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STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of: Application for Certification for the PALEN SOLAR ELECTRIC GENERATING SYSTEM	Docket No. 09-AFC-07C

ENERGY COMMISSION STAFF'S REBUTTAL TESTIMONY

ALTERNATIVES

Testimony of Jeanine Hinde

The purpose of staff's testimony is to address the project owner's testimony of October 9, 2013.

Applicant: Palen Solar Holdings (PSH) believes that staff has not appropriately analyzed the importance of the PSEGS project having an executed Large Generator Interconnection Agreement (LGIA) and Power Purchase Agreements (PPAs) for the electrical output of the proposed PSEGS.

Staff's Response: In the final staff assessment (FSA), staff acknowledges that a change in renewable solar technology or reduction in project size could require approval of amendments to the PPAs and/or the LGIA and that those approvals, if they were required, could affect project viability. These issues are appropriately discussed in staff's alternatives analysis under the subsections, "Potential Feasibility Issues," for each project alternative. (Please see pages 6.1-28 to 29, 6.1-56 to 57, and 6.1-76 to 77 of the FSA.)

Staff's analysis on page 6.1-16 of the final staff assessment (FSA) describes the location of the PSEGS site in an area designated as "developable" in the Riverside East Solar Energy Zone (SEZ), which is shown in the *Final Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States* (U.S.

Bureau of Land Management and U.S. Department of Energy 2012 [complete reference provided in the FSA]). Alternatives Figure 6 shows the relationship between the proposed PSEGS and the Riverside East SEZ. (**See Alternatives – Figure 6 attached hereto.)**

In response to the Center for Biological Diversity's (CBD's) proposed impact minimization alternative (CBD Exhibit 3036), staff submits a figure showing the location of several hundred acres of privately-owned land at the proposed alternative site. The project owner does not have access to the private lands at CBD's proposed impact minimization site. (**See Alternatives - CBD's Proposed Alternative Adding Private Lands attached hereto.**)

BIOLOGICAL RESOURCES

Testimony of Ann Crisp, Carol Watson, And Chris Huntley

CONDITIONS OF CERTIFICATION

Staff accepts the project owner's proposed changes to Condition of Certification **BIO-14** described in their Opening Testimony because the suggested revisions reflect the currently proposed eradication and control measures in the Draft Weed Management Plan. However, the Draft Weed Management Plan is not yet approved and herbicides may be necessary to control weeds on the PSEGS site so a Pesticide Use Permit may still be required.

Staff also accepts the project owner's proposed change to Condition of Certification **BIO-17** described in their Opening Testimony because the suggested revisions reflect the proposed agreements achieved at staff workshops held in April, May, and July of 2013. As discussed in previous workshops, **BIO-17** was modified based on measures developed for the Genesis Solar Energy Project (GSEP). In addition, California Department of Fish and Wildlife (CDFW) and Bureau of Land Management (BLM) coordinated with staff to develop a CDFW-led Proposed Desert Kit Fox Health Monitoring and Mitigation Program. The CDFW-led Proposed Desert Kit Fox Health Monitoring and Mitigation Program would be initiated by CDFW potentially by the end of 2013 and project owners could opt to pay a fee to participate in the program. In addition, staff has made a correction to **BIO-17** to reflect the new terms and definitions for the proposed revised General Condition language.

Staff does not agree with the project owner's proposed changes to Condition of Certification **BIO-16b** to clarify the membership and roles of the Technical Advisory Committee (TAC). The TAC would meet and review the results of onsite project monitoring, evaluate and propose adaptive management modifications at the project site, and evaluate and recommend any appropriate mitigation measures to the Compliance Project Manager (CPM) that would be implemented to reduce the risk or

provide additional mitigation for avian species. As the land manager, the BLM will also need the requirement of the TAC for its own purposes. Therefore, the exact composition of the TAC, as well as the role of each member, is currently being developed for the Ivanpah Solar Electric Generating System. Therefore, Energy Commission staff does not recommend acceptance of the project owner's proposed language, as it may improperly constrain the development and/or function of the group.

In addition to the changes proposed by the project owner, staff is proposing minor changes to the language in Conditions of Certification **BIO-8, BIO-9, BIO-12, BIO-17,** and **BIO-21**. New text introduced by staff is shown below in bold, blue and underline. Edits to text by the staff is shown in bold, blue and strikethrough. The project owner's edits are shown in dark red and underline. The original text of the condition is shown in black. Changes to the conditions proposed in the FSA are shown in bold, underline, or strikethrough.

Condition of Certification BIO-8 (Impact Avoidance and Minimization Measures)

In order to reduce mortality risk to Mojave fringe toed lizard (MFTL) and other species due to project vehicles, staff proposed a 10 mph speed limit on unstabilized, unpaved areas of the project site as was also required in Air Quality Condition of Certification **AQ-SC3(c)**. Staff has since determined that BLM requires all dirt roads to be stabilized. Based on lessons learned during construction of the Colorado River Substation, a sub-station constructed by Southern California Edison, speed limits in areas where MFTL are known to occur or have high potential to occur should be 15 mph or less. The species is extremely difficult to see on roads when vehicle speeds exceed 15 mph. Staff proposes the following changes to **BIO-8** to reduce the risk of road mortality on Mojave fringe toed lizard and other species.

3. Minimize Traffic Impacts. Vehicular traffic during Project **site mobilization,** construction and operation shall be confined to existing routes of travel to and from the Project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. **The speed limit shall not exceed 25 miles per hour on paved or stabilized roads within the Project site, on access roads for linear facilities, or on other roads used by project vehicles. ~~The speed limit shall not exceed 25 miles per hour~~ on paved or stabilized unpaved roads within the Project area, on maintenance roads for linear facilities, or ~~on access roads to the Project site~~. ~~No vehicle shall exceed 10 miles per hour on unpaved areas within the project site, except on stabilized unpaved roads.~~ However, this restriction is superseded by speed limits posted by county or state roadway agencies. In these cases, project vehicles shall abide by posted speed limits. No vehicle speed shall exceed 15 miles per hour on roads within areas where Mojave fringe toed lizard are known to occur or have the potential to occur on site. If the CPM determines that excessive road mortality is**

occurring, then additional measures may be implemented by the project owner in coordination with the Designated Biologist to reduce mortality which may include: installation of speed bumps in areas of high mortality, reduced speed limits in problematic areas, greater biological monitor presence, and enforcement actions against drivers who violate speed limits. Additional speed limit signs shall be posted within areas where Mojave fringe toed lizard are known to occur or have the potential to occur on site.

Condition of Certification BIO-9 (Desert Tortoise Clearance Surveys and Fencing)

Staff has deleted some language in Condition of Certification **BIO-9** to be consistent with deletions provided in the project owner's Final Comments on the Preliminary Staff Assessment and discussions at workshops. In Item 2, line 24 the following deletion is proposed.

BIO-9. Desert tortoise located within the utility ROW alignments shall be moved out of harm's way in accordance with the **most recent** USFWS Desert Tortoise Field Manual (USFWS 2009a), ~~or more recent guidance approved by the CPM~~.

Condition of Certification BIO-12 (Desert Tortoise Compensatory Mitigation)

Staff has added the following language to clarify the timing of the verification based on the proposed revised General Conditions.

BIO-12 Verification: If the mitigation actions required under this condition are not completed prior to the start of ground-disturbing activities **including site mobilization and construction**, the Project owner shall provide the CPM and CDF~~G~~**W** with an approved form of Security in accordance with this condition of certification no later than 30 days prior to beginning Project ground-disturbing activities**, including site mobilization and construction**. Actual Security shall be provided no later than 7 days prior to the beginning of Project ground-disturbing activities. If Security is provided, the Project owner, or an approved third party, shall complete and provide written verification to the CPM, CDF~~G~~**W**, BLM and USFWS of the compensation lands acquisition and transfer within 18 months of the start of Project ground-disturbing activities**, including site mobilization and construction**.

Condition of Certification BIO-17 (American Badger and Desert Kit Fox Impact Avoidance and Minimization Measures)

Staff has made a correction to **BIO-17** to reflect the new terms and definitions for the proposed revised General Condition language. In Item 1, line 6 the following deletion and addition is proposed.

BIO-17. A qualified biologist with demonstrated mammal experience shall complete a baseline pre-construction survey of desert kit fox and American badger populations on

the project site and the anticipated dispersal areas for passive relocation between 30 and 60 days prior to initiation of any ground disturbing activities, including site ~~assessment~~ **mobilization** and construction activities that include installation of desert tortoise fencing. The anticipated dispersal areas shall be defined as all suitable desert kit fox habitat within 500 meters of the project boundaries where desert kit fox would likely be displaced. The survey shall identify and record the locations of all potential dens throughout the project site (or phase) and shall characterize the approximate number and distribution of the badger and kit foxes on the site and anticipated dispersal areas. Depending on the season of the surveys (i.e. breeding or non-breeding) other demographic data will be collected if possible to determine. The baseline pre-construction survey shall include the following components:

In PSH's Opening Testimony, the project owner requests the deletion of the word "census" in the first sentence of the second paragraph. Staff agrees with this deletion, as follows:

BIO-17 The project owner shall conduct a baseline kit fox ~~census~~ survey and submit a summary report that includes the following procedures:

Condition of Certification BIO-21 (Acquire Off-Site State Waters)
The project owner did not have comments on Condition of Certification **BIO-21.** However, staff added language that clarifies the mitigation ratios for unvegetated ephemeral wash. Staff and the project owner are in agreement on the proposed ratios of 3:1 for Dry Wash Woodland and 1:1 for unvegetated ephemeral wash. In Item 1, line 9 the following addition is proposed.

BIO-21
1. Acquire Off-Site State Waters: The Project owner shall acquire, in fee or in easement, a parcel or parcels of land that includes state jurisdictional waters per **BIO-29 – Table 2**, or the area of state waters directly or indirectly impacted by the final Project footprint. The Project footprint means all lands disturbed by construction and operation of the Palen Project, including all linears. The parcel or parcels comprising the ephemeral washes shall include desert dry wash woodland per **BIO-29 – Table 2**, or the acreage of desert dry was woodland impacted by the final Project footprint at a 3:1 ratio **and un-vegetated ephemeral wash at a 1:1 ratio**. The terms and conditions of this acquisition or easement shall be as described in Condition of Certification **BIO 12**, and the timing associated with **BIO-29** (phasing). The current estimated costs are included in **BIO-29 – Table 3** located at the beginning of the Conditions of Certification subsection. Mitigation for impacts to state waters shall occur within the Chuckwalla, East Salton Sea, Hayfield, Rice, or portion of Whitewater within the NECO, Hydrologic Units (HUs) or the Palo Verde Watershed and be prioritized within the Chuckwalla HU in the Palen or adjacent watersheds.

Staff has proposed revisions to the following conditions of certification based on lessons learned during construction and operation of renewable energy projects. Because many of these projects are still under construction, or just beginning to come on line, new data is gathered and experience with implementing conditions improves.

