar plant site, transmission lines and other areas of disturbance have been completed.

Impacts, including construction-related impacts, on cultural resources that would be adversely affected by the proposed action and alternatives are analyzed in PA/FEIS Section 4.4, *Impacts to Cultural Resources*. All impacts to cultural resources will be addressed through implementation of the approved PA.

Existing information is not sufficient to determine the boundaries of a potential Prehistoric Trails Network Cultural Landscape or the archaeological sites that would contribute to such a landscape, such as the Halchidhoma Trail. The same is true for a potential Desert Training Center/ California-Arizona Maneuver Area Cultural Landscape; although the Desert Training Center California-Arizona Maneuver Area (DTC/CAMA) is described and considered in the PA. Archaeological sites within the Area of Potential Effect that might contribute to these potential landscapes have been identified.

5.5.2.12 Public Health and Safety

Commenters and Comments Addressed

Commenter	Comments
Center for Biological Diversity	3-008
California Unions for Renewable Energy (CURE)	6-133, 6-134, 6-135, 6-137, 6-138, 6-139, 6-140, 6-141, 6-142, 6-143, 6-215, 6-216, 6-218, 6-220, 6-221, 6-222, 6-224, 6-225, 6-226, 6-227, 6-228, 6-229, 6-234

Summary of Issues Raised

1. ***Unexploded Ordnance Risk:*** Potential Risk and Effects of Unexploded Ordnance (UXO) and Hazardous Debris
2. ***HTF Risk:*** Risk of Release Heat Transfer Fluid (HTF) and Components and Waste Classification

Responses

Potential Risk and Effects of Unexploded Ordnance (UXO) and Hazardous Debris

Issues concerning risks to public health and safety associated with dermal contact and ingestion of contaminated soils are discussed in PA/FEIS Section 4.12.2, *Hazardous Materials*, and PA/FEIS Section 4.12.3, *Waste Management*. The possibility of soil contamination in connection with UXO also is analyzed in Section 4.11.4, *Unexploded Ordnance (UXO)*. As discussed in PA/FEIS Section 3.12, *Public Health and Safety Resources*, a Phase I Environmental Site Assessment for the project site was conducted in 2009. The Phase I identified no evidence of Recognized Environmental Conditions at the project site and did not indicate the presence of UXO. Thus, a Phase II investigation was not recommended. Nonetheless, mitigation measures are recommended to address UXO-related impacts. See PA/FEIS Section 4.11.4.4, *Summary of Mitigation Measures*.

Risk of Release Heat Transfer Fluid (HTF) and Components

Potential impacts related to HTF spills and contamination associated with the proposed land treatment units are addressed in PA/FEIS Section 4.11, *Impacts to Public Health and Safety*, and Section 4.19, *Impacts to Water Resources*. Section 4.11, *Impacts to Public Health and Safety*, also addresses roadway safety impacts associated with transportation of various materials, including HTF.

Transport vehicles carrying hazardous materials to and from the project site would be required to follow federal and State regulations governing proper containment vessels and vehicles, including appropriate identification of the nature of the contents. Additionally, the Applicant would be required to develop and implement a Safety Management Plan for the delivery of hazardous materials. These requirements would remain in place for the entire duration of the project.

Specific engineering drawings and design specifications for the project are not available for public review. However, a sufficient number of isolation valves would be installed that could be activated manually, remotely or automatically to limit the volume of a spill of HTF to 1,250 gallons – this is a 650 gallon increase from the amount stated in the SA/DEIS and the maximum³ amount that could be lost if there were a catastrophic break in a HTF pipe in the solar field. Considering that the proposed action analyzed in the PA/FEIS also includes two on-site land treatment units (LTUs) whereas the SA/DEIS considered only one, the increase in the maximum amount of HTF that could be spilled does not constitute a substantial change in the proposed action under NEPA: the type of impacts that could result from an HTF spill (as analyzed in the SA/DEIS) are the same regardless of the amount spilled, and the capacity for treatment of any spill has been increased proportionally. Further, pursuant to Mitigation Measure WASTE-7, an approved Operation Waste Management Plan would identify treatment methods and companies providing treatment services. It is assumed that this plan would include provisions for the management of the free standing liquids that could follow a spill.

Comments reference past HTF spills at the Luz Solar Energy Generating Stations (SEGS). The SEGS site is operated by a different solar energy purveyor than the Applicant, was constructed over 20 years ago, and used different design specifications and older technologies (CEC, 2010). Thus, it is not a comparable project to the project and does not serve as an accurate indicator for HTF spill potential at the project site. Thus, this comment does not have a bearing on the adequacy of the analysis of potential impacts of the project. Further, the comment has provided no credible information to suggest that the estimated annual amount of HTF-contaminated soil for the project is vastly underestimated. However, the properties of Therminol and the record of its use at a comparable project, Solar Electric Generating Stations 8 and 9 at Harper Lake, California, have been reviewed and assessed. Past leaks, spills and fires involving HTF were examined and discussed in preparation of this PA/FEIS (CEC, 2010). Most leaks in existing solar power plants release very small amounts of HTF. The results of the assessment indicated that the placement of additional isolation valves in the HTF pipe loops throughout the solar array, as would be required through the implementation of Mitigation Measure HAZ-4, would substantially add to the safety and operational integrity of the entire system and prevent large quantity spills of HTF.

Benzene. Therminol breaks down when heated to the temperatures associated with a solar energy generation system and, consequently, emit Volatile Organic Compounds (VOCs) that contain toxic HTF decomposition products, which include benzene. Impacts of the release of these decompositions products are addressed in PA/FEIS Section 4.11.2, *Hazardous Materials* (see, e.g., 4.11.2.2, *Discussion of Direct and Indirect Impacts*). A health risk assessment was prepared for the project based on 137 pounds of VOC emissions per MW per year. Because benzene is the most toxic of the potential breakdown products as well as the most likely compound to be emitted due to

³ The maximum amount that could be lost if a catastrophic break in a HTF pipe in the solar field were to occur is calculated based on engineering and efficiency factors provided by the Applicant, including the size of the solar array pipe loops as well as an effort to avoid placing too many valves in the pipes, since valves create friction and turbulence that could disrupt the flow of the HTF.

its chemistry, the operational health risk assessment conservatively assumed that 99% of the increase in VOC emissions would be comprised of benzene to ensure that the health risk estimates were not underestimated. Health risks to workers resulting from exposure to benzene and other HTF constituent elements were found to be below significance thresholds. Thus, mitigation for these effects is not required. However, implementation of Mitigation Measure WORKER SAFETY-2 would minimize workers' exposure to HTF constituent elements and ensure proper handling of those elements. Plans implemented under Mitigation Measure HAZ-2 also would be provided to Riverside County of Environmental Health and Riverside County Fire Department.

The SA/DEIS and PA/FEIS recognize that HTF, including benzene and other breakdown products, could contaminate soil and groundwater. For example, the proposed action has included at least one on-site land treatment unit to bioremediate or land farm soil contaminated from releases of HTF since it was proposed (as analyzed in the PA/FEIS, it includes two LTUs). Each LTU would be designed in accordance with Colorado River Basin Regional Water Quality Control Board (RWQCB) requirements, which adequately would address water quality concerns, and the California Department of Toxic Substance Control (DTSC) would require site-specific data to provide/confirm a classification of the waste resulting from the LTUs. As required under WASTE-8, samples of HTF-contaminated "shall be analyzed in accordance with USEPA Method 8015 or other method to be reviewed and approved by DTSC" (emphasis added). This recommended mitigation measure, which honors DTSC's expertise over the subject matter, ensures that the appropriate analytical methodology would be required.

Waste Classification. Pursuant to Mitigation Measure WASTE-7, the approved Operation Waste Management Plan would identify waste testing methods for the project to ensure correct classification of contaminants. The threshold for hazardous contamination of soil with HTF is determined on a case-by-case basis by DTSC. Such determinations typically are based on site conditions as well as a historical pattern of HTF discharges at the site. In the absence of a historical pattern of HTF discharges at the site, it is assumed that HTF-contaminated soils with concentrations $\geq 10,000$ milligrams of HTF per kilogram of soil would be considered hazardous. This is based on the 1995 DTSC determination that a 10,000 milligram per kilogram concentration of HTF would be assumed hazardous for the SEGS III-VI at Kramer Junction project. This determination, however, is subject to change once a history of discharges has been established. At that time the Applicant would petition DTSC for its concurrence on a standardized waste classification for HTF contaminated soils generated at the facility (22 CCR 66260.200(d)). Section 66260.200(f) of Title 22 of the California Code of Regulations places the responsibility of determining whether a waste must be classified as hazardous on the generator of that waste. Therefore, the project owner would have the duty to assess the waste classification for HTF-impacted soils at the project facility in consultation with the Energy Commission, BLM, DTSC and the RWQCB.

5.5.3 Individual Responses

NEPA requires all substantive comments - whether environmental or procedural in nature - to be addressed and attached to the Final EIS (40 CFR 1503.4(b)). This section 5.5.3 provides a response to each of the individual comments received on the SA/DEIS. Where a comment is addressed as part of a Common Response, the individual response provided in this section refers the reader to the applicable Common Response in PA/FEIS Section 5.5.2.

5.5.3.1 Letter 1 – Responses to Comments from Joshua Tree National Park

- 1-01 The BLM acknowledges and appreciates the comment.
- 1-02 BLM appreciates the Park Service's support in connection with the proposed action.
- 1-03 Pursuant to Section 6.9.2.1 of BLM's NEPA Handbook, this comment does not meet the criteria for a substantive comment; consequently, BLM is unable to provide a substantive response.
- 1-04 See Response to Comment 1-03.
- 1-05 Cumulative impacts to water resources, including those relating to groundwater extraction, are analyzed in PA/FEIS Section 4.19.3, *Cumulative Impacts*. See also, Common Response 5.5.2.10. Impacts to scenic views and other aesthetic resources are analyzed in Section 4.18, *Impacts on Visual Resources*. As shown by a comparison of Section 4.18.3 (relating to visual resources) and Section 4.19.3 (relating to water resources), the geographic scope of the cumulative effects analysis varies by resource: for visual resources, it consists of potential shared viewsheds along the I-10 corridor (where visual impacts could be synergistic) and locations from which a viewer could see the proposed action along with views of other projects (where visual impacts could be additive). See also PA/FEIS Figure 3.19-3, *Project Study Area and Viewshed*. While there is some cross-over with the watershed boundary, the viewshed boundary and watershed boundary are not coterminous. Impacts of the project on park visitors' experiences are addressed in Section 4.18, *Impacts on Visual Resources*.
- 1-06 Quantification of impacts is provided in the PA/FEIS where possible to avoid the use of more subjective terms. Where quantification is not possible, qualitative analysis is provided. Since the term "significant" has different meanings under NEPA and CEQA, the BLM recognizes that some confusion may have arisen in the SA/DEIS, which was prepared jointly under NEPA and CEQA, and has endeavored to correct this in the PA/FEIS, which was prepared under NEPA alone. For example, "significance criteria" are a creature of CEQA. By comparison, under NEPA, significance is defined in terms of context and intensity (40 CFR 1502.2). To help agency decision-makers and members of the public understand how a resource or issue will be affected, the analysis in PA/FEIS Chapter 4, *Environmental Consequences* focuses on the context, intensity and duration of the effects

most likely to result from implementation of the project. For specifics about the analysis in the PA/FEIS of impacts to Water Resources, see Common Response 5.5.2.10.

- 1-07 Reference to “a significant percentage of the total amount of groundwater in storage” has been removed in this PA/FEIS.
- 1-08 See Common Response 5.5.2.10.
- 1-09 See Common Response 5.5.2.2.
- 1-10 Whether the incremental impact of a project will be “cumulatively considerable” is a State-law specific CEQA consideration evaluated by the Energy Commission for the project. Because such conclusions are not contemplated in the NEPA context, the BLM has removed references to “cumulatively considerable” and “less than cumulatively considerable” throughout the PA/FEIS.
- 1-11 See Common Response 5.5.2.10.
- 1-12 See Common Response 5.5.2.10.
- 1-13 See Common Response 5.5.2.10.
- 1-14 See Common Response 5.5.2.10.
- 1-15 Additional discussion about individual and cumulative impacts to groundwater levels has been provided in PA/FEIS Section 4.19, *Impacts on Water Resources*. See also, Common Response 5.5.2.10.
- 1-16 See Common Response 5.5.2.10.
- 1-17 See Common Response 5.5.2.10.
- 1-18 The adequacy of recommended mitigation measures to control fugitive dust are addressed in PA/FEIS Section 4.2, *Impacts on Air Resources*, and in Common Response 5.5.2.9, *Air Quality*.
- 1-19 See Response to Comment 1-18, including Common Response 5.5.2.9.
- 1-20 PA/FEIS Section 4.18, *Impacts on Visual Resources*, analyzes project-related impacts associated with fugitive dust, including cumulative impacts and impacts on park visitors. The Chuckwalla Valley is naturally an area of active wind erosion and sand transport, and the project will disrupt active transport of sand by wind through placement of wind fences and wind interference by project facilities (e.g. “wind shadow effect”). The effect could cause areas on the windward side of the project to experience additional sand deposition, and areas on the leeward side to experience additional erosion. The presence of the project disrupts active sand transport, but would not substantially add to the total

amount of visible dust on windy days, especially as seen from Joshua Tree National Park. See Response to Comment 1-21 addressing the project's visibility from park areas.

- 1-21 The current viewshed is described in PA/FEIS Section 3.19, *Visual Resources*. Potential visual impacts of the project from Joshua Tree National Park is discussed in PA/FEIS Section 4.18, *Impacts on Visual Resources*. Several figures referenced in that section illustrate the visual disturbance resulting from the project. For example, PA/FEIS Figure 3.19-3 shows the viewshed affected by the project along with an overlay illustrating the boundaries of Joshua Tree National Park. In addition, PA/FEIS Figures 4.18-6 and 4.18-7 simulate the project in views along the boundary of the park, at the foot of the Coxcomb Mountains. The analysis concludes that the visual impact viewed by Joshua Tree National Park visitors would be minor because (1) the areas of the park from which the project would be visible is limited, (2) where visible, the project would lie in the distant background and constitute a small portion of any scenic overlooks, and (3) the eastern portions of the park lack visitor-serving facilities and appear to be seldom visited.
- 1-22 Impacts associated with nighttime lighting are evaluated in PA/FEIS Section 4.18, *Impacts on Visual Resources*. The agencies concluded in the SA/DEIS that night lighting impacts could be addressed adequately through the implementation of mitigation measure VIS-3. No further mitigation measures are recommended in the PA/FEIS to address impacts related to nighttime lighting.
- 1-23 See Common Response 5.5.2.7.
- 1-24 See Response to Comment 1-03.

5.5.3.2 Letter 2 – Responses to Comments from Brendan Hughes

- 2-01 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), comments like this one, which merely express favor for an alternative without providing additional data or information relevant to the environmental analysis, do not meet the criteria necessary for a “substantive comment” to which a response is merited.
- 2-02 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.
- 2-03 See Response to Comment 2-02. Nonetheless, PA/FEIS Section 4.18.5 acknowledges that the project would have a residual impact to visual resources after implementation of the recommended mitigation measures.
- 2-04 See Response to Comment 2-02; nonetheless, Common Response 5.5.2.5 responds to comments concerning alternatives.
- 2-05 See Response to Comment 2-02; nonetheless, Common Response 5.5.2.7 addresses comments concerning biological resources.

- 2-06 See Response to Comment 2-05.
- 2-07 See Response to Comment 2-05.
- 2-08 See Response to Comment 2-05.
- 2-09 Impacts of the proposed action and alternatives to visual resources as it relates to visitors' experiences (including from Joshua Tree National Park and other key observation points) are analyzed in PA/FEIS Section 4.18, *Impacts on Visual Resources*. As indicated in PA/FEIS Section 4.18.6, the project would cause the following unavoidable adverse impacts: (i) visual impacts to surrounding viewer groups (all KOPs) from sunlight reflected off of the parabolic mirrors (glare); (ii) visual impacts due to the general level of visual contrast of the project in the landscape, and non-conformance with Interim VRM Class III objectives; and (iii) unavoidable and adverse cumulative impacts for travelers along I-10 and dispersed recreational users in the McCoy, Big Maria, and Little Maria Mountains and wilderness.
- 2-10 The CEC approved the project on December 15, 2010. Comments recommending that the CEC take one course or another in connection with this project are moot. Concerning comments about alternatives considered by the BLM, see Common Response 5.5.2.5.
- 2-11 See Response to Comment 2-01.

5.5.3.3 Letter 3 – Responses to Comments from Center for Biological Diversity

- 3-01 Climate change and greenhouse gas emissions are addressed in PA/FEIS Section 3.3, *Global Climate Change*, and Section 4.3, *Impacts on Global Climate Change*. Concerning biological resources, see Common Response 5.5.2.7.
- 3-02 Components of the proposed action and connected actions identified in the comment are described in PA/FEIS Chapter 2, *Proposed Action and Alternatives*. The biological resources that comprise the affected environment (including those mentioned in the comment) are discussed in Section 3.18, *Vegetation Resources*, and Section 3.23, *Wildlife Resources*. Direct, indirect and cumulative impacts on such resources are analyzed in PA/FEIS Section 4.17, *Impacts on Vegetation Resources*, Section 4.21, *Impacts on Wildlife Resources*, and Appendix I, *Biological Resource-related Cumulative Impacts*. See also, Common Response 5.5.2.7. The reasonableness of the range of alternatives considered in the PA/FEIS is addressed in Common Response 5.5.2.5.
- 3-03 See Common Response 5.5.2.1.
- 3-04 See Common Response 5.5.2.5. Final decisions regarding the status of lands within the application area of the project will be determined in the ROD.
- 3-05 See Common Response 5.5.2.5.

- 3-06 The relationship between proposed action and the Solar PEIS as well as with existing land use plans is discussed in PA/FEIS Section 1.3, *Relationship of Proposed Action to BLM Policies, Plans, and Programs, and LUP Conformance Determination*, and in Common Response 5.5.2.1.
- 3-07 Concerning supplementation/recirculation, see Common Response 5.5.2.6. Concerning the range of alternatives analyzed in the PA/FEIS, see Common Response 5.5.2.5.
- 3-08 Comments concerning each of these resource and issue areas identified in this comment will be addressed as they are presented in the letter.
- 3-09 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, the BLM's Administrative Record contains all of the materials relied upon by the BLM in considering whether to approve the requested right of way.
- 3-10 Information about the proposed CDCA Plan Amendment is provided in PA/FEIS Section 1.3.2, *Land Use Plan Conformance and Consistency*, including a description of the CDCA Plan, an explanation of the need for a CDCA Plan Amendment, statement of the proposed Plan Amendment, description of the plan amendment process, and the criteria that the BLM will evaluate as part of its decision-making process. See also, Common Response 5.5.2.1.
- 3-11 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), comments like this one, which do not question, with reasonable basis, the accuracy or adequacy of information in the EIS, present new information relevant to the analysis or reasonable alternatives that were not considered and do not cause changes or revisions in any of the alternatives, do not meet the criteria necessary for a "substantive comment" to which a response is merited. Nonetheless, no NECO Plan amendments are proposed as part of the proposed action or any of the alternatives. See the Northern and Eastern Colorado Desert Coordinated Management Plan (NECO Plan) subsection of Common Response 5.5.2.1.
- 3-12 Concerning the relationship between the proposed action and existing, applicable land use planning documents, see Common Response 5.5.2.1.
- 3-13 See Response to Comment 3-11.
- 3-14 See Response to Comment 3-11.
- 3-15 See Response to Comment 3-11.
- 3-16 See Response to Comment 3-11.
- 3-17 See Response to Comment 3-11.

- 3-18 See Response to Comment 3-11.
- 3-19 See Response to Comment 3-11.
- 3-20 See Response to Comment 3-11.
- 3-21 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.
- 3-22 See Response to Comment 3-21.
- 3-23 See Response to Comment 3-21.
- 3-24 See Response to Comment 3-21.
- 3-25 See Response to Comment 3-11.
- 3-26 See Common Response 5.5.2.1 and Common Response 5.5.2.2.
- 3-27 Concerning consistency with the CDCA Plan, see Common Response 5.5.2.1. Concerning consistency with NEPA, see Common Response 5.5.2.2. Comments concerning the reasonableness of the range of alternatives considered in the PA/FEIS are addressed in Common Response 5.5.2.5.
- 3-28 A Land Use Plan Amendment consistency analysis is provided in PA/FEIS Section 4.8.7. See also Common Response 5.5.2.1.
- 3-29 See Common Response 5.5.2.1.
- 3-30 As noted in Response to Comment 3-28, a Land Use Plan Amendment consistency analysis is provided in PA/FEIS Section 4.8.7. Concerning consistency with FLPMA, see Common Response 5.5.2.2. Impacts concerning sand transport corridors, dunes and related habitat values (as well as other biological resources issues), are addressed in Common Response 5.5.2.7.
- 3-31 Off-highway vehicle (OHV) use in the NECO portion of the CDCA is described and analyzed in PA/FEIS Section 3.17, *Transportation and Public Access*, and Section 4.16, *Impacts on Transportation and Public Access*. Unauthorized OHV travel is a law enforcement issue monitored by BLM law enforcement officers.
- 3-32 Connected actions are described in PA/FEIS Section 2.3, *Connected Actions*. Related impacts are analyzed in Section 4.1.7, *Incorporation of the Analysis of the Red Bluff Substation Project by Reference*, and, for the transmission line relocation, throughout Chapter 4, *Environmental Consequences*. The cumulative scenario, which includes the Solar PEIS, is described in PA/FEIS Section 4.1.1.

- 3-33 Construction of a new gen-tie line and construction of the proposed Red Bluff Substation are identified in PA/FEIS Section 2.3, *Connected Actions*, as connected actions. As noted in the Response to Comment 3-32, impacts associated with the connected actions are analyzed in the PA/FEIS. Concerning components of the Red Bluff Substation Project, see PA/FEIS Section 2.3, *Connected Actions*, and Section 4.1.7, *Incorporation of the Analysis of the Red Bluff Substation Project by Reference*. Concerning consistency with master plans (specifically Solar PEIS), see PA/FEIS Section 1.3.1 and Common Response 5.5.2.1. The BLM is not “piecemealing” its compliance with NEPA, but rather is engaged in staged decision making. The unavailability of data regarding the connected actions identified by the commenter and the draft status of the Solar PEIS combine to render staged decision making and NEPA analysis for these components the most effective approach. Appropriate NEPA analysis will accompany each stage of the decision making.
- 3-34 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see Common Response 5.5.2.2 concerning consistency with FLPMA, and Common Response 5.5.2.3 concerning the adequacy of data relied upon in the PA/FEIS.
- 3-35 Concerning consistency with NEPA and FLPMA, see Common Response 5.5.2.2; concerning the adequacy of data relied upon, see Common Response 5.5.2.3; concerning supplementation/recirculation, see Common Response 5.5.2.6. Concerning environmental analysis of the Red Bluff Substation proposed by Southern California Edison, see Response to Comment 3-33.
- 3-36 See Common Response 5.5.2.6.
- 3-37 Concerning consistency with existing land use plans, see Common Response 5.5.2.1; comments concerning consistency with FLMA are addressed in Common Response 5.5.2.2; comments concerning the adequacy of data relied upon are addressed in Common Response 5.5.2.3. Impacts of the proposed action and alternatives on resources and issues are analyzed throughout PA/FEIS Chapter 4, *Environmental Consequences*. The Environmental Setting in Chapter 3, *Affected Environment*, identifies the existing conditions of the project area and therefore acts as the inventory of the resources for analysis.
- 3-38 Concerning adequacy of data relied upon, see Common Response 5.5.2.3. Concerning supplementation/recirculation, see Common Response 5.5.2.6. The comment provides no basis to conclude that any information or data that is unavailable or that will be developed in accordance with the recommended mitigation measures is “essential for a reasoned choice among alternatives.” Further, the PA/FEIS does assume a worst case scenario when necessary information is lacking or uncertainty remains. See, for example, Section 4.19.4, which recommends mitigation measures the implementation of which would entirely avoid adverse impacts on the Colorado River even though evidence indicates that wells drawing groundwater for project use would not induce flow from the

- Colorado River. See also Common Response 5.5.2.12, which explains that the health risk assessment prepared for the project conservatively assumes that 99% of the increase in VOC emissions would be comprised of benzene, which is the most toxic of the potential breakdown products to ensure that the health risk estimates were not underestimated.
- 3-39 Comments concerning the purpose and need are addressed in Common Response 5.5.2.4.
- 3-40 Comments concerning the purpose and need are addressed in Common Response 5.5.2.4. Compliance with NEPA is addressed in Common Response 5.5.2.2.
- 3-41 Global climate change and greenhouse gas emissions are addressed in PA/FEIS Section 3.3, *Global Climate Change*, and Section 4.3, *Impacts on Global Climate Change*, as well as in Common Response 5.5.2.8. Concerning biological resources and direct, indirect and cumulative impacts on them, see PA/FEIS Sections 3.18, *Vegetation Resources*; 3.23, *Wildlife Resources*; 4.17 *Impacts on Vegetation Resources*; and 4.21, *Impacts on Wildlife Resources*; see also, PA/FEIS Appendix I and Common Response 5.5.2.7.
- 3-42 Baseline (pre-project) conditions are described for all resource and issue areas in PA/FEIS Chapter 3, *Affected Environment*. See, e.g., PA/FEIS Section 3.18, *Vegetation Resources*, which discusses stabilized and partially stabilized desert dunes, which provide unique habitats that often support rare plants such as Harwood's milk-vetch (a rare plant), and Section 3.23, *Wildlife Resources*, which discusses the range and habitat of the golden eagle. Concerning adequacy of data relied upon, see Common Response 5.5.2.3. Concerning supplementation and recirculation, see Common Response 5.5.2.6. Concerning biological resources (plant and wildlife surveys, specifically), see Common Response 5.5.2.7.
- 3-43 See Common Response 5.5.2.3.
- 3-44 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. As a fundamental matter, the BLM notes that the Applicant is entitled to a presumption of compliance with applicable law and would be subject to enforcement for breach of its legal obligations in connection with implementation of the proposed action. Accordingly, it is not necessary to affirmatively establish compliance with LORS in the PA/FEIS. Supplementation/recirculation of an EIS is not required under these circumstances.
- 3-45 The PA/FEIS relies on the most current data and other information available as of the time of its drafting, including Spring 2010 special status plant survey results that were completed subsequent to the SA/DEIS. Comments concerning the adequacy of the data relied upon in the PA/FEIS, see Common Response 5.5.2.3.
- 3-46 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, PA/FEIS Section 4.21, *Impacts on Wildlife Resources*, identifies three Multi-Species WHMAs located in the general Project vicinity:

- Big Maria Mountains WHMA, Palen-Ford WHMA, and the DWMA Continuity WHMA (which provides connectivity between the Chuckwalla DWMA/ACEC south of I-10 and the Palen-Ford WHMA north of I-10 in the immediate Project vicinity). It further acknowledges that the proposed action could impede wildlife movement in these corridors and obstruct connectivity for wide ranging wildlife such as burro deer, kit fox, coyotes, and badgers, and on a population level could impede gene flow for desert tortoises. Impacts relating to these areas also are analyzed in PA/FEIS Section 4.17, *Impacts on Vegetation*.
- 3-47 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment.
- 3-48 See Common Response 5.5.2.7.
- 3-49 Concerning issues relating to the Tortoise Relocation/Translocation Plan required by BIO-10, see Common Response 5.5.2.3 and Common Response 5.5.2.7.
- 3-50 Concerning consistency with NEPA, see Common Response 5.5.2.2. Concerning the analysis of impacts to desert tortoise and the mitigation measures recommended to address such impacts, see PA/FEIS Section 4.21, *Impacts on Wildlife Resources*, and Appendix I as well as Common Response 5.5.2.7.
- 3-51 See Common Response 5.5.2.7.
- 3-52 See Response to Comment 3-49.
- 3-53 As explained in Section 6.8.4 of the BLM's NEPA Handbook, mitigation measures are measures that could reduce or avoid adverse impacts of a proposed action. As defined in the CEQ regulations (40 CFR 1508.20), mitigation measures can be recommended to avoid an impact altogether by not taking a certain action or parts of an action; minimize an impact by limiting the degree of magnitude of the action and its implementation; rectify an impact by repairing, rehabilitation, or restoring the affected environment; reduce or eliminate an impact over time through preservation and maintenance operations during the life of the action; or compensate for an impact by replacing or providing substitute resources or environments. Existing conditions relating to the absence of bighorn sheep and connectivity are not an impact of the proposed action for which it would be appropriate to recommend that mitigation measures be implemented. Further, as discussed in PA/FEIS Section 4.21, *Impacts on Wildlife Resources*, and Appendix I (relating to cumulative impacts), the project would not directly affect habitat within any NECO connectivity corridors or WHMAs, and would not conflict with Desert Bighorn Sheep Conservation goals and objectives outlined in the NECO. In addition, the project site does not represent large direct or indirect impacts to bighorn sheep habitat connectivity or foraging. See also, Common Response 5.5.2.7.
- 3-54 Concerning impacts of the proposed action and alternatives related to the sand transport corridor, sand dune habitat and the Mojave fringe-toed lizard, see PA/FEIS Sections 3.15

- and 4.14 (regarding soil resources), PA/FEIS Sections 3.18 and 4.17 (regarding vegetation and habitats), PA/FEIS Sections 3.23 and 4.21 (regarding wildlife resources) and Appendix I (regarding cumulative impacts to biological resources). See also Common Response 5.5.2.7.
- 3-55 See Common Response 5.5.2.7.
- 3-56 See Common Response 5.5.2.7.
- 3-57 Comments concerning the adequacy of data relied upon are addressed in Common Response 5.5.2.3. Concerning supplementation/recirculation, see Common Response 5.5.2.6.
- 3-58 Concerning adequacy of data relied upon, see Common Response 5.5.2.3. Concerning avian species in the affected environment and impacts to such species (including from collision and electrocution), see PA/FEIS Sections 3.23 and 4.21 and Appendix I. See also, Common Response 5.5.2.7. Concerning consistency with NEPA, see Common Response 5.5.2.2. Concerning consistency with other laws and the Applicant's entitlement to a presumption of compliance, see Response to Comment 3-44.
- 3-59 The proposed evaporation ponds are described in PA/FEIS Chapter 2, *Proposed Action and Alternatives*. Evaporation pond-related impacts to wildlife species are analyzed in PA/FEIS Section 4.21, *Impacts on Wildlife Resources*, and Appendix I; such impacts to aviation safety are addressed in PA/FEIS Section 4.11.7, *Traffic and Transportation Safety*.
- 3-60 See Response to Comment 3-59.
- 3-61 The requirements of Executive Order 13186 are described in PA/FEIS Appendix C, *Applicable Laws, Regulations, Policies, Executive Orders*. Concerning the Applicant's entitlement to a presumption of compliance with applicable laws, see Response to Comment 3-44. Migratory birds and impacts of the proposed action and alternatives on such species are addressed in Common Response 5.5.2.7, *Biological Resources*. Supplementation and recirculation are addressed in Common Response 5.5.2.6; however supplementation is not required under the circumstances suggested by this comment.
- 3-62 See Common Response 5.5.2.7, *Biological Resources*.
- 3-63 See Common Response 5.5.2.7, *Biological Resources*, and Common Response 5.5.2.3, *Adequacy of Data Relied Upon*.
- 3-64 See Common Response 5.5.2.7, *Biological Resources*.
- 3-65 See Common Response 5.5.2.7, *Biological Resources*.

