CHAPTER 3
Revisions to the Draft EIR

3.1 Introduction

The following changes have been made to the previously published text of the Draft EIR. Changes to the Draft EIR include: minor corrections made to improve writing clarity, grammar, and consistency; clarifications, additions, or deletions resulting from specific responses to comments; and text changes to update information in the Draft EIR. These text revisions are organized by the chapter and page number (provided on the left-hand side of the page, below) that appear in the Draft EIR. An explanation of the change, including identification of where it would be made, is presented in *italics*. The specific additions and deletions use the following conventions:

- Text deleted from the EIR is shown in ~~strike-out text~~.
- Text added to the EIR is shown in <u>underline text</u>.

3.2 Text Changes

3.2.1 Executive Summary

ES-18 *In response to Comment A5-13, Mitigation Measure BIO-4 has been revised to cross-reference Mitigation Measure BIO-10 regarding development of a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) which will include descriptions of monitoring methodologies.*

In response to Comment A5-14, Mitigation Measure BIO-4 has been revised to clarify a 500-foot no disturbance buffer will be maintained around active dens until the California Department of Fish and Wildlife (CDFW) provides direction on how to proceed.

Mitigation Measure BIO-4: In areas identified as suitable habitat during the 2011 and 2012 surveys, biological monitors shall conduct pre-construction surveys for kit fox no more than 30 days prior to initiation of construction activities. Surveys shall also consider the potential presence of dens within 100 feet of the Project boundary (including utility corridors and access roads) and shall be performed for each phase of construction. <u>The methodologies for pre-construction kit fox surveys shall be included in the BRMIMP, as prescribed by Mitigation Measure BIO-10.</u> If dens are detected each den shall then be further classified as inactive, potentially active, or definitely active. Inactive dens that would be directly impacted by construction

activities shall be excavated by hand and backfilled to prevent reuse by kit fox. Potential dens that would be directly impacted by construction activities shall be monitored by the Biological Monitor for three consecutive nights using a tracking medium such as diatomaceous medium or fire clay and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand. If tracks are observed, the kit fox dens shall be fitted with the one-way trap doors to encourage kit fox to move off-site. After 48 hours post-installation, the den shall be excavated and collapsed, following the same protocol as with inactive western burrowing owl burrows. These dens shall be collapsed prior to construction of the desert tortoise fence, to allow kit fox the opportunity to move off-site without impediment. If an active natal den is detected on the site, the CDFW shall be contacted within 24 hours. The course of action would depend on the age of the pups, location of the den site, status of the perimeter site fence, and the pending construction activities proposed near the den. A 500-foot no disturbance buffer shall be maintained around all active dens until CDFW provides direction on how to proceed. Habitat-based mitigation or other appropriate mitigation as discussed previously for desert tortoise and western burrowing owl shall provide mitigation for impacts to non-listed special-status species that inhabit overlapping suitable habitat. The following measures are required to reduce the likelihood of distemper transmission:

- No pets shall be allowed on the site prior to or during construction;
- Any kit fox hazing activities that include the use of animal repellents such as coyote urine must be cleared through the CDFW prior to use; and
- Any documented kit fox mortality shall be reported to the CDFW within 24 hours of identification. If a dead kit fox is observed, it shall be retained and protected from scavengers until the CDFW determines if the collection of necropsy samples is justified.

ES-19 *In response to Comments A5-4 and A5-6, Mitigation Measure BIO-5 has been revised to emphasize that the authorization from USFWS and CDFW is required for handling of desert tortoise.*

In response to Comment A5-4, Mitigation Measure BIO-5 has been revised to clarify that the qualified biologist will require CDFW approval, and that CDFW will be contacted if a tortoise is encountered.

In response to Comment A5-5, Mitigation Measure BIO-5 has been revised to confirm that desert tortoise exclusion fencing will remain in place for the life of the Project.

In response to Comment A6-13, Mitigation Measure BIO-5 has been revised based on the potential that formal section 7 consultation may be initiated for the gen-tie line alignment.

Mitigation Measure BIO-5: Desert Tortoise Protection.

(1) **Qualified Biologist:** In the following measures, a "qualified biologist" is defined as a person with appropriate education, training, and experience to conduct tortoise surveys, monitor Project activities, provide worker education programs, and supervise or perform other implementing actions. The person must demonstrate an acceptable knowledge of tortoise biology, desert tortoise impact minimization techniques, habitat requirements, sign identification techniques, and survey procedures. Evidence of such knowledge may include work as a compliance monitor on a project in desert tortoise habitat, work on desert tortoise trend plot or transect surveys, conducting surveys for desert tortoise, or other research or field work on desert tortoise. Attendance at a training course endorsed by the agencies (e.g., Desert Tortoise Council tortoise training workshop) is a supporting qualification. All qualified biologists must be approved by the USFWS, CDFW, and the Riverside Environmental Programs Department (EPD) prior to starting any work on site. The names and qualifications of proposed qualified biologists shall be provided to USFWS, CDFW, and EPD for approval at least 30 days prior to the biologists implementing desert tortoise protection measures described herein.

A qualified biologist will be on-site during all construction. The qualified biologist shall conduct a pre-construction clearance survey of the Project area, watch for tortoises wandering into the construction areas, check under vehicles, and examine excavations and other potential pitfalls for entrapped animals. The qualified biologist will be responsible for overseeing compliance with desert tortoise protective measures and for coordination with the Field Contact Representative (FCR) (described below). The qualified biologist shall have the authority to halt all Project activities that are in violation of these measures or that may result in the take of a tortoise. The qualified biologist shall have a copy of the conservation measures prescribed by USFWS for the gen-tie line through the section 7 consultation process ~~previously issued informal consultation letter issued for the Blythe Solar Project (FWS-ERIV-12B0299-12I0497) for construction of the shared gen-tie line when work is being conducted on the site~~. The qualified biologist is not authorized to handle or relocate desert tortoises as part of this Project without proper authorization from USFWS and CDFW.

(2) **Preconstruction Clearance Survey:** The qualified biologist shall conduct a preconstruction clearance survey of the Project area. Transects for clearance surveys will be spaced 15 feet apart. Clearance will be considered complete after two successive surveys have been conducted without finding any desert tortoises. Clearance surveys must be conducted during the active season for desert tortoises (April through May or September through October). The qualified biologist is not authorized to handle or relocate desert tortoises apart

of this Project without proper authorization from USFWS and CDFW. If a tortoise or tortoise burrow is located during clearance surveys, the USFWS and CDFW will be contacted for direction on how to proceed.

(3) **Field Contact Representative:** The Project Applicant will designate a FCR who will be responsible for overseeing compliance with desert tortoise protective measures and for coordination with the USFWS and CDFW. The FCR will have the authority to halt all Project activities that are not in compliance with the conservation measures prescribed by USFWS for the gen-tie line through the section 7 consultation process ~~measures in the previously issued informal consultation letter (FWS-ERIV-12B0299-12I0497)~~. The FCR will have a copy of these conservation measures ~~this letter~~ when work is being conducted on the site. The FCR may be an agent for the company, the site manager, any other Project employee, a biological monitor, or other contracted biologist. ~~The~~ Neither the FCR nor any other project proponent may bar or limit any communications between any Natural Resource Agency or The County of Riverside Environmental Programs Division and any project biologist, biological monitor or contracted biologist. Any incident occurring during the Project activities that is considered by the qualified biologist to be in non-compliance with these measures will be documented immediately by the qualified biologist. The FCR will ensure that appropriate corrective action is taken. Corrective actions will be documented by the qualified biologist. The following incidents will require immediate cessation of the Project activities causing the incident: (1) location of a desert tortoise within the exclusion fencing; (2) imminent threat of injury or death to a desert tortoise; (3) unauthorized handling of a desert tortoise, regardless of intent; (4) operation of construction equipment or vehicles outside a project area cleared of desert tortoise, except on designated roads; and (5) conducting any construction activity without a biological monitor where one is required.