DESIGNATED BIOLOGIST DUTIES

BIO-2 The Project owner shall ensure that the Designated Biologist performs the activities described below during any site mobilization **and construction** ~~activities, construction-related ground disturbance, grading, boring, or trenching activities,~~ **commissioning, operation, non-operation or closure, or other activities that may impact biological resources**. The Designated Biologist may be assisted by the approved Biological Monitor(s) but remains the contact for the Project owner and the CPM. The Designated Biologist Duties shall include the following:

1. Advise the Project owner's Construction and Operation Managers **and the CPM** on the implementation of the biological resources conditions of certification;

2. Consult on the preparation of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) to be submitted by the Project owner;

3. Be available to supervise, conduct and coordinate mitigation, monitoring, and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as special-status species or their habitat;

4. Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions;

5. Inspect active construction areas where animals may have become trapped prior to construction commencing each day. At the end of the day, inspect for the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity (e.g., parking lots) for animals in harm's way;

6. Notify the Project owner and the CPM **within one working day of discovery** of any non-compliance with any biological resources condition of certification, **injury or mortality of a special status species, or if more than six injured or dead birds or bats are located onsite at one time;**

7. **Collect all data necessary to document the events set forth in paragraph 6 above, including GPS location, photographs, and**

observations necessary to develop a comprehensive report, in accordance with USFWS and CDFW permits or directions with respect to handling, transport, or storage of avian or bat species;

8. Respond directly to inquiries of the CPM **or Energy Commission biological resources staff** regarding biological resource issues, **and provide the data described in paragraph 7 above to the CPM upon request**;

9. **Determine and oversee implementation of remedial actions any time water has been observed standing onsite in accordance with Condition of Certification BIO-8. The project owner shall initiate remedial methods in consultation with the Designated Biologist in accordance with Condition of Certification BIO-8 after standing water has been observed on the project site. Remedial methods may include grading, pumping spraying, tilling, or any other means to disperse or ensure evaporation and/or absorption of standing water. Other remedial efforts may be determined in conjunction with CPM review and approval. Descriptions of remedial efforts, including photo documentation, and discussion of results of remedial efforts must be included in the Monthly Compliance Report;**

10. **Respond to reports of onsite kit fox mortality or injury, and to the extent possible, reports of dead or injured kit fox offsite and immediately adjacent the project boundaries or on access roads in accordance with Condition of Certification BIO-17, and undertake restorative and/or disease prevention actions as specified within the American Badger and Kit Fox Management Plan prepared in accordance with Condition of Certification BIO-17;**

11. Maintain written records of the tasks specified above and those included in the BRMIMP. Summaries of these records shall be submitted in the Monthly Compliance Report and the Annual Compliance Report;

12. Train the Biological Monitors as appropriate, and ensure their familiarity with the BRMIMP, Worker Environmental Awareness Program (WEAP) training, and USFWS guidelines on desert tortoise surveys and handling procedures <www.fws.gov/ventura/speciesinfo/protocols_guidelines>, **as well as all terms and conditions of the Biological Opinion**; and

13. Maintain the ability to be in regular, direct communication with representatives of CDF~~G~~**W**, USFWS, and the CPM, including notifying these agencies of dead or injured listed species and reporting special-status species observations to the California Natural Diversity Database (CNDDB).

Verification: The Designated Biologist shall provide copies of all written reports and summaries that document biological resources compliance activities in the Monthly Compliance Reports submitted to the CPM. If actions may affect biological resources during operation a Designated Biologist shall be available for monitoring and reporting. During Project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report unless his or her duties cease, as approved by the CPM.

BIOLOGICAL MONITOR DUTIES

BIO-4 The Biological Monitors shall assist the Designated Biologist in conducting surveys and in monitoring of site mobilization ~~activities,~~ **and** construction i**ncluding**~~-related~~ ground disturbance**, site preparation, or permanent installation activities, including installation of desert tortoise exclusion fencing**~~, grading, boring, trenching,~~ or reporting. The Designated Biologist shall remain the contact for the Project owner and the CPM, **however, biological monitors will also respond directly to inquiries of the CPM or Energy Commission biological resources staff, and collect and provide reasonably available information to the CPM when requested. Neither the Designated Biologist nor the Biological Monitors shall be prohibited from contact with the CPM or Energy Commission biological resources staff, and the Designated Biologist and the Biological Monitors shall not be precluded from sharing their full and complete knowledge of project-related biological information with the CPM or Energy Commission biological resources staff.**

Verification: The Designated Biologist shall submit in the Monthly Compliance Report to the CPM copies of all written reports and summaries that document biological resources compliance activities, including those conducted by Biological Monitors. If actions may affect biological resources during operation a Biological Monitor, under the supervision of the Designated Biologist, shall be available for monitoring and reporting.

DESIGNATED BIOLOGIST AND BIOLOGICAL MONITOR AUTHORITY

BIO-5 The Project owner's construction/operation manager shall act on the advice of the Designated Biologist and Biological Monitor(s) to ensure conformance with the biological resources conditions of certification. The Project owner shall provide Energy Commission staff with reasonable access to the Project site under the control of the Project owner and shall otherwise fully cooperate with the Energy Commission's efforts to verify the Project owner's compliance with, or the effectiveness of, mitigation measures set forth in the conditions of certification. The Designated Biologist shall have the authority to immediately stop any activity that is not in compliance with these conditions and/or order any reasonable measure to avoid take of an individual of a listed species. If required by the Designated Biologist and Biological Monitor(s) the Project owner's construction/operation manager shall halt all site mobilization **and construction**, **including** ground disturbance, **site preparation, or**

permanent installation activities, including installation of desert tortoise exclusion fencing~~, grading, boring, trenching~~, and operation activities in areas specified by the Designated Biologist. The Designated Biologist shall:

1. Require a halt to all activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued;

2. Inform the Project owner and the construction/operation manager when to resume activities; and

3. Notify the CPM if there is a halt of any activities and advise them of any corrective actions that have been taken or would be instituted as a result of the work stoppage. If the work stoppage relates to desert tortoise or any other federal- or state-listed species, the ~~Carlsbad~~ **Palm Springs** Office of the USFWS and the Ontario Office of the CDF~~G~~**W** shall also be notified.

If the Designated Biologist is unavailable for direct consultation, the Biological Monitor shall act on behalf of the Designated Biologist. **It is expected the Designated Biologist will be onsite** ~~**during construction or otherwise available by phone**~~ **as per BIO-2, or as otherwise directed by the CPM.**

Verification: The Project owner shall ensure that the Designated Biologist or Biological Monitor notifies the CPM and BLM immediately (and no later than the morning following the incident, or Monday morning in the case of a weekend) of any non-compliance or a halt of any site mobilization, ground disturbance, grading, construction, or operation activities. If the non-compliance or halt to construction or operation relates to desert tortoise or any other federal- or state-listed species, the Project owner shall also notify ~~Carlsbad~~ **Palm Springs** Office of the USFWS and the Ontario Office of the CDF~~G~~**W** at the same time. The Project owner shall notify the CPM of the circumstances and actions being taken to resolve the problem.

Whenever corrective action is taken by the Project owner, a determination of success or failure will be made by the CPM in consultation with BLM, USFWS and CDF~~G~~**W** within 5 working days after receipt of notice that corrective action is completed, or the Project owner would be notified by the CPM that coordination with other agencies would require additional time before a determination can be made.

WORKER ENVIRONMENTAL AWARENESS PROGRAM (WEAP)

BIO-6 The Project owner shall develop and implement a Project-specific Worker Environmental Awareness Program (WEAP) and shall secure approval for the WEAP from the CPM. The Project owner shall also provide the USFWS and CDF~~G~~**W** a copy of all portions of the WEAP relating to desert tortoise and any other federal or state-listed species for review and comment. The WEAP shall be administered to all onsite personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors,

inspectors, subcontractors, and delivery personnel. The WEAP shall be implemented during site **mobilization and** ~~preconstruction,~~ construction, **commissioning,** operation, **non-operation,** and closure. The WEAP shall:

1. Be developed by or in consultation with the Designated Biologist and consist of an on-site or training center presentation in which supporting written material and electronic media, including photographs of protected species **and their habitat**, is made available to all participants;

2. Discuss the locations and types of sensitive biological resources on the Project site and adjacent areas, and explain the reasons for protecting these resources; provide information to participants that no snakes or other wildlife shall be **intentionally** harmed **(unless posing a reasonable and immediate threat to humans)**;

3. Place special emphasis on desert tortoise, including **pictures and** information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures;

4. **Provide pictures of golden eagles, American badger, desert kit fox, Mojave fringe-toed lizard, and burrowing owl, provide information on sensitivity to human activities, legal protection, reporting requirements, and how to identify construction avoidance zones for these species as marked by flagging, staking, or other means, also describe the protections for bird nests and provide information as described above;**

5. **Provide overview for staff of potential impacts to reptiles and amphibians from vehicle strikes on all project roads (paved and unpaved) during construction, operations, closure phases, reporting requirements, and protection measures;**

6. **Provide overview of potential impacts to avian species from concentrated solar flux created during start up and operations phase, reporting requirements, and protection measures as required by the USFWS, CDFW, or CPM;**

7. Include a discussion of fire prevention measures to be implemented by workers during Project activities and request workers to: a) dispose of cigarettes and cigars appropriately and not leave them on the ground or buried, b) keep vehicles on graveled or well-maintained roads at all times to prevent vehicle exhaust systems from coming in contact with roadside weeds, c) use and maintain approved spark arresters on all power equipment, and d) keep a fire extinguisher on hand at all times

8. Describe the temporary and permanent habitat protection measures to be implemented at the Project site;

9. **All onsite workers will be informed of the requirement to contact the Designated Biologist or Biological Monitors to report the location of any injured or dead birds or bats. The Designated Biologist or Biological Monitors shall identify and photograph the injured or dead birds or bats in-situ, as well as a full-frame dorsal, ventral and head view using a 12 megapixel camera with an automatic GPS and time/date stamp. The record(s) will be provided to the CPM in the monthly compliance report during construction and operation**

10. Identify whom to contact if there are further comments and questions about the material discussed in the program; and

11. Include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines.

The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist, **and documented within the Monthly Compliance Report.**

Verification: At least ~~30~~ **45** days prior to start of **site mobilization and** construction~~-related ground disturbance~~, the Project owner shall provide to the CPM for review and approval and to BLM, USFWS and **CDFW**~~G~~ a copy of the final WEAP and all supporting written materials and electronic media prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program.

The project owner shall provide in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. At least 10 days prior to **site mobilization and** construction~~-related ground disturbance activities~~ the project owner shall submit two copies of the approved final WEAP **and implement the training for all workers**.

Training acknowledgement forms signed during construction shall be kept on file by the project owner for at least 6 months after the start of commercial operation.

Throughout the life of the project, the WEAP shall be repeated annually for permanent employees, and shall be routinely administered within 1 week of arrival to any new construction personnel, foremen, contractors, subcontractors, and other personnel potentially working within the project area. Upon completion of the orientation, employees shall sign a form stating that they attended the program and understand all protection measures. These forms shall be maintained by the project owner and shall be made available to the CPM, BLM, USFWS and ~~CDFG~~ **CDFW** and upon request.

Workers shall receive and be required to visibly display a hardhat sticker or certificate that they have completed the training.

During Project operation, signed statements for operational personnel shall be kept on file for 6 months following the termination of an individual's employment.

BIOLOGICAL RESOURCES MITIGATION IMPLEMENTATION AND MONITORING PLAN

BIO-7 The Project owner shall develop a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), and shall submit two copies of the proposed BRMIMP to the CPM and BLM for review and approval and USFWS and CDF~~G~~**W** for review. The Project owner shall implement the measures identified in the approved BRMIMP. The BRMIMP shall incorporate avoidance and minimization measures described in final versions of the Desert Tortoise Translocation Plan~~, the Biological Opinion,~~ the Raven Management Plan, the Closure, Conceptual Restoration Plan, **the American Badger and Kit Fox Management Plan, the Bird and Bat Conservation Strategy, the Eagle Protection Plan,** the Burrowing Owl Mitigation and Monitoring Plan, the Weed Management Plan, and all other individual biological mitigation and/or monitoring plans associated with the Project, **or issued by the CDFW, BLM, and USFWS**. The Project owner shall provide to CDF~~G~~**W** and USFWS a copy of all portions of the BRMIMP relating to desert tortoise and any other federal or state-listed species for review and comment.