- 3-66 Site soils are described in PA/FEIS Section 3.15, *Soils Resources*, and analyzed in Section 4.14, *Impacts on Soils Resources*. Desert ecosystems and impacts to them are described in PA/FEIS Sections 3.18 and 4.17 (vegetation resources), Sections 3.23 and 4.21 (wildlife resources) and Appendix I.
- 3-67 Air impacts, including fugitive dust control, are analyzed in PA/FEIS Section 4.2, *Impacts on Air Resources*. See also, Common Response 5.5.2.9.
- 3-68 Sand transport corridors and dune habitats and ecosystems are described and analyzed in PA/FEIS Sections 3.18 and 4.17 (vegetation resources), Sections 3.23 and 4.21 (wildlife resources) and Appendix I. See, for example, PA/FEIS Section 4.17.2, which considers the direct and indirect impacts of the proposed action on sand dunes and sand dune-dependent insect species, as well as PA/FEIS Section 4.21.2, which considers the impacts of nighttime lighting on insects. Concerning biological resources, see Common Response 5.5.2.7.
- 3-69 BLM's financial guarantee requirements (43 CFR 3809.500-3809.551) are independent of its environmental review requirements; information about the bond will be provided with the Record of Decision for the proposed action. Concerning the adequacy of the information relied on in the PA/FEIS, see Common Response 5.5.2.3, *Adequacy of Data Relied Upon*; comments related to supplementation/recirculation are addressed in Common Response 5.5.2.6, *Supplementation/Recirculation*.
- 3-70 Fire in desert ecosystems is addressed in various sections of the PA/FEIS, including Sections 3.22, *Wildland Fire Ecology*; 4.17, *Impacts on Vegetation Resources*; and 4.20, *Impacts on Wildland Fire Ecology*. Fire prevention also is addressed in PA/FEIS Section 4.11.8, *Worker Safety and Fire Protection*. Fire risks would be addressed, for example, by implementation of BIO-14, *Weed Management Plan*, TLSN-3, *Transmission Line Distance from Combustible Material*, and by the Construction Fire Prevention Plan that would be required as part of WORKER SAFETY-1. The full text of these mitigation measures is set forth in PA/FEIS Appendix B.
- 3-71 Detailed discussions of mitigation measures are provided throughout PA/FEIS Chapter 4, *Environmental Consequences*, and in Appendix B. Where the implementation of mitigation measures is expected to avoid impacts, the discussion so states (see, e.g., PA/FEIS Section 4.19.4 in connection with SOIL&WATER-14, SOIL&WATER-15 and SOIL&WATER-18). Alternatively, where adverse conditions are expected to remain after recommended mitigation measures are implemented, this too is explained (see, e.g., 4.19.5 regarding water quality and drainage and flooding). Concerning consistency with NEPA generally, see Common Response 5.5.2.2, *Consistency of the PA/FEIS with NEPA and FLPMA*.
- 3-72 See Common Response 5.5.2.3, *Adequacy of the Data Relied Upon*; Common Response 5.5.2.6, *Supplementation/Recirculation*; and Common Response 5.5.2.2, *Consistency with NEPA*.

- 3-73 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see PA/FEIS Sections 3.15 and 4.14 concerning soil resources and PA/FEIS Sections 4.17 and 4.21 concerning sand transport. See also, Common Response 5.5.2.10, *Water Resources*.
- 3-74 See Common Response 5.5.2.10, *Water Resources*.
- 3-75 See Common Response 5.5.2.10, *Water Resources*.
- 3-76 The Secretary of the Department of the Interior and other officers of the United States are directed by the California Desert Protection Act (§ 410aaa-76(b)) to take all steps necessary to protect the water rights reserved for wilderness areas, including those identified in the comment. As analyzed in PA/FEIS Section 4.19, *Impacts on Water Resources*, and discussed in Common Response 5.5.2.10, *Water Resources*, the BLM is taking necessary steps to protect groundwater levels.
- 3-77 As noted in the comment, no express reservation of water rights has been made under Public Water Reserve 107 in connection with any of the public lands in the CDCA. Because no waters in the project area come within the ambit of this law, the proposed action would have no effect on water rights reserved under it. Public Water Reserve 107 does not provide for the reservation of water rights without some affirmative act to initiate the reservation: federal water rights are not reserved merely because water is present on federal lands. Additionally, PWR 107 is really reflective of the need to allow for surface water flow, not particular to ground water. As indicated in PA/FEIS Section 4.19.5, a relatively minor degree of residual groundwater level reduction would occur as a result of the project even with the implementation of recommended mitigation measures. Nonetheless, the proposed action would not cause an unavoidable adverse impact on water supplies (see PA/FEIS Section 4.19.6). See also, Common Response 5.5.2.10, *Water Resources*.
- 3-78 The PA/FEIS analyzed impacts of the proposed action and alternatives, including how the incremental impacts of the project could combine with the incremental impacts of other projects in the cumulative scenario. The geographic area evaluated for this purpose consisted of the Chuckwalla Valley Groundwater Basin (CVGB), where various project impacts' impacts to groundwater could be additive, synergistic or countervailing, and, for surface waters, the area within the watershed boundary. See also, Common Response 5.5.2.10.
- 3-79 The ROW grant applicant under the BLM's consideration does not provide for the creation or alienation of, in the words of the commenter, "any potential water rights that could arguably be created from use of groundwater by the proposed project" within the ROW. There is insufficient detail about a potential right that someone may argue could be created to allow for meaningful evaluation in the PA/FEIS of any environmental impacts that could flow from that affected right. Such an analysis would require unreasonable forecasting. See also, Common Response 5.5.2.10, *Water Resources*.

- 3-80 As stated in PA/FEIS Section 5.1.2, the evaluation for jurisdictional waters that was performed on the site determined that the ephemeral drainages did not conform to the requirements for designation as jurisdictional waters of the U.S., and discussions with the USACOE indicated that the drainages would not be considered jurisdictional waters of the U.S. The indicated reference to laws, ordinances, regulations, and standards has been removed from the PA/FEIS.
- 3-81 See Common Response 5.5.2.8, *Climate Change/Greenhouse Gases*.
- 3-82 See Common Response 5.5.2.8, *Climate Change/Greenhouse Gases*.
- 3-83 See Common Response 5.5.2.9, *Climate Change/Greenhouse Gases*.
- 3-84 See Common Response 5.5.2.8, *Climate Change/Greenhouse Gases*.
- 3-85 See Common Response 5.5.2.8, *Climate Change/Greenhouse Gases*.
- 3-86 See Common Response 5.5.2.2 concerning consistency of the PA/FEIS with NEPA; see also, Common Response 5.5.2.3 concerning the adequacy of the data relied upon, including data about plant communities.
- 3-87 The comment does not suggest how the analysis fails to consider reasonably foreseeable impacts in the context of the cumulative impacts analysis, thereby depriving the BLM of any particular basis to respond. As indicated in Common Response 5.5.2.2, *Consistency of the PA/FEIS with NEPA and FLPMA*, the PA/FEIS considers cumulative impacts on a resource by resource basis, within geographic areas appropriately tailored to each, throughout Chapter 4, *Environmental Consequences*. The BLM believes this analysis to be adequate under NEPA.
- 3-88 The comment provides no reasonable basis to question the adequacy of, methodology for, or assumptions used for the analysis of impacts to the identified resources. Direct, indirect and cumulative impacts on biological resources are discussed and analyzed in PA/FEIS Sections 3.18 and 4.17 (vegetation), 3.23 and 4.21 (wildlife resources), 3.15 and 4.14 (soils, including dune ecosystems), and Appendix I. Concerning consistency with NEPA, see Common Response 5.5.2.2, *Consistency of the PA/FEIS with NEPA and FLPMA*,. Concerning adequacy of data relied upon, see Common Response 5.5.2.3.
- 3-89 Concerning the purpose and need, see Common Response 5.5.2.4, *Purpose and Need*. Concerning the adequacy of the range of alternatives, see Common Response 5.5.2.5, *Alternatives*.
- 3-90 See Common Response 5.5.2.5, *Alternatives*.
- 3-91 See Common Response 5.5.2.5, *Alternatives*.
- 3-92 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, see Common Response 5.5.2.5, *Alternatives*.

- 3-93 See Common Response 5.5.2.5, *Alternatives*.
- 3-94 See Common Response 5.5.2.5, *Alternatives*.
- 3-95 Off-site alternatives and alternatives that would reduce impacts to dune ecosystems and other biological resources are analyzed in the PA/FEIS (see Common Response 5.5.2.7, *Biological Resources*). Concerning the range of alternatives considered, see Common Response 5.5.2.5, *Alternatives*. Supplementation/recirculation is not required under the circumstances presented in this comment (see Common Response 5.5.2.6, *Supplementation/Recirculation*).
- 3-96 Comments about purpose and need are addressed in Common Response 5.5.2.4, *Purpose and Need*. Comments about the range of alternatives considered are addressed in Common Response 5.5.2.5, *Alternatives*.
- 3-97 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook, this is not a substantive comment.
- 3-98 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook, this is not a substantive comment. Nonetheless, concerning supplementation/recirculation, see Common Response 5.5.2.6, *Supplementation/Recirculation*.

5.5.3.4 Letter 4 – Responses to Comments from California/Nevada Desert Energy Committee of the Sierra Club (Sierra Club)

- 4-01 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook, this is not a substantive comment. Nonetheless, comments about the range of alternatives considered, including off-site alternatives, are addressed in Common Response 5.5.2.5, *Alternatives*.
- 4-02 The affected environment is described on a resource-by-resource basis in Chapter 3, *Affected Environment* (see, e.g., PA/FEIS Section 3.18, *Vegetation Resources*, which describes natural communities on the site and in the project area, including the sand transport system). Impacts of the proposed action and alternatives are analyzed throughout Chapter 4, *Environmental Consequences* (see, e.g., 4.21, *Wildlife Resources*, which evaluates impacts on movement and habitat connectivity of desert tortoise and other wildlife. See also, Common Response 5.5.2.7, *Biological Resources*. The comment provides no reasonable basis to question the accuracy of information in the EIS or the adequacy of, methodology for, or assumptions used for the analysis of impacts.
- 4-03 Comments concerning consistency of the PA/FEIS with NEPA are addressed in Common Response 5.5.2.2, *Consistency of the PA/FEIS with NEPA and FLPMA*; concerning alternatives, see Common Response 5.5.2.5, *Alternatives*. Comments concerning the adequacy of the data relied upon are addressed in Common Response 5.5.2.3, *Adequacy of Data Relied Upon*. Direct, indirect and cumulative impacts to species (including the desert tortoise, and Mojave fringe-toed lizard) are discussed in Common Response

5.5.2.7, *Biological Resources*, and analyzed in PA/FEIS Sections 3.23, *Wildlife Resources*; 4.21, *Impacts on Wildlife Resources*, and Appendix I.

The PA/FEIS for the project provides no basis for the BLM to draw any conclusions or make any decisions concerning the Calico Project. Calico Solar LLC/Tessera Solar's proposed Calico Solar Project was approved last Fall. To the extent that the commenter's remaining comments relate to the Calico project, the BLM declines to respond to them because they are moot and because they are not substantive with respect to the proposed action (see Section 6.9.2.1 of the BLM NEPA Handbook). Because it appears from the citations provided in the letter that the commenter may have intended for the comments to relate to the project and not to the Calico project, the following responses are provided with respect to the project. Furthermore, comments relating specifically to CEQA are not addressed in this response because claimed deficiencies with respect to CEQA compliance are inapposite to the BLM's consideration of the proposed action.

- 4-04 Comments concerning the adequacy of data relied upon are addressed in Common Response 5.5.2.3, *Adequacy of Data Relied Upon*.
- 4-05 See Common Response 5.5.2.7, *Biological Resources*.
- 4-06 See Common Response 5.5.2.7, *Biological Resources*.
- 4-07 See Common Response 5.5.2.7, *Biological Resources*.
- 4-08 See Common Response 5.5.2.7, *Biological Resources*.
- 4-09 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook, this is not a substantive comment. Nonetheless, see Common Response 5.5.2.7, *Biological Resources*.
- 4-10 See Common Response 5.5.2.7, *Biological Resources*.
- 4-11 Comments concerning alternatives considered are addressed in Common Response 5.5.2.5, *Alternatives*. Concerning impacts to Mojave fringe-toed lizard and other wildlife resources, see PA/FEIS Sections 3.23, 4.21, Appendix I, and Common Response 5.5.2.7, each concerning wildlife resources and impacts to them.
- 4-12 See Response to Comment 4-11.
- 4-13 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook, this is not a substantive comment. Nonetheless, comments concerning alternatives are addressed in Common Response 5.5.2.5, *Alternatives*; supplementation and recirculation are addressed in Common Response 5.5.2.6, *Supplementation/Recirculation*.
- 4-14 Concerning adequacy of data relied upon, see Common Response 5.5.2.3, *Adequacy of Data Relied Upon*. Concerning biological resources such as the desert kit fox and American badger, see Common Response 5.5.2.7, *Biological Resources*.

- 4-15 See Common Response 5.5.2.3, *Adequacy of Data Relied Upon*, and 5.5.2.7, *Biological Resources*.
- 4-16 Comments about the cumulative impacts analysis and concerning consistency with NEPA generally are addressed in Common Response 5.5.2.2, *Consistency of the PA/FEIS with NEPA and FLPMA*. Concerning adequacy of data relied upon, see Common Response 5.5.2.3, *Adequacy of Data Relied Upon*.
- 4-17 See Response to Comment 4-16. Concerning cumulative impacts to biological resources, see PA/FEIS Sections 4.17 (*Vegetation Resources*), 4.21 (*Wildlife Resources*), Appendix I, and Common Response 5.5.2.7 (*Biological Resources*).
- 4-18 Concerning the adequacy of the data relied upon, see Common Response 5.5.2.3. Concerning consistency with NEPA and FLPMA, see Common Response 5.5.2.2. Concerning consistency with plans and policies (including the NECO Plan), see Common Response 5.5.2.1.
- 4-19 See Response to Comment 4-18 and Response to Comment 3-11.
- 4-20 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook, this is not a substantive comment.
- 4-21 Concerning alternatives, see Common Response 5.5.2.5. Concerning purpose and need, see Common Response 5.5.2.4.
- 4-22 See Common Response 5.5.2.4.
- 4-23 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook, this is not a substantive comment. Nonetheless, comments concerning consistency with NEPA and FLPMA are addressed in Common Response 5.5.2.2.
- 4-24 Comments concerning supplementation/recirculation are addressed in Common Response 5.5.2.6. Comments concerning consistency of the proposed action and alternatives with the CDCA Plan, NECO Plan and other plans are addressed in Common Response 5.5.2.1.
- 4-25 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook, this is not a substantive comment.

5.5.3.5 Letter 5 – Responses to Comments from The Wilderness Society

- 5-01 See Common Response 5.5.2.1.
- 5-02 See Common Response 5.5.2.1.

- 5-03 See Common Response 5.5.2.1 and, concerning the consistency of “fast track” review of the proposed action with NEPA, see Common Response 5.5.2.2. Furthermore, on February 8, 2011, Secretary Salazar announced multiple initiatives designed to encourage rapid and responsible development of renewable energy on public lands. This policy guidance provides clarity and guidance to stakeholders, including developers and agency employees, about smart siting and effective mitigation for renewable energy projects. See, for example, National Environmental Policy Act Compliance for Utility-Scale Renewable Energy Right-of-Way Authorizations (Instruction Memorandum 2011-59), Solar and Wind Energy Applications – Due Diligence (Instruction Memorandum 2011-60) and Solar and Wind Energy Applications – Pre-Application and Screening (Instruction Memorandum 2011-61).
- 5-04 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 5-05 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 5-06 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, see Common Response 5.5.2.7 (*Biological Resources*) and Common Response 5.5.2.10 (*Water Resources*).
- 5-07 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 5-08 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Regardless, the BLM has considered alternatives that would reduce impacts of the proposed action to the sand transport corridor and MFTL habitat. For example, Reconfigured Alternative 2 would reduce impacts to the sand dune habitat and the Mojave fringe-toed lizard in the northeastern portion of the site and reduce impacts to the sand transport corridor along the northern and northeastern portions of the site. See Figures 2-7 (reconfigured Alternative 2 Option 1) and 2-8 (Reconfigured Alternative 2 Option 2).
- 5-09 See Common Response 5.5.2.7.
- 5-10 See Common Responses 5.5.2.5 (*Alternatives*) and 5.5.2.7 (*Biological Resources*).
- 5-11 As explained in PA/FEIS Section 2.3, *Connected Actions*, the Red Bluff Substation and associated gen-tie proposed by Southern California Edison are connected actions and not a part of the proposed action. Analysis of environmental impacts of the Red Bluff Substation Project are analyzed in Appendix E.
- 5-12 See Common Response 5.5.2.10.
- 5-13 See Common Response 5.5.2.11.
- 5-14 See Common Response 5.5.2.11.

- 5-15 The NHPA Section 106 process for the PSPP concluded when a PA was entered into for the project on September 21, 2010. See Common Response 5.5.2.11.
- 5-16 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook, this is not a substantive comment. Nonetheless, comments concerning consistency with NEPA are addressed in Common Response 5.5.2.2; comments concerning the purpose and need for the proposed action are addressed in Common Response 5.5.2.4; and comments concerning the alternatives considered are addressed in Common Response 5.5.2.5.
- 5-17 Concerning adequacy of data relied upon, see Common Response 5.5.2.3. Concerning supplementation/recirculation, see Common Response 5.5.2.6.
- 5-18 See Common Response 5.5.2.8.
- 5-19 Concerning purpose and need, see Common Response 5.5.2.4. Concerning supplementation/recirculation, see Common Response 5.5.2.6.
- 5-20 Comments concerning alternatives are addressed in Common Response 5.5.2.5. See also Response to Comment 5-08.
- 5-21 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 5-22 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, alternatives are described in PA/FEIS Section 2.4, *Alternatives Development and Screening Process*, and analyzed on a resource-by-resource basis throughout Chapter 4, *Environmental Consequences*. See also, Common Response 5.5.2.5, *Alternatives*.
- 5-23 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, comments regarding biological resources, including desert tortoise, are addressed in Common Response 5.5.2.7.
- 5-24 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, see the Response to Comments 5-08, concerning reduced impacts to Mojave fringe-toed lizard, its habitat, and the sand transport corridor; and Common Response 5.5.2.7, which addressed comments concerning biological resources. Alternatives reconfiguring disturbance area boundaries to avoid or reduce impacts that were developed after the release of the SA/DEIS have been analyzed fully (see PA/FEIS Chapter 4, *Environmental Consequences*) and made available to the public (see, e.g., the CEC's September 2010 Revised Staff Assessment for the project, December 2010 Commission Decision).
- 5-25 Comments concerning alternatives are addressed in Common Response 5.5.2.5.
- 5-26 See Response to Comment 5-11.

- 5-27 Concerning consistency of the cumulative impacts analysis for the proposed action and alternatives with NEPA, see Common Response 5.5.2.2. Quantitative information is provided where available. See, for example, the analysis of cumulative impacts related to water resources, including PA/FEIS Table 4.19-6, *Foreseeable Projects and Anticipated Water Use*. See also, the analysis of cumulative impacts to wildlife resources, including Table 4.21-2, *Cumulative Impacts to Selected Wildlife Resources from the PSPP*, and various tables provided in Appendix I, quantifying cumulative effects to desert tortoise habitat, bighorn sheep WHMAs and connectivity corridors, special-status species habitat (including MFTL, American badger, kit fox, burrowing owl, Harwood's milk vetch, etc.), and other resources). The Red Bluff Substation and relocation of the transmission line (described in PA/FEIS Section 2.3, *Connected Actions*) are considered in the context of the cumulative scenario. See, for example, PA/FEIS Section 4.1.4 (*Cumulative Scenario Approach*) and Section 4.6.3 (cumulative impacts related to lands and realty).
- 5-28 Concerning consistency of the cumulative impacts assessment in the PA/FEIS with NEPA and FLPMA, see Common Response 5.5.2.2. Concerning biological resources, see Common Response 5.5.2.7.
- 5-29 See Common Response 5.5.2.8.
- 5-30 Concerning adequacy of data relied upon, see Common Response 5.5.2.3. Concerning supplementation/recirculation, see Common Response 5.5.2.6. Concerning biological resources, see Common Response 5.5.2.7.
- 5-31 Concerning consistency with NEPA and FLPMA, see Common Response 5.5.2.2. Concerning supplementation/recirculation, see Common Response 5.5.2.6. Concerning the availability of data that has become available following the issuance of the SA/DEIS, see Response to Comment 5-24. The BLM recognizes that the PA/FEIS provides additional information and analysis relative to the SA/DEIS. This is consistent with NEPA. See, for example, Section 6.9.2.2 of the BLM NEPA Handbook, which summarizes the CEQ regulations (40 CFR 1503.4) identifying several options for responding to substantive comments, including: modifying one or more of the alternatives as requested; developing and evaluating suggested alternatives; and supplementing, improving, or modifying the analysis; among others.
- 5-32 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).

5.5.3.6 Letter 6 – Responses to Comments from California Unions for Renewable Energy (CURE)

- 6-001 Comments concerning consistency of the PA/FEIS with NEPA are addressed in Common Response 5.5.2.2. Because the PA/FEIS is been prepared as a stand-alone NEPA document, the substantive requirements of CEQA do not govern its legal adequacy and the BLM may approve the requested ROW grant and/or the CDCA Plan amendment based on compliance of the PA/FEIS with NEPA.

- 6-002 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, comments concerning consistency of the PA/FEIS with NEPA are addressed in Common Response 5.5.2.2.
- 6-003 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, comments concerning consistency of the PA/FEIS with NEPA are addressed in Common Response 5.5.2.2, and comments suggesting supplementation/recirculation are addressed in Common Response 5.5.2.6.
- 6-004 Concerning adequacy of data relied upon, see Common Response 5.5.2.3. Concerning the range of alternatives, see Common Response 5.5.2.5.

Southern California Edison's proposed Red Bluff Substation Project, including gen-tie, telecommunications and telemetry infrastructure, and distribution to provide light and power, are described in PA/FEIS Section 2.3, *Connected Actions*. See also, Appendix E, where the analysis of environmental impacts associated with the Red Bluff Substation Project is summarized and incorporated by reference from the EIS being prepared for the Desert Sunlight Solar Farm project.

The actual length of the transmission line necessary to connect the project to the planned Red Bluff Substation will depend on which of the possible locations ultimately is selected for the substation. Impacts associated with the linear facilities proposed to support the solar plant for the project, including the transmission line, are described in PA/FEIS Section 2.2, *Proposed Action*, and Section 2.4.3, *Alternatives Considered*. Impacts related to the linear facilities are analyzed throughout Chapter 4, *Environmental Consequences*. See, for example, PA/FEIS Section 4.4, *Impacts on Cultural Resources*, Section 4.6, *Impacts on Lands and Realty*, Section 4.8, *Impacts on Multiple Use Classes*, and 4.18, *Impacts on Visual Resources*.

- 6-005 Mitigation Measures are identified in the PA/FEIS where they may be used to avoid or reduce adverse impacts, regardless of whether such impacts are "significant" as that term is used under NEPA (40 CFR 1502.2(b)). The implementation of mitigation measures with the intent of reducing an impact below a level of significance is specific to CEQA and not relevant in the NEPA context. Recommended mitigation measures provide selection criteria for compensation lands. See, for example, BIO-12, *Desert Tortoise Compensatory Mitigation*, which establishes that such lands shall be: (i) within the Colorado Desert Recovery Unit, (ii) prioritized near larger blocks of lands that are either already protected or planned for protection, such as DWMA's or which could feasibly be protected long-term; (iii) connected to lands with desert tortoise habitat equal to or better quality than the project site; and (iv) meet other specified criteria. Accordingly, the PA/FEIS does describe the locations of acceptable compensation habitat. Impacts that may be caused by habitat enhancement associated with implementation of the mitigation measures, if outside the scope of analysis in the PA/FEIS would require supplemental analysis under NEPA. See also, Common Response 5.5.2.7, *Biological Resources*.

- 6-006 Comments concerning alternatives are addressed in Common Response 5.5.2.5.
- 6-007 See Response to Comment 6-004.
- 6-008 Concerning the adequacy of the information relied upon, see Common Response 5.5.2.3. Comments concerning consistency of the PA/FEIS with NEPA are addressed in Common Response 5.5.2.2. Comments concerning purpose and need and alternatives are addressed in Common Response 5.5.2.4 and Common Response 5.5.2.5, respectively. Comments suggesting supplementation/recirculation are addressed in Common Response 5.5.2.6.
- 6-009 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-010 The PA/FEIS provides quantitative information where available, including with respect to acreage. Where distinctions are intended, they are reflected in the acreage identified. See, for example, PA/FEIS Table 2-1, *General Project Dimensions*. Generally speaking, the proposed action requests a right-of-way (ROW) area of approximately 5,200 acres, of which the project would disturb approximately 4,024 acres. By comparison, the overall disturbance area for Reconfigured Alternative 2 Option 1 would be approximately 4,365 acres and, for Option 2, would be approximately 4,330 acres.
- 6-011 The introductory paragraph of PA/FEIS Chapter 2, *Proposed Action and Alternatives*, identifies the disturbance area of the proposed action as encompassing approximately 4,024 acres, expressly including access roads and the transmission line that will connect the solar plant site to Southern California Edison's proposed Red Bluff Substation. The BLM has addressed the concern expressed in this comment by expressly including access roads and the transmission line in the area of disturbance and, thereafter, by analyzing impacts associated with the area of disturbance throughout PA/FEIS Chapter 4, *Environmental Consequences*. See also, Response to Comment 6-004.
- 6-012 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, see Responses to Comments 6-010 and 6-011 concerning quantification of disturbance in the PA/FEIS.
- 6-013 As discussed in PA/FEIS Section 4.14.2, *Discussion of Direct and Indirect Impacts*, the total earthwork including excavation for foundations and underground systems and a total cut and fill volume of approximately 4.5 million cubic yards.
- 6-014 As explained in Response to Comment 6-011, access roads and the transmission line connecting the project to the proposed Red Bluff Substation are described and associated impacts are analyzed in the PA/FEIS. The evaporation ponds and concrete batch plant are described in PA/FEIS Sections 2.2.3, *Power Plant Civil/Structural Features*, and 2.2.4, *Construction*, respectively. Associated impacts are analyzed throughout PA/FEIS Chapter 4, *Environmental Consequences*. For example, impacts associated with the evaporation ponds are evaluated in PA/FEIS Section 4.11, *Impacts on Public Health and Safety*, Section 4.19, *Impacts on Water Resources*, and Section 4.21, *Impacts on Wildlife*

- Resources*. Concerning impacts related to the concrete batch plant, see, for example, PA/FEIS Section 4.2, *Impacts on Air Resources*, Section 4.3, *Impacts on Global Climate Change*, and Section 4.11, *Impacts on Public Health and Safety*. Drainage facilities for the site are described in PA/FEIS Section 2.2, *Proposed Action*. Impacts associated with these facilities are analyzed, for example, in PA/FEIS Section 4.19, *Impacts on Water Resources*, and Section 4.17, *Impacts on Vegetation Resources*, among other sections. See also, Common Response 5.5.2.2.
- 6-015 Comments suggesting supplementation/recirculation are addressed in Common Response 5.5.2.6.
- 6-016 See Common Response 5.5.2.2.
- 6-017 See Response to Comment 6-014.
- 6-018 See Response to Comment 6-014 and Common Response 5.5.2.6. Comments concerning biological resources are addressed in Common Response 5.5.2.7.
- 6-019 See Response to Comment 6-014 and Common Response 5.5.2.2; see also Common Response 5.5.2.6.
- 6-020 Concerning consistency with NEPA, see Common Response 5.5.2.2. Concerning supplementation/recirculation, see Common Response 5.5.2.6.
- 6-021 Concerning air quality, see Common Response 5.5.2.9. See also, Response to Comment 6-014.
- 6-022 Concerning water resources, see Common Response 5.5.2.10. See also, Response to Comment 6-014.
- 6-023 Concerning cultural resources, see Common Response 5.5.2.11. See also, Response to Comment 6-014.
- 6-024 Concerning biological resources, see Common Response 5.5.2.7. See also, Response to Comment 6-014.
- 6-025 Concerning consistency of the PA/FEIS with NEPA, see Common Response 5.5.2.2. See also, Response to Comment 6-014.
- 6-026 Concerning biological resources (vegetation and wildlife), see Common Response 5.5.2.7. Concerning water resources (including groundwater), see Common Response 5.5.2.10.
- 6-027 Baseline information is detailed on a resource-by-resource basis throughout PA/FEIS Chapter 3, *Affected Environment* (see, e.g., PA/FEIS Section 3.18, *Vegetation Resources*, and Section 3.23, *Wildlife Resources*). Concerning adequacy of data relied upon, see

- Common Response 5.5.2.3. Comments suggesting supplementation/recirculation are addressed in Common Response 5.5.2.6.
- 6-028 Concerning consistency with NEPA, see Common Response 5.5.2.2. Potential effects resulting from closure and decommissioning are evaluated throughout PA/FEIS Chapter 4, *Environmental Consequences* (see, e.g., PA/FEIS Section 4.2, *Impacts to Air Quality*, Section 4.12, *Public Health and Safety*, and Section 4.21, *Impacts to Wildlife Resources*). The possibility of residual impacts after implementation of mitigation measures and of unavoidable adverse impacts also is considered in each resource section.
- 6-029 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-030 The PA/FEIS has been prepared in accordance with NEPA. Although the SA/DEIS was prepared as a joint CEQA/NEPA document, the CEC prepared a stand-alone, CEQA-specific Revised Staff Assessment and Commission Decision. Because the PA/FEIS is been prepared as a stand-alone NEPA document, the substantive requirements of CEQA do not govern its legal adequacy. See, Common Response 5.5.2.2.
- 6-031 See Response to Comment 6-030.
- 6-032 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-033 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, comments concerning consistency with NEPA are addressed in Common Response 5.5.2.2; comments concerning biological resources are addressed in Common Response 5.5.2.7; comments concerning cultural resources are addressed in Common Response 5.5.2.11; and comments suggesting supplementation/recirculation are addressed in Common Response 5.5.2.6. See also PA/FEIS Section 4.11 concerning analysis of impacts associated with transmission line safety and nuisance as well as hazards.
- 6-034 See Response to Comment 6-024.
- 6-035 See Common Responses 5.5.2.7 (*Biological Resources*) and 5.5.2.6 (*Supplementation/Recirculation*).
- 6-036 See Common Response 5.5.2.7.
- 6-037 See Common Responses 5.5.2.3 (*Adequacy of Data Relied Upon*) and 5.5.2.7 (*Biological Resources*).
- 6-038 PA/FEIS Section 4.21, *Impacts on Wildlife Resources*, the transmission line and other project structures as additional sources of predator perching sites. See also, Common Response 5.5.2.7.
- 6-039 These impacts are considered in PA/FEIS Section 4.21, *Impacts on Wildlife Resources*, and Section 4.17, *Impacts on Vegetation Resources*. See also, Common Response 5.5.2.7.