(4) **Worker Training:** Prior to the onset of construction activities, a desert tortoise education program will be presented by the FCR or qualified biologist to all personnel who will be present on work areas within the Project area. Following the onset of construction, any new employee will be required to formally complete the tortoise education program prior to working on-site. At a minimum, the tortoise education program will cover the following topics:

- A detailed description of the desert tortoise, including color photographs;
- The distribution and general behavior of the desert tortoise;
- Sensitivity of the species to human activities;
- The protection the desert tortoise receives under the FESA and CESA Act, including prohibitions and penalties incurred for violation of the FESA and CESA Act;

- The protective measures being implemented to conserve the desert tortoise during construction activities; and
- Procedures and a point of contact if a desert tortoise is observed on-site.

(5) **Site Fencing:** Desert tortoise exclusion fencing will be installed around the Project area and will remain in place for the life of the Project. The fence will adhere to USFWS design guidelines, available at: http://www.fws.gov/venturaispecies _information/protocols guidelines/docs/dtlDT_ Exclusion-Fence_2005.pdf. The qualified biologist will conduct a clearance survey before the tortoise fence is enclosed to ensure no tortoises are on the Project area. If a tortoise is found, all construction activity will halt and the USFWS and CDFW contacted for direction on how to proceed. Once installed, exclusion fencing will be inspected at least monthly and following all rain events, and corrective action taken if needed to maintain the integrity of the tortoise barrier. Fencing around the Project area will include a desert tortoise exclusion gate. This gate will remain closed at all times, except when vehicles are entering or leaving the Project area. If it is deemed necessary to leave the gate open for extended periods of time (e.g., during high traffic periods), the gate may be left open as long as a qualified biologist is present to monitor for tortoise activity in the vicinity. Sites with potential hazards to desert tortoise (e.g., auger holes, steep-sided depressions) that are outside of the desert tortoise exclusion fencing will be fenced by installing exclusionary fencing, or not left unfilled overnight.

(6) **Refuse Disposal:** All trash and food items shall be promptly contained within closed, raven-proof containers. These will be regularly removed from the Project area to reduce the attractiveness of the area to common ravens and other desert predators. The FCR will be responsible for ensuring that trash is removed regularly from the site such that containers do not overflow, and that the trash containers are kept securely closed when not in use.

(7) **Tortoises under vehicles:** The underneath of vehicles parked outside of desert tortoise exclusion fencing will be inspected immediately prior to the vehicle being moved. If a tortoise is found beneath a vehicle, the vehicle will not be moved until the desert tortoise leaves of its own accord. ~~(8) Tortoises on roads: If a tortoise is observed on or near the road accessing the Project area, vehicular traffic will stop and the tortoise will be allowed to move off the road on its own.~~

(8) **Tortoise Observations:** No handling of desert tortoise or burrow excavation is allowed as part of the proposed action, unless authorized by USFWS and CDFW. If a tortoise is observed on or near the road accessing the Project area, vehicular traffic will stop and the tortoise will be allowed to move off the road on its own. If a tortoise is observed outside of exclusion fencing, construction

will stop and the tortoise shall be allowed to move out of the area on its own. If a tortoise or tortoise burrow is observed within the exclusion fencing, all construction will stop, and the USFWS and CDFW contacted for direction on how to proceed.

The following activities are not authorized and will require immediate cessation of the construction activities causing the incident: (1) location of a desert tortoise within the exclusion fencing; (2) imminent threat of injury or death to a desert tortoise; (3) unauthorized handling of a desert tortoise, regardless of intent; (4) operation of construction equipment or vehicles outside a project area cleared of desert tortoise, except on designated roads; and (5) conducting any construction activity without a biological monitor where one is required.

(9) **Dead or Injured Specimens:** Upon locating a dead or injured tortoise, the Applicant or agent is to immediately notify the Palm Springs Fish and Wildlife Office by telephone within three days of the finding. Written notification must be made within five days of the finding, both to the appropriate USFWS field office and to the USFWS' Division of Law Enforcement. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, cause of death, if known, and other pertinent information.

ES-24 *In response to Comment A5-8, Mitigation Measure BIO-6 has been revised to clarify consistency with CDFW 2012 guidelines that take avoidance surveys will be completed no less than 14 days prior to site grading and that time lapses between project phases/activities could trigger the need for subsequent take avoidance surveys.*

In response to Comment A5-10, Mitigation Measure BIO-6 has been revised to clarify that use of down-hole cameras will occur only after one-way doors and visual monitoring have taken place.

Mitigation Measure BIO-6: Burrowing Owl Protection:

A Draft Burrowing Owl Monitoring and Mitigation Plan (Plan) has been developed to describe monitoring, reporting, and management of the burrowing owl during the construction, O&M, and decommissioning of the proposed Project, as required by CDFW and County of Riverside. It has been prepared following the 2012 CDFW Staff Report on Burrowing Owl Mitigation (CDFW, 2012), and describes a multi-tiered approach to prevent or reduce impacts during construction and operation of the Project. Below is a general summary of the Plan requirements:

- Pre-construction surveys will be conducted throughout the Project area and laydown areas for burrowing owls, possible burrows, and sign of owls (e.g., pellets, feathers, white wash) no less than 14~~30~~ days prior to ~~construction~~, site grading;

- Time lapses between project phases/activities could trigger the need for subsequent take avoidance surveys, as stated in Appendix D of the CDFW 2012 survey guidelines. The approved Biologist will determine when subsequent surveys are needed;
- Should any of the pre-construction surveys yield positive results for the presence of burrowing owl or active burrows within the Project area, the approved Biologist will coordinate with the Construction Contractor to implement avoidance and set-back distances. Disturbance of owls or occupied burrows during the breeding season (February 1 through August 31) will not be permitted and, to minimize disturbance, use of down-hole cameras to inspect burrows will be used only after one-way doors and visual monitoring have taken place;
- If suitable burrows are observed and documented during the preconstruction surveys within the Project footprint and determined to be inactive, these burrows will be excavated and filled in under the supervision of the approved Biologist(s) prior to clearing and grading;
- To compensate for impacts to burrowing owls in activity areas on the northern part of the Project, 146 acres of habitat have been identified adjacent to the Project area. A letter agreeing to dedicate the existing compensation lands must be approved by CDFW and the County prior to ground disturbance. Land used for compensation must be of equal value or better than the land impacted. Ownership of compensation lands will be transferred prior to any surface disturbance to one of the following: the County, or an entity acceptable to the County or CDFW that can effectively manage listed species and their habitats.
- The Plan provides detailed methods and guidance for passive relocation of burrowing owls occurring within the Project disturbance area; and
- The Plan describes monitoring and management of the passive relocation, including a three-year monitoring program.

ES-25 *In response to Comments A5-15, O4-34, and O4-37, Mitigation Measure BIO-7 has been revised to define the general avian breeding season as January 1 through September 30.*

In response to Comments A5-17 and A6-9, Mitigation Measure BIO-7 has been revised to clarify that the BBCS will be based on recommendations from CDFW.

Mitigation Measure BIO-7: If Project construction activities cannot occur completely outside the bird breeding season, then pre-construction surveys for active nests shall be conducted by a qualified biologist within 1,200 feet of the construction zone no more than seven days before the initiation of construction that would occur between ~~February~~January 1 and ~~August~~ September ~~15~~30. The qualified biologist will hold a current Memorandum of Understanding with the County of Riverside to conduct nesting bird surveys. If breeding birds with active nests are found, a biological monitor shall establish a species-specific buffer around the nests for

construction activities, 250 feet or 1,200 feet for raptor nests. Extent of protection will be based on proposed management activities, human activities existing at the onset of nesting initiation, species, topography, vegetative cover, and other factors. When appropriate, a no-disturbance buffer around active nest sites will be required from nest-site selection to fledging. If for any reason a bird nest must be removed during the nesting season, written documentation providing concurrence from the USFWS and CDFW authorizing the nest relocation shall be obtained. All nest removals shall occur after the nest is demonstrated to be inactive by a qualified biologist and have been shown to not result in take as defined by the Migratory Bird Treaty Act (MBTA). A Bird and Bat Conservation Strategy (BBCS) will be developed for this Project and include additional protections for avian species. The BBCS would be based on specific recommendations from the USFWS and CDFW, and would provide:

- a statement of the Applicant's understanding of the importance of bird and bat safety and management's commitment to remain in compliance with relevant laws;
- documentation of conservation measures PVMSP would implement through design and operations to avoid and reduce bird and bat fatalities at both solar generation facilities as well as the associated gen-tie line, including consideration of bird height and wingspan requirements and use of flight diverters, perch and nest discouraging material, etc.;
- consistent, practical and up-to-date direction to PVMSP staff on how to avoid, reduce, and monitor bird and bat fatalities;
- establishment of accepted processes to monitor and mitigate bird and bat fatalities; establishment of accepted fatality thresholds that, if surpassed, would trigger adaptive changes to management and mitigation management;
- an adaptive management framework to be applied, if thresholds are surpassed; and
- A three-year post-construction monitoring study.