The BRMIMP shall be prepared in consultation with the Designated Biologist and shall include accurate and up-to-date maps depicting the location of sensitive biological resources that require temporary or permanent protection during construction and operation. The BRMIMP shall include complete and detailed descriptions of the following:

1. All biological resources mitigation, monitoring, and compliance measures proposed and agreed to by the Project owner;

2. All biological resources conditions of certification identified as necessary to avoid or mitigate impacts;

3. All biological resource mitigation, monitoring, and compliance measures required in federal agency terms and conditions, such as those provided in the USFWS Biological Opinion;

4. All sensitive biological resources to be impacted, avoided, or mitigated by Project construction, operation, and closure;

5. All required mitigation measures for each sensitive biological resource, **including remedial actions for standing water onsite in accordance with Condition of Certification BIO-8 and known or suspected**

disease outbreaks on the project site in accordance with Condition of Certification BIO-17;

6. **Aerial photographs, at an approved scale, of all areas to be disturbed during project construction activities; include one set prior to any site or related facilities mobilization disturbance and one set subsequent to completion of project construction. Provide planned timing of aerial photography and a description of why times were chosen. Provide a final accounting of the before/after whole acreages and a determination of whether more or less habitat compensation is necessary in the Construction Termination Report prepared in accordance with BIO-29**

7. All measures that shall be taken to avoid or mitigate temporary disturbances from construction activities;

8. Duration for each type of monitoring and a description of monitoring methodologies and frequency;

9. Performance standards to be used to help decide if/when proposed mitigation is or is not successful;

10. All performance standards and remedial measures to be implemented if performance standards are not met;

11. Biological resources-related facility closure measures including a description of funding mechanism(s);

12. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval; and

13. A requirement to submit any sightings of any special-status species that are observed on or in proximity to the Project site, or during Project surveys, to the CNDDB per CDF~~G~~**W** and BLM requirements.

Verification: The Project owner shall submit the draft BRMIMP to the CPM and BLM at least ~~30~~ **45** days prior to start of any **site mobilization and construction** ~~preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching~~. At the same time the Project owner shall provide to CDF~~G~~**W** and USFWS a copy of all portions of the draft BRMIMP relating to desert tortoise and any other federal or state-listed species. The Project owner shall provide final BRMIMP to the CPM, BLM, CDF~~G~~**W** and USFWS at least 7 days prior to start of any ~~**preconstruction**~~ **site mobilization and** construction~~-related ground disturbance, grading, boring, and trenching~~. The BRMIMP shall contain all of the required measures included in all biological conditions of certification. No **site mobilization or**~~-~~construction **activities**~~-related ground disturbance, grading, boring, or trenching~~ may occur prior to approval of the final BRMIMP by the CPM and BLM.

If any permits have not yet been received when the final BRMIMP is submitted, these permits shall be submitted to the CPM within 5 days of their receipt, and the BRMIMP shall be revised or supplemented to reflect the permit condition(s). The Project owner shall submit to the CPM and BLM the revised or supplemented BRMIMP within 10 days following the Project owner's receipt of any additional permits. Under no circumstances shall ground disturbance proceed without implementation of all permit conditions.

To verify that the extent of construction disturbance does not exceed that described in these conditions, the Project owner shall submit aerial photographs, at an approved scale, taken before and after construction to the CPM, BLM, USFWS and CDF~~G~~**W**. The first set of aerial photographs shall reflect site conditions prior to any ~~preconstruction~~ site mobilization and construction **activities**~~-related ground disturbance, grading, boring, and trenching,~~ and shall be submitted prior to initiation of such activities. The second set of aerial photographs shall be taken subsequent to completion of construction, and shall be submitted to the CPM, BLM, USFWS and CDF~~G~~**W** no later than 90 days after completion of construction. The Project owner shall also provide a final accounting in whole acres of vegetation communities/cover types present before and after construction. Construction acreages shall be rounded to the nearest acre.

Any changes to the approved BRMIMP must be approved by the CPM and BLM in consultation with CDF~~G~~**W** and USFWS.

Implementation of BRMIMP measures (for example, construction activities that were monitored, species observed) shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of Project construction, the Project owner shall provide to the CPM, for review and approval, a written construction termination report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the Project's ~~preconstruction~~ site mobilization and construction **activities**~~-related ground disturbance, grading, boring, and trenching~~, and which mitigation and monitoring items are still outstanding. **During operations, ongoing actions and activities within the BRMIMP will be reported in the Annual Compliance Report, or as otherwise directed by the CPM.**

AVIAN ENHANCEMENT AND CONSERVATION PLAN

BIO-16a **The Project owner shall implement the following measure to conserve and enhance avian populations in the vicinity of the project and throughout the region:**

1. **Regional Avian Electrocution Risk and Cable Collision Avoidance Measures. Consistent with the DRECP framework (DRECP 2012), the project owner shall, prior to the commencement of commercial operations at the facility, fund the retrofitting of non-compliant utility poles in the vicinity of the project to APLIC (2006) standards or fund the installation of bird diverters in the vicinity of the Project. A total amount of $300,000 will be provided for these enhancements. The funding shall**

be provided to an independent third party who will perform the actual retrofitting, pursuant to a Retrofit Plan approved by the CPM.

The Retrofit Plan will develop a tiered approach to minimizing electrocution and collision risk, wherein the first funding is applied to retrofit poles in areas where either mortalities are highest or area use is highest. The second tier of retrofitted poles would be areas of lesser importance. If funds remain available after first and second tier poles have been retrofitted, then the CPM may apply the remaining funds to other avian protection objectives outlined by the DRECP, in conjunction with BLM, USFWS, and CDFW. As an alternative to the Retrofitting Plan and the use of a CPM-approved third party, the total funding can be accomplished by making a payment in the amount of $300,000 to the National Fish and Wildlife Foundation's Bald and Golden Eagle Protection Act account.

2. ~~Additional~~ Migratory Bird Conservation: The Project owner shall, prior to the commencement of commercial operation of the facility, provide funds for mitigation as follows:

   ~~a.~~ Pay $1,500,000.00 to fund the activities of a CPM-approved third party that will perform migratory bird conservation measures. Funds would be dispersed only with the release and approval of the CPM. ~~Alternatively, the project owner may prepare a promissory note to deposit said funds at the onset of operations while at the same time providing funding of the initial year of mitigation in the non-refundable amount of $50,000.00 to a project fund as determined by CPM, in conjunction with BLM, CDFW, and USFWS, for the initial year of mitigation in the absence of accrued interest.~~

   ~~b. Alternatively, the project owner may pay $50,000 annually to fund the annual activities of the CPM-approved third party for the life of the project, not to exceed a period of 30 years, commencing at commercial operation. If the project owner elects to make annual payments, the annual payments should be adjusted for cost of living increases using the CPI-U (All Urban Consumers) for the Los Angeles CMSA (includes the counties of Los Angeles, Orange, Riverside, San Bernardino and Ventura) as calculated and published by the California Department of Finance (http://www.dof.ca.gov/html/fs_data/latestecondata/FS_Price.htm). To avoid the adjustment, the project owner may elect to place the amount of $50,000 in an interest bearing account that would allow the cost of living increases to be paid from such account.~~

3. Such measures shall be approved by the CPM and may include, but not be limited to: (i) restoration of degraded habitat with native vegetation; (ii) restoration of agricultural fields to bird habitat; (iii) management of

agricultural fields to enhance bird populations; (iv) invasive plant species and artificial food or water source management; (v) control and cleanup of potential avian hazards, such as lead or microtrash; (vi) retrofitting of buildings to minimize collisions; (vii) retrofitting of conductors and above ground cables to minimize collisions; (viii) animal control programs; (ix) support for avian and bat research and/or management efforts conducted by entities approved by the CPM within the project's mitigation lands or other approved locations; (x) funding efforts to address avian diseases or depredation due to the expansion of predators in response to anthropomorphic subsidies that may adversely affect birds that use the mitigation lands or other approved locations; and (xi) contribute to the Migratory Bird Conservation Fund managed by the Migratory Bird Conservation Commission.

~~a. Neither the principal of the fund nor its earned interest is redeemable by project owner during the life of the project; specifically, the investment instrument will be prepared such that an independent investment firm/management entity manages and distributes monies. When developing the fund instrument, criteria will be established that will trigger the release of the fund residual to the project owner only at the conclusion of the project, or, in the event that an alternative technology is implemented to replace the currently proposed solar energy generating facility.~~

~~b. The investment fund residual will be transferred to the project owner under specified conditions:~~

~~1. At end of the project's life after infrastructure removal has been completed and permit-specified site reclamation criteria have been met;~~

~~2. If the proposed project is converted to an alternative technology that does not impose a similar threat to migratory birds or to bats.~~

Verification: For power line retrofits:

1. At least six months prior to commercial operation, the project owner shall submit the draft Retrofit Plan to the CPM for review and approval and CDFW and USFWS for review and comment. At least 30 days prior to ~~start of any flux generation~~ commercial operation, the project owner shall provide the CPM the final version of the Retrofit Plan. Any modifications to the approved Retrofit Plan must be approved by the CPM in consultation with USFWS, BLM, and CDFW. The project owner shall notify the CPM no less than five working days before implementing any CPM approved modifications to the Retrofit Plan~~; alternately, the project owner may elect to deposit funds into the National Fish and Wildlife Foundation's Bald and Golden Eagle Protection Act account~~.

2. If the project owner elects not to fund a third party to perform retrofits, then no less than 30 days prior to beginning commercial operations, the project owner shall provide written verification to the CPM that security has been established in the National Fish and Wildlife Foundation's Bald and Golden Eagle Protection Act account, in accordance with this condition of certification.

3. The project owner shall provide an annual summary of the actions taken, an accounting of money distributed, and a map of retrofitted power lines as per the Retrofit Plan. If the project owner elects to fund the National Fish and Wildlife Foundation's Bald and Golden Eagle Protection Act account, then the project owner shall~~, within five (5) years of starting commercial operations,~~ provide an annual summary following the commencement of commercial operations, specifying how the National Fish and Wildlife Foundation has or is using the funds.

~~For interest bearing fund:~~ For Migratory Bird Conservation:

1. No later than 30 days prior to commercial operation, the project owner shall provide the CPM written verification of deposit of $1,500,00.00 to the California EnergyCommission.~~of selection of a non-wasting interest-bearing account held by an approved investment entity, in accordance with this condition of certification~~. The account shall be fully funded no later than 7 days prior to commercial operation, and shall be held by the Energy Commission in a special deposit fund that will be earmarked for use only for the purpose of mitigating impacts from this project.

~~2. If the project owner elects to provide a promissory note for $1,500,000.00 the CPM must be provided the note within 30 days of starting operations, and must also fund $50,000 for the first year's benefit, within 7 days of starting operations.~~

~~3. The project owner, or the account's administrator (investment entity) shall submit to the CPM an annual report summarizing the performance of the fund and describing all restoration/enhancement actions taken.~~

AVIAN AND BAT PROTECTION PLAN

BIO-16b The Project owner shall prepare a Bird and Bat Conservation Strategy (BBCS) and submit it to the CPM for review and approval, in conjunction with BLM, CDFW, and USFWS for review and comment, or, if available, shall implement a standard monitoring protocol as developed by the BLM, USFWS, CDFW, and Energy Commission staff. The BBCS, whether developed by the project owner or the regulatory agencies, shall provide for the following:

- Survey and monitor onsite and offsite avian use and behavior to document species composition on and offsite, compare onsite and offsite rates of avian and bat use, document changes in avian and

bat use over time, and evaluate the general behavior of birds in and near the facility.