- 6-040 See Common Response 5.5.2.7.
- 6-041 See Common Response 5.5.2.7.
- 6-042 Given the generality of the comment, only a general reply is possible: See Common Response 5.5.2.7.
- 6-043 See Common Responses 5.5.2.5 (*Alternatives*) and 5.5.2.2, concerning consistency of the PA/FEIS with NEPA.
- 6-044 See Common Response 5.5.2.7 and PA/FEIS Sections 3.23, 4.21 and Appendix I.
- 6-045 See Common Responses 5.5.2.3 (*Adequacy of Data Relied Upon*) and 5.5.2.7 (*Biological Resources*).
- 6-046 See Common Response 5.5.2.7.
- 6-047 See Common Response 5.5.2.7 and Response to Comment 6-014.
- 6-048 See Common Response 5.5.2.7.
- 6-049 Concerning consistency with NEPA, see Common Response 5.5.2.2. Concerning biological resources, see Common Response 5.5.2.7.
- 6-050 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-051 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-052 See Common Response 5.5.2.7.
- 6-053 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-054 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-055 See Common Responses 5.5.2.6 (*Supplementation/Recirculation*) and 5.5.2.7 (*Biological Resources*) as well as Response to Comment 6-014.
- 6-056 See Common Responses 5.5.2.2 (*Consistency of the PA/FEIS with NEPA*), 5.5.2.3 (*Adequacy of Information Relied Upon*), and 5.5.2.7 (*Biological Resources*).
- 6-057 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, see Common Responses 5.5.2.2 (*Consistency of the PA/FEIS with NEPA*) and 5.5.2.7 (*Biological Resources*).
- 6-058 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-059 See Common Response 5.5.2.7.

- 6-060 See Common Responses 5.5.2.3 (*Adequacy of Data Relied Upon*) and 5.5.2.7 (*Biological Resources*). It is for the wildlife agencies with resource-specific jurisdiction over eagles to determine whether take authorization is required; such a determination is not required by NEPA to be made in the PA/FEIS.
- 6-061 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-062 See Common Response 5.5.2.7 (*Biological Resources*) and Response to Comment 6-014.
- 6-063 State jurisdictional waters are not relevant to the FEIS. Concerning biological resources, see Common Response 5.5.2.7.
- 6-064 See Common Response 5.5.2.7.
- 6-065 See Common Response 5.5.2.7.
- 6-066 See Common Response 5.5.2.7.
- 6-067 See Common Responses 5.5.2.3 (*Adequacy of the Information Relied Upon*), 5.5.2.6 (*Supplementation/Recirculation*) and 5.5.2.7 (*Biological Resources*). See also, Response to Comment 6-011.
- 6-068 See Common Response 5.5.2.7 (*Biological Resources*) and Response to Comment 6-014.
- 6-069 See Common Responses 5.5.2.3 (*Adequacy of the Information Relied Upon*) and 5.5.2.7 (*Biological Resources*).
- 6-070 See Common Response 5.5.2.7.
- 6-071 See Common Response 5.5.2.7.
- 6-072 See Common Response 5.5.2.7 as well as PA/FEIS Sections 4.17 (concerning vegetation), 4.21 (concerning wildlife) and Appendix I (concerning cumulative impacts related to biological resources).
- 6-073 See Response to Comment 6-072 and Response to Comment 6-014.
- 6-074 See Common Responses 5.5.2.2 (*Consistency of the PA/FEIS with NEPA*) and 5.5.2.7 (*Biological Resources*).
- 6-075 See Common Responses 5.5.2.7 (*Biological Resources*) and 5.5.2.6 (*Supplementation/Recirculation*).
- 6-076 As indicated in the comment, the Draft Biological Assessment for the project was prepared pursuant to the ESA. Compliance or non-compliance with the requirements of that statute would be independent of consistency of the PA/FEIS with NEPA. Further, the

- USFWS and not BLM would have enforcement jurisdiction with respect to the ESA. Accordingly, this is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-077 Disclosure of consultation with wildlife agencies and potential take authorization from such agencies is not relevant to a determination of whether the PA/FEIS is consistent with of NEPA (see Common Response 5.5.2.2).
- 6-078 See Response to Comment 6-077.
- 6-079 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-080 See Response to Comment 6-077.
- 6-081 See Response to Comment 6-077.
- 6-082 Impacts to wildlife resources from construction-related noise and nighttime lighting are analyzed in PA/FEIS Section 4.21, *Impacts to Wildlife Resources*.
- 6-083 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-084 Concerning the adequacy of mitigation measures, see Common Response 5.5.2.2 (*Consistency of the PA/FEIS with NEPA*). See also, Common Response 5.5.2.7 (*Biological Resources*).
- 6-085 See Common Response 5.5.2.5.
- 6-086 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-087 If implementation of the recommended mitigation measure would entail significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its effects (40 CFR 1502.9(c)(1)(ii)) or constitute a substantial change to the proposed action that is relevant to environmental concerns (40 CFR 1502.9(c)(1)(i)), supplementation would be required. However, impacts such as those identified in the comment are addressed in PA/FEIS Section 4.21.
- 6-088 See Common Response 5.5.2.7.
- 6-089 See Common Response 5.5.2.7.
- 6-090 See Common Response 5.5.2.7.
- 6-091 Concerning consistency with NEPA, see Common Response 5.5.2.2. Concerning biological resources and “significance,” see Common Response 5.5.2.7.

- 6-092 See Common Responses 5.5.2.3 (*Adequacy of the Data Relied Upon*) and 5.5.2.7 (*Biological Resources*).
- 6-093 See Common Response 5.5.2.7.
- 6-094 See Common Response 5.5.2.7.
- 6-095 See Common Response 5.5.2.7.
- 6-096 See Common Response 5.5.2.7. Also, impacts associated with HTF are analyzed in PA/FEIS Section 4.19, *Impacts to Water Resources*, and 4.11.2, *Hazardous Materials*.
- 6-097 See Common Response 5.5.2.7.
- 6-098 Herbicide use and associated risk is evaluated in PA/FEIS Section 4.17, *Vegetation Resources*; see also, Common Response 5.5.2.7.
- 6-099 See Response to Comment 6-021, including Common Response 5.5.2.9.
- 6-100 See Response to Comment 6-014 and Common Response 5.5.2.10, *Water Resources*.
- 6-101 See Response to Comment 6-014. Further, PA/FEIS Tables 4.2-3 and 4.2-4 include data rows for emissions that would occur due to construction of the transmission line and associated access roads. Operation of the transmission line and access roads would result in no direct emissions.
- 6-102 See Common Response 5.5.2.9 (*Air Quality*).
- 6-103 See Common Response 5.5.2.9 (*Air Quality*).
- 6-104 As discussed in Section 4.2 of the PA/FEIS, the inputs for the air dispersion model included meteorological data, such as wind speed and other atmospheric conditions, and site elevation. For the project, the meteorological data used as input to the model included hourly wind speeds and directions measured at the Blythe Airport meteorological station during 2002 through 2004. The data from Blythe Airport indicate that the highest annual wind direction frequencies are from the south through the southwest. However, as disclosed in Section 3.2, a more westerly wind direction is expected at the site due to local topography. Given the proximity of the Blythe Airport to the project site, this data is a reasonable input to the model and accurately indicates that that the worst-case scenario impacts would occur in the vicinity of Unit #1
- 6-105 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-106 See Common Response 5.5.2.9 (*Air Quality*).
- 6-107 See Common Response 5.5.2.9 (*Air Quality*).

- 6-108 See Common Response 5.5.2.9 (Air Quality).
- 6-109 See Common Response 5.5.2.9 (Air Quality).
- 6-110 See Common Response 5.5.2.9 (Air Quality).
- 6-111 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-112 See Common Response 5.5.2.9 (Air Quality).
- 6-113 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-114 See Common Response 5.5.2.9 (Air Quality).
- 6-115 See Common Response 5.5.2.9 (Air Quality).
- 6-116 See Common Response 5.5.2.9 (Air Quality).
- 6-117 Concerning consistency with plans, see Common Response 5.5.2.1. Concerning consistency with NEPA (cumulative) and FLPMA, see Common Response 5.5.2.2. Concerning biological resources, see Common Response 5.5.2.7.
- 6-118 As discussed in PA/FEIS Section 3.9, *Multiple Use Classes*, the project site is designated as Multiple-Use Class M (Moderate Use) in the CDCA Plan, as amended. The Multiple Use Class (MUC) Guidelines in Table 1 of the CDCA Plan state that solar electrical generation facilities may be allowed in MUC Limited (L), Moderate (M), and Intensive (I) areas after NEPA requirements are met and the CDCA Plan is properly amended. MUC M is based on a controlled balance between higher-intensity use and protection of public lands. The CDCA Plan states that “electrical generation plants may be allowed” within the Moderate Use designation. Specifically, solar electrical generating facilities “may be allowed after NEPA requirements are met.” The published SA/DEIS did correctly state that the project is wholly within the Moderate (M) MUC designated in the CDCA as amended (see Section C. 6, Land Use, Recreation and Wilderness). While the chapter describing the alternatives in the SA/DEIS incorrectly stated the MUC was Limited (L), this has been corrected in the PA/FEIS.
- 6-119 PA/FEIS Section 3.16, *Special Designations*, and Section 4.15, *Impacts on Special Designations*, describe the proximity of all special designation areas to the project and the impacts to each of the ACECs in close proximity. The Palen Dry Lake ACEC is located approximately 0.5 mile northeast of the project site. The Chuckwalla Valley Dune Thicket ACEC is located approximately 17 miles southeast of the site.
- 6-120 The PA/FEIS fully analyzes the direct, indirect, and cumulative impacts to land and realty uses, recreation and special designation areas such as wilderness, wilderness study areas and back country byways in PA./FEIR Sections 4.05, 4.12 and 4.15.1 through 4.15.3, respectively. See also, Response to Comment 6-014.

- 6-121 See Response to Comment 6-118.
- 6-122 Concerning consistency with master plans, see Common Response 5.5.2.1. Concerning biological resources, see Common Response 5.5.2.7.
- 6-123 See Common Response 5.5.2.2.
- 6-124 See Common Response 5.5.2.7.
- 6-125 See Common Responses 5.5.2.1 (*Consistency of the Proposed Action with the CDCA Plan, NECO Plan and other Plans*) and 5.5.2.7 (*Biological Resources*).
- 6-126 “Substantial evidence” is required to support environmental conclusions under CEQA. As noted above, CEQA does not govern the legal adequacy of the PA/FEIS. See Common Response 5.5.2.11 (*Cultural Resources*).
- 6-127 See Common Response 5.5.2.11.
- 6-128 See Common Response 5.5.2.11.
- 6-129 See Common Response 5.5.2.11.
- 6-130 See Common Response 5.5.2.11.
- 6-131 See Common Response 5.5.2.11.
- 6-132 See Common Response 5.5.2.11.
- 6-133 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, comments concerning public health and safety are addressed in Common Response 5.5.2.12.
- 6-134 See Common Response 5.5.2.12.
- 6-135 See Common Response 5.5.2.12.
- 6-136 On December 1, 2010, the South Coast Air Quality Management District (SCAQMD) issued a Final Determination of Compliance for the project. In preparing its final determination, the SCAQMD estimated toxic air contaminant (TAC) emissions for normal operations of each emissions unit, which include the auxiliary boilers, emergency fire water pump and generator engines, and HTF ullage system vent.

As the SCAQMD explained, TAC emissions from the auxiliary boilers were estimated based on EPA AP-42 emission factors for natural gas combustion. TAC emissions from the emergency fire water pump and generator engines were quantified for routine testing and maintenance operation, which will be no more than one hour per day, 50 hours per

year, per engine. Emissions are not calculated for emergency use. The TAC emissions were characterized as aggregate particulate emissions (diesel particulate matter [DPM]) from diesel-fired engines. The DPM emissions are assumed to be equal to the PM10 emissions. The total uncontrolled TAC emissions from the HTF ullage tank vent were estimated based on data provided by an existing solar thermal parabolic trough plant and extrapolated to account for HTF system size. HTF is composed of approximately 75 percent diphenyl ether and 25 percent biphenyl. For this application, because both of these compounds contain benzene rings, it was conservatively assumed that the HTF breakdown products would consist primarily (approximately 99 percent) of benzene. Controlled emissions were calculated based on the use of two carbon adsorption canisters in series with an overall control efficiency of 98 percent. Determination was considered in preparing the PA/FEIS. Concerns of the SCAQMD with respect to its subject matter expertise, including TACs, have been addressed in the environmental review for this project to the satisfaction of the agency. The toxic emissions (benzene) due to fugitives is assumed to be 1% of the total fugitive emissions or $0.01(19,186 \text{ lb/yr}) = 191.86 \text{ lb/yr}$. Since there are two ullage systems, the toxic emissions per system are $(191.86 \text{ lb/yr})/2 = 96 \text{ lb/yr}$. The toxic emissions per ullage system = $300 \text{ lb/yr}(0.99) = 297 \text{ lb/yr}$. Therefore, the total benzene emissions from a single ullage system (including fugitives) are $96 \text{ lb/yr} + 297 \text{ lb/yr} = 393 \text{ lb/yr}$. Table 17 of the SCAQMD's Final Determination of Compliance, which lists the breakdown of the TAC emissions for each permit unit, is reproduced here for the commenter's convenience.

- 6-137 See Common Response 5.5.2.12.
- 6-138 See Common Response 5.5.2.12.
- 6-139 See Common Responses 5.5.2.12 (*Public Health and Safety*) and 5.5.2.6 (*Supplementation/Recirculation*).
- 6-140 See Common Response 5.5.2.12.
- 6-141 See Common Response 5.5.2.12.
- 6-142 See Common Response 5.5.2.12.
- 6-143 See Common Response 5.5.2.10.
- 6-144 See Common Responses 5.5.2.5 (*Alternatives*) and 5.5.2.10 (*Water Resources*).
- 6-145 See Common Response 5.5.2.5 (*Alternatives*). Impacts related to wildlife habitat are addressed in PA/FEIS Sections 4.17 (*Impacts to Vegetation Resources*) and 4.21 (*Impacts to Wildlife Resources*) as well as Appendix I, concerning cumulative impacts to biological resources.

TABLE 17
SCAQMD FINAL DETERMINATION OF COMPLIANCE

Pollutant	Auxiliary Boiler		Fire Water Pump		Generator		Ullage System		
	Hourly lb/hr	Annual lb/yr	Hourly lb/hr	Annual lb/yr	Hourly lb/hr	Annual lb/yr	Hourly (R1) lb/hr	Hourly (R2) lb/hr	Annual lb/yr
7, 12-Dimethylbenz (a) anthracene	5.49E-07	9.47E-04							
Acenaphthene	6.18E-08	1.07E-04							
Acenaphthylene	6.18E-08	1.42E-04							
Anthracene	8.24E-08	1.42E-04							
Benz (a) anthracene	6.18E-08	1.07E-04							
Benzene	7.21E-05	1.24E-01					3.75+01	7.50E-01	3.90E+02
Benzo (a) pyrene	4.12E-08	7.01E-05							
Benzo (b) fluoranthene	6.18E-08	1.07E-05							
Benzo (g, h, i) perylene	4.12E-08	7.01E-05							
Benzo (k) fluoranthene	6.18E-08	1.07E-05							
Biphenyl	0.00E+00	--					3.75E-03	7.50E-05	3.00E-02
Chrysene	6.18E-08	1.07E-04							
Dibenz (a, h) anthracene	4.12E-08	7.01E-05							
Dichlorobenzene	4.12E-05	7.01E-02							
Diesel Particulate Matter	0.00E+00	--	9.91E-02	4.96E+00	9.65E-01	4.38E+01			
Fluoranthene	1.03E-07	1.78E-04							
Formaldehyde	2.57E-03	4.44E+00							
Hexane	6.18E-02	1.07E-02							
Indeno (1, 2, 3-cd) pyrene	6.18E-08	1.01E-03							
Naphthalene	2.09E-05	3.61E+02							
Phenanthrene	5.83E-07	1.01E-03							
Pyrene	1.72E-07	2.96E-04							
Toluene	1.17E-04	2.01E-01							
Total for Single System	6.46E-02	1.11E+02	9.91E-02	4.96	9.91E-02	4.83	37.5	0.75	393
Total for Both Systems	1.29E-01	2.23E+02	1.98E-01	9.92	1.98E-01	9.66	75.00	1.50	786

- 6-146 Project cut and fill would be balanced within the site, with no net import or export of material. The vast majority of project grading and excavation would occur in the solar plant ROW, with only relatively minor excavation needed for installation of gen-tie facilities (e.g., at the locations of monopoles). Mitigation Measure SOIL&WATER-11 relates to channel erosion protection. It specifies that soil cement bank protection shall be provided in specified circumstances, and prohibits some other methods of channel stabilization, such as dumped riprap, gabions, and bio-stabilization measures based on these methods' incompatibility with biological resources in the area.
- 6-147 See Common Response 5.5.2.10.
- 6-148 See Common Response 5.5.2.10.
- 6-149 See Common Response 5.5.2.10.
- 6-150 The Applicant filed a Streambed Alteration Agreement (SAA) with the California Department of Fish & Game in November 2009 for the purposes of altering the terrain and installing channels. This application currently is being reviewed. Compliance with the provisions of the SAA issued for the project would be required by State law as well as SOIL&WATER-12.
- 6-151 See Common Response 5.5.2.10 and Response to Comment 6-022. Also, the commenter appears to assume that the Applicant intends to further develop groundwater resources in the vicinity of the project. This assumption is unfounded. No such evidence has been identified.
- 6-152 See Common Response 5.5.2.10.
- 6-153 See Common Response 5.5.2.10.
- 6-154 See Common Response 5.5.2.10.
- 6-155 See Common Response 5.5.2.10.
- 6-156 See Common Response 5.5.2.10.
- 6-157 See Common Response 5.5.2.10.
- 6-158 See Common Response 5.5.2.4.
- 6-159 See Common Response 5.5.2.5; see also, Response to Comment 6-011.
- 6-160 See Common Response 5.5.2.5.
- 6-161 See Common Response 5.5.2.5.

- 6-162 See Common Response 5.5.2.5.
- 6-163 See Common Response 5.5.2.5.
- 6-164 See Common Response 5.5.2.5.
- 6-165 See Common Response 5.5.2.5.
- 6-166 See Common Response 5.5.2.5.
- 6-167 Concerning consistency with NEPA, see Common Response 5.5.2.2. Concerning adequacy of data relied upon, see Common Response 5.5.2.3. Concerning alternatives, see Common Response 5.5.2.5. Comments about supplementation/recirculation are addressed in Common Response 5.5.2.6.
- 6-168 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-169 See Common Response 5.5.2.7.
- 6-170 See Common Response 5.5.2.7.
- 6-171 See Common Responses 5.5.2.3 (Adequacy of Data Relied Upon), 5.5.2.6 (*Supplementation/Recirculation*), and 5.5.2.7 (*Biological Resources*).
- 6-172 See Common Response 5.5.2.7.
- 6-173 See Common Response 5.5.2.7.
- 6-174 See Common Response 5.5.2.7.
- 6-175 See Common Response 5.5.2.7.
- 6-176 See Common Response 5.5.2.7.
- 6-177 See Common Response 5.5.2.7.
- 6-178 See Common Response 5.5.2.7.
- 6-179 See Common Response 5.5.2.7.
- 6-180 See Common Response 5.5.2.7.
- 6-181 See Common Response 5.5.2.7.
- 6-182 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, see Common Response 5.5.2.7.

- 6-183 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-184 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, see Common Response 5.5.2.7.
- 6-185 See Common Response 5.5.2.7.
- 6-186 See Common Response 5.5.2.7.
- 6-187 See Common Response 5.5.2.7.
- 6-188 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-189 See Common Response 5.5.2.7.
- 6-190 See Common Response 5.5.2.7.
- 6-191 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-192 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-193 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). As noted above, CEQA does not govern the legal adequacy of the PA/FEIS.
- 6-194 See Common Response 5.5.2.7.
- 6-195 Concerning alternatives, see Common Response 5.5.2.5. Concerning biological resources, see Common Response 5.5.2.7.
- 6-196 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-197 See Common Responses 5.5.2.7 (*Biological Resources*) and 5.5.2.5 (*Alternatives*).
- 6-198 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, see Common Response 5.5.2.7.
- 6-199 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-200 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, see Common Response 5.5.2.7.
- 6-201 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, see Common Response 5.5.2.7.
- 6-202 See Common Response 5.5.2.7.
- 6-203 See Common Response 5.5.2.7.

- 6-204 See Common Response 5.5.2.7.
- 6-205 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-206 See Common Response 5.5.2.7.
- 6-207 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
Nonetheless, see Common Response 5.5.2.7.
- 6-208 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-209 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-210 See Common Response 5.5.2.5.
- 6-211 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-212 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-213 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-214 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-215 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-216 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
- 6-217 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook).
Nonetheless, see Common Response 5.5.2.7.
- 6-218 See Common Response 5.5.2.12.
- 6-219 See Common Response 5.5.2.12. Because the requested information has been provided in
the PA/FEIS, supplementation and recirculation are not required (see Common Response
5.5.2.6).
- 6-220 See Common Response 5.5.2.12.
- 6-221 See Common Response 5.5.2.12.
- 6-222 See Common Response 5.5.2.12.
- 6-223 See Common Response 5.5.2.12.
- 6-224 See Common Response 5.5.2.12.
- 6-225 See Common Response 5.5.2.12.

- 6-226 See Common Response 5.5.2.12.
- 6-227 See Common Response 5.5.2.12.
- 6-228 See Common Response 5.5.2.12.
- 6-229 See Common Response 5.5.2.12.
- 6-230 See Common Response 5.5.2.12.
- 6-231 The Colorado River Basin Regional Water Board and State Water Board worked with the CEC on the development of CEC's conditions of certification for the project. CEC Conditions of Certification are recommended as mitigation measures throughout PA/FEIS Chapter 4, *Environmental Consequences*, to address direct, indirect and cumulative impacts of the proposed action and alternatives on the quality of the human environment. They are set forth in full in PA/FEIS Appendix B. Because permit requirements for compliance with water quality laws and regulations were drafted and incorporated into the CEC's approval of the project to mitigate potential water quality impacts, no further action is required of the BLM to ensure this result for the project.
- 6-232 See Common Response 5.5.2.12.
- 6-233 See Common Response 5.5.2.12.
- 6-234 See Common Response 5.5.2.12.

5.5.3.7 Letter 7 – Responses to Comments from Western Watershed Project

- 7-01 Comments concerning alternatives are addressed in Common Response 5.5.2.5.
- 7-02 Comments concerning desert tortoise and other biological resources are addressed in Common Response 5.5.2.7.
- 7-03 Comments concerning consistency of the proposed action and alternatives with the CDCA Plan, NECO Plan and other planning documents are addressed in Common Response 5.5.2.1.
- 7-04 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, comments concerning global climate change are addressed in Common Response 5.5.2.8.
- 7-05 See Common Response 5.5.2.7.

- 7-06 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, comments concerning the analysis of impacts to desert tortoise are addressed in Common Response 5.5.2.7, *Biological Resources*.
- 7-07 Comments concerning biological resources are addressed in Common Response 5.5.2.7. Comments concerning consistency of the proposed action with NEPA and FLPMA are addressed in Common Response 5.5.2.2.
- 7-08 See Response to Comment 7-07. CEQA significance determinations are not relevant in the NEPA context; thus, no revisions were made to explain how recommended mitigation measures would reduce impacts to sand transport to a less-than-significant level. Instead, quantification of impacts is provided where possible, qualitative assessments are provided where quantification is not possible, and mitigation measures are identified where they may be used to avoid or reduce adverse impacts, regardless of whether such impacts are “significant” as that term is used under NEPA (40 CFR 1502.2(b)). Comments suggesting supplementation/recirculation are addressed in Common Response 5.5.2.6.
- 7-09 See Common Response 5.5.2.10.

5.5.3.8 Letter 8 – Responses to Comments from Metropolitan Water District of Southern California

- 8-01 This is not a substantive comment (see Section 6.9.2.1 of the BLM NEPA Handbook). Nonetheless, comments concerning water resources, such as Colorado River water, are addressed in Common Response 5.5.2.10.
- 8-02 The solar field would be installed on BLM land where Metropolitan Water District (MWD) does not currently own, operate, or manage any facilities. Additionally, a preliminary review of siting alignments and available information regarding the location of Metropolitan’s facilities indicated that the development of the project is not be expected to place any facilities on or across facilities owned, operated or managed by MWD. In the event that project facilities are installed across an existing MWD facility, acquisition of proper permits and coordination with MWD would ensure that potential impacts are minimized.
- 8-03 BLM is not aware of, nor does the comment offer, any potential impacts within the purview of NEPA that could result to MWD’s transmission system (reliability, operations or safety) due to implementation of the project. Concerning transmission line safety and nuisance more generally, see PA/FEIS Section 4.11.6.
- 8-04 See Common Response 5.5.2.10.
- 8-05 Pursuant to Section 6.9.2.1 of the BLM NEPA Handbook H-1790-1 (Jan. 30, 2008), this is not a substantive comment. Nonetheless, the BLM notes that the language quoted relates to SOIL&WATER-14, *Mitigation of Impacts to the Palo Verde Mesa*

Groundwater Basin, and that the foreclosure of the quoted opportunities does not preclude the effectiveness of SOIL&WATER-14: as stated in the mitigation measure, other proposed mitigation activities may be determined to be acceptable. See also, Common Response 5.5.2.10, *Water Resources*.

8-06 See Common Response 5.5.2.10.

5.5.3.9 Letter 9 – Intentionally Left Blank

Intentionally left blank.

5.5.3.10 Letter 10 – Responses to Comments from Environmental Protection Agency

- 10-01 Considering the reasonableness of the range of alternatives, see Common Response 5.5.2.5. Further, the time required to prepare an EIS ranges depending on the complexity of the issues involved and the types and magnitude of improvements proposed, and can take as much as 24-36 months or more. The BLM identified certain “fast-track” projects for which the companies involved demonstrated to the BLM that they had made sufficient progress to formally start the environmental review and public participation process. The project is one such project. The Applicant submitted a ROW application to the BLM and filed an application for certification with the Energy Commission. The environmental review process, including opportunities for public participation, commenced immediately. Like all renewable energy projects proposed for BLM-managed lands, the project has received the full extent of environmental review required by NEPA and has included the same opportunities for public involvement as are required for all other land-use decision making by the BLM.
- 10-02 Concerning potential impact to water resources, including downstream flows, see Common Response 5.5.2.10, *Water Resources*.
- 10-03 Concerning use of existing draining channels and/or natural features instead of proposed concrete-lined channels, see Common Response 5.5.2.10.
- 10-04 Concerning a finalized drainage plan see Common Response 5.5.2.10.
- 10-05 Concerning potential impacts to wildlife and drainage systems, see Common Response 5.5.2.7 (wildlife); see also, Common Response 5.5.2.10 (drainage).
- 10-06 Impacts and mitigation measures concerning biological resources are analyzed in PA/FEIS Sections 4.17 (vegetation) and 4.21 (wildlife). Concerning compensatory mitigation, see Common Response 5.5.2.7.
- 10-07 All mitigation commitments required by the BLM will be included in the ROD.
- 10-08 Concerning groundwater mitigation, see Common Response 5.5.2.10.

- 10-09 The project is not proposed within the Palo Verde Mesa Groundwater Basin; therefore, the requested basin balance analysis is not relevant to this project.
- 10-10 Concerning impacts to groundwater, see Common Response 5.5.2.10.
- 10-11 Concerning impacts to groundwater recharged by the Colorado River, see Common Response 5.5.2.10.
- 10-12 Concerning necessary project water entitlements see Common Response 5.5.2.10.
- 10-13 Concerning the need for the proposed action, see Common Response 5.5.2.4. Concerning climate change, see Common Response 5.5.2.8. Concerning the adequacy of the data relied upon, see Common Response 5.5.2.3.

This comment also questions the adequacy of the PA/FEIS's assessment of cumulative impacts. A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. The PA/FEIS considers the potential for incremental impacts resulting from construction, operation and maintenance, and closure and decommissioning of the project to cause or contribute to a cumulative effect in each of the issue areas for which the project could cause an impact.

The Ninth Circuit requires federal agencies to "catalogue" and provide useful analysis of past, present, and future projects and to provide some quantified or detailed information because, in its absence, the public cannot be assured that the agencies have taken the requisite "hard look." The PA/FEIS for the project not only catalogues cumulative projects, but also provides quantified and detailed information about them. See, e.g., Table 4.1-1, *Cumulative Scenario*. On an issue-by-issue basis, PA/FEIS Chapter 4, *Environmental Consequences*, identifies the geographic and temporal scope of the cumulative impacts analysis area, provides a basis for the boundaries of each, identifies existing conditions within each cumulative impacts assessment area, identifies the direct and indirect effects of the proposed action and alternatives, and identifies past, present and reasonably foreseeable future actions making up the cumulative scenario. See, for example, PA/FEIS Section 4.21.3 (discussion of cumulative impacts on wildlife resources), Table 4.21-2, *Cumulative Impacts to Selected Wildlife Resources from the PSPP*. The several renewable energy (solar and wind) projects being considered by the BLM's California Desert District are identified in Table 4.1-2, including the number of projects, acreage and total megawatts under consideration in the Palm Springs, Barstow, El Centro, Needles, and Ridgecrest Field Offices. Renewable energy projects on state and private lands are identified in Table 4.1-3. Also part of the cumulative scenario, existing projects along the I-10 corridor in eastern Riverside County are identified in Table 4.1-4 and future foreseeable projects in this area are identified in Table 4.1-5. The PA/FEIS's

analysis of cumulative impacts is adequate. See also Common Response 5.5.2.2, concerning NEPA compliance generally.