The BBCS will be submitted to USFWS and CDFW for review at least 60 days prior to construction. The BBCS would be considered a "living document" that articulates the Applicant's commitment to develop and implement a program to increase avian and bat safety and reduce risk. As progress is made through the program or challenges are encountered, the BBCS may be reviewed, modified, and updated. The initial goals of this BBCS are to:

- provide a framework to facilitate compliance with federal law protecting avian species and a means to document compliance for regulators and the interested public;
- allow the Agent to manage risk to protected bird and bat species in an organized and cost-effective manner;

- establish a mechanism for communication between PVMSP managers and natural resource regulators (primarily USFWS and CDFW);
- foster a sense of stewardship with PVMSP owners, managers, and field engineers; and
- articulate and cultivate a culture of wildlife awareness (specifically birds and bats) and the importance of their protection.

ES-28 *In response to Comments O4-32 and O4-101, text is added to Mitigation Measure BIO-8 to clarify approval requirements for compensatory mitigation.*

Mitigation Measure BIO-8: To mitigate for permanent habitat loss and direct impacts to Mojave fringe-toed lizards the Applicant shall provide compensatory mitigation at a 3:1 ratio, which may include compensation lands purchased in fee or in easement in whole or in part, for impacts to stabilized or partially stabilized desert dune habitat (i.e., dune, sand ramp, or fine-sandy wash habitat). Suitable Mojave fringe-toed lizard habitat is located throughout the gen-tie line corridor and potential habitat was detected on approximately three percent of the Project area (creosote bush scrub habitat). If compensation lands are acquired, the Applicant shall provide funding for the acquisition in fee title or in easement, initial habitat improvements and long-term maintenance and management of the compensation lands. A letter agreeing to dedicate the existing compensation lands must be approved by BLM, USFWS, CDFW, and the County prior to ground disturbance. Lands used for compensation must be of equal value or better than the land impacted. Ownership of compensation lands will be transferred prior to any surface disturbance to one of the following: the County, or an entity acceptable to the agencies that can effectively manage listed species and their habitats.

ES-28 *In response to Comments A5-14 and A6-14, Mitigation Measure BIO-10 has been revised to provide a 90-day review period for CDFW, USFWS, and the County.*

In response to Comment A6-13, Mitigation Measure BIO-10 has been revised based on the potential that formal section 7 consultation may be initiated for the gen-tie line alignment.

Mitigation Measure BIO-10: A Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) will be developed to summarize all of the various biological mitigation, monitoring, and compliance measures and include measures from the various biological plans and permits developed for PVMSP. The BRMIMP shall include the following:

1. All biological resources mitigation, monitoring, and compliance measures outlined in this EIR;
2. All biological resource mitigation, monitoring and compliance measures required in federal agency terms and conditions, such as conservation measures prescribed by USFWS for the gen-tie line through the section 7 consultation process ~~those provided in the USFWS concurrence letter that the Project is "not likely to~~

~~incidentally take or otherwise adversely affect" federally listed species (FWS-ERIV-12B0299-12I0497)~~;

3. All biological resource mitigation, monitoring and compliance measures outlined in the Burrowing Owl Mitigation and Monitoring Plan and the Bird and Bat Conservation Strategy (the full biological plans will be included in the attachments to the BRMIMP);
4. All locations on a map, at an approved scale, of sensitive biological resource areas subject to disturbance and areas requiring temporary protection and avoidance during construction and operation;
5. Duration for each type of monitoring and a description of monitoring methodologies and frequency;
6. Performance standards to be used to help decide if/when proposed mitigation is or is not successful; and
7. A process for proposing plan modifications to appropriate agencies for review and approval. The BRMIMP document shall be provided at least ~~60~~90 days prior to start of any Project-related ground disturbing activities to the USFWS, CDFW, and County for review and approval. Implementation of BRMIMP measures will be reported in the monthly compliance reports by the Lead Biologist (i.e., survey results, construction activities that were monitored, species observed).

ES-29 *In response to Comment A5-18, Mitigation Measure BIO-9 has been revised to clarify that a formal jurisdictional delineation would be required prior to construction to verify avoidance of regulated wetlands/waters.*

Mitigation Measure BIO-9: Impacts to areas under jurisdiction of the USACE, Regional Water Quality Control Board (RWQCB), and CDFW shall be avoided as necessary to reduce impacts to less than significant levels. A formal jurisdictional delineation of regulated waters and wetlands shall be conducted on the Project site prior to construction to verify avoidance of such resources. Where avoidance of jurisdictional areas is not necessary to reduce impacts to less than significant levels, including emergency repairs, and access/spur roads within the ephemeral channel, the applicant shall provide the necessary mitigation required as part of wetland permitting. This will include creation, restoration, and/or preservation of suitable jurisdictional habitat along with adequate buffers to protect the function and values of jurisdictional area mitigation. The location(s) of the mitigation will be determined in consultation with the Applicant and the responsible agency(s) as part of the permitting process.

ES-4 *The Applicant provided revisions to proposed Project components involving the number of proposed substations and O&M buildings. The revisions are shown in strikeout underline below. See the discussion under Section 3.2.3, Chapter 2, Project Description, in this Final EIR for the reasons the analysis and conclusions in the Draft EIR would remain unchanged with or without the additional substations and O&M buildings.*

ES 1.1 Project Components

Proposed Solar Facility and Gen-tie line

The proposed 450 MW PV electrical generating facility and 14.5-mile gen-tie line would occupy approximately 3,400 acres. The proposed Project would consist of the following major components (see Figures 2-5, *Project Area and 2-6, Site Plan*):

- Solar Facility (3,250 total acres, private land)
  - Solar array field that utilizes single-axis solar PV trackers (295 feet long and 140 feet wide). Six trackers with 18 north-south oriented rows of PV panels would be configured into blocks (660 feet long by 470 feet wide).
  - Inverters (5.0 feet wide and 10.5 feet tall) mounted on small concrete pads (minimum 0.5 foot above grade).
  - System of underground interior collection power lines located between inverters and substations.
  - ~~Two~~ Three on-site substations (each approximately 300 feet long by 300 feet wide).
  - ~~One~~ Three operations and maintenance (O&M) building (approximately 3,500 square feet).
  - Several interior access roads.

3.2.2 Chapter 1, Introduction

No text changes have been made to Chapter 1, *Introduction.*

3.2.3 Chapter 2, Project Description

2-15 and 2-34

The Applicant provided revisions to the Chapter 2, Project Description, proposing to allow the potential use of PV panels that contain a thin semiconductor layer containing cadmium telluride (CdTe). While CdTe itself is a hazardous substance in an isolated form, the CdTe in the PV panels is bound and sealed within the glass sheets and a laminate material (Fthenakis, 2003, 2008). A report by the Norwegian Geotechnical Institute (NGI) notes that "If the modules are destroyed during use and are exposed to rain, emissions can occur; however, very low vapor pressure and water solubility are expected to result in only trace emissions into the environment" (NGI, 2010, p. 13). Additionally, an article that examined the potential for CdTe leaching from commercial rooftop solar PV installations found the worst-case modeled environmental concentrations in soil, air, and groundwater in a California-based scenario, are one to five orders of magnitude below human health screening levels (Sinha et al., 2012). If the Applicant chooses to use CdTe PV panels, implementation of BMP-9 has been modified to require that the Applicant to prepare

and implement a Broken PV Module Detection and Handling Plan, to minimize the potential for CdTe leaching from damaged panels.