- Implement an onsite and offsite (if feasible) avian and bat mortality and injury monitoring program to identify the extent of potential avian or bat mortality or injury from collisions with facility structures or from elevated levels of solar flux that may be encountered within the facility airspace, including:
  - assessing levels of collision-related mortality and injury with heliostats, perimeter fences and power tower structures;
  - calculating rates of solar flux-related avian mortality and injury, if any;
  - documenting seasonal, temporal, and weather-related patterns associated with collision- or solar flux-related mortality and injury, if any; and
  - documenting flight spatial patterns that may be associated with collision- or flux-related mortality and injury, if any.
  - documenting spatial patterns that may be associated with avoidance of the facility.

- Identify specific conservation measures and/or programs to minimize impacts and evaluate the effectiveness of those measures.
- Implement an adaptive management and decision-making framework for reviewing, characterizing, and responding to quantitative survey and monitoring results.

BBCS Components

The project owner shall prepare and implement a BBCS adopting all requirements applicable to solar generation in current guidelines recommended by the USFWS (currently 2012 USFWS Land Based Wind Energy Guidelines). The BBCS shall include the following components:

1. Preconstruction Baseline survey results. A description and summary of the baseline survey methods and results.

2. Formation of a technical advisory committee (TAC). The TAC will facilitate concurrent project owner, CPM, and state and federal wildlife agency review of seasonal and annual survey results, the effectiveness of the adaptive management measures implemented by the project owner, modification of the surveys in response to the results, if necessary, and the identification of additional mitigation responses that are commensurate with the extent of impacts that may be identified in the monitoring studies. A meeting schedule for the TAC will be indentified, for regular review of avian and bat injury and mortality monitoring results, and recommend to the CPM for approval any necessary changes to monitoring, adaptive

management, and appropriate dissemination of mitigation funds per BIO-16a #2. The TAC will also assist the CPM in implementing the following provisions #3 - #8, and will have the authority to require independent, third-party monitoring, if determined advisable.

3. Avian and bat use and behavior surveys. Avian and bat site-use behavior surveys shall be conducted during construction and operation. The program will outline survey methodology and field documentation, identification of appropriate onsite and offsite survey locations, control sites, and the seasonal considerations. Prey abundance surveys will also be conducted to identify the locations and changes in the abundance of prey species. Bat acoustic sampling may be implemented depending on results of the baseline study.

4. Golden eagle nest surveys and monitoring. Results of annual pedestrian and/or helicopter surveys of golden eagle nesting sites within a 10-mile radius of the project site, including a summary of available information concerning golden eagle nesting activity in the project vicinity.

5. Avian and bat mortality and injury monitoring: An avian and bat injury and mortality monitoring program shall be implemented during construction and operation of the project. The results of avian monitoring data shall be reported directly to the CPM and the project owner. Monitoring activities will include~~including~~:

   (a) Onsite monitoring that will systematically survey representative locations within the facility, at a level that will produce statistically robust data; account for potential spatial bias and allow for the extrapolation of survey results to unsurveyed areas and the survey interval based on scavenger and searcher efficiency trials and detection rates.

   (b) Offsite monitoring, to the extent that access can be reasonably and feasibly obtained by the project owner, of one or more locations adjacent to the project facilities using the same or comparable methods as implemented for the onsite monitoring to identify which avian species potentially injured by collisions or solar flux within adjacent areas.

   (c) Low-visibility and high-wind weather event monitoring to document potential weather-related collision risks that may be associated with the power towers at the facility, including foggy, highly overcast, or rainy night-time weather typically associated with an advancing frontal system, and high wind events (40 miles per hour winds) are sustained for period of greater than 4 hours.

The monitoring report shall include survey frequency, locations and methods.

(d) **Scavenger and searcher efficiency trials to document the extent to which avian or bat fatalities remain visible over time and can be detected within the project area and to adjust the survey timing and survey results to reflect scavenger and searcher efficiency rates.**

(e) **Statistical methods used to generate facility estimates of potential avian and bat impacts based on the observed number of detections during standardized searches during the monitoring season for which the cause of death can be determined and is determined to be facility-related.**

(f) **Field detection and mortality or injury identification, cause attribution, handling and reporting protocols consistent with applicable legal requirements.**

6. **Survey schedule and period. All surveys and monitoring studies included in the BBCS shall be conducted for at least three years following commercial operation and approval of the BBCS by the CPM. At the end of the three-year period, the Energy Commission, will hold public meetings, and at that time shall determine ~~project owner and the CPM shall meet and confer to determine~~ whether the survey program shall be continued for subsequent periods. The monitoring program may be modified with the approval of the CPM in response to survey results, identified scavenging efficiency rates, or other factors to increase monitoring accuracy and reliability or in accordance with the adaptive management decision-making framework included in the BBCS. The individuals conducting the surveys and monitoring shall be available to the CPM or Energy Commission biological resources staff to answer questions on monitoring status, survey methods or the results of monitoring studies, and shall not be precluded from sharing their full and complete knowledge of the monitoring program, incidental observations, and results with the CPM or Energy Commission biological resources staff.**

7. **Adaptive management. An adaptive management program shall be developed to identify and implement reasonable and feasible measures that would reduce any biologically significant levels of avian or bat mortality or injury attributable to project operations and facilities. Any such impact reduction measures must be commensurate (in terms of factors that include geographic scope, costs, and scale of effort) to the level of avian or bat mortality or**

injury that is specifically and clearly attributable to the project facilities. The adaptive management program shall include the following elements:

(a) Reasonable measures for characterizing the extent and significance of detected mortality and injuries clearly attributable to the project, and ensuring adequate funding for wildlife rehabilitation facilities approved by the CPM, in conjunction with the USFWS and CDFW.

(b) Measures that the project owner will implement to adaptively respond to detected mortality and injuries attributable to the project, including passive avian diverter installations along the perimeter or at other locations within the project to avoid site use, the use of sound, light or other means to discourage site use consistent with applicable legal requirements, onsite prey or habitat control measures consistent with applicable legal requirements, and additional perch and nest proofing of project facilities.

8. Eagle Protection Plan (EPP): The project owner shall prepare and implement an Eagle Protection Plan adopting all requirements applicable to solar generation as outlined in guidelines recommended by the USFWS (currently 2012 USFWS Land Based Wind Energy Guidelines2011b). The EPP may be prepared as a stand-alone document or included as a chapter within the BBCS. The EPP shall describe all available baseline data on golden eagle occurrence, seasonality, activity, and behavior throughout the project area and vicinity. The EPP shall outline a study protocol consistent with Item 5 above to include annual pedestrian and/or helicopter surveys of golden eagle breeding sites within a 10 mile radius of the project site, to be reviewed and approved by the CPM, in consultation with the USFWS, BLM, and CDFW.

The EPP shall describe all proposed measures to prevent death and injury of eagles from (1) collisions with facility features including the heliostats, power towers, and gen-tie line towers or transmission lines, (2) electrocutions on transmission lines or other project components, and (3) concentrated solar flux created over the solar field. The EPP shall describe efforts taken pursuant to BIO-16a.

The EPP shall also include any feasible adaptive modifications to heliostat positioning during operation (including day time and night time) in order to minimize collisions and/or risk of exposure to concentrated solar flux. Any such adaptive minimization measures must be commensurate (in terms of factors that include geographic scope, costs, and scale of effort) to the level of avian or bat risk that is

specifically and clearly attributable to the project facilities. The EPP shall provide a reporting schedule for all monitoring or other activities related to bird or bat conservation or protection during project construction or operation. The EPP shall be subject to review and approval by the CPM in consultation with CDFW, BLM, and USFWS, and shall be incorporated into the project's BRMIMP and BBCS, and implemented. The results of golden eagle monitoring, initial progress of the BIO-16a #1, and review of adaptive management strategies will also be discussed publicly following three years of commercial operation.

9. **After 3 years of commercial operation and data collection, the Energy Commission will hold public workshops to present data collection results, discuss and evaluate suitable adaptive management measures, and determine if additional mitigation is required. Future mitigation requirements, if any, would occur through a license amendment process.**

Verification: The BBCS shall be submitted to the CPM for review and approval and to CDFW, BLM, and USFWS for review and comment no less than 60 days after start of construction. The project owner shall provide the CPM with copies of any written or electronic transmittal from the USFWS, BLM, or CDFW related to the BBCS within 30 days of receiving any such transmittal. Survey reports shall be submitted to the CPM after each season and in an annual summary report throughout the course of the three-year study period and as set forth in the approved monitoring study plan. The reports will include all monitoring data required as part of the monitoring program, such as photographs, GPS locations, observations, and other information required by the CPM.

Methods and results of the Monitoring Study shall be submitted to the CPM following conclusion of each monthly survey, and during spring and fall, should be submitted bimonthly. Results of the Monitoring Study should also be copied in Monthly and Annual Compliance Reports throughout the course of the study, or as otherwise directed by the CPM. Mortality or injuries of special status species shall be reported to the CPM via phone and email within one working day of discovery. The Monitoring Study shall continue ~~and~~ until the CPM, in consultation with CDFW, BLM, and USFWS, concludes that the cumulative monitoring data provide sufficient basis for estimating long-term bird mortality for the project. The reports will include all monitoring data required as part of the monitoring program.

The reports shall also summarize any additional wildlife mortality or injury documented on the project site during the year, regardless of cause, and assess any adaptive management measure implemented during the prior year as approved by the CPM. After the third year of the monitoring program, the CPM shall meet and confer with the TAC to determine if the study period shall be extended based on data quality and sufficiency of analysis, or if needed, to

document efficacy of any adaptive management measures undertaken by the project owner. If a carcass of a golden eagle or any state or federally listed threatened or endangered species is found at any time by the monitoring study or project operations staff, the project owner, Designated Biologist, or other qualified biologist that may be identified by the Designated Biologist shall contact the CPM, CDFW and USFWS by email, fax or other electronic means within one working day of any such detection.

SAND TRANSPORT AND INDIRECT IMPACTS TO MOJAVE FRINGE-TOED LIZARD

Condition of Certification BIO-20 (Sand Dune/Mojave Fringe-Toed Lizard Mitigation)

Staff and the project owner agree on direct impacts and proposed mitigation for Mojave fringe-toed lizards and their habitat from the construction of the PSEGS. However, there remains an area of substantial disagreement between staff and the project owner regarding Condition of Certification **BIO-20** (**Sand Dune/Mojave Fringe-Toed Lizard Mitigation**) and the analysis used to support significance conclusions for indirect impacts to Mojave fringe-toed lizard habitat from disruption of aeolian sand transport from the PSEGS.

The project owner indicated in their Opening Testimony that staff inappropriately relied on a flawed sand transport study and made incorrect assumptions which led to a severe overestimation of the project effects on the sand transport corridor. The project owner believes that staff severely overestimated whether those effects would cause actual loss of Mojave fringe-toed lizard habitat.

Staff disagrees with the conclusions provided by the project owner. The existing models provide the best available data regarding sand transport in the region. While Staff acknowledges that modeling for the PSEGS has limitations, the conclusions developed in this study are based on modeling supported by scientific research in the field of sand transport.