- 10-14 Concerning the purpose and need and range of alternatives, see Common Responses 5.5.2.4 and 5.5.2.5, respectively.
- 10-15 The question requests a description of BLM’s authority to adopt a “modified” project design or alternate site on BLM land, to deny an application, or to select another ROW application submitted by the same applicant or its corporate owner. A ROW grant is an authorization to use a specific piece of public land for a certain project, such as a transmission line, road, pipeline, or communication site. A ROW grant authorizes rights and privileges for a specific use of the land for a specific period of time. Generally, a BLM ROW is granted for a term appropriate for the life of the project. The BLM’s ROW grants are authorized by Title V of FLPMA (43 U.S.C. 1761-1771) and the implementing regulations set forth at 43 CFR part 1600. Pursuant to 43USC 1764(j), “The Secretary. . . shall grant, issue, or renew a right-of-way under this subchapter only when he is satisfied that the applicant has the technical and financial capability to construct the project for which the right-of-way is requested, and in accord with the requirements of this subchapter.”

BLM’s authority includes the power to modify a project design subject to a ROW application, or to deny the application, to the extent that the application does not reflect certain statutorily-required terms and conditions. For example, terms and conditions are imposed to carry out the purposes of FLPMA; minimize damage to scenic and aesthetic values and fish and wildlife habitat, and otherwise protect the environment; require compliance with applicable air and water quality standards; and require compliance with State standards for public health and safety, environmental protection, and siting, construction, operation and maintenance if such standards are more stringent than applicable Federal standards (43 USC 1765). BLM also may impose terms and conditions to the extent that it deems them necessary to protect Federal property and economic interests; manage efficiently the lands that would be subject to the ROW and protect the other lawful users of the lands adjacent to or traversed by the ROW; protect lives and property; protect the interests of individuals living in the general area traversed by the ROW who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes; require location of the ROW along a route that will cause least damage to the environment, taking into consideration feasibility and other relevant factors; and otherwise protect the public interest in the lands traversed by the right-of-way or adjacent thereto (43 USC 1765).

Individual ROW applications are considered separately; thus, two applications submitted by the same applicant or its corporate owner would be considered independently based on the independent merit of each. A decision whether to grant one of the applications would be made independently of whether to grant the other.

- 10-16 The cumulative scenario is discussed in FEIS Section 4.1. The cumulative impacts analysis in Chapter 4, *Environmental Consequences*, conservatively assumes that all projects within the cumulative scenario will proceed, including renewable energy projects. Any effort to further refine how many of renewable energy applications received by BLM are likely to proceed would be speculative and would not contribute to the understanding of the potential impacts of the project on the human environment. Concerning the Solar PEIS and the DRECP process, see Common Response 5.5.2.1.
- 10-17 The Power purchase agreements are sensitive documents between the Applicant and the power purchaser. BLM does not require detailed information regarding the specifics of that agreement, only that there is an outlet or recipient of the power generated. The size of the project, in megawatts produced and acres utilized, can be evaluated by the public to determine the trade-off between resources. This information can be found in the PA/FEIS in Chapter 2, *Proposed Action and Alternatives*.
- 10-18 Concerning site selection, see PA/FEIS Section 2.4.3, *Alternatives Considered but Eliminated From Detailed Analysis*. Concerning the reasonableness of the range of alternatives considered, see Common Response 5.5.2.5. The comment suggests that BLM should compare proposed renewable energy projects one with another. The BLM does consider each project that is proposed in the context of other past, present, and reasonably foreseeable future projects as part of the cumulative impacts analysis. See, e.g., PA/FEIS Chapter 4, *Environmental Consequences*.
- 10-19 Concerning site selection, see PA/FEIS Section 2.4.3, *Alternatives Considered but Eliminated From Detailed Analysis*. Concerning purpose and need, see Common Response 5.5.2.4. Additionally, BLM in the purpose and need for the project is responding to the Applicant's request for a ROW under Title V of FLPMA.
- 10-20 Concerning alternatives, see Common Response 5.5.2.5.
- 10-21 Concerning alternatives, see Common Response 5.5.2.5. The BLM does not require the preparation of a cost benefit analysis or a fiscal impact statement. These are more typically done by the applicants prior to considering the use of public lands for projects. Additionally, reviewing such information would not affect the size and scope of the project, or its impacts, nor would it improve the analysis of the alternatives in such a manner as to make one more feasible than another.
- 10-22 Concerning the suggestion that the DRECP is relevant to the BLM's consideration of the proposed action and alternatives, see Common Response 5.5.2.1.
- 10-23 Concerning climate change, See PA/FEIS Sections 3.3 and 4.3 Affected Environment and Impacts to Global Climate Change respectively; see also Common Response 5.5.2.8.
- 10-24 See Response to Comment 10-23.

- 10-25 Concerning incorporation of climate change monitoring, see PA/FEIS Sections 4.3 *Impacts to Global Climate Change*, Section 4.17, *Impacts on Vegetation*, and Section 4.21, *Impacts on Wildlife*.
- 10-26 Concerning climate change, See PA/FEIS Sections 3.3 and 4.3; see also Common Response 5.5.2.8.
- 10-27 All areas in the SA/DEIS that indicated undetermined technical areas have since been revised and appropriate mitigation has been provided in the PA/FEIS. Please see each technical section in Chapter 4, *Environmental Consequences*, for the proposed mitigation. The Energy Commission's Conditions of Certification are located in Appendix B.
- 10-28 Concerning cultural resources, see Common Response 5.5.2.11. Concerning the adequacy of data relied upon, see Common Response 5.5.2.3.
- 10-29 The social and economic analysis in the PA/FEIS (see Sections 3.14, 4.13) assesses the cumulative impact expected if all 13 identified solar projects proceed with construction between 2011 and 2016. The cumulative analysis also included the additional construction impacts associated with construction of the Blythe Airport Solar project and another six non-solar projects currently planned on BLM land within eastern Riverside County.

The cumulative analysis uses the same approach as impact analysis of the project's construction impacts on the social and economic conditions for both the local study area (Blythe, California; Ehrenberg, Arizona; and Quartzite, Arizona) and the regional study area (eastern Riverside County from Palm Springs to Blythe). Specifically, the PA/FEIS impact analysis assesses the projected construction worker labor need and the regional labor force supply of adequately qualified and potential trainable workers to determine the likely magnitude of in-migration that may be expected to the local and regional study area.

The analysis estimates the amount of growth expected to occur based on the demand for housing from construction and operations workers by evaluating the supply of suitable housing to meet the temporary housing demand of project construction and operations workers. Given the region's relatively high unemployment rates it is expected that the majority of future construction and operations workers would live within the regional study area. Any workers attracted to work at any of the construction sites may be expected to seek temporary housing (i.e., for weekly commuting) and would maintain their existing primary residence in western Riverside County, San Bernardino or elsewhere.

Based on the current housing vacancy rates and availability of local hotel/motel accommodations in the local and regional study area, there is considerable potential availability for suitable temporary housing or accommodations within the existing housing stock and motel/hotel facilities especially if workers are willing to share

accommodations. As a result, it is not expected that any new housing or hotel/motel growth would occur as a result of the planned solar projects.

The vicinity of the project site currently lacks any transit operations that would be suitable for these projects' construction workers. Construction of the project is scheduled to overlap with the construction schedules of three other projects in the area, two solar energy generation parabolic trough projects and one photovoltaic project. These three projects plus the project would result in approximately 3,623 workers traveling on I-10 to their work sites at the same time. The overlapping construction schedules of these projects would result in cumulatively considerable impacts to I-10 as well as to local streets, highways, and intersections in the vicinity of the project site. However, implementation of Construction and Operations Traffic (TRANS-4), provided in PA/FEIS Section 4.16, would ensure that a Traffic Control Plan is developed and implemented to address traffic issues related to movement of workers, vehicles, and materials, including arrival and departure schedules and designated workforce and delivery routes. The BLM elects not to require the Applicant to make additional provisions.

5.6 Administrative Remedies

BLM and the Environmental Protection Agency's Office of Federal Activities (EPA) will publish separate NOAs for the Proposed Plan Amendment/Final EIS in the Federal Register when the document is ready to be released to the public. The NOA (published by the EPA in the Federal Register) will initiate a 30-day protest period on the proposed CDCA Plan Amendment to the Director of the BLM in accordance with 43 CFR 1610.5-2.

Following resolution of any protests BLM then may publish an Approved Plan Amendment and a Record of Decision (ROD) on the Project Application. Publication and release of the ROD will serve as public notice of BLM's decision on the Project Application which is appealable in accordance with 43 CFR Part 4.

5.7 List of Preparers

Though individuals have primary responsibility for preparing sections of the Propose PA/FEIS, the document is an interdisciplinary team effort. In addition, internal review of the document occurs throughout preparation. Specialists at the BLM's Field Office, State Office, and Washington Office review the analysis and supply information, as well as provide document preparation oversight. Contributions by individual preparers may be subject to revision by other BLM specialists and by management during internal review.

**TABLE 5-2
LIST OF PREPARERS**

BLM – Palm Spring-South Coast Field Office and California Desert District Office		
<i>Name</i>	<i>Job Title/ Primary Responsibility</i>	<i>Office Location</i>
Holly Roberts	Associate Field Director	Palm Springs South Coast Field Office
Allison Shaffer	Project Manager, Realty Specialist	Palm Springs South Coast Field Office
Jeffery Childers	Planning & Environmental Coordinator	Renewable Energy Coordinating Office (RECO), California Desert District Office
Chris Dalu	Archaeologist	Palm Springs South Coast Field Office
Greg Hill	Land Use Planner	Palm Springs South Coast Field Office
George Kline	RECO Archaeologist	Palm Springs South Coast Field Office
Larry LaPre	Biologist	California Desert District Office
Kim Marsden	Biologist	California Desert District Office
Mark Massar	Biologist	Palm Springs South Coast Field Office
Ysmael Wariner	Business Support Assistant	Palm Springs South Coast Field Office
Environmental Science Associates and Sub-consultants		
<i>Name</i>	<i>Job Title</i>	<i>Primary Responsibility</i>
Johnson, Jennifer	Project Director	Quality Assurance/Quality Control
Scott, Janna	Project Manager	Quality Assurance/Quality Control, Cumulative Effects
Carlson, Nik	Senior Technical Associate	Environmental Justice, Social and Economics
Conti, Kirstin	Associate	Public Health and Safety
Cordery, Ted	Biologist	Vegetation and Wildlife Resources, Wildland and Fire Ecology
Duverge, Dylan	Associate	Visual Resources
Eckard, Robert	Senior Associate	Global Climate Change, Water Resources
Matt Fagundes	Technical Associate	Air Quality, Noise, Public Health and Safety, Noise
Holst, Julie	Associate	Air Quality, Mineral Resources, Special Designations, Transportation and Public Access – OHV, Noise
Kershaw, Carol	Lands and Realty Specialist	Lands and Realty
McCullough, Wes	GIS Analyst	Figures
Noddings, Chris	Associate	Livestock and Grazing, Wild Horse and Burro, Recreation, Multiple Use Class, Special Designations
Prohaska, Robert	Energy Director	Quality Assurance/Quality Control
Simmons, Gregg	Manager, Simmons Environmental and Natural Resource Consulting, LLC	Environmental Planner and Technical Advisor
Stumpf, Gary	Cultural Resources Specialist	Cultural and Paleontological Resources
Taplin, Justin	Technical Associate	Soil and Mineral Resources
Teitel, Ron	Senior Graphics	Graphics

ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
$^{\circ}\text{F}$	degrees Fahrenheit
A	ampere (amp)
AAQS	ambient air quality standards
AB	Assembly Bill
AB 32	California Global Warming Solutions Act of 2006
ac	acres
ACC	air-cooled condenser
ACEC	Area of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
AERMOD	AMS/EPA Regulatory Model
af or ac-ft	acre-feet
AFC	Application for Certification
afy or ac-ft/yr	acre-feet per year
AIChE	American Institute of Chemical Engineers
AIM	Aeronautical Information Manual
ALUC	Airport Land Use Commission
AM	Amplitude Modulated
AML	appropriate management level
AML	abandoned mined lands
AMPs	Allotment Management Plans
AMS	American Meteorological Society
amsl	above mean sea level
AMT	alternative minimum tax
ANSI	American National Standards Institute
AO	Authorized Officer
APCDs	Air Pollution Control Districts
APCO	Air Pollution Control Officer
APE	Area of Potential Effects
API	American Petroleum Institute
APLIC	Avian Power Line Interaction Committee

APN	Assessor's Parcel Number
APP	Avian Protection Plan
Applicant	Palo Verde Solar I
AQCM	Air Quality Construction Mitigation Manager
AQCMP	Air Quality Construction Mitigation Plan
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ARPA	Archaeological Resources Protection Act of 1979
ASME	American Society for Material Engineering
AST	aboveground storage tank
ASTM	American Society for Testing Materials Standards
ATC	Authority to Construct
ATCC	Area of Traditional Cultural Concern
ATCM	Airborne Toxic Control Measure
ATV	all-terrain vehicle
AWEA	American Wind Energy Association
BA	Biological Assessment
BAAB	Blythe Army Air Base
BAAQMD	Bay Area Air Quality Management District
BACM	Best Available Control Measures
BACT	Best Available Control Technology
BCC	birds or conservation concern
bgs	below ground surface
bhp	brake-horsepower
BIL	basic impulse level
BIS	Department of Business Innovation & Skills
BLM	United States Bureau of Land Management
BMPs	best management practices
BO	Biological Opinion
BOR	Bureau of Reclamation
BRMIMP	Biological Resources Mitigation Implementation and Monitoring Plan
BSPP	Blythe Solar Power Plant
CAA	Clean Air Act
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
CalARP	California Accidental Release Program
CalEPA	California Environmental Protection Agency
Cal-IPC	California Invasive Plant Council
Cal-OSHA	California - Occupational Safety and Health Administration

CalPIF	California Partners in Flight
Caltrans	California State Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CAS	Chemical Abstracts Service
CATEF II	California Air Toxics Emission Factors
CBC	California Building Code
CBEA	California Biomass Energy Alliance
CBO	Conference of Building Officials
CBOC	California Burrowing Owl Consortium
CBSC	California Building Standards Code
CC	City Council
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCS	cryptocrystalline silicate
CCTV	closed circuit television
CDCA	California Desert Conservation Area
CDCA Plan	California Desert Conservation Area Plan
CDD	California Desert District
CDE	California Department of Education
CDF	California Department of Forestry and Fire Protection
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CDPA	California Desert Protection Act of 1994
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFATS	Chemical Facility Anti-Terrorism Standard
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH ₄	methane
Chamber of Commerce	Blythe Area Chamber of Commerce
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIWMA	California Integrated Waste Management Act of 1989
CIWMB	California Integrated Waste Management Board
CMUP	Comprehensive Management and Use Plan

CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNF	Cleveland National Forest
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
COC	Conditions of Certification
CPM	Compliance Project Manager
CPUC	California Public Utilities Commission
CRAM	California Rapid Assessment Method
CRBRWQCB	Colorado River Basin Regional Water Quality Control Board
CRHR	California Register of Historical Resources
CRS	Congressional Research Service
CSC	California Species of Special Concern
CSP	California State Parks
CTG	Combustion Turbine Generator
CTI	Cooling Technology Institute
CTTM	Comprehensive Travel and Transportation Management
CUPA	Certified Unified Program Authority
CURE	California Unions for Reliable Energy
CVBG	Chuckwalla Valley Groundwater Basin
CWA	Clean Water Act
cy	cubic yards
D	dynamic volt amp reactive
D	Delisted
dB	Decibel
dBA	A-weighted decibels
DCS	data (or distributed) control system
DDT	Dichloro-diphenyl-trichloroethane
DESCP	Drainage, Erosion, and Sedimentation Control Plan
DHS	Department of Homeland Security
DMG	Division of Mines and Geology (now called California Geological Survey)
DNA	Determination of NEPA Adequacy
DOC	California Department of Conservation
DOE	United States Department of Energy
DOI	United States Department of Interior
DOJ	United States Department of Justice
DOT	Department of Transportation
DPM	diesel particulate matter

DPR	Department of Parks and Recreation
DPR	Department of Pesticide Regulation
DPS	Distinct Population Segment
DPV1	Devers-Palo Verde No. 1 Transmission Line
DPV2	Devers-Palos Verde 2 Transmission Line
DRECP	California Desert Renewable Energy Conservation Plan
DRMP-A/DEIS	Draft Resource Management Plan-Amendment/Draft Environmental Impact Statement
DTC	Desert Training Center
DTC/C-AMA	George S. Patton’s World War II Desert Training Center/California- Arizona Maneuver Area
DTCCCL	Desert Training Center California-Arizona Area Cultural Landscape
DTRO	Desert Tortoise Recovery Office
DTSC	Department of Toxic Substances Control
DWMA	Desert Wildlife Management Area
DWR	California Department of Water Resources
E3	Energy and Environmental Economics, Inc.
EB	eastbound
EEMP	Equipment Emissions Mitigation Plan
EERE	Energy Efficiency and Renewable Energy
EFD	El Centro Fire Department
EFZ	Earthquake Fault Zone
EIC	Eastern Information Center
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMF	Electric and Magnetic Field
EMS	Emergency Medical Services
EO	Executive Order
EPA	United States Environmental Protection Agency
EPAct 05	Energy Policy Act of 2005
EPRI	Electric Power Research Institute
EPS	Emission Performance Standard
ERC	Emission Reduction Credit
ESA	Endangered Species Act
ET	evapotranspiration
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDOC	Final Determination of Compliance
FE	Federally listed as endangered
FEIR	Final Environmental Impact Report
FEIS	Final Environmental Impact Statement

FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FESA	Federal Endangered Species Act
FHWA or FHA	Federal Highway Administration
FLPMA	Federal Land Policy and Management Act
FM	Frequency Modulated
FMAP	Fire Management Activity Plan
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
fps	feet per second
FR	Federal Register
FSC	Field Supervisor Controller
ft	feet
ft ² /d	feet squared per day
FT	Federally listed as threatened
FTA	Federal Transit Administration
FTE	full time equivalent
FTHL	flat-tailed horned lizard
g	gravity
gal	gallon
GCC	Global Climate Change
GEA	Geothermal Energy Association
gen-tie	power transmission line
GHG	greenhouse gas
GIS	geographic information system
gpd	gallons per day
gpd/ft	gallons per day per foot
gpd/ft ²	gallons per day per square foot
gpm	gallons per minute
GSEP	Genesis Solar Energy Project
GSU	generator set-up transformer
GWh	gigawatt-hour
GWR	groundwater recharge
H ₂ S	hydrogen sulfide
HA	Herd Area
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscape Survey
HAP	Hazardous Air Pollutant
HARP	Hotspots Analysis Reporting Program

HAs	Herd Areas
HCE	heat collection element
HCM	Highway Capacity Manual
HDPE	high-density polyethylene
HEC-RAS	Hydrologic Engineering Center River Analysis System
HERO	high efficiency reverse osmosis
HFCs	hydrofluorocarbons
HI	Hazards Index or Chronic Hazards Index
HMAAs	Herd Management Areas
HMBP	Hazardous Materials Business Plan
hp	horsepower
HP	high pressure
HPTP	Historic Properties Treatment Plan
HRA	Health Risk Assessment
HRP	Habitat Restoration Plan
HSC	Health and Safety Code
HTF	Heat Transfer Fluid
HUC	hydrologic unit code
HWSRMRA	Hazardous Waste Source Reduction and Management Review Act of 1989
Hz	Hertz
I-10	Interstate-10
ICAPCD	Imperial County Air Pollution Control District
ICC	Interagency Coordinating Committee
ICDTSC	Imperial County Department of Toxic Substances Control
IEEE	Institute of Electrical and Electronics Engineers
IEPR	Integrated Energy Policy Report
IID	Imperial Irrigation District
ILPP	Injury and Illness Prevention Program
in	inches
in/sec	inches per second
IND	Industrial Service Supply
INT	international
IP	intermediate pressure
ISCST	Industrial Source Complex Short Term
ISO	Independent System Operator
ITC	investment tax credit
IUSD	Imperial Unified School District
IVEDC	Imperial Valley Economic Development Corporation
IVRM	Interim Visual Resource Management
IVS	Imperial Valley Solar

K	erosion factor
kA	kilo-amps
KOPs	key observation points
kV	kilovolt
kVA	kilovolt-amperes
kVAR	kilovolt-ampere reactive
kW	kilowatt
kWe	kilowatt-electric
L ₉₀	The A-weighted noise level that is exceeded 90 percent of the time during the measurement period.
LADWP	Los Angeles Department of Water and Power
lbs	pounds
lb/yr	pounds per year
L _{dn}	day-night average noise level
LDS	leachate detection system
LE	Land Evaluation
LEDPA	Least Environmentally Damaging Practicable Alternative
L _{eq}	equivalent continuous sound level
LESA	Land Evaluation and Site Assessment
LESA Model	Land Evaluation and Site Assessment Model
LID	Low Impact Development
LLC	Limited Liability Corporation
LORS	laws, ordinances, regulations, and standards
LOS	level of service
LP	low pressure
LRAs	Local Reliability Areas
LTU	Land Treatment Unit
LTVA	Long-Term Visitor Area
LUP	Land Use Plan
M6.0	earthquake of magnitude 6.0 or greater
Ma	million years ago
MA	management area
MACT	Maximum Available Control Technology
MBTA	Migratory Bird Treaty Act
MCE	Maximum Credible Earthquake
MCL	Maximum Contaminant Level
MCR	Monthly Compliance Report
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MEIR	maximum exposed individual resident
MEIW	maximum exposed individual worker

mg/L	milligrams per liter
mg/m ³	milligrams per cubic meter
mi	miles
ml	milliliters
ML	Measuring Location
mm	millimeters
MM	Modified Mercalli
MMBtu	1 million british thermal units
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
mph	miles per hour
MPP	Mirror Positioning Plan
MRZ	Mineral Resource Zone
MSA	Metropolitan Statistical Area
msl	mean sea level
MT	metric ton
MTBF	mean time between failure
MTCO ₂ e	metric tons of carbon dioxide equivalent
MTPs	Master Title Plats
MTS	Metropolitan Transit System
MUC	Multiple-Use Class
MUC C	Multiple-Use Class Controlled
MUC I	Multiple-Use Class Intensive
MUC L	Multiple-Use Class Limited
MUC M	Multiple-Use Class Moderate
MUC U	Multiple-Use Class Unclassified
MUN	Municipal and Domestic Water Supply
MVA	megavolt-amperes
MVAR	megavolt-ampere reactive
MW	megawatts
Mw	Maximum Earthquake Magnitude
MWh	megawatt-hour
N/A	Not Applicable
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NECO	Northern and Eastern Colorado Desert Coordinated Management Plan
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation

NESC	National Electrical Safety Code
NFP	National Fire Plan
NFPA	National Fire Protection Association
NFWF	National Fish and Wildlife Foundation
NHPA	National Historic Preservation Act
NIOSH	National Institute of Safety and Health
NLCS	National Landscape Conservation System
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NRHP or National Register	National Register of Historic Places
NO	nitric oxide
NO ₂	nitrogen dioxide
NOA	Notice of Availability
NOI	Notice of Intent
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	United States National Park Service
NRC	National Research Council
NRCS	Natural Resources Conservation Service
NRDC	Natural Resources Defense Council
NSPS	New Source Performance Standard
NSR	New Source Review
NTP	Notice to Proceed
NWIS	National Water Information System
O&M	operations and maintenance
O ₂	oxygen
O ₃	ozone
OCA	Off-site Consequence Analysis
OCWGB	Ocotillo/Coyote Wells Groundwater Basin
OEHHA	Office of Environmental Health Hazard Assessment
OFA	Offer of Financial Assistance
OHV	off-highway vehicle
OII	Order Initiating an Informational
OLM	Ozone Limiting Method
OSHA	United States Occupational Safety and Health Administration
OTC	once-through cooling
PA	Programmatic Agreement
PA	Plan Amendment
PA/FEIS	Resource Management Plan Amendment/Final Environmental Impact Statement
PSSCFO	Palm Springs / South Coast Field Office

PALS	pre-acquisition liability survey
PBS	Peninsular bighorn sheep
PCA	Pest Control Advisor
PCU	power conversion unit
PDF	Portable Document Format
PDOC	Preliminary Determination of Compliance
PEIS	Programmatic Environmental Impact Statement
PFCs	perfluorocarbons
PGA	peak ground acceleration
PG&E	Pacific Gas and Electric Company
PL	Public Law
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PMI	Point of Maximum Impact
POD	Plan of Development
PPA	Power Purchase Agreement
PPE	Personal Protective Equipment
ppm	parts per million
ppmv	parts per million by volume
ppmvd	parts per million by volume, dry
PQAD	Prehistoric Quarries Archaeological District
PRC	Public Resources Code
PRIA	Public Rangelands Improvement Act of 1978
PRM	Paleontological Resource Monitors
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
PRPA	Paleontologic Resources Preservation Act
PRS	Paleontological Resources Supervisor
PSA	Preliminary Staff Assessment
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
PSPP	Palen Solar Power Project
PSSCFO	Palm Springs South Coast Field Office
PTNCL	Prehistoric Trails Network Cultural Landscape
PTO	Permit to Operate
PTZ	pan, tilt, and zoom
PV	photovoltaic
PVC	polyvinyl chloride
PVID	Palo Verde Irrigation District
PVMGB	Palo Verde Mesa Groundwater Basin

PVVGB	Palo Verde Valley Groundwater Basin
PVVTA	Palo Verde Valley Transit Agency
PYFC	Potential Fossil Yield Classification
QFER	Quarterly Fuel and Energy Report
R	Rare
RACM	Reasonably Available Control Measures
RACT	Reasonably Available Control Technology
RCALUC	Riverside County Airport Land Use Commission
RCFD	Riverside County Fire Department
RCRA	Resource Conservation and Recovery Act
REAT	Renewable Energy Action Team
REC I	Water Contact Recreation
REC II	Non-contact Water Recreation
Recovery Act	American Recovery and Reinvestment Act of 2009, P.L. 111-5
RECs	Recognized Environmental Conditions
REF	Renewable Electricity Future
RELS	Reference Exposure Levels
RETI	Renewable Energy Transmission Initiative
RFI	radio frequency interference
RMP	Resource Management Plan
RMPA	Resource Management Plan Amendment
RO	reverse osmosis
ROD	Record of Decision
ROG	reactive organic gases
ROW	right-of-way
ROWD	Report of Waste Discharge
RPS	Renewables Portfolio Standard
RQ	reportable quantity
RSA	Revised Staff Assessment
RTP	Regional Transportation Plan
RUSLE2	Revised Universal Soil Loss Equation
RV	recreational vehicle
RWQCB	Regional Water Quality Control Board
S	Sensitive
SAC	Science Advisory Committee
SA/DEIS	Staff Assessment/Draft Environmental Impact Statement
SAP	Sampling and Analysis Plan
SARA Title III	Superfund Amendments and Reauthorization Act of 1986
SC	sediment control
SCA	Solar Collector Assembly

SCADA	supervisory control and data acquisition
SCAG	Southern California Association of Governments
SCCWRP	Southern California Coastal Water Research Project
SCE	Southern California Edison
SCEC	Southern California Earthquake Center
scf	standard cubic feet
scfh	standard cubic feet of hydrogen per hour
SCG	Southern California Gas Company
SCPBRG	Santa Cruz Predatory Bird Research Group
SCWD	Seeley County Water District
SDAR	San Diego and Arizona Railroad
SDG&E	San Diego Gas and Electric Company
SE	State listed as endangered
SES	Stirling Energy Systems
SESA	Solar Energy Study Area
sf	square feet
SF ₆	sulfur hexafluoride
SFP	State fully protected
SHPO	State Historic Preservation Officer
SIC	Southeastern Information Center
SIP	State Implementation Plan
SLF	Sacred Lands File
SLRU	Sensitivity Level Rating Units
SO ₂	sulfur dioxide
SO ₄	sulfate
SOPs	standard operating procedures
SO _x	sulfur oxides
SPCC	Spill Prevention Control and Countermeasures
SPRR	Southern Pacific Railroad
sq mi	square miles
SQRUs	Scenic Quality Rating Units
SR-111	State Route 111
SR-98	State Route 98
SRA	Safety Risk Assessment
SRA	State Responsibility Area
SRP	Scientific Review Panel
SS	soil stabilization
SSAB	Salton Sea Air Basin
SSAB	Salton Sea Air Basin
ST	State listed as threatened

STG	steam turbine-generator
SVP	Society of Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWWTP	Seeley Wastewater Treatment Plant
TAC	Toxic Air Contaminants
T-BACT	Best Available Control Technology for Toxics
TC	tracking control
TDS	Total Dissolved Solids
TGA	Taylor Grazing Act
TMDLs	Total Maximum Daily Loads
TNW	traditional navigable water
tpy	tons per year
UBC	Uniform Building Code
UDI	undocumented immigrants
µg/L	micrograms per Liter
µg/m ³	micrograms per cubic meter
URS	URS Corporation
US	United States
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USC	United States Code
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USLE	Universal Soil Loss Equation
UXO	unexploded ordnance
UV	ultraviolet
V	volts
VAC	volts alternating current
VAR	volt-ampere reactive
VdB	velocity decibel
VDE	Visible Dust Emission
VHA	Lavic Lake volcanic hazard area
VMT	vehicle miles traveled
VOCs	volatile organic compounds
VRI	Visual Resource Inventory

VRM	Visual Resource Management
W	watts
WAs	Wilderness Areas
WAPA	Western Area Power Administration
WB	westbound
WDR	Waste Discharge Requirement
WE	wind erosion
WEAP	Worker Environmental Awareness Program
WEC	World Energy Council
WECC	Western Electricity Coordinating Council
WECO	Western Colorado Desert Routes of Travel Designations
WEPS	Wind Erosion Prediction System
WHMA	Wildlife Habitat Management Area
WILD	Wildlife Habitat
WIU	Wilderness Inventory Unit
WL	Watch List
WRCC	Western Regional Climate Center
WSA	Wilderness Study Area
WSS	Web Soil Survey
WTE	Wave & Tidal Energy
ybp	years before present
YDMP	Yuha Desert Management Plan
yr	year
ZOI	zone of influence

GLOSSARY OF TERMS

A

Adjacent: Defined by ASTM E1527-00 as any real property the border of which is contiguous or partially contiguous with that of the Site or would be contiguous or partially contiguous with that of the Site but for a street, road, or other public thoroughfare separating them.