Also on Draft EIR Page 2-15, the applicant proposes to add clarification that panel configurations are subject to final design. These proposed changes result in no new or more significant impacts than analyzed in the Draft EIR.

2.3.3 Project Facilities

Solar Array Field

Subject to final design, the panels would be configured into trackers (**Figure 2-7**), and the trackers configured into 1.5 MW blocks approximately 660 feet wide and 470 feet long (**Figure 2-8**). Each tracker (295 feet long and 140 feet wide) has 18 north-south oriented rows of PV panels. The panels would be supported by micro-piles (15 to 20 feet long and 4.5-inch outer diameter), which would be driven directly into the ground by a tracked backhoe to a depth of 8 to 12 feet using a vibration technology to reduce noise impacts; no blasting or rock-breaking is anticipated. Small truck-mounted cranes or grade-all forklifts would place trackers onto micro-piles. Within each tracker, the rows of PV panels would be linked by a steel drive strut (295 feet long), which would be oriented perpendicular to the axis of rotation. Each row would be connected to the drive strut by a torque arm, which acts as a lever, enabling the drive strut to rotate the rows in unison.

The PVMSP would utilize single-axis PV trackers with ~~silicon~~ solar panels. All panels would be oriented in the same direction as they track the sun's movement. By design, the PV panels absorb sunlight to maximize electrical output and use anti-reflective glass, resulting in about half the reflectance of standard residential and commercial glass. Due to limited rotation angles, the solar panels have no potential for reflecting the sun's rays upon any ground-plane position.

2.3.6 Decommissioning and Repowering

The module's component materials lack toxic metals such as mercury, lead, ~~cadmium telluride,~~ or gallium, and the majority of the components of the solar installation are made of materials that can be readily recycled. If the panels can no longer be used in a solar array, the silicon can be recovered, the aluminum resold, and the glass recycled. Other components of the solar installation, such as the tracker structures and mechanical assemblies, can be recycled, as they are made from galvanized steel. Equipment such as drive controllers, inverters, transformers, and switchgear can be either reused or their components recycled. The equipment pads are made from concrete, which can be crushed and recycled. Underground conduit and wire can be removed by uncovering trenches and backfilling when done. The electrical wiring is made from copper and/or aluminum and can be reused or recycled, as well.

BMP-9 Hazardous Materials. As required by the Clean Air Act, Section 401 of the Clean Water Act, the Toxic Substance Control Act, and the Hazardous Materials

Transportation Act, all vehicles and equipment must be in proper working condition to ensure that there is no potential for fugitive emissions or accidental release of motor oil, fuel, antifreeze, hydraulic fluid, grease, or other hazardous materials. Equipment must be checked for leaks prior to operation and repaired as necessary. Refueling of equipment must take place on existing paved roads, where possible, and not within or adjacent to drainages. Hazardous spills must be cleaned up immediately. Contaminated soil would be disposed of at an approved offsite landfill, and spills reported to the permitting agencies. Service/maintenance vehicles should carry appropriate equipment and materials to isolate and remediate leaks or spills, and an on-site spill containment kit for fueling, maintenance, and construction will be available.

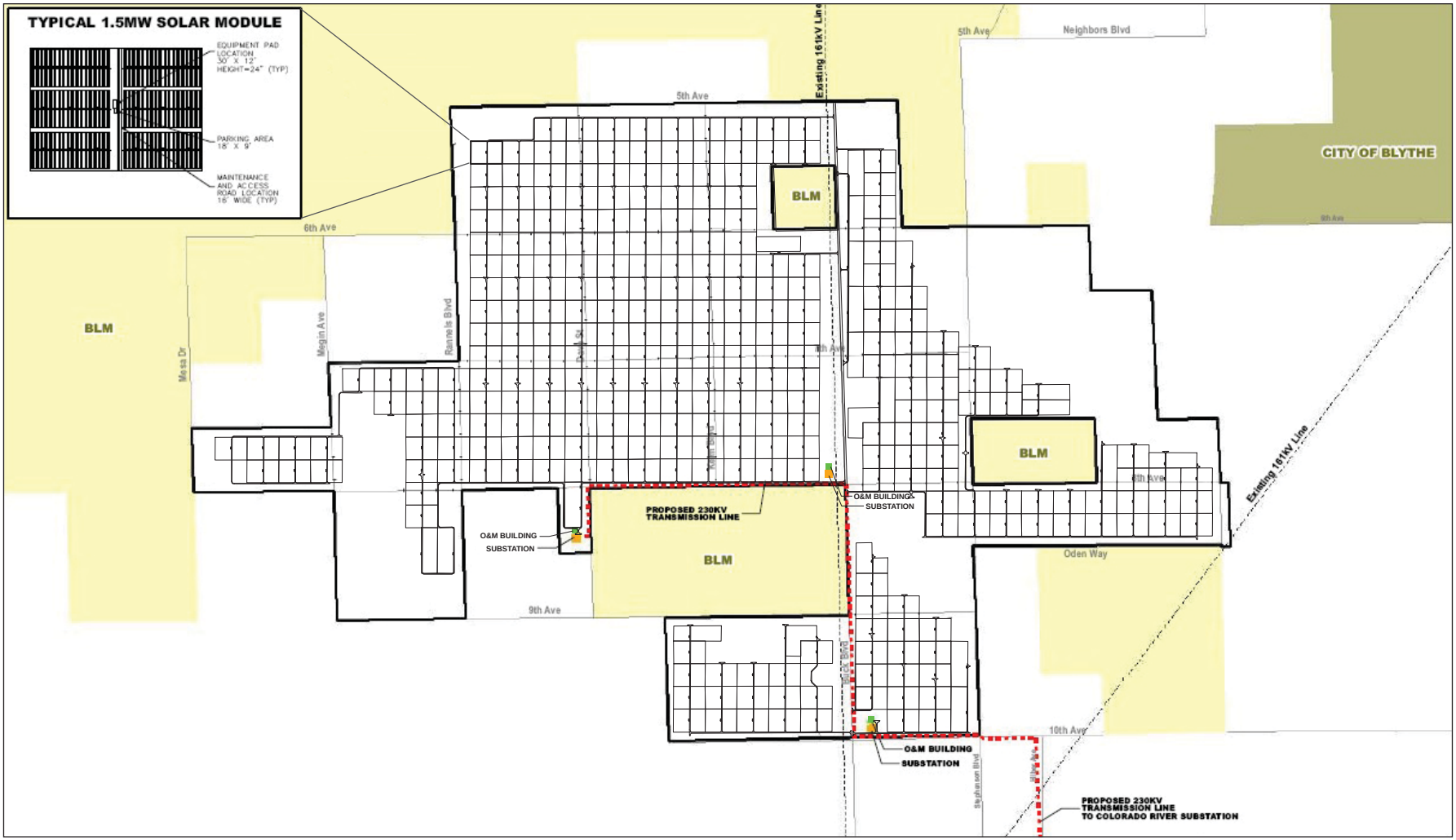
Cleaning of construction vehicles at commercial car washes should be considered rather than washing vehicles on the Project area so that dirt, grease, and detergents are treated effectively at existing facilities designed to handle those types of wastes.