The project owner would rather rely on a subjective and qualitative review of existing structures and effects. Page 10 of the project owner's rebuttal states:

> "In order to adequately evaluate potential effects on sand transport, the effects of fences, structures, orchards and agricultural fields in nearby areas were examined in order to see real, not modeled, effects of transport blockage."

The project owner does not provide any supporting data for these conclusions other than general descriptions of the sand transport system in the region. The project owner has not specified what sand transport zones the surveyed areas occur in. Staff is unable to validate either the methods or the results of the project owner's approach.

As to the existing date farms or windrows of vegetation adjacent to the project, staff does not believe these features are relevant to the analysis. Most of these features are located in sand transport Zone IV, an area characterized by the project owner's qualitative study as supporting thin relict aeolian sediments. This is in contrast with the active aeolian corridor zones considered in staff's model, which contributes large amounts of aeolian material to offsite areas. In addition, core Mojave fringe-toed lizard habitat is not present in either the date farms, or the areas adjacent to the date farms. Some ephemeral fan-surface channels transport sufficient fine and medium sand from uplands and higher fan locations to be a source of aeolian sand for Zone IV following infrequent surface flows, but wind-transported sand from this source is very minor and is insufficient to maintain loose sand deposits (Kenney 2010). Most of staff's concerns regard areas defined as sand transport Zones III or II where indirect effects are likely to reduce aeolian sand deposits where the date farms do not fundamentally block sand transport corridors. Therefore, staff does not consider the inclusion of date farms or vegetation windrows within the model beneficial.

The use and validity of the model was previously adjudicated, and the Commission Decision was predicated upon use of the model's results in developing appropriate mitigation. Following issuance of the Commission Decision, no new information regarding sand transport in the region has become available, nor has the model been updated or changed in any way. In the absence of updated studies, staff continues to believe the current model provides a reasonable estimate to assessing impacts to the sand transport for the project area. While the existing model may have some deficiencies, there is little doubt or disagreement that the placement of approximately 170,000 heliostats would alter the existing wind environment and pose a substantial barrier to aeolian sand transport.

The most important area of disagreement between staff and the project owner is the conclusions regarding the degradation of habitat and the proposed mitigation. The project owner contends that staff considers indirect impacts to result in the *complete* loss of habitat for Mojave fringe-toed lizards, but this misconstrues staff's position. Staff considers indirect impacts from the disruption of sand transport as those resulting in the *degradation* of habitat – not just the complete functional loss of habitat for this species. This was the basis for staff's mitigation requirement of 0.5:1 for indirect impacts. Mitigation ratios required for the complete loss of habitat ranged from 1:1 for stabilized areas to 3:1 for sand dominated communities.

While the following discussion regarding the degradation of Mojave fringe-toed lizard habitat caused by disruptions to the aeolian corridor, it is important to note that construction of a project this size will also have other indirect impacts offsite, such as weed proliferation (discussed further below), noise, lighting, and increased traffic, etc., that also combine to degrade offsite habitat.

Staff agrees that there will likely remain some functional habitat for Mojave fringe-toed lizards in areas downwind of the project. However, the loss of sand to the system is expected to increase the likelihood that the area will become "armored" or subject to

stabilization from weeds. Like most species, Mojave fringe-toed lizards use a range of habitats to fulfill their living requirements. Cablk and Heaton (2002) found this species prefers areas with a high percentage of sand (63-100 percent) and opined that to maintain existing Mojave fringe-toed lizard populations, more area than just the locally suitable habitat must be identified for management. It is not known, however, what quality levels can be attributed within this range of habitats, nor is it known for certain how these habitat types are being used by Mojave fringe-toed lizards. Further investigation is warranted to better understand the use of this range of habitat, from pure sand to the composite of sand and perennial vegetation, now that this range has been better defined (*Ibid*). In the meantime, staff maintains the previous approach is conservative for the Mojave fringe-toed lizard.

Barrows (1996) found that sand dune ecosystems, including their source sand and sand corridors, are necessary for the long-term survivorship of eolian sand specialists, such as fringe-toed lizards (Barrows 1996). Similarly, suitable habitat exists within a matrix of heterogeneous conditions such as hummocks or pockets of soft sand with few annual species interspersed with hard packed sand and less suitable levels of vegetation and vegetation composition. Clearly individuals are moving within this matrix of suitable and unsuitable habitat throughout the greater identified dune feature (Cablk and Heaton, 2002). Staff's approach to mitigation acknowledges and encompasses the full habitat suites used by this species, and provides mitigation for impacts that degrade or have the potential to degrade habitat required by this species for their continued persistence in an area. As described above, this species is an obligate dune dweller that uses adjacent habitat for foraging, and dispersal to other sand sheets.

The project owner suggests that surface flows from the Chuckwalla Mountains may provide source material for future aeolian transport. Based on a review of assumption #2 and discussions with Dr Lancaster, staff understands that it would take a very significant storm event for runoff to transport a portion of the deposited sand into potential MFTL habitat. These types of storms are infrequent and unlikely to occur except in El Nino years. In addition most of the runoff would be transported into Zone IV which is not identified as core Mojave fringe-toed lizard habitat.

The project owner states that since percentage of sand blockage does not equal deflation it cannot be argued that the resultant habitat would be unsuitable for Mojave fringe-toed lizard. However, the threshold for a sand shadow registering as an impact was previously adjudicated. The Commission Decision determined that an impact occurred if a given location experienced a reduction in sand of 25 percent or more. Here, the project owner predicted acres of indirect impacts in the range of 0 to 50 percent and 50 to 100 percent reduction. Staff requested via email that PSH provide indirect impacts based on percentage reduction of sand input ranges of: "25 – 50 percent", "50 – 75 percent", "75 – 100 percent" to complete a comparative analysis of the two studies. This group of ranges is what was used to determine indirect impacts for the approved PSPP and used in the **BIO-20**. PSH declined to provide this information and responded that they did not agree with the break down proposed by staff.

Staff considers the well-documented body of evidence to support the mitigation approach identified for the PSEGS. This is the same conclusion adjudicated for the PSPP project and is based on existing studies and the principles identified above. Staff believes the effects of the project are predictable and the mitigation proportionate to the impact. In addition, to be consistent with the previously adjudicated impact threshold of 25 percent or greater and in the absence of evidence that indirect impacts to Mojave fringe-toed lizard would not occur in habitat with a 25 to 50 percent reduction of sand input, staff concludes that 421 acres mitigated at 0.5 to 1 for a total of 210.5 acres is appropriate.

References:

Barrows, C. W. 1996. An ecological model for the protection of a dune ecosystem. Conservation Biology 10:888-891.

Cablk, M.E. and J.S. Heaton. 2002. Mojave Fringe-Toed Lizard surveys at the Marine Corps Air Ground Combat Center at Twentynine Palms, California and nearby lands administered by the Bureau of Land Management. California: Marine Corps Air Ground Combat Center. Report M67399-00-C-0005. 115 p.

Kenney, M. 2010 Aeolian transport evaluation and ancient shoreline delineation report: Genesis Solar Energy Project, Riverside County, California. Worley Parsons Report No. 52011206, February 5, 2010. 32pp.

Responses to Center for Biological Diversity Testimony

Staff believes that many issues raised by the Center for Biological Diversity are issues that have been previously litigated in the original licensing proceeding for PSPP. Staff further believes that the proposed PSEGS project will not cause any changes to the License that would require revisiting these issues. Examples of such issues include:

1) Mitigation ratios - all
2) Desert Tortoise connectivity
3) Desert Tortoise translocation
4) Burrowing owl (only new linears pose changes to the original PSPP license)
5) Sand transport direct impacts
6) Cryptobiotic soils

COMPLIANCE CONDITIONS AND COMPLIANCE MONITORING PLAN

Testimony of Eric Veerkamp

Staff provides the following in response to the project owner's testimony of October 9, 2013

1. <u>Changes to page 7-2.</u> Staff has clarified when tortoise clearance activities may occur. Biological Resources staff agrees with the project owner that Desert Tortoise clearance surveys and fencing occur together. However, staff finds that it would be improper to include the installation of Desert Tortoise exclusion fencing as a pre-construction activity because the fence installation will *not* be minimally disruptive to soil and vegetation.

<u>Site Assessment and Pre-Construction Activities</u>

The below-listed site assessment and pre-construction activities may be initiated or completed prior to the start of construction, subject to the CPM's approval of the specific site assessment or pre-construction activities.

Site assessment and pre-construction activities include the following, but only to the extent the activities are minimally disruptive to soil and vegetation ~~and will not affect listed or special-status species or other sensitive resources~~:

1. the installation of environmental monitoring equipment;

2. a minimally invasive soil or geological investigation;

3. a topographical survey;

4. any other study or investigation, such as preconstruction surveys ~~and tortoise clearance work~~ to determine the environmental acceptability or feasibility of the use of the site for any particular facility; and,

5. any minimally invasive work to provide safe access to the site for any of the purposes specified in 1-4 above.

<u>Site Mobilization and Construction</u>

When a condition of certification requires the project owner to take an action or obtain CPM approval prior to the start of construction, or within a period of time relative to the start of construction, that action must be taken, or approval must be obtained, prior to any site mobilization or construction activities, as defined below.

Site mobilization and construction activities are those necessary to provide site access for construction mobilization and facility installation, including both temporary and permanent equipment and structures, as determined by the CPM.

Site mobilization and construction activities include, but are not limited to:

1. ground disturbance activities like grading, boring, trenching, leveling, mechanical clearing, mowing, grubbing, and scraping;

2. site preparation activities, such as access roads, temporary fencing **(including temporary desert tortoise exclusion fencing)**, trailer and utility installation, construction equipment installation and storage, equipment and supply laydown areas, borrow and fill sites, temporary parking facilities, and chemical spraying and controlled burns; and,

3. permanent installation activities for all facility and linear structures, including access roads, fencing (including **permanent desert** tortoise **exclusion** fencing), utilities, parking facilities, equipment storage, mitigation and landscaping activities, and other installations, as applicable

2. Changes to Condition of Certification COM-4. Staff proposes adding the following language to the bottom of Condition of Certification COM-4. The purpose of this language is to clarify the CPM's authority to issue limited notices to proceed.

Construction may commence subsequent to CPM issuance of a letter authorizing the owner to proceed. The CPM may issue limited notices to proceed to allow one or more portions of construction to commence. A limited notice to proceed, if issued, will specify what activities can occur and what specific conditions must be met to commence the activities identified in the notice.

3. Changes to page 7-5. Staff clarifies the additional "environmental coordination" duties of the CBO in the text of this section (changes in bold) and proposes the new COM-16.

CHIEF BUILDING OFFICIAL DELEGATION

Under the California Building Code Standards, while monitoring project construction and operation, staff acts as, and has the authority of, the Chief Building Official (CBO). Staff may delegate CBO responsibility to either an independent third-party contractor or a local building official. However, staff retains CBO authority when selecting a delegate CBO, including the interpretation and enforcement of state and local codes **and standards** and the use of discretion, as necessary, in implementing the various codes and standards. **The CBO shall conduct on-site (including linear facilities) reviews and inspections at intervals necessary to fulfill those responsibilities.**

The delegate CBO will also be responsible **for coordinating** compliance with all environmental Conditions of Certification and the implementation of all appropriate codes and standards**. The CBO's role would not be expanded to nor duplicate the inspection roles of the on-site Designated Biologist (BO), Cultural Resource Specialist (CRS), or Air Quality Construction Mitigation Manager (AQCMM)**

provided by the Project Owner, nor duplicate Staff's role with respect to review and approval of environmental compliance and mitigation plans.