Air Basin: A regional area defined for state air quality management purposes based on considerations that include topographic features that influence meteorology and pollutant transport patterns, and political jurisdiction boundaries that influence the design and implementation of air quality management programs.

Air Quality Control Region: A regional area defined for federal air quality management purposes based on considerations that include topographic features that influence meteorology and pollutant transport patterns, and political jurisdiction boundaries that influence the design and implementation of air quality management programs.

Alluvium: a fine-grained fertile soil consisting of mud, silt, and sand deposited by flowing water on flood plains, in river beds, and in estuaries.

Alluvial Fan: Fan shaped material of water deposited material.

Ambient Air Quality Standards: A combination of air pollutant concentrations, exposure durations, and exposure frequencies that are established as thresholds above which adverse impacts to public health and welfare may be expected. Ambient air quality standards are set on a national level by the U.S. Environmental Protection Agency. Ambient air quality standards are set on a state level by public health or environmental protection agencies as authorized by state law.

Ambient Air: Outdoor air in locations accessible to the general public.

Archaeological district: A significant concentration, linkage, or continuity of sites, buildings, or features important in history or prehistory. There can be discontinuous districts composed of resources that are not in close proximity to one another

Area of Critical Environmental Concern (ACEC): A designated area on public lands where special management attention is required: (1) to protect and prevent irreparable damage to fish and wildlife; (2) to protect important historic, cultural, or scenic values, or other natural systems or processes; or (3) to protect life and safety from natural hazards.

Attainment Area: An area that has air quality as good as or better than a national or state ambient air quality standard. A single geographic area may be an attainment area for one pollutant and a non-attainment area for others.

B

Basic Elements: The four design elements (form, line, color, and texture), which determine how the character of a landscape is perceived.

Bioremediation: The use of biological agents, such as bacteria or plants, to remove or neutralize contaminants, as in polluted soil or water.

C

Calcareous Substrates: Substances, often of a chalky composition, containing, or resembling calcium carbonate.

Cancer: A class of diseases characterized by uncontrolled growth of somatic cells. Cancers are typically caused by one of three mechanisms: chemically induced mutations or other changes to cellular DNA; radiation induced damage to cellular chromosomes; or viral infections that introduce new DNA into cells.

Carbon Monoxide (CO): A colorless, odorless gas that is toxic because it reduces the oxygen-carrying capacity of the blood.

Characteristic: A distinguishing trait, feature, or quality.

Characteristic Landscape: The established landscape within an area being viewed. This does not necessarily mean a naturalistic character. It could refer to an agricultural setting, an urban landscape, a primarily natural environment, or a combination of these types.

Climate: A statistical description of daily, seasonal, or annual weather conditions based on recent or long-term weather data. Climate descriptions typically emphasize average, maximum, and minimum conditions for temperature, precipitation, humidity, wind, cloud cover, and sunlight intensity patterns; statistics on the frequency and intensity of tornado, hurricane, or other severe storm events may also be included.

Community Noise Equivalent Level (CNEL): A 24-hour average noise level rating with a 5 dB penalty factor applied to evening noise levels and a 10 dB penalty factor applied to nighttime noise levels. The CNEL value is very similar to the Day-Night Average Sound Level (Ldn) value, but includes an additional weighting factor for noise during evening hours.

Contrast: Opposition or unlikeness of different forms, lines, colors, or textures in a landscape.

Contrast Rating: A method of analyzing the potential visual impacts of proposed management activities.

Cretaceous: In geologic history the third and final period of the Mesozoic era, from 144 million to 65 million years ago, during which extensive marine chalk beds formed.

Criteria Pollutant: An air pollutant for which there is a national ambient air quality standard (carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, inhalable particulate matter, fine particulate matter, or airborne lead particles).

Critical Habitat: Habitat designated by the US Fish and Wildlife Service under Section 4 of the Endangered Species Act and under the following criteria: 1) specific areas within the geographical area occupied by the species at the time it is listed, on which are found those physical or biological features essential to the conservation of the species and that may require special management of protection; or 2) specific areas outside the geographical area by the species at the time it is listed but that are considered essential to the conservation of the species.

Cultural Landscape: A geographic area, including both natural and cultural resources, associated with a historic event, activity, group, or person; or, a geographic area that has been assigned cultural or social meaning by associated cultural groups.

Cultural Modification: Any man-caused change in the land form, water form, vegetation, or the addition of a structure which creates a visual contrast in the basic elements (form, line, color, texture) of the naturalistic character of a landscape.

Cultural Resource: A location of human activity, occupation, or use identifiable through field inventory, historical documentation, or oral evidence. Cultural resources include archaeological and historical sites, structures, buildings, objects, artifacts, works of art, architecture, and natural features that were important in past human events. They may consist of physical remains or areas where significant human events occurred, even though evidence of the events no longer remains. And they may include definite locations of traditional, cultural, or religious importance to specified social or cultural groups.

Cultural Resource Data: Cultural resource information embodied in material remains such as artifacts, features, organic materials, and other remnants of past activities. An important aspect of data is context, a concept that refers to the relationships among these types of materials and the situations in which they are found.

Cultural Resource Data Recovery: The professional application of scientific techniques of controlled observation, collection, excavation, and/or removal of physical remains, including analysis, interpretation, explanation, and preservation of recovered remains and associated records in an appropriate curatorial facility used as a means of protection. Data recovery may sometimes employ professional collection of such data as oral histories, genealogies, folklore, and related information to portray the social significance of the affected resources. Such data recovery is sometimes used as a measure to mitigate the adverse impacts of a ground-disturbing project or activity.

Cultural Resource Integrity: The condition of a cultural property, its capacity to yield scientific data, and its ability to convey its historical significance. Integrity may reflect the authenticity of a property's historic identity, evidenced by the survival or physical characteristics that existed during its historic or prehistoric period, or its expression of the aesthetic or historic sense of a particular period of time.

Cultural Resource Inventory (Survey): A descriptive listing and documentation, including photographs and maps of cultural resources. Included in an inventory are the processes of locating, identifying, and recording sites, structures, buildings, objects, and districts through library and archival research, information from persons knowledgeable about cultural resources, and on-the-ground surveys of varying intensity.

Class I: A professionally prepared study that compiles, analyzes, and synthesizes all available data on an area's cultural resources. Information sources for this study include published and unpublished documents, BLM inventory records, institutional site files, and state and National Register files. Class I inventories may have prehistoric, historic, and ethnological and sociological elements. These inventories are periodically updated to include new data from other studies and Class II and III inventories.

Class II: A professionally conducted, statistically based sample survey designed to describe the probable density, diversity, and distribution of cultural properties in a large area. This survey is achieved by projecting the results of an intensive survey carried out over limited parts of the target area. Within individual sample units, survey aims, methods, and intensities are the same as those applied in Class III inventories. To improve statistical reliability, Class II inventories may be conducted in several phases with different sample designs.

Class III: A professionally conducted intensive survey of an entire target area aimed at locating and recording all visible cultural properties. In a Class III survey, trained observers commonly conduct systematic inspections by walking a series of close interval parallel transects until they have thoroughly examined an area.

Cultural Resource Values: The irreplaceable qualities that are embodied in cultural resources, such as scientific information about prehistory and history, cultural significance to Native Americans and other groups, and the potential to enhance public education and enjoyment of the Nation's rich cultural heritage.

Cultural Site: A physical location of past human activities or events, more commonly referred to as an archaeological site or a historic property. Such sites vary greatly in size and range from the location of a single cultural resource object to a cluster of cultural resource structures with associated objects and features.

D

Day/Night Average Sound Level (Ldn): A 24-hour average noise level rating with a 10 dB penalty factor applied to nighttime noise levels. The Ldn value is very similar to the CNEL value, but does not include any weighting factor for noise during evening hours.

Decibel (dB): A generic term for measurement units based on the logarithm of the ratio between a measured value and a reference value. Decibel scales are most commonly associated with acoustics (using air pressure fluctuation data); but decibel scales sometimes are used for ground-borne vibrations or various electronic signal measurements.

Desert Pavement: A surface covering of closely packed rock fragments of pebble or cobble size found on desert soils.

Desert Wildlife Management Area (DWMA): areas established in the NECO Plan to address the recovery of the desert tortoise. They are intended to be areas where viable desert tortoise populations can be maintained (Category I habitat).

Distance Zones: A subdivision of the landscape as viewed from an observer position. The subdivision (zones) includes foreground-middleground, background, and seldom seen.

E

Enhancement: A management action designed to improve visual quality.

Equivalent Average Sound Pressure Level (Leq): The decibel level of a constant noise source that would have the same total acoustical energy over the same time interval as the actual time-varying noise condition being measured or estimated. Leq values must be associated with an explicit or implicit averaging time in order to have practical meaning.

Ethnohistoric Resources: Areas used by Native Americans following exploration and settlement by non-Native Americans. Sites or artifacts of particular significance to modern Native Americans are often kept secret by those groups to protect the sites from disturbance, looting, overuse, or other defamations.

Excavation: The scientific examination of an archaeological site through layer-by-layer removal and study of the contents within prescribed surface units, e.g. square meters.

F

Fluvial: Of, relating to, or occurring in a river.

Form: The mass or shape of an object or objects which appear unified, such as a vegetative opening in a forest, a cliff formation, or a water tank.

G

Geomorphic Province: Naturally defined geologic regions that display a distinct landscape or landform.

Greenhouse Gas: A gaseous compound that absorbs infrared radiation and re-radiates a portion of that back toward the earth's surface, thus trapping heat and warming the earth's atmosphere.

H

Habitat: A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

Hazardous Air Pollutant (HAP): Air pollutants which have been specifically designated by relevant federal or state authorities as being hazardous to human health. Most HAP compounds are designated due to concerns related to: carcinogenic, mutagenic, or teratogenic properties; severe acute toxic effects; or ionizing radiation released during radioactive decay processes.

Hertz (Hz): A standard unit for describing acoustical frequencies measured as the number of air pressure fluctuation cycles per second. For most people, the audible range of acoustical frequencies is from 20 Hz to 20,000 Hz.

Historical Site: A location that was used or occupied after the arrival of Europeans in North America (ca. A.D. 1492). Such sites may consist of physical remains at archaeological sites or areas where significant human events occurred, even though evidence of the events no longer remains. They may have been used by people of either European or Native American descent.

Holocene: Of, denoting, or formed in the second and most recent epoch of the Quaternary period, which began 10 000 years ago at the end of the Pleistocene.

Hydrocarbons: Any organic compound containing only carbon and hydrogen, such as the alkanes, alkenes, alkynes, terpenes, and arenes.

I

Igneous: Rock, such as granite and basalt that has solidified from a molten or partially molten state.

Indian Tribe: Any American Indian group in the United States that the Secretary of the Interior recognizes as possessing tribal status (listed periodically in the Federal Register).

Indigenous: Being of native origin (such as indigenous peoples or indigenous cultural features).

Interdisciplinary Team: A group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, assembled to solve a problem or perform a task. The members of the team proceed to a solution with frequent interaction so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions.

Invasive Species: An exotic species whose introduction does or is likely to cause economic or environmental harm or harm to human health (Executive Order 13122, 2/3/99).

Isolate: Non-linear, isolated archaeological features without associated artifacts.

K

Key Observation Point (KOP): One or a series of points on a travel route or at a use area or a potential use area, where the view of a management activity would be most revealing.

L

Landscape Character: The arrangement of a particular landscape as formed by the variety and intensity of the landscape features and the four basic elements of form, line, color, and texture. These factors give the area a distinctive quality which distinguishes it from its immediate surroundings.

Landscape Features: The land and water form, vegetation, and structures which compose the characteristic landscape.

Leasable Minerals: Minerals whose extraction from federally managed land requires a lease and the payment of royalties. Leasable minerals include coal, oil and gas, oil shale and tar sands potash, phosphate, sodium, and geothermal steam.

Line: The path, real or imagined, that the eye follows when perceiving abrupt differences in form, color, or texture. Within landscapes, lines may be found as ridges, skylines, structures, changes in vegetative types, or individual trees and branches.

Locatable Minerals: Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

M

Maintenance Area: An area that currently meets federal ambient air quality standards but which was previously designated as a nonattainment area. Federal agency actions occurring in a maintenance area are still subject to Clean Air Act conformity review requirements.

Management Activity: A surface disturbing activity undertaken on the landscape for the purpose of harvesting, traversing, transporting, protecting, changing, replenishing, or otherwise using resources.

Memorandum of Understanding (MOU): A written but noncontractual agreement between two or more agencies or other parties to take a certain course of action.

Mineral Material Disposal: The sale of sand, gravel, decorative rock, or other materials defined in 43 CFR 3600.

Mining Claim: A mining claim is a selected parcel of Federal Land, valuable for a specific mineral deposit or deposits, for which a right of possession has been asserted under the General Mining Law. This right is restricted to the development and extraction of a mineral deposit. The rights granted by a mining claim protect against a challenge by the United States and other claimants only after the discovery of a valuable mineral deposit. The two types of mining claims are lode and placer. In addition, mill sites and tunnel sites may be located to provide support facilities for lode and placer mining.

Mitigation: Mitigation includes: (a) Avoiding the impacts altogether by not taking an action or parts of an action, (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment, (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, (e) Compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

N

National Pollutant Discharge Elimination System (NPDES): The NPDES permit program has been delegated in California to the State Water Resources Control Board. These sections of the CWA require that an applicant for a federal license or permit that allows activities resulting in a

discharge to waters of the United States must obtain a State certification that the discharge complies with other provisions of the Clean Water Act.

National Register District: A group of significant archaeological, historical, or architectural sites, within a defined geographic area, that is listed on the National Register of Historic Places. See National Register of Historic Places.

National Register of Historic Places: The official list, established by the National Historic Preservation Act, of the Nation's cultural resources worthy of preservation. The National Register lists archeological, historic, and architectural properties (i.e. districts, sites, buildings, structures, and objects) nominated for their local, state, or national significance by state and federal agencies and approved by the National Register Staff. The National Park Service maintains the National Register. Also see National Historic Preservation Act.

National Scenic Trail: One of the three categories of national trails defined in the National Trails System Act of 1968 that can only be established by act of Congress and are administered by federal agencies, although part or all of their land base may be owned and managed by others. National Scenic Trails are existing regional and local trails recognized by either the Secretary of Agriculture or the Secretary of the Interior upon application.

Native American: Indigenous peoples of the western hemisphere.

Nitric Oxide (NO): A colorless toxic gas formed primarily by combustion processes that oxidize atmospheric nitrogen gas or nitrogen compounds found in the fuel. A precursor of ozone, nitrogen dioxide, numerous types of photochemically generated nitrate particles (including PAN), and atmospheric nitrous and nitric acids. Most nitric oxide formed by combustion processes is converted into nitrogen dioxide by subsequent oxidation in the atmosphere over a period that may range from several hours to a few days.

Nitrogen Dioxide (NO₂): A toxic reddish gas formed by oxidation of nitric oxide. Nitrogen dioxide is a strong respiratory and eye irritant. Most nitric oxide formed by combustion processes is converted into nitrogen dioxide by subsequent oxidation in the atmosphere. Nitrogen dioxide is a criteria pollutant in its own right, and is a precursor of ozone, numerous types of photochemically generated nitrate particles (including PAN), and atmospheric nitrous and nitric acids.

Nitrogen Oxides (NO_x): A group term meaning the combination of nitric oxide and nitrogen dioxide; other trace oxides of nitrogen may also be included in instrument-based NO_x measurements. A precursor of ozone, photochemically generated nitrate particles (including PAN), and atmospheric nitrous and nitric acids.

Non-native Species: See Invasive Species and Noxious Weed.

Noxious Weed: According to the Federal Noxious Weed Act (PL 93-629), a weed that causes disease or has other adverse effects on man or his environment and therefore is detrimental to the agricultural and commerce of the United States and to the public health.

Nonattainment Area: An area that does not meet a federal or state ambient air quality standard. Federal agency actions occurring in a federal nonattainment area are subject to Clean Air Act conformity review requirements.

O

Off-Highway Vehicle (OHV): Any vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain, deriving motive power from any source other than muscle. OHVs exclude: 1) any non-amphibious registered motorboat; 2), any fire, emergency, or law enforcement vehicle while being used for official or emergency purposes; 3) any vehicle whose use is expressly authorized by a permit, lease, license, agreement, or contract issued by an authorized officer or otherwise approved; 4) vehicles in official use; and 5) any combat or combat support vehicle when used in times of national defense emergencies.

Organic Compounds: Compounds of carbon containing hydrogen and possibly other elements (such as oxygen, sulfur, or nitrogen). Major subgroups of organic compounds include hydrocarbons, alcohols, aldehydes, carboxylic acids, esters, ethers, and ketones. Organic compounds do not include crystalline or amorphous forms of elemental carbon (graphite, diamond, carbon black, etc.), the simple oxides of carbon (carbon monoxide and carbon dioxide), metallic carbides, or metallic carbonates.

Overdraft condition: A condition in which the total volume of water being extracted from the groundwater basin would be greater than the total recharge provided to the basin.

Ozone (O₃): A compound consisting of three oxygen atoms. Ozone is a major constituent of photochemical smog that is formed primarily through chemical reactions in the atmosphere involving reactive organic compounds, nitrogen oxides, and ultraviolet light. Ozone is a toxic chemical that damages various types of plant and animal tissues and which causes chemical oxidation damage to various materials. Ozone is a respiratory irritant, and appears to increase susceptibility to respiratory infections. A natural layer of ozone in the upper atmosphere absorbs high energy ultraviolet radiation, reducing the intensity and spectrum of ultraviolet light that reaches the earth's surface.

P

Paleontological Resources (Fossils): The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are for understanding past environments, environmental change, and the evolution of life.

Paleontology: A science dealing with the life forms of past geological periods as known from fossil remains.

Paleozoic Era: An era of geologic time (600 million to 280 million years ago) between the Late Precambrian and the Mesozoic eras and comprising the Cambrian, Ordovician, Silurian, Devonian, Missippian, Pennsylvanian, and Permian periods.

Particulate Matter: Solid or liquid material having size, shape, and density characteristics that allow the material to remain suspended in the atmosphere for more than a few minutes. Particulate matter can be characterized by chemical characteristics, physical form, or aerodynamic properties. Categories based on aerodynamic properties are commonly described as being size categories, although physical size is not used to define the categories. Many components of suspended particulate matter are respiratory irritants. Some components (such as crystalline or fibrous minerals) are primarily physical irritants. Other components are chemical

irritants (such as sulfates, nitrates, and various organic chemicals). Suspended particulate matter also can contain compounds (such as heavy metals and various organic compounds) that are systemic toxins or necrotic agents. Suspended particulate matter or compounds adsorbed on the surface of particles can also be carcinogenic or mutagenic chemicals.

Peak Particle Velocity: A measure of ground-borne vibrations. Physical movement distances are typically measured in thousandths of an inch, and occur over a tiny fraction of a second. But the normal convention for presenting that data is to convert it into units of inches per second.

Petroglyph: Pictures, symbols, or other art work pecked, carved, or incised on natural rock surfaces.

pH (parts hydrogen): The logarithm of the reciprocal of hydrogen-ion concentration in gram atoms per liter.

Physiographic Province: An extensive portion of the landscape normally encompassing many hundreds of square miles, which portrays similar qualities of soil, rock, slope, and vegetation of the same geomorphic origin (Fenneman 1946; Sahrhaftig 1975).

Pleistocene (Ice Age): An epoch in the Quarternary period of geologic history lasting from 1.8 million to 10,000 years ago. The Pleistocene was an epoch of multiple glaciation, during which continental glaciers covered nearly one fifth of the earth's land.

Pliocene: The Pliocene Epoch is the period in the geologic timescale that extends from 5.332 million to 2.588 million years before present.

PM₁₀ (inhalable particulate matter): A fractional sampling of suspended particulate matter that approximates the extent to which suspended particles with aerodynamic equivalent diameters smaller than 50 microns penetrate to the lower respiratory tract (tracheo-bronchial airways and alveoli in the lungs). In a regulatory context, PM₁₀ is any suspended particulate matter collected by a certified sampling device having a 50 percent collection efficiency for particles with aerodynamic equivalent diameters of 9.5-10.5 microns and an maximum aerodynamic diameter collection limit less than 50 microns. Collection efficiencies are greater than 50 percent for particles with aerodynamic diameters smaller than 10 microns and less than 50 percent for particles with aerodynamic diameters larger than 10 microns.

PM_{2.5} (fine particulate matter): A fractional sampling of suspended particulate matter that approximates the extent to which suspended particles with aerodynamic equivalent diameters smaller than 6 microns penetrate into the alveoli in the lungs. In a regulatory context, PM_{2.5} is any suspended particulate matter collected by a certified sampling device having a 50 percent collection efficiency for particles with aerodynamic equivalent diameters of 2.0-2.5 microns and an maximum aerodynamic diameter collection limit less than 6 microns. Collection efficiencies are greater than 50 percent for particles with aerodynamic diameters smaller than 2.5 microns and less than 50 percent for particles with aerodynamic diameters larger than 2.5 microns.

Precursor: A compound or category of pollutant that undergoes chemical reactions in the atmosphere to produce or catalyze the production of another type of air pollutant.

Prehistoric: Refers to the period wherein American Indian cultural activities took place before written records and not yet influenced by contact with nonnative culture(s).

Programmatic Agreement (PA): A document that details the terms of a formal, legally binding agreement between one party and other state and/or federal agencies. A PA establishes a process for consultation, review, and compliance with one or more federal laws, most often with those federal laws concerning historic preservation.

Protocol Agreement (Protocol): A modified version of the NPA, adapted to the unique requirements of managing cultural resources on public lands in California, and is used as the primary management guidance for BLM offices in the state.

Q

Quaternary Age: The most recent of the three periods of the Cenozoic Era in the geologic time scale of the ICS. It follows the Tertiary Period, spanning 2.588 ± 0.005 million years ago to the present. The Quaternary includes two geologic epochs: the Pleistocene and the Holocene Epochs.

R

Rehabilitation: A management alternative and/or practice which restores landscapes to a desired scenic quality.

Restoration (Cultural Resource): The process of accurately reestablishing the form and details of a property or portion of a property together with its setting, as it appeared in a particular period of time. Restoration may involve removing later work that is not in itself significant and replacing missing original work. Also see Stabilization (Cultural Resource).

Riparian: Situated on or pertaining to the bank of a river, stream, or other body of water. Normally describes plants of all types that grow rooted in the water table or sub-irrigation zone of streams, ponds, and springs.

Road: A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.

Route: "Routes" represents a group or set of roads, trails, and primitive roads that represents less than 100% of the BLM transportation system. Generically, components of the transportation system are described as routes.

S

Saleable Minerals: Common variety minerals on the public lands, such as sand and gravel, which are used mainly for construction and are disposed by sales or special permits to local governments. See also Mineral Materials.

Scale: The proportionate size relationship between an object and the surroundings in which the object is placed.

Scenery: The aggregate of features that give character to a landscape.

Scenic Area: An area whose landscape character exhibits a high degree of variety and harmony among the basic elements which results in a pleasant landscape to view.

Scenic Quality: The relative worth of a landscape from a visual perception point of view.

Scenic Quality Evaluation Key Factors: The seven factors (land form, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications) used to evaluate the scenic quality of a landscape.

Scenic Quality Ratings: The relative scenic quality (A, B, or C) assigned a landscape by applying the scenic quality evaluation key factors; scenic quality A being the highest rating, B a moderate rating, and C the lowest rating.

Scenic Values: See Scenic Quality and Scenic Quality Ratings.

Secretary of the Interior: The U.S. Department of the Interior is in charge of the nation's internal affairs. The Secretary serves on the President's cabinet and appoints citizens to the National Park Foundation board.

Sedimentary Rocks: Rocks, such as sandstone, limestone, and shale, that are formed from sediments or transported fragments deposited in water.

Sensitivity Levels: Measures (e.g., high, medium, and low) of public concern for scenic quality.

Shaft: See Mine Shaft.

Special Status Species: Federal- or state-listed species, candidate or proposed species for listing, or species otherwise considered sensitive or threatened by state and federal agencies.

State Historic Preservation Office (SHPO): The official within and authorized by each state at the request of the Secretary of the Interior to act as liaison for the National Historic Preservation Act. Also see National Historic Preservation Act.

State Implementation Plan (SIP): Legally enforceable plans adopted by states and submitted to EPA for approval, which identify the actions and programs to be undertaken by the State and its subdivisions to achieve and maintain national ambient air quality standards in a time frame mandated by the Clean Air Act.

State Water Resources Control Board (SWRCB): Created in 1967, joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California's waters. The mission of the nine Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology.

Subsurface: Of or pertaining to rock or mineral deposits which generally are found below the ground surface.

Sulfur Dioxide (SO₂): A pungent, colorless, and toxic oxide of sulfur formed primarily by the combustion of fossil fuels. It is a respiratory irritant, especially for asthmatics. A criteria pollutant in its own right, and a precursor of sulfate particles and atmospheric sulfuric acid.

T

Taphonomy: The study of the processes by which animal bones and shells and plant and other fossil remains are transformed after deposition.

Tertiary: The Tertiary Period marks the beginning of the Cenozoic Era. It began 65 million years ago and lasted more than 63 million years, until 1.8 million years ago. The Tertiary is made up of 5 epochs: the Paleocene Epoch, the Eocene Epoch, the Oligocene Epoch, the Miocene Epoch, and the Pliocene Epoch.

Texture: The visual manifestations of the interplay of light and shadow created by the variations in the surface of an object or landscape.

Toxic: Poisonous. Exerting an adverse physiological effect on the normal functioning of an organism's tissues or organs through chemical or biochemical mechanisms following physical contact or absorption.

Traditional Cultural Properties: Areas associated with the cultural practices or beliefs of a living community. These sites are rooted in the community's history and are important in maintaining cultural identity.

Trail: A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

V

Vandalism (Cultural Resource): Malicious damage or the unauthorized collecting, excavating, or defacing of cultural resources. Section 6 of the Archaeological Resources Protection Act states that "no person may excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands...unless such activity is pursuant to a permit issued under section 4 of this Act."

Variables: Factors influencing visual perception including distance, angle of observation, time, size or scale, season of the year, light, and atmospheric conditions.

Variety: The state or quality of being varied and having the absence of monotony or sameness.

Vehicle Miles Traveled (VMT): The cumulative amount of vehicle travel within a specified or implied geographical area over a given period of time.

Viewshed: The landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor. Protection, rehabilitation, or enhancement is desirable and possible.

Visual Contrast: See Contrast.

Visual Quality: See Scenic Quality.

Visual Resources: The visible physical features on a landscape (e.g., land, water, vegetation, animals, structures, and other features).

Visual Resource Management Classes: Categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four classes. Each class has an objective which prescribes the amount of change allowed in the characteristic landscape.

Visual Resource Management (VRM): The inventory and planning actions taken to identify visual values and to establish objectives for managing those values; and the management actions taken to achieve the visual management objectives.

Visual Values: See Scenic Quality.

W

Wetlands: Permanently wet or intermittently water-covered areas, such as swamps, marshes, bogs, potholes, swales, and glades.

Wilderness Area: An area formally designated by Congress as part of the National Wilderness Preservation System as defined in the Wilderness Act of 1964 (78 Stat.891), Section 2(c).

Wilderness Study Area: A roadless area or island that has been inventoried and found to have wilderness characteristics as described in section 603 of FLPMA and section 2(c) of the Wilderness Act of 1964 (78 Stat. 891). Source for both of these is BLM's IMP and Guidelines for Lands Under Wilderness Review (December 1979).

REFERENCES

Organization of the References

A number of documents available through the California Energy Commission's permitting process were used as primary references in preparing this PA/FEIS. These include the March 2010 Staff Assessment/ Draft Environmental Impact Statement; September 1, 2010 Revised Staff Assessment, Part I; September 16, 2010 Revised Staff Assessment, Part II; and December 2010 Commission Decision. The SA/DEIS is incorporated by reference in this PA/FEIS. Other references used in the preparation of this PA/FEIS are organized in this section as follows:

References from the CEC Permitting Process

The authors of this PA/FEIS relied upon a number of documents that were generated as part of the CEC Permitting Process. These references are listed below by topical area/environmental parameter.

Additional References

These are additional references that were used by the PA/FEIS authors as primary sources of information for the analyses provided in the PA/FEIS.

Chapter 2: Proposed Action and Alternatives

References from the CEC Permitting Process

CEC (California Energy Commission), Commission Decision, 2010. *Palen Solar Power Project Commission Decision*. (December 2010).

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Solar Millennium, 2009. *Palen Solar Power Project Application for Certification*. (August 2009).

Additional References

NREL (National Renewable Energy Laboratory), 2010. *Solar Power and the Electric Grid*, NREL Energy Analysis. Available at: <<http://www.nrel.gov/docs/fy10osti/45653.pdf>> (March 2010).

California Independent System Operator (CAISO), 2011. *California ISO, Shaping a Renewed Future*. Available at: <<http://www.caiso.com/>> (Accessed April 25, 2011).

Section 3.2: Air Quality

References from the CEC Permitting Process

CEC (California Energy Commission), Commission Decision, 2010. *Palen Solar Power Project Commission Decision*. (December 2010).

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Section 3.3: Global Climate Change

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

CARB (California Air Resources Board), 2010. *Update Note on The State of California Air Resources Board (ARB) Proposed Cap and Trade Regulation*. Available at: <[http://www.gcftaskforce.org/documents/May_Aceh/Other/California%20Air%20Resources%20Board%20Preliminary%20Draft%20Regulation%20Summary%20\(English\).pdf](http://www.gcftaskforce.org/documents/May_Aceh/Other/California%20Air%20Resources%20Board%20Preliminary%20Draft%20Regulation%20Summary%20(English).pdf)>. (May 2010).

CEC (California Energy Commission) Genesis RSA (Revised Staff Assessment), 2010. *Genesis Solar Energy Project Revised Staff Assessment*. (June 2010).

EPA (Environmental Protection Agency), 2010. *RE-Powering America's Land, Siting Renewable Energy on Potentially Contaminated Land and Mine Sites*. Available at: <<http://www.epa.gov/oswercpa/>>. (Accessed February 23, 2010).