Broken PV Module Detection and Handling Plan. Before photovoltaic (PV) panels containing cadmium telluride (CdTe) may be used on the Project site, the Applicant shall prepare and receive County approval of a Broken PV Module Detection and Handling Plan. The plan shall describe the Applicant's plan for identifying, handling, and disposing of PV modules that may break, chip, or crack at some point during the Project's life cycle to ensure the safe handling, storage, transport, and recycling and/or disposal of the modules and related electrical components in a manner that is compliant with applicable law and protective of human health and the environment. The plan shall be submitted to the County for review and approval prior to commencement of construction activities and prior to delivery of CdTe-containing PV panels to the Project site and shall be distributed to all construction crew members and temporary and permanent employees prior to construction and operation of the Project. All available data from the panel manufacturer(s) regarding materials used and safety procedures and/or concerns shall be appended to the plan to assist the County with identifying potential hazards and abatement measures.

2-18 and 2-24

The Applicant provided revisions to the Chapter 2, Project Description, proposing the addition of one substation (with associated switchgear pads) and two O&M buildings. The revisions are shown in strikeout underline below. In addition, Figure 2-6 has been revised to show the locations of the proposed additional structures and to clarify that panel configurations may be revised during final design but will comply and remain consistent with land use requirements. As shown on Revised Figure 2-6, the additional substation and O&M buildings would be constructed within the boundary of the proposed the solar facility, which was wholly analyzed throughout the Draft EIR for potential disturbance. The new structures are proposed in locations where they would avoid existing archeological sites and sensitive biological resources. The closest newly proposed structure to a sensitive receptor for

purposes of noise or air quality would be 8,000 feet at the closest point. This is farther than the distances analyzed in the Draft EIR; therefore, the proposed location of the new structures within the solar facility site would result in no new or more significant impact than analyzed in the Draft EIR. Similarly, given the proposed locations relative to key observation points identified and analyzed in the Draft EIR, the proposed new structures would result in no new or more significant visual impact than analyzed in the Draft EIR. The applicant proposes no changes to the number of employees during construction or operations as a result of constructing or operating the additional structures. Construction of the additional structures would result in negligible additional vehicle trips during construction (i.e., associated with materials delivery) and, during operations (i.e., associated with regular septic system maintenance), and no or negligible delay of the construction schedule. The construction schedule analyzed in the Draft EIR was a conservative estimate that tended to overestimate rather than underestimate the number of days required for construction to assure that impacts associated with the reasonable maximum duration of construction would be analyzed and disclosed in the EIR. For these reasons, the analysis and conclusions in the Draft EIR would remain unchanged with or without the additional substation and two additional O&M buildings.



Note: Panel configurations may be revised during final design but will comply and remain consistent with land use requirements.

SOURCE: POWER Engineers

Palo Verde Mesa Solar Project . 150379

Figure 2-6
Site Plan

Substation and Switchgear Pads

The ~~two~~ three on-site substations (each 300 feet long by 300 feet wide) would collect all the medium-voltage circuits and step up the voltage to 230 kV. The internal arrangement for the substations would include a 34.5 kV switchrack, a 230 kV switchrack, a 34.5 kV / 230 kV transformer yard, and a control building (see **Figure 2-11**).

Operation and Maintenance Buildings

~~One~~ Three O&M buildings (approximately 3,500 square feet, enclosed, and no more than 30 feet tall) would provide work space for maintenance staff and storage space for operational equipment and parts. The physical locations of the buildings are shown in *Figure 2-6 (Site Plan).* The layout and elevations are illustrated in **Figures 2-13** and **2-14**. The buildings would be constructed with the finished floor a minimum of 24-inches above the highest adjacent ground. The buildings would include bathroom facilities serviced by a private septic system and would be designated occupancy Classification U. A covered outdoor temporary assembly and storage area (80,000 square feet, 25 feet tall) would be directly adjacent to each ~~the~~ O&M building.

2-22 *The Applicant proposes to clarify that transmission line facilities would include poles constructed with concrete material. This proposed change would result in no new or more significant impacts than analyzed in the Draft EIR.*

230 kV Gen-tie Lines

The transmission line facilities would include single-circuit concrete/tubular steel poles that are 77 to 120 feet tall with an average distance between poles (span length) of 700 to 800 feet (*see Figure 2-12*).

2-38 *In response to Comment O4-30, BMP-6 has been modified to clarify that security lighting would be directed downward and shielded to focus illumination on the Project site only and to provide light spillage onto adjacent habitat.*

BMP-6 Lighting Plan. A lighting plan would be prepared that documents how lighting will be designed and installed to minimize night-sky impacts during facility construction and operations. Lighting for facilities will not exceed the minimum number of lights and brightness required for safety and security and will not cause excessive reflected glare. Light fixtures will not spill light beyond the Project boundary. Motion-sensitive lighting would be installed at the Project site access points and would be calibrated to avoid activation by small animals, and timers would be used to automatically turn off lighting after a set period of time. Security lighting would be directed downward and shielded to focus illumination on the Project site only, and to prevent light spillage onto adjacent habitat. Where feasible, vehicle-mounted lights will be used for night maintenance activities. Wherever feasible, consistent with safety and security, lighting will be kept off when not in use.

The lighting plan will include a process for promptly addressing complaints about lighting.

2-39 *The Applicant provided revisions to BMP-11 that specify that panels will be designed to ensure minimal visual intrusion, contrast, and glare, and eliminate the statement that color panel backs will be color-treated to reduce visual contrast with the landscape setting. These edits do not pose a significant change to the project because the color and finish of the solar panels will be required to be designed to ensure minimal visual intrusion, contrast, and glare and would therefore continue to meet the original intent of the BMP-11 as presented in the Draft EIR. Therefore, the Applicant's revisions to BMP-11 would result in no new or more significant visual impact than analyzed in the Draft EIR.*

In addition, in response to Comment A6-10, BMP-12 is revised to include reference to 2012 APLIC guidelines and to state that mechanisms to visually warn birds (permanent markers or bird flight diverters) shall be placed on gen-tie lines consistent with APLIC guidelines

BMP-11 Project structures, gen-tie line, and building surfaces. Project structures and building surfaces. Project facilities would be sited to ensure that there is adequate space (i.e., setbacks of no less than 100 feet) between solar facilities and natural washes. These setbacks would preserve and maintain the natural washes' hydrological functions. The color and finish of Project structure**,** panels**,** and building surfaces that are visible to the public will be designed to ensure minimal visual intrusion, contrast, and glare. Grouped structures will be painted the same color to reduce visual complexity and color contrast. ~~Solar panel backs will be color-treated to reduce visual contrast with the landscape setting.~~ Materials, coatings, or paints having little or no reflectivity will be used wherever possible. The visual color contrast of graveled surfaces will be reduced with approved color treatment practices.

BMP-12 Gen-tie lines. Gen-tie line support structures and other facility structures shall be designed in compliance with current standards and practices to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices). This design would also reduce the potential for increased predation of special-status species, such as the desert tortoise. Mechanisms to visually warn birds (permanent markers or bird flight diverters) shall be placed on gen-tie lines consistent with APLIC guidelines at regular intervals to prevent birds from colliding with the lines (APLIC 2006 and 2012; USFWS 2010). To the extent practicable, the use of guy wires shall be avoided because they pose a collision hazard for birds and bats. Necessary guy wires shall be clearly marked with bird flight diverters to reduce the probability of collision. Shield wires shall be marked with devices that have been scientifically tested and found to significantly reduce the potential for bird collisions. Gen-tie lines shall utilize non-specular conductors and non-reflective coatings on insulators.

3.2.4 Chapter 3.0, Environmental Setting, Impacts, and Mitigation Measures

No text changes have been made to Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*.

3.2.5 Section 3.1, Aesthetics

3.1-23 *In response to Comment A6-10, BMP-12 is revised to include reference to 2012 APLIC guidelines.*

BMP-12 Gen-tie lines. Gen-tie line support structures and other facility structures shall be designed in compliance with current standards and practices to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices). This design would also reduce the potential for increased predation of special-status species, such as the desert tortoise. Mechanisms to visually warn birds (permanent markers or bird flight diverters) shall be placed on gen-tie lines at regular intervals to prevent birds from colliding with the lines (APLIC 2006 and 2012; USFWS 2010). To the extent practicable, the use of guy wires shall be avoided because they pose a collision hazard for birds and bats. Necessary guy wires shall be clearly marked with bird flight diverters to reduce the probability of collision. Shield wires shall be marked with devices that have been scientifically tested and found to significantly reduce the potential for bird collisions. Gen-tie lines shall utilize non-specular conductors and non-reflective coatings on insulators.