The project owner will pay delegate CBO fees necessary to cover the costs of the **on-site** reviews, inspections**, and environmental coordination.**

COM-16: CBO Delegation. Under the California Building Code Standards, while monitoring project construction and operation, staff acts as, and has the authority of, the Chief Building Official (CBO). Staff may delegate CBO responsibility to either an independent third-party contractor or a local building official. However, staff retains CBO authority when selecting a delegate CBO, including the interpretation and enforcement of state and local codes and standards and the use of discretion, as necessary, in implementing the various codes and standards. The CBO shall conduct on-site (including linear facilities) reviews and inspections at intervals necessary to fulfill those responsibilities.

The delegate CBO will also be responsible for coordinating compliance with all environmental Conditions of Certification and the implementation of all appropriate codes and standards. The CBO's role would not be expanded to nor duplicate the inspection roles of the on-site Designated Biologist (DB), Cultural Resource Specialist (CRS), or Air Quality Construction Mitigation Manager (AQCMM) provided by the Project Owner, nor duplicate Staff's role with respect to review and approval of environmental compliance and mitigation plans.

The project owner will pay delegate CBO fees necessary to cover the costs of the on-site reviews, inspections, and environmental coordination. The Project Owner shall provide proof of its agreement to fund the activities of the CBO at least 60 days prior to the start of construction activity.

PROJECT DESCRIPTION

Testimony of Christine Stora

Staff agrees that the Project Description, at Page 3-6, should be edited as follows:

MIRROR WASHING

The majority of mirror washing activities are planned to be performed at night, with a small minority of the washing activities to be performed in the daytime during plan

operation. Mirror washing will be performed by ~~a~~ **multiple** mobile mirror washing machine**s**. The mirror washing machine**s** will travel along the ring roads and, in a stationary position, use a remote boom to access all heliostats within a 100-foot radius of its location.

CULTURAL RESOURCES

Testimony of Matthew Braun, Thomas Gates, Melissa E. Mourkas, and Michael D. McGuirt

Project Owner's General Points of Contention

1. The project owner contends that staff did not utilize proper viewshed coverage projections in demonstrating a visual impact to the Chuckwalla Valley portion of the PRGTL.

2. The project owner contends that the project does not result in significant interference with the viewshed to warrant rendering the loss of integrity to the Chuckwalla Valley portion of the Pacific to Rio Grande Trails Landscape (PRGTL).

Staff Response to the Project Owner's General Points of Contention

1. Staff agrees that because this is an Amendment to the Commission Final Decision which approved the PSPP, staff should limit its analysis to the new or different impacts to cultural resources posed by the proposed project. The project owner asserts that staff erred by not limiting its analysis to those areas shown in Exhibit 25 – the areas from which the solar power towers would be visible, minus the areas from which the original project components would be visible. Staff disagrees with this over-simplified approach. Staff believes that the proposed project's 750-foot-tall towers increase the project visibility both in quantity and quality. Where the original project was relatively low-profile, and would have been designed to reduce its visual intrusion on the landscape, the two-towers will much taller than any other man-made object in the valley and they will be extremely bright. The approved PSPP environmental documents did not analyze viewshed impacts to any cultural resources because of the low profile of the project (approximately 30 foot-troughs and 40 to 60 foot-tall plant buildings). Staff believes the significantly greater visual intrusion of these towers warrants the breadth of staff's analysis.

2. The construction of the amended project as a power tower facility containing two 750-foot-tall structures will not simply interfere with a viewshed. It will present a dramatic physical and visual intrusion on and across an historical resource, the subject landscape of the Chuckwalla Valley and interface with the Palen and Coxcomb Mountains. The presence of the proposed towers and heliostat fields would substantially degrade the ability of this historical resource to convey that

cultural and spiritual significance to the degree that it can be reasonably argued that the landscape will suffer a substantial adverse change to its significance if the proposed project is built.

In the FSA, staff determined that the PRGTL was eligible for listing in the California Register of Historical Resources under Criteria 1, 3, and 4.

As to Criterion 1, the PRGTL "[i]s associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage." (CEQA Guidelines, 15064.5 (a)(3)(A)). Staff explained that the PRGTL meets this criterion due to "its broad contributions to the unique historic events that shaped Native American understanding of the landscape and movement through the landscape, and their ongoing traditions and history that have allowed them to survive, and at particular periods of their existence, flourish, in a place that many non-Native Americans would consider harsh, inhospitable, or vastly in need of improvement." (FSA, Cultural Resources, 4.3-153). Staff provided support that the PRGTL currently maintains the aspects of integrity of setting, feeling, and association. (154, 155, 158, and 159.) Staff acknowledged existing man-made constructions within the landscape, but found that these impacts to the integrity of setting to be "nominal to the overall sense of setting the unique historic events that occurred within the landscape convey" (154) and noted that "[t]he broad, low angle sweep of the valley tends to mask these roads and structures." (158) Staff determined that because of the significant visual intrusion of the PSEGS solar towers, if constructed, "the landscape would no longer retain the integrity of setting to convey these unique historic events." (154) Staff did explain this reasoning: "The towers would loom large over the valley floor nearer the facility site, while the solar receiver steam generators, when online, would hover brilliantly high in the air, imposing their environmentally incongruous and intrusive character far across the valley." (159) Staff believes the evidence of the unique and severe visual intrusion the towers will have on the Chuckwalla Valley portion of the PRGTL supports this determination.

Staff provided similar analysis and determinations for Criterion 3, which the PRGTL meets due to the petroglyph sites that possesses high artistic values. (See FSA, Cultural Resources, 4.3-155 and 156).

Staff noted that the PRGTL is also eligible under Criterion 4 (the PRGTL has yielded, or may be likely to yield, information important in prehistory or history) "at both the local and regional level of significance for the potential to yield archaeological and ethnographic information important to the prehistory and history of the Chuckwalla Valley, and the PRGTL more generally." (FSA, Cultural Resources, 4.3-154 and 158). But Staff noted that "the ability of the landscape to potentially provide information important to the local and regional history is not affected by the integrity of setting, feeling, and association of the landscape." (FSA, Cultural Resources, 4.3-156).

CRIT's General Points of Contention and Staff's Responses:

1) Staff has deferred analysis of impacts to cultural resources by requiring field work as mitigation for the project's impacts.

Staff disagrees with this contention. Staff has analyzed the potential impacts this project would cause based on the available information. Based on this information, staff has determined that the potential impacts of this project would cause significant, unmitigable impacts. Staff's proposed CUL-1 is an attempt to provide some measure of mitigation in the form of increased knowledge about the Chuckwalla Valley portion of the PRGTL.

2) The unanticipated discoveries at the Genesis Solar Energy Project constitute "new information of substantial importance" relating to both the likelihood of discovering buried cultural material on site and the resulting harm. Thus, the Energy Commission must consider these potential impacts.

Staff disagrees that discoveries at the Genesis project warrant a reopening of the analysis of potential on-site impacts. Genesis is a different project from Palen in both locale and design. Most important to CRIT's concerns is that Palen does not entail the large-scale grading that was done at Genesis.

PSEGS CULTURAL RESOURCE ERRATA

Cultural Resources staff hereby provides a revised Figure 6 – Pacific to Rio Grande Trails Landscape. It has been amended to more accurately reflect the three corridors discerned from a number of source documents. These sources are now also referenced on the amended figure. (**See Cultural Resources-Ethnographic Study – Figure 6 attached hereto.**)

SOURCE REFERENCES FOR REVISED FIGURE 6

Casebier 2010—Dennis G., *Mojave Road Guide: An Adventure Through Time.* Tales of the Mojave Road, No. 27, Publishing Company. Essex, CA.

Cordell 1984—Linda S., *Prehistory of the Southwest*. Academic Press, Inc., San Diego, California.

Davis 1961—James, T., *Trade Routes and Economic Exchange Among the Indians of California.* University of California Archaeological Survey No. 54. University of California, Berkeley, CA.

Ford 1983—Richard I., *Inter-Indian Exchange in the Southwest*., in Handbook of the North American Indians, Volume 10 Southwest. Smithsonian Institute, Washington D.C.

Guerrero 2006—Vladimir. *The Anza Trail and the Settling of California.* Heyday Books, Berkeley, California.

Heizer 1978—Robert F. *Trade and Trails.* Volume 8, California. Smithsonian Institute, Washington D.C.

Kessell 2002—John L., *Spain in the Southwest; A Narrative History of Colonial New Mexico, Arizona, Texas, and California*. University of Oklahoma Press, Norman Oklahoma.

Lingenfelter 1986—Richard E., *Death Valley and the Amargosa; A Land of Illusion*. University of California Press, Berkeley, CA.

Ross 1992—Delmer G., *Gold Road to La Paz; An Interpretive Guide to the Bradshaw Trail*. Tales of the Mojave Road, No. 19, Publishing Company. Essex, California.

Steiner 1999—Harold., *The Old Spanish Trail Across the Mojave Desert; a History and Guide*. Haldor Company, Las Vegas, Nevada.

Weide 1974—Margaret L and James Barker, Harry Lawton, David Weide and Philip Wilke. *Background to Prehistory of the Yuha Desert Region*. Bureau of Land Management, Riverside California.

Von Till Warren 1981—Elizabeth and Ralph Roske. *Cultural Resources of the California Desert, 1776-1980: Historic Trails and Wagon Roads.* Bureau of Land Management, Riverside, California.

GEOLOGY AND PALEONTOLOGY

Testimony of Casey Weaver

Staff's Approach is Based on the Fact that PSEGS Impacts to Paleontological Resources Caused by Vibratory Technique of Pylon Installation Cannot Be Mitigated in the Same Way That Traditional Construction Methods Can Be Mitigated.

PSH's Opening Testimony mischaracterizes Staff's testimony. Staff does not say that PSEGS vibratory technique of pylon installation results in *more* impacts to paleontological resources than PSPP. Instead, the impacts that Staff expects (which are the same impacts that were expected in the Commission Decision for PSPP), *cannot be mitigated* as they are when traditional construction methods are used.

In the Commission Decision for PSPP, the Commission acknowledged the high probability of paleontologic resources on the project site. “The evidence establishes a high probability that paleontologic resources will be encountered during grading and excavation in the older Quaternary age alluvial and lacustrine sediments. Further, deeper excavations in the younger alluvium that will encounter the underlying older Quaternary age alluvial soils will also have a high probability to encounter paleontologic resources.” (Page 3, Commission Decision, GEO/PALEO)

For PSPP, the overall site preparation included mass grading, and where structure and solar trough foundations were proposed, excavations were to be completed using more traditional construction methods. The Commission Decision Findings of Fact 16 and 17 state:

> “16. Project construction-related mass grading, deep foundation excavation, and utility trenching that penetrates underlying undisturbed soils holds a high potential for exposure of paleontological resources, until determined otherwise by the project paleontological resource specialist.
> 17. The project owner will implement several mitigation measures to avoid impacts to any paleontological resources discovered, including worker education, preparing a Paleontological Monitoring and Mitigation Plan, and having a Paleontologic Resource Specialist on-site. These mitigation measures are found in Conditions of Certification **PAL-1** through **PAL-7,** below.” (Page 9, Commission Decision, GEO/PALEO)

The Commission Decision determined that Conditions of Certification **PAL-1** to **PAL-7** were necessary to mitigate potential impacts to less than significant levels. “Conditions of Certification **PAL-1** to **PAL-7** are designed to mitigate any paleontologic resource impacts to a less than significant level. Essentially, Conditions of Certification **PAL-1** to **PAL-7** would require a worker education program in conjunction with monitoring of earthwork activities by qualified, professional paleontological resource specialists (PRS). Earthwork would be halted any time potential fossils are recognized by either the paleontologist or the worker. For finds deemed significant by the PRS, earthwork cannot restart until all fossils in that strata, including those below the design depth of excavation, are collected.” (Page 4, Commission Decision, GEO/PALEO)

But with the new vibratory installation construction method, **PAL-1** to **PAL-7** will *not* serve to mitigate the potential impacts to paleontologic resources. Simply stated, PSEGS will drive, or auger without spoils removal and then drive, 170,000 pylons, each 8 inches in diameter, up to 12 feet deep. This method will not uncover any underlying fossils – it will destroy them.