IPCC, 2007: *Summary for Policymakers. In: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22.

South Coast Air Quality Management District (SCAQMD), 2008. Board Meeting Date: December 5, 2008, Agenda No. 31. Available at: <<http://www.aqmd.gov/hb/2008/December/081231a.htm>> (Accessed April 29, 2011).

United States Environmental Protection Agency (USEPA), 2009d. *EPA's Endangerment Finding; Environmental and Welfare Effects*. December 7, 2009. Available at: <http://www.epa.gov/climatechange/endangerment/downloads/EndangermentFinding_EnvironmentalEffects.pdf> (Accessed April 29, 2011).

United States Environmental Protection Agency (USEPA), 2009e. *EPA's Endangerment Finding; Legal Background*. December 7, 2009. Available at: <http://www.epa.gov/climatechange/endangerment/downloads/EndangermentFinding_LegalBasis.pdf> (Accessed April 29, 2011).

United States Environmental Protection Agency (USEPA), 2009f. *EPA's Endangerment Finding; Health Effects*. December 7, 2009. Available at: http://www.epa.gov/climatechange/endangerment/downloads/EndangermentFinding_Health.pdf (Accessed April 29, 2011).

Section 3.4: Cultural Resources

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

ECORP Consulting, Inc. 2010. *Class III Cultural Resources Inventory of the Desert Sunlight Solar Farm Project*. Primary Authors Evelyn Chandler, Robert Cunningham, Elizabeth Denniston, Jennifer Howard, Melanie Knyppstra, and Stephen Pappas, ECORP Consulting, Inc., Redlands, California. Prepared for BLM – Renewable Energy Coordinating Office, Palm Springs, California.

Section 3.5: Environmental Justice

Additional References

CEQ (Council on Environmental Quality), 1997. *Environmental Justice Guidance Under the National Environmental Policy Act, 1997*.

U.S. Census, 2000. *American Factfinder*. Available at: <http://factfinder.census.gov/home/saff/> (Accessed July 16, 2010).

Section 3.6: Lands and Realty

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Section 3.7: Livestock Grazing

Additional References

BLM CDD (Bureau of Land Management California Desert District), 2002. *Proposed Northern and Eastern Colorado Desert Coordinated Management Plan and Final EIS*. Section 3.9 Multiple Use Classes. (July 2002).

Section 3.8: Mineral Resources

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Section 3.9: Multiple Use Class

Additional References

FLPMA, 2001. *Federal Land Policy and Management Act*. Available at:
<<http://www.blm.gov/flpma/index.html>>. (As Amended October 2001).

Section 3.10: Noise

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

County of Riverside, 2008. County of Riverside General Plan. Noise Element. (2008).

Section 3.11: Paleontological Resources

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Section 3.12: Public Health and Safety

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

ABAG (Association of Bay Area Governments), 2003. *Modified Mercalli Intensity Scale*.

AirNav, 2010. *FAA Information [for CN64, Desert Center Airport]*. Available at:
<<http://www.airnav.com/airport/CN64>>. (Effective November 18, 2010).

CalRecycle, 2010. *Jurisdiction Waste Stream Profile for Riverside County*. Available at:
<<http://www.calrecycle.ca.gov/profiles/Juris/JurProfile2.asp?RG=U&JURID=410&JUR=R=Riverside%2DUnincorporated>>. (Accessed December 1, 2010).

DOE (Department of Energy), 2002. *Vulnerability Assessment Methodology*. Available at:
<http://www.esisac.com/publicdocs/assessment_methods/VA.pdf>. (September 2002).

FAA (Federal Aviation Administration), 2010a. *Airport Master Record*. (Effective, November 18, 2010).

FAA (Federal Aviation Administration), 2010b. *Technical Guidance for Evaluating Selected Solar Technologies on Airports*. FAA-ARP-TR-10-1. (November 2010).

- FAA (Federal Aviation Administration), 2006. *Safety Risk Analysis of Aircraft Overflight of Industrial Exhaust Plumes*. DOT-FAA-AFS-420-06-01. (January 2006).
- NERC (North American Electric Reliability Council), 2002. *Security Guidelines for the Electricity Sector, Version 1.0*. Available at: <http://www.esisac.com/publicdocs/Guides/SecurityGuidelinesElectricitySector-Version1.pdf>.> (June 2002).
- NERC (North American Electric Reliability Council), 2009. *NERC and Energy Central Team to Provide Education on Critical Infrastructure Protection and Cyber Security Standards*. Available at: <http://www.subnet.com/news-events/press-releases/NERC-and-Energy-Central-Team-to-Provide-Education-on-Critical-Infrastructure-Protection-Cyber-Security-Standards.aspx>.> (September 2009).
- USAEC (United States Army Environmental Command), 2010. *Unexploded Ordnance (UXO)*. Available at: <http://aec.army.mil/usaec/technology/uxo00.html>.> (Accessed December 1, 2010).

Section 3.13: Recreation

Additional References

- BLM (Bureau of Land Management), 1980. *California Desert Conservation Area Plan 1980* (“CDCA Plan”). Available at: http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/cdd/cdcaplan.Par.15259.File.dat/CA_Desert_.pdf > (As amended March 1999)
- BLM (Bureau of Land Management), 1983. *Manual 8560: Management of Designated Wilderness Areas*. Available at: http://www.blm.gov/ca/pa/wilderness/wilderness_pdfs/wa/8560_-_MODWA.pdf.>
- BLM (Bureau of Land Management), 1988. Handbook H-8560-1: *Management of Designated Wilderness Areas*. Available at: http://www.blm.gov/ca/pa/wilderness/wilderness_pdfs/wa/ManagementofDesignat.pdf.>
- BLM (Bureau of Land Management), 1995. *BLM’s Principles For Wilderness Management In The California Desert*.
- BLM CDD (Bureau of Land Management California Desert District), 2002. *Proposed Northern and Eastern Colorado Desert Coordinated Management Plan and Final EIS*. Section 3.9 Multiple Use Classes. (July 2002).
- BLM (Bureau of Land Management), 2009. *The Bradshaw Trail*. Available at: <http://www.blm.gov/ca/st/en/fo/palmsprings/bradshaw.html>. (March 10, 2009).
- Blythe, 2007. *City of Blythe General Plan 2025* (Parks and Recreation Element).
- Indio, 2010. *Buildings & Parks Division*. City of Indio. Available at: <http://www.indio.org/index.aspx?page=251>> (Accessed September 21, 2010).
- Lake Tamarisk Desert Resort, 2010. *Lake Tamarisk Desert Resort*. Available at: <http://laketamariskdesertresort.com/default.aspx>.> (Accessed June 17, 2010).

- NPS (National Park Service), 2011. *Joshua Tree National Park*. Available at: <http://www.nps.gov/jotr/index.htm>. (Accessed January 10, 2011).
- NPS (National Park Service), 2010. *Things to Do [in Joshua Tree National Park]*. Available at: <http://www.nps.gov/jotr/planyourvisit/things2do.htm>. (December 21, 2010).
- NPCA (National Parks Conservation Association). 2002. National treasures as economic engines: The economic impact of visitor spending in California's national parks. 14 pp. Oakland, CA.
- Nelson, 2010. *Chuckwalla Mountains Wilderness*. Available at: <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&WID=121>. (Accessed June 23, 2010).
- Village Profile, 2010. *Village Profile: Indio, California*. Available at: <http://www.villageprofile.com/california/indio/05/topic.html>. (Accessed September 21, 2010).

Section 3.14: Social and Economic Setting

References from the CEC Permitting Process

- CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

- Arizona Department of Commerce, 2010. *Community Profiles*. Available at: <http://www.azcommerce.com/SiteSel/Profiles/Community+Profile+Index.htm> (Accessed on July 19, 2010).
- Blythe, 2007. *City of Blythe General Plan 2025* (Land Use Element, Housing Element, Redevelopment Agency).
- Blythe/Palo Verde Economic Development Partnership, 2010. *Project Summary and Project Purpose*. Available at <http://www.desertcolleges.org/Faculty/Blythe.htm>. (Accessed July 22, 2010).
- BEA (Bureau of Economic Analysis), 2010. *Regional Economic Information System*. Available at <http://www.bea.gov/regional/reis/default.cfm?selTable=CA25>. (Accessed July 16, 2010).
- BLM (Bureau of Land Management), 2005. *H-1601-1 Land Use Planning Handbook, Appendix D*. Available at: http://www.blm.gov/pgdata/etc/medialib/blm/ak/aktest/planning/planning_general.Par.65225.File.dat/blm_lup_handbook.pdf. (March 11, 2005).
- Census, 2000. *American Factfinder*. Available at: <http://factfinder.census.gov/home/saff/> (Accessed July 16, 2010).
- California Department of Finance, 2010. *Table 2: E-5 Population and Housing Estimates for Cities, Counties and State, 2001-2010 with 2000 Benchmark*. (May 2010).

- EDD (California Employment Development Department), 2010. *California Employment Projections of Employment by Industry and Occupation - Riverside County*. Available at <<http://www.labormarketinfo.edd.ca.gov/?pageid=145>>. (Accessed September 2010).
- California State Controller's Office, 2009. *Counties Annual Report, FY 2008-2009*. Table 4: Summary of General County Financing Sources, Table 5: Summary of County Expenditures by Function and Activity. Available at: <http://www.sco.ca.gov/Files-ARD-Local/LocRep/counties_reports_0708counties.pdf>. (Accessed July 16, 2010).
- Coachella, 2008. *Coachella General Plan*. Available at: <<http://www.coachella.org/documentcenterii.aspx>>.
- Indio, 2004. *City of Indio General Plan*. Available at: <<http://www.indio.org/index.aspx?page=202>>.
- Riverside, 2008. County of Riverside General Plan Desert Center Area Plan. Available at: http://www.rctlma.org/genplan/general_plan_2008/area_plan_vol_2/Desert_Center_Area_Plan_2008.pdf.
- U.S. Census, 2010. *American Factfinder*. Available at: <<http://factfinder.census.gov/home/saff/>> (Accessed July 16, 2010).

Section 3.15: Soil Resources

References from the CEC Permitting Process

- CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

- Natural Resources Conservation Service (NRCS). 2011. U.S. General Soil Map (STATSGO2). Database. Available at <<http://soils.usda.gov/survey/geography/statsgo/>>. (Accessed April 26, 2011).
- PWA, 2010. *Geomorphic Assessment and San Transport Impacts Analysis of the Palen Solar Power Project, Appendix C* (Biology Report). (August 2010).
- Zimbelman, JR; Williams, SH; Tchakerian VP. 1995. Sand transport paths in the Mojave Desert, southwestern United States. In: Tchakerian, VP, ed. *Desert Aeolian processes*. London: Chapman and Hall: pp 101-129.

Section 3.16 Special Designations

References from the CEC Permitting Process

- CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

- NPS (National Park Service), 1998. *Joshua Tree National Park SPOP Report*. Available at: <<http://www.nps.gov/sustain/spop/jtree.htm>>. (Accessed January 16, 2011).

NPS (National Park Service), 2010. *Things to Do [in Joshua Tree National Park]*. Available at: <<http://www.nps.gov/jotr/planyourvisit/things2do.htm>>. (December 21, 2010).

Uhler, 2007. *Joshua Tree National Park Hiking Guide*. Available at: <<http://www.joshua.tree.national-park.com/hike.htm>>. (Accessed January 16, 2011).

Section 3.17: Transportation and Public Access – Off Highway

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

BLM (Bureau of Land Management), 1980. *California Desert Conservation Area Plan 1980* (“CDCA Plan”). Available at: <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/cdd/cdcaplan.Par.15259.File.dat/CA_Desert_.pdf> (As amended March 1999).

BLM CDD (Bureau of Land Management California Desert District), 2002. *Proposed Northern and Eastern Colorado Desert Coordinated Management Plan and Final EIS*. Section 3.9 Multiple Use Classes. (July 2002).

SunBus, 2010. *SunBus System Map*. (September 2010).

Section 3.18: Vegetation Resources

References from the CEC Permitting Process

CEC (California Energy Commission), Commission Decision, 2010. *Palen Solar Power Project Commission Decision*. (December 2010).

BLM CDD (Bureau of Land Management California Desert District), 2002. *Proposed Northern and Eastern Colorado Desert Coordinated Management Plan and Final EIS*. Section 3.9 Multiple Use Classes. (July 2002).

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Section 3.19: Visual Resources

Additional References

BLM, 1986, Handbook H-8410-: *Visual Resource Inventory*. Available at: <<http://www.blm.gov/nstc/VRM/8410.html>>. (Accessed July 8, 2010).

BLM (Bureau of Land Management), 1980. *California Desert Conservation Area Plan 1980* (“CDCA Plan”). Available at: <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/cdd/cdcaplan.Par.15259.File.dat/CA_Desert_.pdf> (As amended March 1999).

CEC (California Energy Commission) Genesis RSA (Revised Staff Assessment), 2010. *Genesis Solar Energy Project Revised Staff Assessment*. (June 2010).

Section 3.20: Water Resources

References from the CEC Permitting Process

CEC (California Energy Commission)/BLM (Bureau of Land Management), 2010. *Palen Solar Power Project (PSPP) Staff Assessment and Draft Environmental Impact Statement (SA/DEIS)*. (March 2010).

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Solar Millennium 2009. *Palen Solar Power Project Application for Certification*. (August 2009).

Section 3.21: Wild Horse and Burro Resources

Additional References

BLM CDD (Bureau of Land Management California Desert District), 2002. *Proposed Northern and Eastern Colorado Desert Coordinated Management Plan and Final EIS*. Section 3.9 Multiple Use Classes. (July 2002).

Section 3.22: Wildland Fire Ecology

Additional References

BLM CDD (Bureau of Land Management California Desert District), 2002. *Proposed Northern and Eastern Colorado Desert Coordinated Management Plan and Final EIS*. Section 3.9 Multiple Use Classes. (July 2002).

Section 3.23 Wildlife Resources

References from the CEC Permitting Process

CEC (California Energy Commission)/BLM (Bureau of Land Management), 2010. *Palen Solar Power Project (PSPP) Staff Assessment and Draft Environmental Impact Statement (SA/DEIS)*. (March 2010).

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Section 4.1: Introduction

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

- CEQ (Council on Environmental Quality), 1997. *Considering Cumulative Effects Under the National Environmental Policy Act*. (January 1997).
- Humboldt County, 2010. *Scoping Report for the Bear River Wind Power Project*. Humboldt County Development Services Department, Planning Division and U.S. Fish & Wildlife Service. Available at: <http://co.humboldt.ca.us/planning/bear-river/scoping-report_2010-03-15.pdf>. (March 2010).
- Cabanilla, 2010. Richard Cabanilla, Planner IV, Imperial County Community Planning and Development Services. Personal communication. (October 12, 2010).
- Geothermal Energy Association, 2009. *U.S. Geothermal Power Production and Development Update*. Geothermal Energy Association. Available at: <http://www.geo-energy.org/reports/Industry_Update_March_Final.pdf>. (March 2009).
- Geothermal Magazine, 2010. *Geysers Field, California, USA`*. Geothermal Magazine. Available at: <<http://www.geothermalmagazine.eu/english/geysers-field-california-usa/index.html>>. (October 14, 2010).
- Kinney, 2010. Chuck Kinney, Deputy Director, Kings County Community Development Agency. Personal communication, (October 12, 2010).
- Kopp, 2010. Sara Kopp, Planner II, Kern County Planning and Community Development Department. Personal communication, (October 12, 2010).
- Kern County, 2010. *Kern County Renewable Energy Projects*. Available at: <http://www.co.kern.ca.us/planning/renewable_energy.asp>. (Accessed October 13, 2010).
- Public Utilities Commission, 2010. *Resolution E-4356*. Available at: <http://docs.cpuc.ca.gov/word_pdf/FINAL_RESOLUTION/123111.pdf>. (September 2, 2010).
- Solano County, 2010. *Amendment: Final Environmental Impact Report, Montezuma Wind Plant Project*. Solano County Department of Resource Management. Available at: <<http://www.co.solano.ca.us/civica/filebank/blobdload.asp?BlobID=7860>>. (January 2010).

Section 4.2: Impacts to Air Resources

References from the CEC Permitting Process

- CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).
- CEC (California Energy Commission), Commission Decision, 2010. *Palen Solar Power Project Commission Decision*. (December 2010).

Section 4.3: Impacts on Global Climate Change

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

CEC (California Energy Commission) Genesis RSA (Revised Staff Assessment), 2010. *Genesis Solar Energy Project Revised Staff Assessment*. (June 2010).

Christensen, N, Wood, A, Voisin, N, Lettenmaier, D, and Palmer, R. 2004. *The effects of climate change on the hydrology and water resources of the Colorado River Basin*. *Climate Change* 62:337-363. 2004.

Council on Environmental Quality (CEQ), 2010. *Memorandum for the Heads of Federal Departments and Agencies: Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*. Available at: http://ceq.hss.doe.gov/nepa/regs/Consideration_of_Effects_of_GHG_Draft_NEPA_Guidance_FINAL_02182010.pdf. (Accessed April 29, 2011).

EPA (Environmental Protection Agency), 2010. *RE-Powering America's Land, Siting Renewable Energy on Potentially Contaminated Land and Mine Sites*. Available at: <http://www.epa.gov/oswercpa/>. (February 23, 2010)

IPCC (International Panel on Climate Change), 2007. *Summary for Policymakers. In: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, UK, 7-22.

OPR (Office of Planning and Research), 2010. *Cities and Counties Addressing Climate Change*. State of California, Governor's Office of Planning and Research. (April 5, 2010).

Pew, 2008. *The Causes of Global Climate Change*. Pew Center on Global Climate Change, (August 2008).

Pew, 2010a. *Sources of Anthropogenic GHG Emissions Worldwide*. Pew Center on Global Climate Change. Available at: http://www.pewclimate.org/global-warming-basics/facts_and_figures. (Accessed July 20, 2010)

Pew, 2010b. *GHG Emissions by Sector*. Pew Center on Global Climate Change. Available at: <http://www.pewclimate.org/print/2284>. (Accessed July 20, 2010).

Seager, R., Ting, M, Held, I., Kushnir, Y., Lu, J., Vecchi, G., Huang, H., Harnik, N., Leetmaa, A., Lau, N., Li, C., Velez, J., and Naik, N., 2007. *Model projections of an imminent transition to a more arid climate in southwestern North America*. *Science* 316 (1181): 10.1126/science.1139601.

Section 4.4: Impacts on Cultural Resources

References from the CEC Permitting Process

CEC (California Energy Commission), Commission Decision, 2010. *Palen Solar Power Project Commission Decision*. (December 2010).

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Section 4.5: Impacts on Environmental Justice

Additional References

Council on Environmental Quality (CEQ), *Environmental Justice Guidance Under the National Environmental Policy Act*, 1997.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February, 1992.

Section 4.6: Impacts on Lands and Realty

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Solar Millennium 2009. *Palen Solar Power Project Application for Certification*. (August 2009).

Section 4.8: Impacts on Multiple Use Classes

Additional References

BLM (Bureau of Land Management), 2001. *6804 – Special Status Species Management*
Available at:
<http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pdfs/pa_pdfs/biology_pdfs.Par.9d22a8ee.File.dat/6840_ManualFinal.pdf>.

BLM (Bureau of Land Management), 2005. *Handbook H-1601-1, Land Use Planning Handbook, Appendix D: Social Science Considerations in Land Use Planning Decisions*. (March 2005).

BLM (Bureau of Land Management), 1980. *California Desert Conservation Area Plan 1980* (“CDCA Plan”). Available at:
<http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/cdd/cdcaplan.Par.15259.File.dat/CA_Desert_.pdf> (As amended March 1999)

BLM (Bureau of Land Management), 2007. *Clarification of Guidance and Integration of Comprehensive Travel and Transportation Management Planning into the Land Use Planning*. Available at:
<http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/20080/im_2008-014.html>. (October 24, 2007).

Section 4.9: Impacts on Noise

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Section 4.10: Impacts to Paleontological Resources

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Solar Millennium, 2009. *Palen Solar Power Project Application for Certification*. (August 2009).

Section 4.11: Impacts on Public Health and Safety

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Solar Millennium, 2009. *Palen Solar Power Project Application for Certification*. (August 2009).

Additional References

FAA (Federal Aviation Administration), 2010. *Airport Master Record* (Effective November 18, 2010).

FAA (Federal Aviation Administration), 2010b. *Technical Guidance for Evaluating Selected Solar Technologies on Airports*. FAA-ARP-TR-10-1 (November 2010).Section 4.12 Impacts on Recreation

United States Environmental Protection Agency (U.S. EPA), 2000. U.S. EPA, *Risk Management Program Guidance for Propane Storage Facilities*, EPA 550-B-00-001 (40 CFR Part 68) <http://www.epa.gov/emergencies/docs/chem/storage.pdf> (rev. Jan. 27, 2000).

Section 4.12: Impacts on Recreation

Additional References

CEC (California Energy Commission) Genesis RSA (Revised Staff Assessment), 2010. *Genesis Solar Energy Project Revised Staff Assessment*. (June 2010).

Section 4.13: Social and Economic Impacts

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Solar Millennium, 2009. *Palen Solar Power Project Application for Certification*. (August 2009).

Additional References

EPRI, (Electric Power Research Institute), 1982. *Socioeconomic Impacts of Power Plants*.

Section 4.14: Impacts on Soil Resources

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

Kenney, 2010, *Draft Aeolian Sand Mitigation Summary Report*. Palen Solar Power Project, Riverside County, CA.

PWA, 2010. *Geomorphic Assessment and San Transport Impacts Analysis of the Palen Solar Power Project, Appendix C* (Biology Report). (August 2010).

Section 4.15: Impacts on Special Designations

Additional References

BLM (Bureau of Land Management), 1980. *California Desert Conservation Area Plan 1980* (“CDCA Plan”). Available at: <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/cdd/cdcaplan.Par.15259.File.dat/CA_Desert_.pdf> (As amended March 1999).

BLM CDD (Bureau of Land Management California Desert District), 2002. *Proposed Northern and Eastern Colorado Desert Coordinated Management Plan and Final EIS*. Section 3.9 Multiple Use Classes. (July 2002).

BLM (Bureau of Land Management) and IID (Imperial Irrigation District), 2005. *Final Environmental Impact Statement and Environmental Impact Report for the*

Solar PEIS, 2010. *Solar Energy Development Programmatic EIS Schedule*. Solar Energy Development PEIS Information Center. Available at: <<http://solareis.anl.gov/documents/dpeis/index.cfm>>. (Accessed August 2, 2010).

Redlands Institute, 2002. *Summary of Desert Tortoise Recovery Actions: Eastern Colorado Recovery Unit*. University of Redlands. (November 2002).

Section 4.16: Impacts on Transportation and Public Access – Off Highway Vehicle Resources

References from the CEC Permitting Process

CEC (California Energy Commission) Palen RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

FLPMA, 2001. *Federal Land Policy and Management Act*. Available at: <<http://www.blm.gov/flpma/index.html>>. (As Amended October 2001).

Section 4.17: Impacts on Vegetation Resources

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

CEC (California Energy Commission), Commission Decision, 2010. *Palen Solar Power Project Commission Decision*. (December 2010).

Section 4.18: Impacts on Visual Resources

Additional References

BLM, 2010, BLM Handbook H-8431-1, Visual Resource Contrast Rating, accessed at <http://www.blm.gov/nstc/VRM/8431.html>, on 7/23/2010.

Solar PEIS, 2010. *Solar Energy Development Programmatic EIS Schedule*. Solar Energy Development PEIS Information Center. Available at: <<http://solareis.anl.gov/documents/dpeis/index.cfm>>. (Accessed August 2, 2010).

Section 4.19: Impacts on Water Resources

References from the CEC Permitting Process

Solar Millennium 2009. *Palen Solar Power Project Application for Certification*. (August 2009).

CEC (California Energy Commission)/BLM (Bureau of Land Management), 2010. *Palen Solar Power Project (PSPP) Staff Assessment and Draft Environmental Impact Statement (SA/DEIS)*. (March 2010).

CEC (California Energy Commission)/BLM (Bureau of Land Management), 2010. *Palen Solar Power Project (PSPP) Staff Assessment and Draft Environmental Impact Statement (SA/DEIS)*. (March 2010).

CEC (California Energy Commission), Commission Decision, 2010. *Palen Solar Power Project Commission Decision*. (December 2010).

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Section 4.20: Impacts on Wildland Fire Ecology

References from the CEC Permitting Process

Solar Millennium 2009. *Palen Solar Power Project Application for Certification*. (August 2009).

CEC (California Energy Commission)/BLM (Bureau of Land Management), 2010. *Palen Solar Power Project (PSPP) Staff Assessment and Draft Environmental Impact Statement (SA/DEIS)*. (March 2010).

CEC (California Energy Commission), Commission Decision, 2010. *Palen Solar Power Project Commission Decision*. (December 2010).

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Additional References

Brooks, M. L. 1998. *Ecology of a biological invasion: alien annual plants in the Mojave Desert*. Ph.D. Dissertation University of California, Riverside. 186. p.

CDF (California Department of Forestry and Fire Protection), 2007. *Draft Fire Hazard Severity Zones in [Local Responsibility Areas], Eastern Riverside County*. Available at: <http://frap.cdf.ca.gov/webdata/maps/riverside_east/fhszl06_1_map.61.jpg>. (September 19, 2007).

CDF (California Department of Forestry and Fire Protection), 2010. *California Fire Hazard Severity Zone Map Update Project*. Available at: <http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps.php>.

Section 4.21: Impacts on Wildlife Resources

References from the CEC Permitting Process

CEC (California Energy Commission) RSA (Revised Staff Assessment), 2010. *Palen Solar Power Project Revised Staff Assessment*. (September 2010).

Chapter 5 Consultation, Coordination and Public Involvement

Additional References

BLM (Bureau of Land Management), 2007. *Solar Energy Development Policy*. Instruction Memorandum No. 2007-097. (April 4, 2007).

Christensen, N, Wood, A, Voisin, N, Lettenmaier, D, and Palmer, R., 2004. *The effects of climate change on the hydrology and water resources of the Colorado River Basin*. *Climate Change* 62:337-363.

EPA (Environmental Protection Agency), 2010., *RE-Powering America's Land, Siting Renewable Energy on Potentially Contaminated Land and Mine Sites*. Available at: <<http://www.epa.gov/oswercpa/>>. (February 23, 2010).

Seager, R., Ting, M, Held, I., Kushnir, Y., Lu, J., Vecchi, G., Huang, H., Harnik, N., Leetmaa, A., Lau, N., Li, C., Velez, J., and Naik, N. 2007. *Model projections of an imminent transition to a more arid climate in southwestern North America*. *Science* 316 (1181): 10.1126/science.1139601.

Solar PEIS, 2010. *Solar Energy Development Programmatic EIS Schedule*. Solar Energy Development PEIS Information Center. Available at: <<http://solareis.anl.gov/documents/dpeis/index.cfm>>. (Accessed August 2, 2010).