3.2.6 Section 3.2, Agriculture and Forestry Resources

No text changes have been made to Section 3.2, *Agriculture and Forestry Resources.*

3.2.7 Section 3.3, Air Quality

No text changes have been made to Section 3.3, *Air Quality.*

3.2.8 Section 3.4, Biological Resources

3.4-3 *In response to comment O4-19, revisions to clarify that CRPR3 plants meet the CEQA definition of rare or endangered under CEQA Guidelines are made as follows.*

- Species that are identified by the California Rare Plant Ranking System (CRPR) as List 1A (presumed extirpated in California), 1B (rare, threatened, and endangered in California and elsewhere), or 2A (presumed extirpated in California, but more common elsewhere). CRPR List 1A, 1B, 2A and 2B species are considered special-status plant species if they fall within any of these categories as defined in the Native Plant Protection Act (NPPA), California Fish and Game Code (CFGC) Section 1901, or the CESA, CFGC Sections 2050 through 2098 (CNPS 2001, 2015). Further, CRPR 3 plants meet the CEQA

definition of rare or endangered under CEQA Guidelines Section 15125 (c) and/or Section 15380; or

Also in response to comment O4-19, revisions to Table 3.4-3 show the addition of Chocolate Mountains tiquilia (*Tiquilia canescens* var. *pulchella).*

Chocolate Mountains tiquilia (*Tiquilia canescens var. p ulchella)*	CRPR: Rank 3.2 State Rank: S3	Sometimes slopes, ridges, or washes. Sonoran desert scrub	Perennial shrub. Blooming Period February through May	Many herbarium specimens of T. canescens not determined to variety; annotations needed, yet difficult to distinguish between varieties in dried material; needs study. Many occurrences historical; need field surveys. Known only from the Sonoran Desert. Threatened by solar and wind energy development. Possibly threatened by military activities and vehicles.	Moderate

3.4-17 *In response to Comments O4-24, the following statement has been removed from Table 3.4-4, as follows.*

BUOW sign was observed in the north and northeast portion of the site in 2011; kit fox and ground squirrel burrows may be used by BUOW. Habitat marginally suitable for this species occurs within the gen-tie line corridors. In 2011, three active BUOW burrows were identified within the gen-tie study area (POWER, 2013a). ~~May be occasionally present as foragers but unlikely to be present as residents.~~

3.4-18 *In response to Comment O4-52, Table 3.4-4 has been revised to indicate the potential occurrence for gilded flicker and vermilion flycatcher is low as opposed to absent.*

Gilded flicker (*Colaptes chrysoides*)	CESA: Endangered, USFWS: Bird of Conservation Concern	Found in habitats with giant cactus, Joshua trees (*Yucca brevifolia*), and riparian groves in desert lowlands and foothills (AOU, 1995).	Within California, this species now is confined to a small area of Joshua tree woodland in the eastern Mojave Desert (Cima Dome).	~~Absent~~ Low
Vermilion flycatcher (*Pyrocephalus rubinus*)	CDFW: Species of Special Concern	Open farmlands, shrubby grasslands, and streamsides and small wooded ponds in desert habitat. Found in diverse areas near open water.	Some suitable habitat is present within the agricultural areas of the study area, but available surface water is mainly restricted to irrigation channels.	~~Absent~~ Low

3.4-21 *In response to Comments A6-5, O4-25,O4-41, and O4-84, a description of the Pacific Flyaway and discussion regarding the potential occurrence of federally listed avian species referenced by the commenter has been added.*

In response to Comment O4-92, a revision was made to the reference to the linkage/corridor identified by the DRECP.

Wildlife Corridors

The Project area could be used as a seasonal or non-seasonal movement corridor by various wildlife species. Wildlife movement activities typically fall into one of three movement categories: 1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); 2) seasonal migration; and 3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover).

Regionally, the Project site is located to the east of the Palen/McCoy Wilderness (McCoy Mountains), south of the Big Maria Mountains Wilderness and Rice Valley Wilderness, north of the Palo Verde Mountains Wilderness, and immediately west/northwest of the City of Blythe and the Colorado River within the NECO planning area of the California Desert Conservation Area (CDCA). The NECO planning area includes several desert wildlife management areas (DWMAs) for the desert tortoise and additional wildlife habitat management areas (WHMAs) that protect habitat that could support multiple species types. The study area does not overlap with any WHMAs or DWMAs (BLM and CDFW, 2002). Further, the nearest habitat linkage/wildlife movement corridor depicted in DRECP Figure III.7-27 follows McCoy Wash.

Because a large portion of the Project area is agricultural, wildlife movement between wilderness areas is not currently being impeded, nor is it being facilitated. Much of the Project area has a low cover of non-irrigated winter wheat. It is likely that wildlife presently use these lower-quality areas to pass between wilderness areas in the mountains and surrounding environment. The Project area as a whole does not provide much native forage or cover for wildlife, except in the areas where vegetative habitat is relatively intact or in the washes, particularly McCoy Wash, which may serve as funneling areas for wildlife that are passing through. The California Desert Connectivity Project, sponsored by Science and Collaboration for Connected Wildlands, provides land management agencies with information on optimal areas to maintain or restore ecological connectivity within California deserts. The closest planned linkage to the Project area is one between the Palen McCoy and Little Pichaco Wilderness Areas (South Coast Wildlands ND) (POWER, 2012). This planned linkage would be located southwest of the Project area.

There are few existing barriers to wildlife movement within the Project area. As shown in **Table 3.4-1**, approximately 80 percent the solar facility site supports production of non-irrigated wheat. There are several citrus groves within the Project area south of McCoy Wash, along with a ranch immediately north of the northern Project boundary and a communal complex immediately south of the southern Project boundary. The rest of the Project area is mostly zoned as agricultural.

The Project area is located within a major branch of Pacific Flyway, a north/south migration route for birds that travel between North and South America. In Southern

California, this migratory pathway spans a broad front, and migrating birds are not uniformly distributed across the landscape (Bloom 1985). Given the Project's location within the Pacific Flyway, a wide-variety of neotropical migrants would be expected to occur at least periodically within the Project area. While suitable breeding habitat may not be present on site for certain species, individuals would be expected to pass through the Project area as "flyovers." Such flyover species include federally listed species, such as the southwestern willow flycatcher (*Empidonax traillii extimus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), and Yuma clapper (Ridgway's) rail (*Rallus longirostris (obsoletus) yumanensis*). The number of potential flyover species for which suitable breeding and/or foraging habitat is absent from the Project site is extensive and includes other special-status species not listed in Table 3.4-4.

3.4-29 *In response to Comment A1-2, BMP-3 is revised to state that the Fugitive Dust Abatement Plan shall be submitted to the Mojave Air Quality Management District.*

Fugitive Dust Abatement Plan. As required by the Mojave Desert Air Quality Management District Rule 403, a Fugitive Dust Abatement Plan would be prepared to address fugitive dust emissions during Project construction, operation, maintenance, and decommissioning. The plan would include measures to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land, and solid waste disposal operations, and would take every reasonable precaution to prevent visible particulate matter from being deposited upon public roadways as a direct result of operations. During construction, all unpaved roads, disturbed areas (e.g., areas of scraping, excavation, backfilling, grading, and compacting), and loose materials generated during Project construction activities would be watered as frequently as necessary to minimize fugitive dust generation. However, the amount of water will be minimized each time to prevent temporarily ponding water that may occur as a result of the fugitive dust plan. In water-deprived locations, water spraying would be limited to active disturbance areas only, and non-water-based dust control measures would be implemented in areas with intermittent use or use that is not heavy, such as stockpiles or access roads. The dust suppression measures would consider the sensitivity of wildlife to the windborne dispersal of fugitive dust containing dust suppressants and the potential impact on future reclamation. The Fugitive Dust Abatement Plan shall be submitted for review to the Mojave Air Quality Management District prior to earth-moving activity.