Understanding that the change in construction methodology associated with the amended project was not addressed in the Final Decision of the approved project, staff submitted data requests 76 and 77 to obtain more detailed information about the amended project’s potential impact to paleontological resources. In response to Data

Request 76, the project owner declined to provide the requested information but provided a short description of various local and regional surficial geomorphic features – features that exist *on the surface* of the ground. The project owner did not discuss the documented evidence that indicates high paleontologically sensitive soils occur at the near surface beneath the site, nor the Pleistocene vertebrate fossils recently discovered at nearby construction sites underlain by soils similar to those underlying the PSEGS site. Similarly, the project owner declined to provide the information requested in Data Request 77.

Because of the lack of information from the project owner to address paleontological resources likely to occur beneath the site, staff drafted proposed Condition of Certification **PAL-9**.

Staff's proposed **PAL-9** attempts to mitigate this impact by requiring PSEGS to "characterize" the site. While Staff acknowledges the poor word choice – the Commission has already determined that the site is underlain by soils that have a high probability of fossil presence – Staff's **PAL-9** serves as a way for the PSEGS to mitigate for those fossils it has a high probability of destroying. Implementation of **PAL-9** would require the owner to determine if there is a statistically significant occurrence of paleontological resources on the site and what the areal and vertical extent of those resources may be. If it is determined there are significant paleontological resources on the site, then the condition allows for representative recovery and curation of fossils in the solar field area that will aid the scientific community in understanding the paleoecology of the site and region. This understanding of the paleoecology of the area will mitigate the expected direct, indirect and cumulative impacts due to the construction of the proposed project.

TRAFFIC AND TRANSPORTATION

Testimony of Andrea Koch, Gregg Irvin, Ph.D., Alvin Greenberg, Ph.D., and David Flores

Condition of Certification TRANS-1:

Project Owner: The project owner objects to staff's modification of TRANS-1 to require that the intersections of I-10 and Corn Springs Road always operate at LOS C or better. The project owner states:

The original condition included, and Staff's proposed condition continues to include, a more appropriate and measurable standard. Specifically, the condition states that the TCP shall use: "one or more of the following measures designed to prevent stacking: staggered work shifts, off-peak work schedules, and/or restricting travel to and departures from each project site to 10 or fewer vehicles every three minutes".

We disagree with replacement of the vehicle based performance standard with Staff's new LOS C performance standard (LOS Standard) for the following reasons. While the project-related vehicle trips are a part of the LOS Standard, project-related trips are not

the only component. Even if PSEGS adds zero vehicle trips, the LOS may fall below LOS C due to other traffic at the intersection. We believe it is unreasonable to impose a LOS Standard that could be impossible to comply with even when the project is not adding any vehicle trips to the intersection. The performance standard contained in the Condition of Certification for the Approved Project is based on limiting the actual Project Vehicle Trips (PVT Standard). This is a requirement which is quantifiable as it can easily be checked (i.e., cameras) for project trips and more importantly is under the direct control of the Project Applicant. The LOS based requirement will not be instantaneously quantifiable, as it will require traffic counts to be taken and an engineer to perform LOS analysis, which can take a few days from data collection to analysis and results. Furthermore, as noted above, the LOS may be worse than LOS C even with no project traffic being added. Setting a vehicle based performance standard is immediately quantifiable, enforceable, and will directly mitigate the PSEGS's traffic.

Based on this argument, the project owner proposes modification of the first two bullets of TRANS-1 to state:

• A work schedule designed to ensure that stacking does not occur at intersections necessary to enter and exit the project site.~~, and that LOS at these intersections and on I-10 remains at LOS C or better.~~

• A plan for monthly monitoring of traffic volume and/or delay ~~and LOS~~ at study roadways and intersections during periods of higher construction employment (Months 19 through 25, including Month 22, the peak construction month).

Staff Response: Staff needs to retain the original language to satisfy Caltrans per their comment letter of August 12, 2013 recommending condition language for maintaining traffic flow on I-10 at LOS C or better during peak travel time.

Condition of Certification TRANS-3:

Project Owner: The project owner objects to staff's modification of TRANS-3 to require the owner to conduct pavement testing prior to construction on all County roadways that could be used for PSEGS construction and operation activities. The project owner states:

Requiring pavement testing and possible rebuilding of miles of roadway prior to construction and then the repairs to be made after construction is redundant, not warranted by the increase in peak and average construction tips from the PSEGS amendment, and has not been required of other Commission projects (including the previously Approved Project).

As a compromise, PSH will agree to the following modification to limit pavement testing to those portions of Corn Springs Road that will be utilized by the PSEGS heavy haul activities:

TRANS-3 *The project owner shall coordinate with Riverside County to conduct pavement testing for ~~all County roadways~~* ***that portion of Corn Springs Road*** *that could be utilized by PSEGS* ***heavy haul*** *construction ~~and operation~~ activities. Based on results of the pavement testing and prior to the first heavy haul delivery, the project owner shall make any necessary improvements to ensure* ***that portion of Corn Springs Road that will be utilized for heavy haul construction activities will*** *~~the roads~~ provide sufficient load-bearing capacity for* ***heavy haul construction activities*** *~~construction and operation traffic~~. Improvements must meet the minimum Riverside County or Caltrans standard (whichever is applicable) for a roadway that accommodates heavy trucks.*

Following construction, the project owner shall ensure that any roads damaged due to project-related construction activities are restored to original or near-original condition in a timely manner, as directed by the CPM and in coordination with Caltrans and/or Riverside County. Repair and restoration of access roads may be required at any time during the construction phase of the project to assure public safety. Repairs required during construction shall be made as soon as ***practical*** *~~possible~~.*

Verification: *Prior to ~~site mobilization~~* ***heavy haul activities****, the project owner shall provide a copy of the pavement test to the CPM and Riverside County for review. Sixty (60) days prior to start of construction, the project owner shall establish a schedule for approval and completion of any roadway improvements.*

Staff Response: Staff accepts these changes and agrees that Corn Springs Road would be the most likely affected road. In fact, staff was specifically addressing restoration of only Corn Springs Road when writing the original condition.

Condition of Certification TRANS-6:

Project Owner: The project owner stated:
We recommend that the following language be deleted from the Condition as it is informational, does not require any action on the part of the Project Owner, and should therefore be considered to be part of the analysis as opposed to enforceable condition language.

~~The FAA has proposed publishing guidance on the use of Audio Visual Warning Systems (AVWS) for obstruction lighting. The project owner has the future option to change the tower obstruction lighting system to an Audio Visual Warning System. An AVWS was recommended by the National Park Service in a comment on the FAA Notice of Construction or Alteration for the PSEGS to preserve the natural darkness in this portion of the Mojave Desert. If it is feasible and the project owner wishes to implement an AVWS in the future, the project owner shall consult with the FAA and the CPM as necessary.~~

Staff Response: Staff would prefer to retain this language in the Condition. Its presence in the Condition does not commit the project owner to use this system, but makes this future option available if needed.

Condition of Certification TRANS-7:

Project Owner: The project owner made some minor modifications to TRANS-7 and added the following language to address Riverside County's concerns:

The HPMP shall include a communication protocol for Riverside County with specific contact information whereby Riverside County can speak to a representative at the PSEGS site 24 hours a day/seven days a week to respond to requests from the Riverside County PSEC Project to investigate potential interference with operation of the PSEC microwave tower.

Staff Response: Staff accepts these modifications and appreciates the project owner catching the error in the last paragraph of the "Verification" section. Staff has already included the project owner's suggested PSEC Project language addition in an errata to the FSA.

WORKER SAFETY AND FIRE PROTECTION

Testimony of Alvin Greenberg, Ph.D.

Staff accepts the project owner's requested modifications to the verification language of **WORKER SAFETY-5** as proposed in PSEGS Worker Safety and Fire Protection Opening Testimony.

VISUAL RESOURCES

Testimony of William Kanemoto

CRIT states that the Energy Commission must consider whether the PSEGS conforms with BLM's applicable (interim) Visual Resource Management (VRM) classes. In its Staff Assessment, staff did not attempt to make a determination of the project's conformance with BLM IVRM classes. In July 2013, however, BLM published its DSEIS for the PSEGS project. In that analysis, BLM found that the PSEGS would not conform with the Class III IVRM class applied to the project site as seen from a number of key viewpoints, thus representing an adverse effect. Although their terminology differs somewhat, BLM's VRM analysis in the DSEIS, and staff's visual analysis in the FSA substantially agree in the baseline, impact analyses, and impact conclusions for key viewpoints at middle-ground distances (up to 3 – 5 miles). For key viewpoints in this distance zone, BLM found the project effects to be adverse and non-conforming with IVRM Class III objectives; Energy Commission staff found these effects to be significant and adverse under CEQA.