INDEX

- AB 32, 3.3-4, 3.3-5, 4.3-2, 4.3-14
- Adjacent, ES-13, 2-1, 2-6, 2-9, 2-13, 2-19, 2-28, 2-29, 2-30, 3.1-1, 3.4-11, 3.4-14, 3.4-35, 3.4-39, 3.7-1, 3.10-1, 3.11-3, 3.12-3, 3.12-7, 3.13-5, 3.14-3, 3.14-4, 3.18-7, 3.19-3, 3.19-5, 3.20-13, 3.20-17, 3.20-18, 3.20-20, 3.20-21, 3.21-1, 3.23-14, 3.23-23, 4.1-17, 4.3-12, 4.6-1, 4.10-1, 4.11-38, 4.12-1, 4.12-5, 4.15-5, 4.15-13, 4.17-2, 4.17-7, 4.17-8, 4.17-10, 4.17-13, 4.17-21, 4.17-22, 4.17-24, 4.17-30, 4.17-31, 4.17-34, 4.18-17, 4.19-2, 4.19-6, 4.19-10, 4.19-14, 4.19-15, 4.19-16, 4.19-28, 4.20-4, 4.21-2, 4.21-3, 4.21-11, 4.21-13, 4.21-15, 4.21-16, 4.21-17, 4.21-20, 4.21-21, 4.21-29, 5-22, 5-46, 5-48, 5-49, 5-95
- Air Basin, 3.2-1, 3.2-5, 3.2-6, 3.3-8, 4.1-4, 4.1-6, 4.2-14, 4.14-9, 5-44
- Air Resources, 3.2-1, 3.3-4, 4.1-4, 4.1-6, 4.2-1, 4.2-11, 4.2-12, 4.2-13, 4.2-14, 4.2-17, 4.3-2, 4.3-10, 4.3-14, 4.11-9, 4.15-5, 5-38
- Alluvial Fan, 3.4-1, 3.4-2, 3.4-3, 3.4-16, 3.8-1, 3.8-4, 3.15-1, 3.15-3, 3.18-16, 3.18-23, 3.18-24, 3.18-28, 3.18-29, 3.18-30, 3.18-31, 3.20-1, 3.20-4, 3.20-12, 3.20-13, 3.20-14, 3.23-7, 3.23-13, 3.23-15, 4.7-1, 4.11-49, 4.17-3, 4.17-5, 4.21-9
- Alluvium, 3.4-1, 3.4-2, 3.8-1, 3.8-2, 3.8-3, 3.11-2, 3.11-3, 3.11-4, 3.12-10, 3.20-12, 3.20-14, 4.10-1, 4.10-2, 4.10-3
- Alternatives, ES-1, ES-3, ES-4, ES-5, 1-1, 1-2, 1-8, 1-10, 1-12, 1-13, 1-14, 2-2, 2-6, 2-18, 2-19, 2-20, 2-21, 2-22, 2-23, 2-24, 2-25, 2-27, 2-30, 2-31, 2-33, 2-34, 2-35, 2-36, 2-38, 3.1-1, 3.3-5, 3.4-42, 4.1-1, 4.1-2, 4.1-3, 4.1-8, 4.2-1, 4.2-16, 4.2-17, 4.3-1, 4.3-11, 4.3-15, 4.4-10, 4.5-3, 4.7-2, 4.8-2, 4.8-4, 4.8-6, 4.8-7, 4.8-8, 4.8-9, 4.8-10, 4.8-11, 4.9-7, 4.9-8, 4.10-1, 4.10-4, 4.11-18, 4.11-20, 4.11-25, 4.11-29, 4.11-30, 4.11-31, 4.11-33, 4.11-34, 4.11-35, 4.11-38, 4.11-39, 4.11-45, 4.11-46, 4.11-48, 4.11-50, 4.11-54, 4.12-4, 4.12-6, 4.13-1, 4.13-9, 4.13-16, 4.13-27, 4.13-28, 4.14-1, 4.14-2, 4.14-5, 4.14-8, 4.14-9, 4.14-10, 4.14-11, 4.15-4, 4.17-1, 4.17-3, 4.17-8, 4.17-15, 4.17-23, 4.17-24, 4.17-25, 4.17-28, 4.17-29, 4.17-30, 4.17-31, 4.17-34, 4.18-1, 4.18-19, 4.18-20, 4.18-22, 4.19-1, 4.19-7, 4.19-15, 4.20-1, 4.20-2, 4.20-3, 4.20-4, 4.20-5, 4.21-1, 4.21-17, 4.21-24, 4.21-26, 4.21-27, 4.21-28, 4.21-29, 4.23-1, 5-6, 5-8, 5-10, 5-11, 5-13, 5-15, 5-16, 5-18, 5-19, 5-21, 5-23, 5-24, 5-25, 5-26, 5-28, 5-29, 5-31, 5-32, 5-34, 5-35, 5-36, 5-37, 5-39, 5-40, 5-45, 5-51, 5-52, 5-58, 5-59, 5-60, 5-61, 5-62, 5-64, 5-65, 5-67, 5-68, 5-69, 5-70, 5-71, 5-72, 5-73, 5-74, 5-75, 5-76, 5-83, 5-88, 5-89, 5-91, 5-93, 5-94, 5-95, 5-96
- Ambient Air, 2-35, 3.2-1, 3.2-2, 3.2-3, 3.2-5, 3.2-6, 3.12-1, 4.2-1, 4.2-2, 4.2-3, 4.2-10, 4.2-11, 4.2-12, 4.2-13, 4.2-15, 4.2-16, 4.2-17, 4.2-18, 4.8-7, 4.11-36, 5-27
- Ambient Air Quality Standards, 3.2-1, 3.2-2, 3.2-3, 3.2-5, 3.2-6, 4.2-2

- American Badger, 3.23-14, 4.21-11, 4.21-24, 5-17
- American Indian Religious Freedom Act, ES-15, 1-5, 5-4
- American Recovery and Reinvestment Act, ES-2, 1-3, 1-4, 4.1-9
- Archaeological District, 3.4-1
- Attainment Area, 3.2-3
- Bald Eagle and Golden Eagle Protection Act, 3.23-12
- Basic Elements, 3.19-4, 4.18-1
- Best Management Practices (BMP), 4.14-4, 4.11-46, 4.21-25
- Bioremediation, 1-14, 2-4, 2-12, 2-24, 3.18-3, 4.11-244.19-8
- Bureau of Land Management, ES-1, 1-1, 1-9, 3.4-36, 3.6-1, 3.18-13, 3.23-4, 4.1-19, 5-9, 5-34
- Cahuilla, 1-6, 3.4-8, 3.4-9, 3.4-11, 3.4-13, 3.4-15, 3.4-16, 3.4-17, 3.4-18, 3.4-19, 3.4-37, 3.4-38, 5-5, 5-52
- California Department of Fish and Game (CDFG), 1-7, 1-13, 2-18, 3.18-2, 3.18-4, 3.18-5, 3.18-6, 3.18-7, 3.18-8, 3.18-10, 3.18-13, 3.18-18, 3.18-19, 3.18-22, 3.18-32, 3.18-33, 3.23-1, 3.23-4, 3.23-23, 4.1-7, 4.8-11, 4.17-25, 4.21-6, 4.21-17, 4.21-25, 4.21-27, 5-2, 5-20, 5-30, 5-34, 5-35, 5-36
- California Desert Protection Act (CDPA), 3.16-2, 3.16-4
- California Endangered Species Act (CESA), 1-7, 5-2
- California Energy Commission (CEC), ES-1, ES-15, ES-16, 1-1, 1-4, 1-5, 1-7, 1-13, 2-18, 2-28, 2-31, 2-33, 2-38, 3.2-1, 3.2-2, 3.2-3, 3.2-4, 3.2-5, 3.3-1, 3.3-2, 3.3-3, 3.3-4, 3.3-8, 3.3-9, 3.4-1, 3.4-2, 3.4-3, 3.4-4, 3.4-5, 3.4-6, 3.4-7, 3.4-8, 3.4-9, 3.4-10, 3.4-11, 3.4-12, 3.4-13, 3.4-14, 3.4-15, 3.4-16, 3.4-17, 3.4-19, 3.4-20, 3.4-21, 3.4-22, 3.4-23, 3.4-24, 3.4-25, 3.4-26, 3.4-27, 3.4-28, 3.4-29, 3.4-30, 3.4-31, 3.4-32, 3.4-33, 3.4-34, 3.4-35, 3.4-36, 3.4-38, 3.4-39, 3.6-2, 3.8-1, 3.8-2, 3.8-4, 3.10-1, 3.10-2, 3.11-1, 3.11-2, 3.11-3, 3.11-4, 3.12-2, 3.12-4, 3.12-6, 3.12-9, 3.12-10, 3.12-11, 3.12-12, 3.12-14, 3.12-15, 3.12-16, 3.14-5, 3.14-6, 3.14-10, 3.14-11, 3.14-12, 3.14-13, 3.14-14, 3.15-1, 3.15-2, 3.15-3, 3.15-4, 3.16-2, 3.16-3, 3.16-5, 3.17-5, 3.18-1, 3.18-2, 3.18-3, 3.18-4, 3.18-5, 3.18-6, 3.18-7, 3.18-8, 3.18-9, 3.18-10, 3.18-11, 3.18-13, 3.18-14, 3.18-15, 3.18-16, 3.18-17, 3.18-18, 3.18-19, 3.18-20, 3.18-21, 3.18-22, 3.18-23, 3.18-24, 3.18-25, 3.18-26, 3.18-27, 3.18-28, 3.18-29, 3.18-30, 3.18-31, 3.18-32, 3.18-33, 3.19-2, 3.20-1, 3.20-2, 3.20-3, 3.20-4, 3.20-5, 3.20-6, 3.20-7, 3.20-8, 3.20-9, 3.20-10, 3.20-11, 3.20-12, 3.20-13, 3.20-14, 3.20-15, 3.20-16, 3.20-19, 3.20-20, 3.23-1, 3.23-2, 3.23-4, 3.23-5, 3.23-6, 3.23-7, 3.23-8, 3.23-9, 3.23-10, 3.23-11, 3.23-12, 3.23-13, 3.23-14, 3.23-15, 3.23-16, 3.23-18, 3.23-19, 3.23-20, 3.23-21, 3.23-22, 3.23-23, 4.1-8, 4.1-9, 4.1-13, 4.1-16, 4.1-18, 4.1-19, 4.1-20, 4.1-21, 4.2-3, 4.2-4, 4.2-5, 4.2-6, 4.2-7, 4.2-8, 4.2-9, 4.2-17, 4.2-18, 4.3-2, 4.3-3, 4.3-4, 4.3-5, 4.3-7, 4.3-10, 4.3-15, 4.4-8, 4.6-3, 4.6-4, 4.6-8, 4.9-1, 4.9-2, 4.9-3, 4.9-4, 4.9-5, 4.10-1, 4.11-2, 4.11-3, 4.11-4, 4.11-8, 4.11-9, 4.11-10, 4.11-11, 4.11-12, 4.11-13, 4.11-14, 4.11-15, 4.11-16, 4.11-17, 4.11-18, 4.11-20, 4.11-21, 4.11-22, 4.11-24, 4.11-25, 4.11-27, 4.11-28, 4.11-29, 4.11-30, 4.11-32, 4.11-35, 4.11-36, 4.11-37, 4.11-43, 4.11-48, 4.11-49, 4.11-53, 4.11-54, 4.11-55, 4.12-2, 4.13-2, 4.13-3, 4.13-5, 4.13-7, 4.13-11, 4.13-12, 4.13-14, 4.14-3, 4.14-4, 4.16-1, 4.16-3, 4.16-4, 4.16-5, 4.16-6, 4.17-1, 4.17-3, 4.17-15, 4.17-17, 4.17-18, 4.17-23, 4.17-24, 4.17-25, 4.17-27, 4.17-28, 4.17-29, 4.17-32,

- 4.17-33, 4.18-23, 4.19-1, 4.19-2, 4.19-3, 4.19-7, 4.19-9, 4.19-10, 4.19-11, 4.19-12, 4.19-13, 4.19-14, 4.19-15, 4.19-25, 4.19-26, 4.20-1, 4.20-2, 4.20-5, 4.21-1, 4.21-2, 4.21-3, 4.21-4, 4.21-5, 4.21-6, 4.21-7, 4.21-9, 4.21-10, 4.21-11, 4.21-12, 4.21-13, 4.21-14, 4.21-15, 4.21-16, 4.21-17, 4.21-18, 4.21-23, 4.21-29, 5-4, 5-6, 5-7, 5-13, 5-14, 5-15, 5-18, 5-27, 5-28, 5-29, 5-30, 5-31, 5-34, 5-35, 5-36, 5-47, 5-48, 5-54, 5-59, 5-73, 5-78, 5-91
- California Global Warming Solutions Act (AB 32), 3.3-4, 3.3-5, 4.3-2, 4.3-14
- Cancer, 3.12-2, 4.11-3, 4.11-4, 4.11-5, 4.11-10, 4.11-11, 4.11-12, 4.11-13, 4.11-14, 4.11-15, 4.11-16, 4.11-17
- Carbon Monoxide (CO), 4.2-1, 4.11-9
- CESA, 3.18-10, 3.23-1, 5-2
- Characteristic, 3.8-1, 3.11-1, 3.12-5, 3.15-4, 3.18-1, 3.18-9, 3.19-1, 3.19-4, 4.9-4, 4.12-7, 4.18-1, 4.18-2, 4.18-16, 4.18-18
- Characteristic Landscape, 3.19-1, 3.19-4, 4.12-7, 4.18-1, 4.18-2, 4.18-18
- Chemehuevi, 1-6, 3.4-12, 3.4-13, 3.4-15, 3.4-18, 3.4-19, 3.4-20, 3.4-21, 3.4-37, 3.4-38, 3.18-17, 3.22-1, 3.23-6, 4.21-3, 5-5, 5-52
- City of Blythe, 3.5-2, 3.13-1, 3.14-1, 3.14-2, 3.14-5, 3.14-7, 3.14-11, 3.14-12, 3.14-13, 3.16-5, 4.1-15, 4.1-19, 4.5-1, 4.5-2, 4.13-8, 4.13-13, 4.13-15, 4.13-23
- Civil Rights Act, 3.5-1
- Clean Air Act (CAA), 3.3-2
- Climate, 1-13, 1-15, 3.2-1, 3.3-1, 3.3-2, 3.3-3, 3.3-4, 3.3-5, 3.3-6, 3.3-7, 3.3-8, 3.4-3, 3.4-5, 3.4-24, 3.12-14, 3.14-3, 3.15-1, 3.15-4, 3.18-1, 3.19-1, 3.20-1, 4.1-7, 4.1-8, 4.2-1, 4.2-15, 4.3-1, 4.3-2, 4.3-5, 4.3-6, 4.3-7, 4.3-8, 4.3-9, 4.3-10, 4.3-11, 4.3-12, 4.3-13, 4.3-14, 4.3-15, 4.10-4, 4.10-5, 4.17-10, 4.17-28, 4.17-30, 4.19-27, 4.20-4, 4.21-9, 5-8, 5-22, 5-38, 5-39, 5-40, 5-41, 5-42, 5-63, 5-94, 5-96, 5-97
- Climate Change, 1-3
- CNEL, 3.10-2
- Contrast, ES-13, 2-20, 3.4-2, 3.4-30, 3.12-9, 3.13-1, 3.13-4, 3.14-6, 4.1-2, 4.1-3, 4.8-4, 4.14-7, 4.14-11, 4.15-4, 4.15-5, 4.17-21, 4.18-1, 4.18-2, 4.18-3, 4.18-5, 4.18-7, 4.18-8, 4.18-9, 4.18-10, 4.18-11, 4.18-12, 4.18-13, 4.18-14, 4.18-15, 4.18-16, 4.18-17, 4.18-18, 4.18-19, 4.18-20, 4.18-21, 4.18-22, 4.18-24
- Contrast Rating, 4.18-1, 4.18-2, 4.18-3, 4.18-5, 4.18-7, 4.18-10, 4.18-11, 4.18-19
- Council of Environmental Quality (CEQ), 1-2, 1-8, 3.5-1, 3.5-2, 4.1-1, 4.1-2, 4.1-3, 4.1-22, 4.3-1, 4.5-1, 5-12, 5-13, 5-16, 5-19, 5-26, 5-33, 5-64, 5-74
- Cretaceous, 3.8-2
- Criteria Pollutant, 2-35, 3.2-1, 3.2-3, 3.2-4, 4.2-1, 4.2-2, 4.2-10, 4.2-11, 4.2-12, 4.2-13, 4.2-14, 4.2-15, 4.3-15, 4.11-9, 4.11-10
- Critical Habitat, 1-15, 2-26, 2-27, 3.9-5, 3.22-1, 3.23-2, 4.1-74.8-8, 4.8-11, 4.21-2, 4.21-3, 4.21-19, 4.21-20, 4.21-21, 4.21-25, 5-32, 5-35
- Cultural Landscape, 3.4-1, 3.4-7, 3.4-8, 3.4-13, 3.4-39, 4.1-4, 4.4-10
- Cultural Modification, 3.19-3, 3.19-5, 4.15-4, 4.18-10, 4.18-16, 4.18-20, 4.18-21
- Cultural Resource Inventory, 4.4-1
- Cultural Resource Values, 3.9-2, 3.16-5
- Cultural Resources, ES-5, ES-15, 1-6, 2-22, 2-23, 2-24, 2-25, 2-30, 2-35, 3.3-3, 3.4-1, 3.4-2, 3.4-4, 3.4-34, 3.4-35, 3.4-36,

- 3.4-37, 3.4-38, 3.4-39, 3.4-40, 3.4-41, 3.4-42, 3.9-3, 3.13-5, 3.16-5, 4.1-4, 4.1-5, 4.1-6, 4.1-22, 4.4-1, 4.4-2, 4.4-3, 4.4-4, 4.4-5, 4.4-6, 4.4-7, 4.4-8, 4.4-9, 4.4-10, 4.8-7, 4.8-8, 4.15-2, 4.22-1, 4.23-1, 5-4, 5-5, 5-13, 5-17, 5-29, 5-50, 5-51, 5-52, 5-77, 5-78, 5-97
- Cultural Site, 3.13-2, 4.4-9, 4.4-10
- Cumulative Impacts, ES-4, ES-5, 1-13, 2-19, 3.3-2, 4.1-1, 4.1-3, 4.1-22, 4.2-15, 4.2-16, 4.3-1, 4.3-2, 4.4-7, 4.4-8, 4.4-10, 4.5-3, 4.6-6, 4.6-7, 4.8-3, 4.9-7, 4.10-4, 4.11-19, 4.11-20, 4.11-26, 4.11-27, 4.11-30, 4.11-34, 4.11-39, 4.11-46, 4.11-51, 4.11-55, 4.12-5, 4.12-6, 4.13-19, 4.13-20, 4.13-25, 4.13-27, 4.13-28, 4.14-9, 4.14-10, 4.15-3, 4.15-8, 4.15-12, 4.16-9, 4.17-1, 4.17-23, 4.17-24, 4.17-27, 4.17-29, 4.17-31, 4.18-20, 4.18-24, 4.19-1, 4.19-21, 4.19-23, 4.19-24, 4.19-25, 4.19-26, 4.20-3, 4.21-1, 4.21-12, 4.21-23, 4.21-24, 4.21-25, 5-11, 5-13, 5-14, 5-15, 5-22, 5-32, 5-33, 5-35, 5-36, 5-37, 5-40, 5-44, 5-45, 5-46, 5-47, 5-51, 5-57, 5-59, 5-63, 5-64, 5-65, 5-68, 5-69, 5-71, 5-74, 5-80, 5-83, 5-85, 5-91, 5-94, 5-96
- dB, 3.10-2
- Desert Kit Fox, 3.18-5, 3.18-6, 3.23-1, 3.23-14, 3.23-15, 4.21-11, 4.21-19, 4.21-22, 4.21-23, 4.21-29, 5-70
- Desert Pavement, 3.4-7, 3.4-13, 3.4-14, 3.8-1, 3.11-2, 3.18-5, 3.23-6
- Desert Tortoise, 1-7, 1-12, 1-15, 2-9, 2-20, 2-26, 2-30, 3.4-20, 3.16-2, 3.16-3, 3.16-5, 3.18-2, 3.18-4, 3.18-31, 3.23-1, 3.23-2, 3.23-4, 3.23-5, 3.23-6, 3.23-7, 3.23-10, 4.1-7, 4.8-11, 4.15-2, 4.17-20, 4.21-1, 4.21-2, 4.21-3, 4.21-4, 4.21-5, 4.21-6, 4.21-7, 4.21-8, 4.21-17, 4.21-19, 4.21-20, 4.21-21, 4.21-22, 4.21-23, 4.21-24, 4.21-25, 4.21-26, 4.21-27, 4.21-29, 5-3, 5-10, 5-17, 5-20, 5-30, 5-31, 5-32, 5-33, 5-35, 5-36, 5-64, 5-69, 5-73, 5-74, 5-75, 5-91, 5-92
- Desert Wildlife Management Area (DWMA), ES-12, 1-15, 2-3, 2-30, 3.13-4, 3.13-5, 3.16-5, 3.18-2, 3.18-21, 3.23-1, 3.23-6, 4.12-2, 4.15-1, 4.15-2, 4.15-12, 4.15-13, 4.17-23, 4.21-4, 4.21-8, 4.21-13, 4.21-24, 4.21-29, 5-64
- Distance Zones, 3.19-3, 4.18-3
- Endangered Species Act (ESA), ES-15, 1-5, 3.12-3, 3.14-6, 3.14-10, 3.18-10, 4.13-3, 5-4, 5-44, 5-80
- Energy Policy Act, ES-2, ES-15, 1-3, 1-8, 2-33, 3.6-1, 4.6-7, 5-1, 5-12
- Enhancement, 1-4, 4.1-3, 4.8-11, 4.17-31, 4.21-26, 5-6, 5-17, 5-31, 5-75
- Environmental Justice, 3.1-1, 3.3-5, 3.5-1, 3.5-2, 3.5-3, 4.1-3, 4.5-1, 4.5-2, 4.5-3
- Excavation, 3.11-4, 4.2-3, 4.7-1, 4.10-1, 4.10-2, 4.10-5, 4.11-29, 4.11-42, 4.11-49, 4.11-50, 4.14-2, 4.14-3, 4.17-1, 4.19-9, 5-76, 5-87
- Federal Endangered Species Act (FESA), 5-11
- Federal Land Policy and Management Act (FLPMA), ES-2, ES-15, 1-2, 1-3, 1-4, 1-8, 1-10, 1-12, 2-26, 2-29, 2-34, 3.6-1, 3.9-1, 3.9-4, 3.16-1, 3.16-3, 3.16-4, 3.16-5, 3.19-2, 4.1-21, 4.8-5, 4.8-10, 4.16-8, 5-1, 5-7, 5-8, 5-12, 5-13, 5-17, 5-21, 5-22, 5-61, 5-62, 5-66, 5-68, 5-69, 5-71, 5-74, 5-83, 5-92, 5-95, 5-96
- Fine Particulate Matter (PM_{2.5}), ES-6, 1-13, 3.2-1, 3.2-2, 3.2-3, 3.2-4, 3.2-6, 4.1-4, 4.2-1, 4.2-3, 4.2-4, 4.2-5, 4.2-7, 4.2-8, 4.2-9, 4.2-10, 4.8-7, 4.11-12, 4.12-2
- Floodplain, 1-15, 3.4-11, 3.4-20, 3.4-22, 3.18-17, 3.18-22, 3.20-15, 4.17-4, 4.19-10, 4.19-12, 4.19-14, 4.19-17, 4.19-18, 4.19-20

- Fluvial, 3.4-2, 3.15-4, 3.18-24, 3.18-28, 3.18-31, 3.20-12, 4.14-2, 4.17-3, 4.17-12, 4.17-24, 4.17-27, 4.17-32, 4.19-9, 4.21-9
- Form, ES-13, 2-9, 3.2-5, 3.4-7, 3.4-9, 3.4-14, 3.4-19, 3.4-20, 3.4-29, 3.12-9, 3.14-2, 3.14-19, 3.15-4, 3.16-2, 3.18-6, 3.18-9, 3.19-4, 3.20-8, 3.20-10, 3.20-13, 3.20-20, 3.20-22, 3.22-1, 3.23-9, 4.2-1, 4.2-2, 4.2-10, 4.2-16, 4.4-9, 4.12-2, 4.13-6, 4.14-1, 4.14-3, 4.15-4, 4.15-5, 4.17-13, 4.17-29, 4.18-2, 4.18-10, 4.18-11, 4.18-14, 4.18-15, 4.18-16, 4.18-18, 4.18-24, 4.21-4, 5-11, 5-16, 5-19, 5-20
- Fugitive Dust, ES-9, 3.2-1, 3.2-6, 3.3-8, 4.2-1, 4.2-4, 4.2-5, 4.2-6, 4.2-9, 4.2-11, 4.2-12, 4.2-15, 4.2-16, 4.2-17, 4.2-18, 4.3-10, 4.11-10, 4.11-12, 4.12-1, 4.12-2, 4.15-5, 4.15-6, 4.17-2, 4.17-13, 4.17-14, 4.20-1, 5-38, 5-39, 5-43, 5-44, 5-57, 5-66
- Geomorphic Province, 3.4-1, 3.8-1, 3.11-1, 3.12-9, 3.12-10, 3.19-1
- Global Climate Change, 3.2-1, 3.3-1, 3.3-2, 3.3-4, 4.1-4, 4.3-1, 4.3-5, 4.3-11, 4.3-14, 4.3-15, 5-38, 5-40, 5-91, 5-99
- Golden Eagle, 1-15, 3.23-11, 3.23-12, 3.23-14, 3.23-16, 4.1-7, 4.21-10, 4.21-16, 4.21-17, 4.21-23, 4.21-27, 4.21-29, 5-17, 5-29, 5-37, 5-63
- Greenhouse Gas, 1-13, 2-38, 3.2-1, 3.3-1, 3.3-2, 3.3-3, 3.3-4, 3.3-7, 3.3-8, 3.14-14, 4.2-1, 4.2-14, 4.3-1, 4.3-2, 4.3-3, 4.3-4, 5-8, 5-59, 5-63
- Groundwater, ES-5, ES-13, 1-15, 2-4, 2-8, 3.4-27, 3.4-30, 3.12-3, 3.12-14, 3.18-3, 3.18-5, 3.18-7, 3.18-8, 3.18-9, 3.18-33, 3.20-3, 3.20-4, 3.20-5, 3.20-7, 3.20-8, 3.20-9, 3.20-10, 3.20-11, 3.20-13, 3.20-14, 3.20-15, 3.20-19, 3.20-20, 3.20-23, 4.1-4, 4.1-7, 4.1-20, 4.1-21, 4.3-7, 4.3-8, 4.8-7, 4.8-9, 4.11-12, 4.11-17, 4.11-20, 4.11-21, 4.11-49, 4.11-51, 4.14-11, 4.17-4, 4.17-5, 4.17-6, 4.17-7, 4.17-11, 4.17-17, 4.17-20, 4.17-24, 4.17-25, 4.17-27, 4.17-32, 4.19-1, 4.19-2, 4.19-4, 4.19-5, 4.19-6, 4.19-7, 4.19-8, 4.19-9, 4.19-10, 4.19-11, 4.19-15, 4.19-16, 4.19-18, 4.19-19, 4.19-21, 4.19-23, 4.19-24, 4.19-26, 4.19-27, 4.19-28, 4.21-12, 4.21-27, 5-27, 5-38, 5-40, 5-41, 5-45, 5-46, 5-47, 5-48, 5-49, 5-50, 5-55, 5-56, 5-57, 5-62, 5-67, 5-77, 5-87, 5-93, 5-94
- Habitat, ES-3, ES-11, ES-14, 1-13, 1-14, 2-22, 2-23, 2-24, 2-25, 2-26, 2-34, 3.3-4, 3.10-1, 3.14-1, 3.15-3, 3.15-4, 3.16-2, 3.16-3, 3.16-5, 3.18-1, 3.18-2, 3.18-4, 3.18-5, 3.18-6, 3.18-7, 3.18-10, 3.18-11, 3.18-13, 3.18-14, 3.18-16, 3.18-19, 3.18-20, 3.18-22, 3.18-23, 3.18-24, 3.18-25, 3.18-26, 3.18-29, 3.18-30, 3.18-31, 3.18-32, 3.20-9, 3.22-1, 3.22-2, 3.23-1, 3.23-2, 3.23-4, 3.23-5, 3.23-6, 3.23-7, 3.23-8, 3.23-9, 3.23-10, 3.23-11, 3.23-12, 3.23-13, 3.23-14, 3.23-15, 3.23-16, 3.23-18, 3.23-19, 3.23-20, 3.23-21, 3.23-22, 3.23-23, 4.3-1, 4.3-9, 4.8-3, 4.8-8, 4.8-11, 4.12-1, 4.14-2, 4.14-5, 4.14-6, 4.14-7, 4.14-8, 4.14-10, 4.14-11, 4.15-2, 4.15-7, 4.15-8, 4.17-2, 4.17-4, 4.17-6, 4.17-9, 4.17-10, 4.17-11, 4.17-12, 4.17-15, 4.17-18, 4.17-19, 4.17-20, 4.17-21, 4.17-22, 4.17-23, 4.17-24, 4.17-25, 4.17-27, 4.17-30, 4.17-31, 4.17-32, 4.17-34, 4.20-1, 4.21-2, 4.21-3, 4.21-4, 4.21-5, 4.21-6, 4.21-7, 4.21-8, 4.21-9, 4.21-10, 4.21-11, 4.21-12, 4.21-13, 4.21-17, 4.21-18, 4.21-19, 4.21-20, 4.21-21, 4.21-22, 4.21-23, 4.21-24, 4.21-25, 4.21-26, 4.21-29, 4.21-30, 5-10, 5-11, 5-17, 5-20, 5-28, 5-30, 5-31, 5-32, 5-33, 5-34, 5-35, 5-36, 5-37, 5-38, 5-40, 5-48, 5-61, 5-63, 5-64, 5-69, 5-72, 5-73, 5-74, 5-75, 5-85, 5-95
- Halchidhoma, 3.4-15, 3.4-19, 3.4-22, 3.4-25, 3.4-26, 3.4-39, 5-52
- Has, 1-13
- Heat Transfer Fluid (HTF), 4.3-4
- Herd Areas, 3.21-1

- Herd Management Areas, 3.21-1
- Historical Site, 3.4-40, 3.17-2
- Holocene, 3.8-2
- Hydrocarbons, 2-12, 3.2-3, 4.11-11, 4.11-12, 4.19-8, 5-37
- Hz, 3.10-2
- Igneous, 3.20-13
- Indian Tribe, 1-6, 1-13, 3.4-37, 3.4-38, 4.4-2, 5-4, 5-5, 5-52
- Indigenous, 2-12, 3.4-26, 3.20-22, 4.19-8, 5-37
- Interdisciplinary Team, 5-98
- Invasive Species, 1-15, 3.18-32, 3.23-13, 4.3-9, 4.17-11, 4.17-13, 5-39, 5-40
- Isolate, 4.11-21, 4.21-5, 5-37
- KOP, 4.18-3, 4.18-4, 4.18-7, 4.18-10, 4.18-11, 4.18-12, 4.18-13, 4.18-14, 4.18-15, 4.18-16, 4.18-17
- lands and realty, 4.1-4
- Lands and Realty, 3.1-1, 5-74
- Landscape Character, 4.18-1, 4.18-5
- Landscape Features, 3.4-1, 4.18-15, 4.18-18
- Le Conte's Thrasher, 3.23-13, 4.21-24
- Leasable Minerals, 3.8-5
- Leq, ES-8, 3.10-1, 3.10-2, 3.10-3, 4.9-2, 4.9-3, 4.9-4, 4.12-2
- Line, ES-1, ES-4, ES-9, ES-13, 1-1, 2-1, 2-3, 2-4, 2-5, 2-6, 2-9, 2-13, 2-15, 2-19, 2-20, 2-21, 2-22, 2-26, 2-29, 3.1-1, 3.4-1, 3.4-31, 3.4-35, 3.4-38, 3.4-39, 3.4-40, 3.5-2, 3.6-2, 3.9-3, 3.12-1, 3.12-4, 3.12-5, 3.12-6, 3.12-7, 3.12-15, 3.14-4, 3.16-2, 3.16-4, 3.17-5, 3.17-6, 3.18-3, 3.18-16, 3.18-23, 3.18-27, 3.18-28, 3.19-1, 3.19-4, 3.19-6, 3.23-6, 3.23-7, 3.23-14, 3.23-15, 4.1-5, 4.1-15, 4.1-16, 4.1-17, 4.1-18, 4.1-19, 4.1-21, 4.2-2, 4.2-3, 4.2-4, 4.2-9, 4.2-10, 4.2-11, 4.2-12, 4.2-13, 4.2-16, 4.2-17, 4.4-4, 4.4-5, 4.4-9, 4.6-1, 4.6-2, 4.6-3, 4.6-4, 4.6-5, 4.6-7, 4.6-8, 4.8-1, 4.9-2, 4.9-3, 4.9-4, 4.9-6, 4.11-1, 4.11-9, 4.11-31, 4.11-32, 4.11-33, 4.11-34, 4.11-35, 4.11-38, 4.11-45, 4.11-51, 4.11-54, 4.12-2, 4.12-6, 4.14-2, 4.14-3, 4.15-1, 4.15-4, 4.15-5, 4.16-2, 4.16-3, 4.16-5, 4.17-15, 4.18-2, 4.18-5, 4.18-8, 4.18-10, 4.18-11, 4.18-12, 4.18-13, 4.18-14, 4.18-15, 4.18-16, 4.18-18, 4.18-19, 4.18-20, 4.18-21, 4.18-24, 4.21-1, 4.21-3, 4.21-5, 4.21-10, 4.21-17, 5-14, 5-49, 5-61, 5-62, 5-74, 5-75, 5-76, 5-78, 5-82, 5-92, 5-95
- Locatable Minerals, 3.8-5
- Maintenance Area, 2-14, 4.11-8
- Management Activity, 3.19-4
- Maricopa, 3.4-15, 3.4-22, 3.4-24, 3.4-25, 3.14-6, 4.1-10
- Memorandum of Understanding (MOU), ES-1, ES-2, 1-3
- Metropolitan Water District of Southern California (MWD), 4.1-20
- Migratory Bird Treaty Act, 3.23-1, 4.21-11
- Migratory Birds, 1-15, 2-11, 4.1-7, 4.21-17, 4.21-29, 5-31, 5-36
- Mining Claim, 3.4-39, 3.4-40, 3.8-5, 3.9-4, 3.16-3, 4.4-6
- Mitigation, ES-11, ES-16, 1-6, 1-7, 1-8, 1-14, 3.3-5, 3.9-2, 3.18-28, 3.22-2, 4.1-1, 4.1-2, 4.1-9, 4.1-14, 4.1-21, 4.1-22, 4.2-9, 4.2-11, 4.2-12, 4.2-13, 4.2-14, 4.2-17, 4.2-18, 4.3-1, 4.3-5, 4.3-8, 4.3-9, 4.3-10, 4.3-11, 4.3-12, 4.3-15, 4.3-16, 4.4-1, 4.4-9, 4.4-10, 4.5-2, 4.5-3, 4.6-8, 4.7-3, 4.8-4, 4.8-7, 4.8-9, 4.8-11, 4.9-5, 4.9-6,