3.4-31 *In response to Comment A6-10, BMP-12 is revised to include reference to 2012 APLIC guidelines.*

BMP-12 Gen-tie lines. Gen-tie line support structures and other facility structures shall be designed in compliance with current standards and practices to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices). This design would also reduce the potential for increased predation of special-status species, such as the desert tortoise. Mechanisms to visually warn birds (permanent

markers or bird flight diverters) shall be placed on gen-tie lines at regular intervals to prevent birds from colliding with the lines (APLIC 2006 and 2012; USFWS 2010). To the extent practicable, the use of guy wires shall be avoided because they pose a collision hazard for birds and bats. Necessary guy wires shall be clearly marked with bird flight diverters to reduce the probability of collision. Shield wires shall be marked with devices that have been scientifically tested and found to significantly reduce the potential for bird collisions. Gen-tie lines shall utilize non-specular conductors and non-reflective coatings on insulators

3.4-37 *In response to Comment A6-14, the isolation of the BLM parcel within the Project footprint is discussed as an indirect impact to desert tortoise.*

Desert Tortoise

Construction of the proposed Project would result in the permanent loss of potential desert tortoise habitat. However, the majority of the solar facility site (i.e., about 90 percent) is characterized as agricultural land (i.e., non-irrigated wheat and citrus orchard), which does not present suitable habitat for the species. Habitat quality along the transmission line corridor is higher when compared to the solar facility site but is characterized as marginal desert tortoise habitat, generally supporting soils that are too sandy for tortoise burrows and supporting sparse vegetative forage. Thus, the desert tortoise habitat that would be affected by the proposed Project is of limited quality and extent. Because tortoises may use desert washes as habitat, excessive indirect disturbance to the washes that traverse the solar facility site as a result of construction would degrade and possibly reduce the quality of desert tortoise habitat in these areas. In addition, construction of the Project, including installation of desert tortoise exclusion fencing around the solar facility site, would isolate the northerly BLM parcel within but excluded from the Project Area. Isolation of these parcels would eliminate its potential to support desert tortoises. This BLM parcel totals 38.4 acres and currently supports native desert scrub habitat. This parcel would remain isolated for the life of the Project, representing a potential long-term indirect impact on the local desert tortoise population. It should be noted that the Project would not isolate the southerly BLM parcel within but excluded from the Project area. This southerly parcel totals approximately 83.2 acres, supports native desert scrub habitat, and would remain connected to native habitats to the east associated with McCoy wash. Further, during construction, increased predation could occur from ravens, coyotes, and feral dogs, which are attracted to human activity to scavenge for food. Construction activities that result in desert tortoise mortality or the degradation of occupied desert tortoise habitat would be considered a take under FESA and CESA.

While there is potential for desert tortoise to occur on the solar facility site, the likelihood of occurrence is considered low given that the majority of the solar facility site is not suitable desert tortoise habitat. While the species does have moderate potential to occur within the marginal habitat present along the gen-tie corridor, the USFWS previously issued a memoranda for the BMSP proposed gen-tie line, which would be utilized by the Palo Verde Mesa gen-tie alignment, stating that construction

of the proposed gen-tie line would "not likely to incidentally take or otherwise adversely affect desert tortoise" (USFWS, 2012). This determination was based on known species distribution and specific conservation measures that would be employed to protect tortoises during construction.

Impacts to desert tortoise resulting from construction of the proposed Project can be avoided to some extent by the implementation of BMPs. BMP-7 (Trash Abatement Plan) would minimize attraction of opportunistic predators of the desert tortoise (e.g., ravens and feral dogs) by controlling litter onsite. In addition, BMP-12 (Gen-tie lines) would minimize increased raven predation pressures on desert tortoise with design standards to discourage perching. BMP-10 (Integrated Weed Management Plan) would minimize the introduction and proliferation of non-native invasive plant species that commonly accompanies construction projects and which can degrade desert tortoise habitat. BMP-14 (Travel and Traffic) and BMP-19 (Plants and Wildlife) would reduce potential direct impacts to individuals by limiting vehicular traffic to existing or designated routes and work areas, minimizing the potential for individuals to become trapped in open trenches, and prohibiting the handling or harassment of individuals.

The potential effect on habitat is of sufficient quality and quantity to potentially adversely affect the species even after implementation of BMPs. Thus, impacts before implementation of mitigation measures would be potentially significant. Implementation of Mitigation Measure BIO-1 and BIO-5 would reduce the potential direct and indirect impacts to desert tortoise during construction to levels less than significant. Mitigation Measure BIO-1 specifically requires bi-weekly monitoring by a Lead Biologist to ensure sensitive biological resources such as desert tortoise are avoided. Mitigation Measure BIO-5 specifically requires implementation of desert tortoise conservation measures prescribed by USFWS (2012) for the BMSP to avoid take of the species. Among other requirements, these conservation measures require installation of desert tortoise exclusion fencing, pre-construction clearance surveys, construction monitoring by a "qualified biologist", and a desert tortoise education program. Mitigation Measure BIO-5 also includes refuse disposal requirements to reduce attraction of ravens, thereby reducing the potential predation-related direct and indirect impacts to desert tortoise. Take of the species would not be authorized without authorization from USFWS and CDFW. Thus, any tortoises that are observed on or near access roads will be allowed to move out of the way on their own, and at no point will tortoises be handled without advance permission from USFWS and CDFW, and then only by approved biologists.

3.4-38 *In response to Comments A6-16, O4-32 and O4-101, potential impacts to suitable Mojave fringe-toed lizard habitat have been quantified. In addition, text is added to Mitigation Measure BIO-8 to clarify approval requirements for compensatory mitigation.*

Mojave Fringe-toed Lizard

Suitable Mojave fringe-toed lizard habitat is located throughout the gen-tie line corridor and potential habitat was detected on approximately three percent of the main Project area (creosote bush scrub habitat). The species was found in high abundance throughout the gen-tie line portion of the Project and detected during spring surveys conducted for the BMSP (POWER, 2012b). The Project would remove a portion of the available habitat on the gen-tie line; suitable habitat within the solar facility portion of the Project area would be avoided. In total, up to approximately 59.5 acres of suitable Mojave fringe-toed lizard habitat would be directly impacted with construction of the gen-tie line. In addition to habitat loss, construction of the Project may result in temporary displacement of individuals out of the construction area, crushing by equipment or crew, or increased susceptibility to predation during construction. Because eggs are laid in the sand, construction may destroy eggs that are within the study area during the breeding season.

Long-term predation vulnerability may occur due to vegetation loss, which decreases dispersal and refuge opportunities from predators. In addition, increased perching opportunities resulting from construction of the proposed gen-tie line increases this species' predation vulnerability. Compaction of sandy areas due to construction and vehicular traffic may degrade habitat suitability for this fossorial species. Because this species is mostly herbivorous as an adult, proliferation of non-native plant species that out-compete native plants could have negative impacts on the Mojave fringe-toed lizard. The loss of known and potential habitat and potential direct and indirect effects to Mojave fringe-toed lizards on the Project site and gen-tie line is potentially significant.

Impacts to Mojave fringe-toed lizard resulting from construction of the proposed Project can be avoided to some extent by the implementation of BMPs. BMP-7 (Trash Abatement Plan) would minimize attraction of opportunistic predators by controlling litter onsite. In addition, BMP-12 (Gen-tie lines) would minimize increased predation pressures on the species with design standards to discourage avian perching. BMP-10 (Integrated Weed Management Plan) would minimize the introduction and proliferation of non-native invasive plant species that commonly accompanies construction projects and which can degrade Mojave fringed-toed lizard habitat. BMP-14 (Travel and Traffic) and BMP-19 (Plants and Wildlife) would reduce potential direct impacts to individuals by limiting vehicular traffic to existing or designated routes and work areas, minimizing the potential for individuals to become trapped in open trenches, and prohibiting the handling or harassment of individuals. However, impacts to the Mojave fringe-toed lizard before implementation of mitigation measures would remain potentially significant. The implementation of Mitigation Measure BIO-8 would reduce the potential direct and indirect impacts to the Mojave fringe-toed lizard during construction of the proposed gen-tie line to less than significant levels by requiring habitat-based compensatory mitigation at a 3:1 ratio for the permanent loss of suitable habitat. Habitat-based

compensation at a 3:1 ratio ensures that the loss of habitat is sufficiently offset by the long-term conservation of suitable habitat elsewhere.