Date: October 21, 2013

Respectfully Submitted,

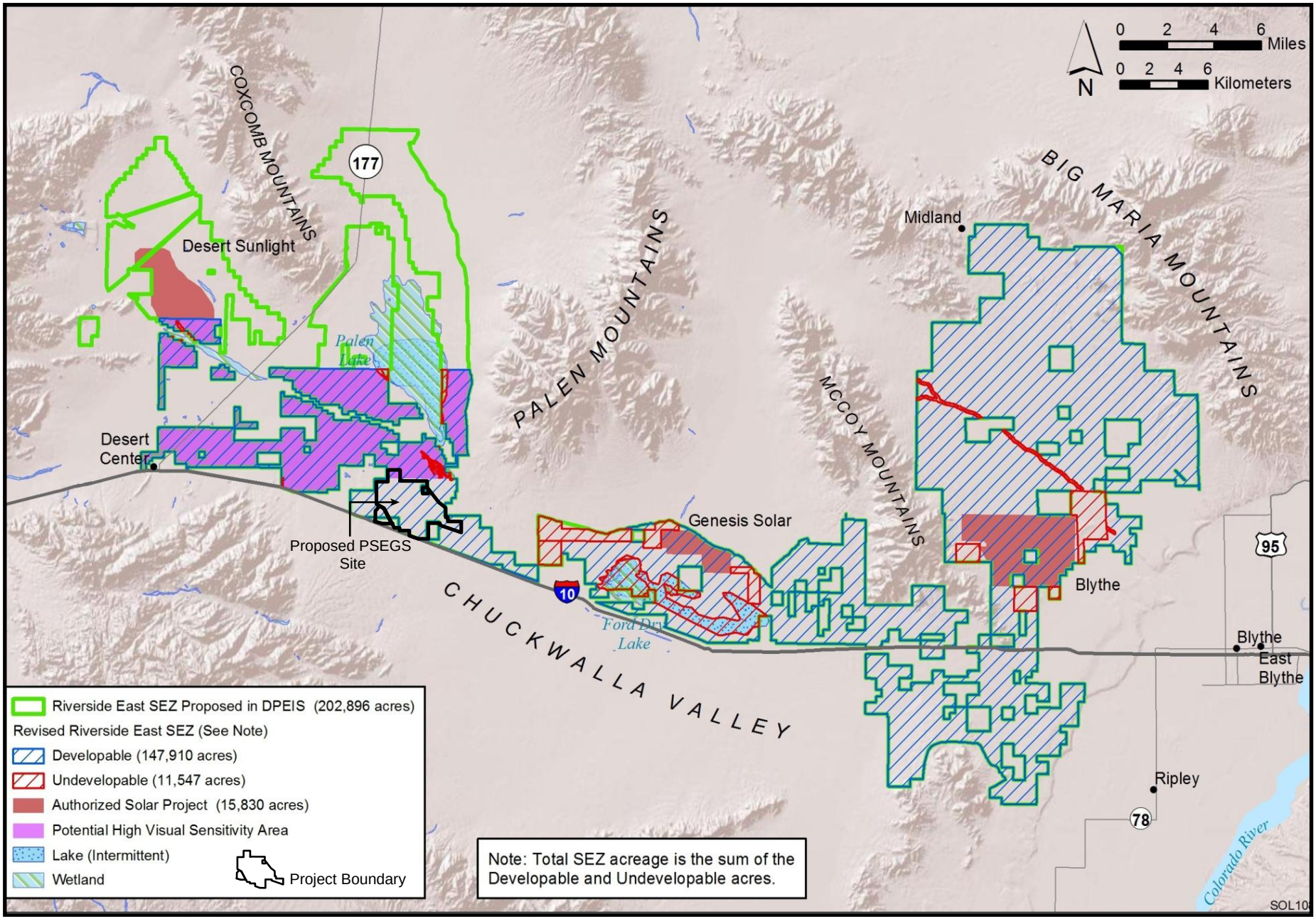
s/ Jennifer Martin-Gallardo
Jennifer Martin-Gallardo - Staff Counsel

ATTACHMENT

Alternatives – Figure 6

ALTERNATIVES - FIGURE 6

Palen Solar Electric Generating System - Developable and Non-development Areas for the Proposed Riverside East SEZ as Revised



CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

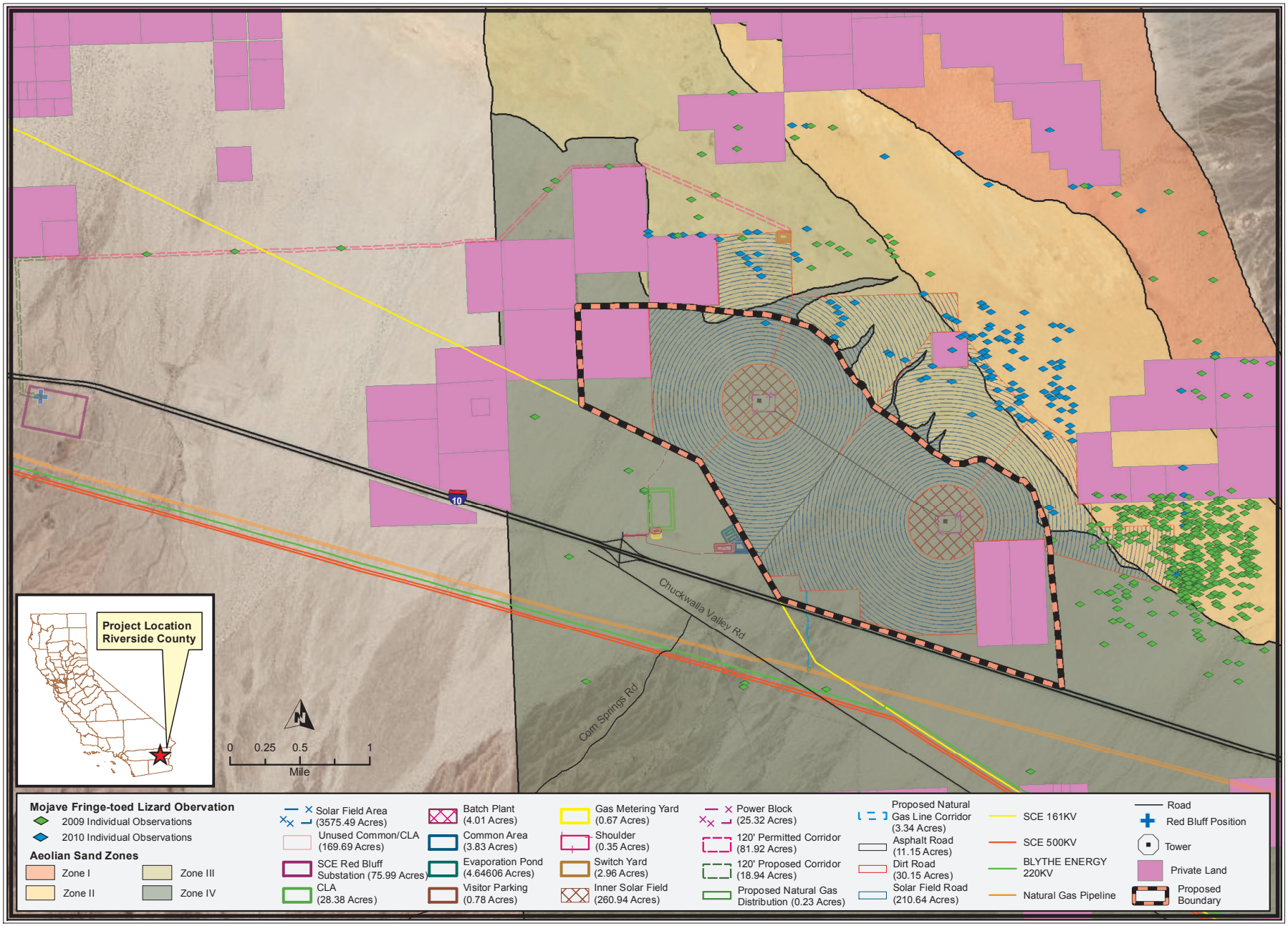
SOURCE: BLM & DOE Final Programmatic Environmental Impact Statement (PEIS) for Solar Energy Development in Six Southwestern States, July 2012

ATTACHMENT

Alternatives – CBD's Proposed Alternative Adding Private Lands

ALTERNATIVES

CBD Proposed Alternative - Adding Private Land
Palen Solar Electric Generating System - Mojave Fringe-toed Lizard Observation & Aeolian Sand Zones
Impact Minimization Alternative Benefitting Mojave Fringe-toed Lizard and Rare Plants



CALIFORNIA ENERGY COMMISSION - SITING,TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

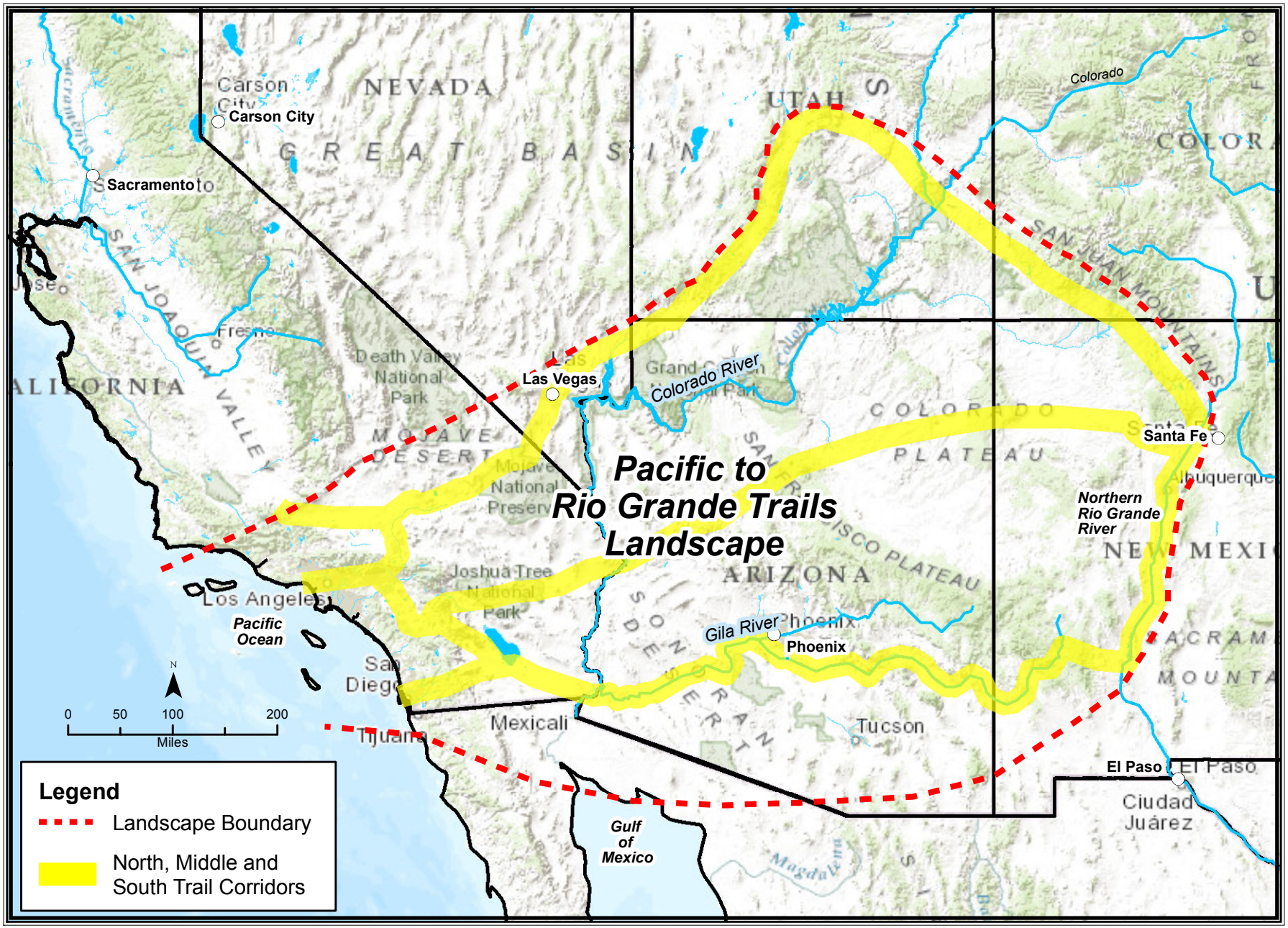
SOURCE: Bing Aerial, BrightSource - May 2013, OpenStreetMap - May 2013, CEC Transmission Line, Natural Gas Line - June 2013
Adapted from: Center for Biological Resources 2013, Exhibit 3036

ATTACHMENT

Cultural Resources – Ethnographic Study – Figure 6

CULTURAL RESOURCES- ETHNOGRAPHIC STUDY - FIGURE 6

Palen Solar Electric Generating System - Pacific to Rio Grande Trails Landscape



CULTURAL RESOURCES

CALIFORNIA ENERGY COMMISSION - SITING,TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: ESRI, Delorme, Tele Atlas, CEC Cassbier 2010: 38; Cordell 1984: 282; Davis 1961: 71; Ford 1983: 719; Guerrero 2006: 6; Heizer 1978: 692; Kessell 2002: 38, 87, 284; Lingenfelter 1986: 44; Ross 1992: i; Steiner 1999: i; Weide, Banker, Lawton, Weide and Wilke 1974:17; Von Till Warren and Roske 1981: VI-1