- 4.9-7, 4.9-8, 4.10-4, 4.10-5, 4.11-3, 4.11-9, 4.11-21, 4.11-28, 4.11-30, 4.11-35, 4.11-36, 4.11-40, 4.11-46, 4.11-47, 4.11-48, 4.11-49, 4.11-52, 4.11-56, 4.12-6, 4.13-28, 4.14-4, 4.14-6, 4.14-7, 4.14-9, 4.14-10, 4.14-11, 4.15-5, 4.15-6, 4.15-7, 4.15-8, 4.15-9, 4.15-10, 4.15-11, 4.16-6, 4.16-7, 4.16-8, 4.16-9, 4.17-1, 4.17-10, 4.17-12, 4.17-20, 4.17-24, 4.17-27, 4.17-29, 4.17-30, 4.17-31, 4.17-32, 4.17-34, 4.17-35, 4.18-1, 4.18-7, 4.18-9, 4.18-10, 4.18-11, 4.18-13, 4.18-14, 4.18-15, 4.18-16, 4.18-21, 4.18-22, 4.18-23, 4.18-24, 4.19-6, 4.19-13, 4.19-14, 4.19-15, 4.19-16, 4.19-17, 4.19-18, 4.19-19, 4.19-20, 4.19-24, 4.19-26, 4.19-27, 4.19-28, 4.20-4, 4.20-5, 4.21-7, 4.21-11, 4.21-14, 4.21-16, 4.21-21, 4.21-23, 4.21-24, 4.21-25, 4.21-26, 4.21-27, 4.21-28, 4.21-29, 4.21-30, 5-2, 5-4, 5-6, 5-10, 5-13, 5-16, 5-18, 5-19, 5-20, 5-27, 5-28, 5-30, 5-31, 5-32, 5-34, 5-35, 5-36, 5-39, 5-40, 5-41, 5-42, 5-43, 5-45, 5-46, 5-47, 5-48, 5-49, 5-50, 5-51, 5-53, 5-55, 5-57, 5-58, 5-62, 5-64, 5-66, 5-67, 5-72, 5-75, 5-78, 5-81, 5-91, 5-92, 5-93, 5-97
- National Ambient Air Quality Standards (NAAQS), 3.2-4, 4.2-3, 4.2-7
- National Environmental Policy Act (NEPA), ES-1, ES-2, ES-15, ES-16, 1-1, 1-2, 1-3, 1-5, 1-6, 1-8, 1-10, 2-19, 2-21, 2-27, 2-38, 3.4-1, 3.4-40, 3.5-1, 3.9-3, 3.9-4, 3.19-2, 4.1-1, 4.1-2, 4.1-3, 4.1-8, 4.1-9, 4.1-22, 4.2-14, 4.2-15, 4.3-1, 4.3-12, 4.3-13, 4.4-3, 4.4-4, 4.4-7, 4.4-10, 4.5-1, 4.6-5, 4.7-2, 4.8-3, 4.8-5, 4.8-6, 4.8-8, 4.8-9, 4.8-10, 4.9-6, 4.10-3, 4.11-19, 4.11-26, 4.11-30, 4.11-34, 4.11-38, 4.11-39, 4.11-45, 4.11-50, 4.11-51, 4.11-54, 4.11-55, 4.12-5, 4.13-1, 4.13-17, 4.14-8, 4.14-9, 4.16-7, 4.17-21, 4.17-22, 4.18-19, 4.19-21, 4.21-22, 4.22-1, 5-4, 5-7, 5-9, 5-10, 5-11, 5-12, 5-13, 5-14, 5-15, 5-16, 5-18, 5-19, 5-21, 5-23, 5-24, 5-25, 5-26, 5-27, 5-28, 5-31, 5-33, 5-45, 5-47, 5-49, 5-51, 5-54, 5-56, 5-57, 5-58, 5-60, 5-61, 5-62, 5-63, 5-64, 5-65, 5-66, 5-67, 5-68, 5-69, 5-70, 5-71, 5-72, 5-73, 5-74, 5-75, 5-76, 5-77, 5-78, 5-79, 5-80, 5-81, 5-82, 5-83, 5-84, 5-88, 5-89, 5-90, 5-91, 5-92, 5-93, 5-95
- National Historic Preservation Act (NHPA), ES-15, 1-5, 1-6, 3.4-1, 3.4-37, 3.4-40, 3.4-41, 4.4-1, 4.4-4, 4.4-7, 4.4-10, 5-4, 5-51, 5-73
- National Park Service (NPS), 1-9, 3.4-41, 3.13-2, 3.14-13, 3.16-1, 3.16-2, 3.16-6, 3.22-1, 4.12-3, 4.15-5, 4.15-9, 4.15-10, 4.15-11, 4.15-12, 4.18-23, 4.18-24, 5-1
- National Pollutant Discharge Elimination System (NPDES), 4.14-4, 4.19-6, 4.19-10
- National Register of Historic Places, 1-13, 3.4-1, 3.4-40, 3.4-41, 4.4-2, 4.4-3, 4.8-7, 5-4
- Native American, ES-15, 1-5, 1-6, 1-13, 3.4-1, 3.4-7, 3.4-12, 3.4-13, 3.4-14, 3.4-15, 3.4-19, 3.4-34, 3.4-36, 3.4-37, 3.4-38, 3.4-39, 3.4-41, 3.9-3, 3.11-1, 4.4-1, 4.4-2, 4.8-5, 4.8-8, 5-4, 5-5, 5-51
- Native American Graves Protection and Repatriation Act, 3.11-1
- Nitric Oxide (NO), 3.2-5, 4.2-2
- Nitrogen Dioxide (NO₂), 3.2-1, 3.2-2, 3.2-3, 3.2-4, 3.2-5, 4.2-1, 4.2-2, 4.2-3, 4.2-4, 4.2-7, 4.2-9, 4.2-11, 4.2-13, 4.2-18, 4.8-7
- Nitrogen Oxides (NO_x), ES-6, 3.2-3, 3.2-5, 3.2-6, 3.3-1, 4.2-2, 4.2-4, 4.2-5, 4.2-7, 4.2-8, 4.2-9, 4.2-10, 4.2-11, 4.2-12, 4.2-13, 4.2-18, 5-44
- Noise/Vibration, 1-14
- Nonattainment Area, 3.2-4
- Non-native Species, 3.18-32, 3.23-20, 4.17-8
- Noxious Weed, 3.18-6, 4.17-8, 4.17-9, 4.17-24, 4.21-4

- Off-Highway Vehicles (OHV), 1-14, 2-27, 3.2-2, 3.13-1, 3.13-2, 3.13-5, 3.14-14, 3.17-1, 3.17-2, 3.18-14, 3.18-15, 3.18-16, 3.18-21, 3.19-2, 3.22-1, 3.23-8, 3.23-9, 4.1-4, 4.1-5, 4.1-6, 4.1-7, 4.8-10, 4.12-1, 4.12-2, 4.12-6, 4.16-1, 4.16-2, 4.16-6, 4.16-7, 4.16-8, 4.16-9, 4.18-2, 4.18-4, 4.18-5, 4.18-12, 4.18-17, 4.20-1, 4.20-2, 4.20-4, 4.22-1, 5-61, 5-99
- Organic Compounds, 3.2-3, 4.2-15, 4.11-9
- Overdraft condition, 3.20-11, 4.19-2, 4.19-24
- Ozone (O₃), 3.2-2, 4.2-1
- Paleontological Resources, ES-8, 1-14, 3.11-1, 3.11-3, 3.11-4, 4.1-4, 4.8-7, 4.10-1, 4.10-2, 4.10-3, 4.10-4, 4.10-5
- Paleontological Resources Preservation Act, 3.11-1
- Paleontology, ES-8, 3.12-11, 4.10-2, 4.10-3, 4.10-4, 4.10-5
- Palo Verde Irrigation District Act, 3.4-29
- Particulate Matter, 3.2-1, 3.2-2, 3.2-3, 3.2-6, 4.2-1, 4.2-15, 4.2-16, 4.2-17, 4.11-9, 4.11-10, 4.11-14, 4.15-6, 4.20-2, 5-85
- Particulate Matter (PM₁₀), ES-6, 2-35, 3.2-1, 3.2-2, 3.2-3, 3.2-4, 3.2-6, 4.1-4, 4.2-1, 4.2-3, 4.2-4, 4.2-5, 4.2-7, 4.2-8, 4.2-9, 4.2-16, 4.2-17, 4.2-18, 4.8-7, 4.12-2, 4.20-2, 5-38, 5-44, 5-85
- pH (parts hydrogen), 2-5, 2-10, 2-11, 3.20-17, 3.20-22
- Pleistocene, 3.8-2
- Pliocene, 3.8-1, 3.8-2
- PM_{2.5}, 4.1-4
- Precursor, 3.2-6, 4.2-15, 4.2-16, 4.2-17
- Prehistoric, ES-7, 3.4-1, 3.4-7, 3.4-8, 3.4-11, 3.4-12, 3.4-13, 3.4-14, 3.4-23, 3.4-34, 3.4-35, 3.4-38, 3.4-39, 3.4-40, 4.1-4, 4.4-4, 4.4-5, 4.4-6, 4.10-4, 4.10-5, 4.15-2
- Programmatic Agreement (PA), ES-15, 1-5, 1-6, 3.4-37, 4.1-14, 4.4-10, 4.6-8, 4.8-7, 4.8-8, 5-4, 5-50, 5-51, 5-52
- Public Health and Safety, 2-18, 3.1-1, 3.9-4, 3.12-1, 3.13-1, 4.1-4, 4.1-5, 4.1-6, 4.1-7, 4.1-14, 4.1-21, 4.3-9, 4.5-3, 4.11-1, 4.11-18, 4.11-19, 4.11-21, 4.11-25, 4.11-26, 4.11-37, 4.11-50, 4.11-51, 5-2, 5-53, 5-84, 5-95
- Purpose and Need, ES-2, 1-2, 1-3, 1-3, 1-4, 2-27, 2-28, 2-29, 2-31, 2-33, 2-34, 2-35, 2-36, 2-37, 2-38, 2-39, 5-21, 5-22, 5-23, 5-24, 5-63, 5-68, 5-69, 5-71, 5-73, 5-76, 5-95, 5-96
- Quechan, 1-5, 1-6, 3.4-15, 3.4-19, 3.4-22, 3.4-23, 3.4-24, 3.4-25, 3.4-26, 3.4-37, 3.4-38, 5-5, 5-51, 5-52
- Recreation, ES-12, 1-14, 2-32, 3.1-1, 3.4-33, 3.9-1, 3.9-2, 3.9-4, 3.13-1, 3.13-2, 3.13-4, 3.13-5, 3.13-6, 3.14-12, 3.14-19, 3.16-2, 3.16-3, 3.16-4, 3.17-1, 3.19-2, 3.19-6, 4.1-3, 4.1-6, 4.8-3, 4.8-4, 4.12-1, 4.12-2, 4.12-3, 4.12-5, 4.12-6, 4.12-7, 4.15-2, 4.15-12, 4.16-2, 4.16-8, 4.18-17, 4.20-1, 4.20-3, 4.23-1, 5-83
- Rehabilitation, 3.9-2, 3.22-2, 4.18-18, 5-64
- Renewable Energy, ES-1, ES-2, ES-15, 1-3, 1-4, 1-8, 2-28, 2-31, 2-32, 2-33, 2-35, 2-38, 3.3-2, 3.3-3, 3.6-1, 3.14-1, 3.14-13, 3.14-14, 4.1-2, 4.1-4, 4.1-5, 4.1-6, 4.1-7, 4.1-8, 4.1-9, 4.1-10, 4.1-11, 4.1-12, 4.1-13, 4.2-14, 4.2-16, 4.3-2, 4.3-4, 4.3-12, 4.3-13, 4.4-9, 4.6-6, 4.6-7, 4.9-6, 4.11-19, 4.11-26, 4.11-27, 4.11-30, 4.11-34, 4.11-38, 4.11-45, 4.11-51, 4.11-54, 4.12-5, 4.13-10, 4.13-17, 4.13-18, 4.13-20, 4.13-28, 4.14-8, 4.14-9, 4.15-3, 4.15-8, 4.17-22, 4.18-21, 4.19-21, 4.19-24, 4.20-4, 4.21-22, 4.22-1, 4.23-1,

- 5-1, 5-10, 5-11, 5-15, 5-21, 5-22, 5-23,
5-25, 5-44, 5-72, 5-93, 5-94, 5-96
- Restoration, ES-10, ES-13, 2-18, 4.1-22,
4.9-5, 4.10-5, 4.12-7, 4.13-19, 4.14-4,
4.14-5, 4.14-9, 4.15-12, 4.17-1, 4.17-12,
4.17-28, 4.18-17, 4.18-20, 5-31
- Right-of-Way (ROW), ES-1, ES-2, ES-3,
ES-4, ES-5, ES-15, 1-1, 1-2, 1-3, 1-4, 1-8,
1-9, 1-11, 2-1, 2-3, 2-4, 2-5, 2-9, 2-15,
2-18, 2-19, 2-21, 2-22, 2-23, 2-26, 2-29,
2-31, 2-33, 2-34, 3.1-1, 3.4-37, 3.6-2,
3.7-1, 3.8-2, 3.8-4, 3.9-3, 3.10-1, 3.11-2,
3.12-4, 3.12-6, 3.21-1, 4.1-2, 4.1-3, 4.1-9,
4.1-14, 4.1-17, 4.1-18, 4.1-21, 4.1-22,
4.2-14, 4.2-15, 4.2-17, 4.4-2, 4.4-4, 4.4-5,
4.6-2, 4.6-3, 4.6-4, 4.6-6, 4.6-7, 4.6-8,
4.8-1, 4.8-3, 4.8-4, 4.8-8, 4.8-9, 4.8-10,
4.9-1, 4.9-4, 4.11-10, 4.11-19, 4.11-26,
4.11-32, 4.14-2, 4.15-3, 4.15-11, 4.16-3,
4.16-7, 4.18-5, 4.19-9, 4.21-1, 5-1, 5-3,
5-6, 5-10, 5-17, 5-21, 5-22, 5-23, 5-25,
5-26, 5-60, 5-67, 5-74, 5-76, 5-87, 5-93,
5-95, 5-96, 5-96
- Riparian, 1-7, 3.9-5, 3.18-2, 3.18-4, 3.18-7,
3.18-23, 3.18-24, 3.18-28, 3.23-12,
3.23-18, 3.23-19, 3.23-20, 3.23-23,
4.8-11, 4.17-24
- Road, 1-1, 1-14, 2-1, 2-4, 2-5, 2-8, 2-13,
2-14, 2-19, 2-20, 2-21, 2-26, 3.4-27,
3.4-28, 3.4-29, 3.4-38, 3.4-39, 3.4-40,
3.6-2, 3.12-3, 3.12-4, 3.12-7, 3.13-6,
3.16-4, 3.16-5, 3.17-1, 3.17-3, 3.17-4,
3.17-5, 3.17-6, 3.18-14, 3.18-16, 3.18-23,
3.18-27, 3.19-1, 3.22-1, 3.23-5, 3.23-9,
3.23-11, 3.23-18, 4.2-1, 4.2-3, 4.2-5,
4.4-4, 4.4-5, 4.4-9, 4.6-1, 4.6-2, 4.6-3,
4.6-4, 4.6-5, 4.8-1, 4.11-8, 4.11-37,
4.11-47, 4.14-2, 4.21-4, 4.21-5, 4.21-7,
4.21-8, 4.21-9, 4.21-10, 4.21-11, 5-36,
5-44, 5-95
- Route, ES-5, 1-3, 1-10, 3.4-1, 3.4-7, 3.4-14,
3.4-15, 3.4-26, 3.4-27, 3.4-34, 3.4-38,
3.6-2, 3.12-4, 3.13-6, 3.16-3, 3.16-5,
3.17-2, 3.17-3, 3.17-5, 3.18-3, 4.1-15,
4.6-3, 4.6-4, 4.6-5, 4.6-7, 4.8-10, 4.11-20,
4.11-31, 4.11-33, 4.11-51, 4.12-1, 4.12-2,
4.14-6, 4.14-7, 4.15-2, 4.15-3, 4.16-2,
4.16-5, 4.16-8, 4.21-29, 5-9, 5-14, 5-21,
5-95
- Safe Drinking Water and Toxic Enforcement
Act, 4.11-5
- Scale, ES-2, ES-13, 1-3, 1-4, 1-8, 1-12,
1-15, 2-31, 2-32, 2-33, 2-36, 2-37, 3.3-1,
3.4-4, 3.4-16, 3.4-24, 3.4-31, 3.4-32,
3.4-33, 3.4-35, 3.14-2, 3.15-1, 3.19-1,
3.23-6, 4.2-16, 4.3-1, 4.3-2, 4.4-1, 4.6-6,
4.8-3, 4.8-4, 4.9-3, 4.9-6, 4.11-18,
4.11-25, 4.11-39, 4.11-41, 4.11-46,
4.11-55, 4.12-6, 4.13-19, 4.14-9, 4.15-1,
4.15-4, 4.15-7, 4.15-12, 4.18-2, 4.18-5,
4.18-7, 4.18-9, 4.18-10, 4.18-11, 4.18-14,
4.18-15, 4.18-16, 4.18-20, 4.18-21,
4.18-22, 4.18-24, 4.20-4, 4.21-24, 5-8,
5-11, 5-12, 5-15, 5-16, 5-25, 5-36, 5-41,
5-45, 5-50
- Scenery, 3.19-3, 3.19-5, 4.15-13, 4.18-1,
4.18-10
- Scenic Quality, 3.19-2, 3.19-3, 3.19-5,
4.18-1, 4.18-7, 4.18-10
- Scenic Quality Ratings, 4.18-1
- Scenic Values, 3.16-5, 3.19-1, 3.19-2
- Scoping, ES-5, ES-15, ES-16, 1-5, 1-13,
2-20, 3.3-5, 3.3-6, 3.3-7, 3.8-3, 3.14-1,
5-5, 5-6, 5-13, 5-34, 5-51
- Secretary of the Interior, ES-2, 1-2, 1-9,
2-33, 3.3-3, 3.6-1, 3.8-3, 3.16-1, 5-1
- Security Fencing, 2-5, 2-9, 4.1-21, 4.12-7,
5-33
- Sedimentary Rocks, 3.4-8
- sensitive receptors, 3.12-1
- Sensitive Receptors, 1-14, 2-36, 3.10-1,
3.10-2, 3.12-1, 3.12-2, 4.5-3, 4.9-1, 4.9-3,
4.9-4, 4.9-5, 4.9-6, 4.9-7, 4.11-16,
4.11-21, 4.18-3

- Serrano, 3.4-13, 3.4-15, 3.4-16, 3.4-17, 3.4-18, 3.4-19, 3.4-37
- Social Setting, 4.12-3
- Soils Resources, 2-35, 4.3-10, 4.14-9, 4.14-10, 5-42
- Special Areas, 3.14-13, 3.19-3, 3.19-5
- special designations, 4.1-6
- Special Designations, ES-13, 3.1-1, 3.16-1, 4.12-2, 4.15-1, 4.15-2, 4.15-3, 4.15-12, 4.18-3, 4.18-17, 5-12
- Special Status Species, 1-14, 2-30, 3.14-14, 3.18-4, 4.21-20
- State Historic Preservation Office (SHPO), 5-51
- Steam Turbine Generator (STG), 4.16-4
- Subsurface, 3.4-2, 3.8-2, 3.8-3, 3.11-2, 3.12-15, 3.20-4, 3.20-5, 3.20-7, 3.20-10, 4.1-4, 4.11-20, 4.17-4, 4.19-2, 4.19-6
- Sulfur Dioxide (SO₂), 3.2-1, 3.2-2, 3.2-3, 3.2-4, 3.2-6, 3.2-7, 4.2-1, 4.2-3, 4.2-4, 4.2-7, 4.8-7
- Tertiary, 3.8-3
- Texture, 3.15-2, 3.19-4, 4.14-1, 4.15-4, 4.15-5, 4.18-2, 4.18-11, 4.18-13, 4.18-14, 4.18-15, 4.18-16, 4.18-18, 4.18-24
- Threatened or Endangered Species, 1-14, 3.23-6
- Toxic, 2-12, 2-35, 3.20-22, 3.20-23, 4.11-2, 4.11-4, 4.11-5, 4.11-6, 4.11-7, 4.11-8, 4.11-9, 4.11-10, 4.11-11, 4.11-13, 4.21-4, 5-30, 5-54, 5-63, 5-84
- Trail, 3.4-14, 3.4-26, 3.4-27, 3.4-35, 3.4-39, 3.4-40, 3.13-4, 3.13-6, 3.16-5, 4.12-2, 4.21-4
- Transmission, ES-1, ES-2, ES-9, 1-1, 1-2, 1-3, 1-4, 1-8, 1-10, 1-12, 1-13, 2-1, 2-2, 2-3, 2-4, 2-5, 2-13, 2-15, 2-19, 2-20, 2-21, 2-22, 2-26, 2-29, 3.1-1, 3.3-4, 3.3-8, 3.4-1, 3.4-26, 3.4-30, 3.4-31, 3.4-34, 3.4-38, 3.4-39, 3.4-40, 3.6-1, 3.6-2, 3.9-3, 3.12-1, 3.12-4, 3.12-5, 3.12-6, 3.12-7, 3.17-6, 3.18-1, 3.18-3, 3.18-14, 3.18-23, 3.18-27, 3.18-28, 3.19-5, 3.19-6, 3.23-1, 3.23-15, 3.23-16, 4.1-4, 4.1-15, 4.1-16, 4.1-17, 4.1-18, 4.1-19, 4.1-21, 4.2-2, 4.2-3, 4.2-16, 4.2-17, 4.4-2, 4.4-4, 4.4-5, 4.4-9, 4.6-1, 4.6-2, 4.6-3, 4.6-4, 4.6-5, 4.6-6, 4.6-7, 4.6-8, 4.8-1, 4.8-8, 4.9-2, 4.9-4, 4.9-6, 4.10-3, 4.11-1, 4.11-17, 4.11-31, 4.11-32, 4.11-33, 4.11-34, 4.11-35, 4.11-38, 4.11-45, 4.11-51, 4.11-54, 4.12-6, 4.13-13, 4.14-2, 4.14-3, 4.15-4, 4.15-8, 4.16-3, 4.16-5, 4.17-10, 4.17-11, 4.17-13, 4.17-14, 4.17-15, 4.18-3, 4.18-5, 4.18-10, 4.18-12, 4.18-13, 4.18-14, 4.18-15, 4.18-16, 4.18-17, 4.18-20, 4.18-21, 4.19-9, 4.19-12, 4.20-1, 4.20-3, 4.21-1, 4.21-3, 4.21-4, 4.21-5, 4.21-10, 4.21-16, 4.21-17, 4.21-23, 4.21-28, 5-10, 5-17, 5-39, 5-49, 5-52, 5-61, 5-74, 5-75, 5-76, 5-78, 5-82, 5-92, 5-95
- United States Army Corp of Engineers (USACE), 1-6, 1-7, 1-13, 3.18-22, 3.18-28, 5-1
- United States Fish and Wildlife Service (USFWS), ES-15, 1-5, 1-9, 1-13, 2-18, 3.18-24, 3.23-2, 3.23-5, 3.23-6, 3.23-11, 3.23-12, 4.1-7, 4.1-14, 4.8-11, 4.17-1, 4.17-5, 4.21-1, 4.21-2, 4.21-3, 4.21-4, 4.21-6, 4.21-10, 4.21-17, 4.21-23, 4.21-25, 4.21-27, 5-1, 5-4, 5-20, 5-30, 5-34, 5-35, 5-36, 5-81
- Utility Corridor, 1-11, 2-19, 3.6-1, 3.6-2, 3.19-4, 4.1-4, 4.6-7, 4.6-8, 4.15-4, 4.21-27
- Vandalism, ES-12, 3.23-5, 4.11-53, 4.16-2, 4.21-2
- Variables, 3.12-14, 3.22-1, 4.11-19, 4.19-7, 4.22-1
- Variety, 1-10, 2-12, 2-32, 2-38, 3.2-6, 3.4-7, 3.4-8, 3.4-10, 3.4-16, 3.4-18, 3.4-20,

- 3.4-23, 3.9-2, 3.16-2, 3.16-6, 3.17-1,
3.18-1, 3.18-6, 3.18-10, 3.18-16, 3.18-22,
3.18-29, 3.19-5, 3.19-6, 3.23-2, 3.23-5,
3.23-9, 3.23-20, 3.23-21, 3.23-23, 4.1-14,
4.8-1, 4.8-7, 4.8-9, 4.8-11, 4.11-45,
4.13-18, 4.17-6, 4.17-8, 4.18-10, 4.21-6,
4.21-29, 5-13, 5-23, 5-26, 5-44
- Vegetation Resources, 4.1-6, 4.3-9, 4.17-1,
4.17-5, 4.17-8, 4.17-14, 4.17-15, 4.17-19,
4.17-21, 4.17-22, 4.17-23, 4.17-28,
4.17-29, 4.17-34, 4.21-4, 4.21-26, 5-37,
5-66
- Vehicle Miles Traveled (VMT), 4.2-9
- Viewshed, 3.16-1, 3.19-1, 4.15-3, 4.15-4,
4.15-5, 4.15-9, 4.16-2, 4.18-1, 4.18-17,
4.18-20, 4.18-21, 4.18-22, 5-56, 5-58
- Visual Contrast, 4.15-4, 4.15-5, 4.18-1,
4.18-2, 4.18-3, 4.18-5, 4.18-7, 4.18-9,
4.18-10, 4.18-11, 4.18-12, 4.18-13,
4.18-14, 4.18-15, 4.18-16, 4.18-18,
4.18-21, 4.18-24, 5-59
- Visual Quality, 4.12-1, 4.18-1
- Visual Resource Management (VRM),
3.19-1, 3.19-2, 3.19-4, 3.19-5, 3.19-6,
4.18-1, 4.18-2, 4.18-9, 4.18-11, 4.18-12,
4.18-13, 4.18-14, 4.18-15, 4.18-16,
4.18-17, 4.18-24, 5-59
- Visual Resources, 1-15, 2-22, 2-23, 2-24,
2-30, 3.1-1, 3.19-1, 4.1-6, 4.18-1, 4.18-3,
4.18-13, 4.18-14, 4.18-15, 4.18-16,
4.18-18, 4.18-19, 4.18-20, 4.18-23, 5-56,
5-58, 5-59
- Visual Values, 3.19-3, 3.19-4, 3.19-5,
4.18-1, 4.18-10
- Wastewater, 1-15, 2-10, 2-11, 2-15, 3.20-4,
3.20-5, 3.20-7, 3.20-8, 3.20-22, 4.1-21,
4.3-7, 4.5-2, 4.11-24, 4.19-7, 4.19-8
- Water Resources, 3.3-7, 3.8-3, 3.9-3, 4.1-4,
4.1-6, 4.3-6, 4.3-7, 4.3-8, 4.3-10, 4.3-12,
4.3-15, 4.8-7, 4.11-22, 4.11-51, 4.19-1,
4.19-16, 4.19-21, 4.19-27, 4.19-28,
4.21-12, 5-27, 5-42, 5-45, 5-56, 5-74,
5-77, 5-92, 5-93
- Water Supply, 1-15, 2-4, 2-8, 2-10, 3.3-4,
3.3-7, 3.18-4, 3.20-7, 3.20-15, 3.20-21,
4.1-20, 4.3-1, 4.3-6, 4.3-7, 4.3-8, 4.3-9,
4.17-4, 4.17-5, 4.19-1, 4.19-9, 4.19-16,
4.19-18, 4.19-19, 4.19-23, 4.19-25,
4.20-4, 5-28, 5-38, 5-42
- Western Burrowing Owl, 3.18-5, 3.18-6,
3.23-10, 3.23-11, 4.1-7, 4.8-11, 4.21-20,
4.21-21, 5-31, 5-32
- Wetlands, 1-6, 1-15, 3.4-10, 3.18-9, 3.18-22,
3.20-10, 3.20-11, 3.20-19, 3.23-19, 4.1-3,
4.8-11, 4.17-7, 5-2
- Wilderness Act, 3.13-4, 3.16-1
- Wilderness Area, 2-3, 2-27, 2-36, 3.1-1,
3.13-2, 3.13-4, 3.13-6, 3.16-1, 3.16-2,
3.16-3, 3.16-6, 3.18-2, 3.19-1, 3.19-2,
3.23-1, 4.1-6, 4.12-1, 4.12-2, 4.12-5,
4.15-1, 4.15-2, 4.15-8, 4.15-12, 4.15-13,
4.18-2, 4.18-17, 4.18-21, 4.18-22, 5-12,
5-67
- Wilderness Area (WA), 3.16-6, 4.15-12,
4.15-13, 4.18-17
- Wilderness Study Area, 2-27, 3.16-1,
3.16-3, 5-12, 5-83
- Wildlife Resources, 3.16-5, 4.1-7, 4.3-9,
4.21-1, 4.21-20, 4.21-21, 4.21-22,
4.21-23, 4.21-25, 4.21-27, 4.21-28,
4.21-29, 4.21-30, 5-32, 5-33, 5-37, 5-65,
5-66, 5-68, 5-70, 5-74, 5-81, 5-94, 5-99
- Wind Energy, 2-33, 2-34, 4.1-8, 4.1-12,
4.1-13, 4.6-5, 4.6-6, 4.11-27, 5-10