BIO-8 To mitigate for permanent habitat loss and direct impacts to Mojave fringe-toed lizards the Applicant shall provide compensatory mitigation at a 3:1 ratio, which may include compensation lands purchased in fee or in easement in whole or in part, for impacts to stabilized or partially stabilized desert dune habitat (i.e., dune, sand ramp, or fine-sandy wash habitat). Suitable Mojave fringe-toed lizard habitat is located throughout the gen-tie line corridor and potential habitat was detected on approximately three percent of the Project area (creosote bush scrub habitat). If compensation lands are acquired, the Applicant shall provide funding for the acquisition in fee title or in easement, initial habitat improvements and long-term maintenance and management of the compensation lands. A letter agreeing to dedicate the existing compensation lands must be approved by BLM, USFWS, CDFW, and the County prior to ground disturbance. Lands used for compensation must be of equal value or better than the land impacted. Ownership of compensation lands will be transferred prior to any surface disturbance to one of the following: the County, or an entity acceptable to the agencies that can effectively manage listed species and their habitats.

3.4-44 *In response to Comment A6-11, additional details regarding Yuma (Rideway's) clapper rail have been added to the analysis of potential Project impacts. Other revisions are included to the analysis of potential avian impacts to clarify conclusions.*

Avian Impacts

Direct and indirect impacts to avian species may occur during Project construction, operation, and decommissioning through collisions with Project facilities and equipment including transmission wires, fencing, array structures, and heavy equipment. Risk factors that are typically associated with avian collisions with man-made structures include size of facility, height of structures, and specific attributes of structures (guy wires and lighting/light attraction), as well as siting in high risk areas, frequency of inclement weather, type of development and species or taxa at potential risk. The role of these risk factors has been outlined in the USFWS draft guidelines for wind turbines (USFWS 2012) and communication towers (USFWS 2013), as well as by various publications in the peer reviewed literature (Gehring et al. 2009, 2011; Kerlinger et al. 2010; Kagen et al. 2014). ~~The latter references quantify three of the risk factors.~~ Such collisions can result in injury or mortality, including, in the case of power lines, from electrocution. This is a potentially significant impact of the Project.

The numbers or species of birds that may be affected by collisions with solar panels or other infrastructure cannot be known with certainty, though ongoing monitoring data from solar projects within the state suggest that a variety of birds may be

susceptible to collisions with panels (Genesis Solar, LLC 2013a, 2013b, and 2013c; Ironwood Consulting, Inc. 2012, 2013a, 2013b). Solar panels are both reflective and have a strong polarization signature – elements thought to mimic water or suitable related habitat. As a result, some have theorized that solar panels can attract species that mistake the panels for bodies of water, potentially leading to increased collision-related and other risks. For this reason, the phenomenon sometimes colloquially is referred to as the "fake lake effect." Some postulate that this phenomenon could be attracting birds to solar project sites thereby exposing the birds to greater risk of impacts such as potential collision with Project infrastructure, the possibility of being stranded within site fencing once they land, or other forms of distress. It may be that, when viewed from a distance or an elevated position, solar panel arrays appear to be a water body to migrating water birds during daylight hours or on nights when the moon is full.

Species that may be subject to impacts associated with the fake lake effect include a wide-variety of neotropical migrants that travel along the Pacific Flyway. As discussed in Section 3.4.1, *Environmental Setting*, species expected to migrate through the Project area include federally listed species such as the Yuma clapper (Ridgeway's) rail, southwestern willow flycatcher, and western yellow-billed cuckoo. In recent years, mortalities of Yuma clapper (Ridgeway's) rail have been documented at other solar PV projects in the region (one at the Desert Sunlight project and one at the Solar Gen 2 project) (USFWS 2016). Thus, while suitable nesting and foraging habitat may not be present for certain neotropical migrants (Yuma clapper [Ridgeway's] rail included), any species migrating along the Pacific Flyway may be subject to potential impacts associated with fake lake effect as they travel through the region. As noted by USFWS (2016), evidence suggests neotropical migratory songbirds and water-associated species (e.g., waterfowl, loons, grebes, rails) may be at most risk for fake lake effect impacts.

The causes of avian injuries and fatalities at commercial-scale solar projects are being evaluated by the USFWS, CDFW, and others. Data collection and avian risk studies are currently underway at several PV solar array facilities in desert regions, including the Desert Sunlight Solar Project in Riverside County (Desert Sunlight). Standardized monitoring and study results have not been completed. Uncertainty remains because: 1) the mortality data has been collected over a relatively short period of time and still is being evaluated; 2) in most cases, the cause of death is not clear; 3) mortality information from one project location is not necessarily indicative of the mortality that might be found at another project location, and 4) avian surveys are time consuming and does not necessarily account for all affected birds. The primary study on bird strikes at solar facilities (McCrary et al., 1986) concluded that siting was an important consideration in reducing avian impacts; and that caution should be taken when siting solar facilities near open water or agricultural fields, or near population of rare, threatened, or endangered birds.

While data collection at some PV solar array-type facilities has documented individual instances of avian mortality resulting from collisions, the best available scientific information to date does not suggest a significant increased risk of avian mortality occurring at facilities such as the Project. Currently available data indicates relatively low mortality due to direct impacts with the types of facilities included in the Project, particularly PV panels. For example, at Desert Sunlight, current data suggests that avian mortality was associated with direct contact with panels, and non-panel facilities that are not unique to solar facilities such as fences, Project buildings, transmission lines, and unknown or possible background causes (Kagen et al., 2014). Hence, it is likely that a low level of avian impacts can be anticipated at the proposed facility, whether from PV panels, fences, buildings, or other infrastructure associated with the Project.

The potential for ~~a significant impact to result from~~ avian collisions at the Project site ~~is unlikely, and collision risk is not expected~~ to adversely affect avian populations is low. The factors that have been empirically demonstrated to result in elevated collision risk at various types of facilities and structures are not present at the Project site. Instead, the Project includes mostly low-height PV arrays with only a few structures exceeding the height of PV panels, and the Project would incorporate minimal lighting and adhere to best management practices in an effort to avoid attracting avian species. The Project is also proposed in an area that does not experience inclement weather patterns that, when combined with certain types of lighting regimes, are theorized to confuse or disorient avian species. Thus, while some individual collisions between birds and Project facilities and equipment can be expected, the risk of significant impact to avian populations is minimal ~~and therefore less than significant~~. Nevertheless, Mitigation Measure BIO-7 includes development and implementation of a BBCS to mitigate potentially significant impacts to avian species resulting from collisions with Project facilities and equipment including transmission wires, fencing, array structures, and heavy equipment.

~~The anticipated low level of avian mortality associated with the construction and operation of the Project is expected to result in a less than significant impact to avian species. Based on available information, significant impacts to migratory birds are not expected, and no mitigation is recommended.~~

3.4-52 *In response to Comment A6-8, the cumulative discussion for avian species has been revised to more clearly discuss cumulative effects of bird fatalities at utility-scale solar facilities in the region.*

Avian Impacts

Migratory birds are expected to occur throughout the study area during construction, operation, and maintenance of the PVMSP. Areas cleared for solar fields are expected to have less activity over time than those that remain relatively vegetated (e.g., the gen-tie line corridor). Construction of the proposed Project or any of the cumulative projects could potentially result in habitat loss and degradation,

displacement, disruption or failure of nesting efforts, decreased foraging activities, increased predation, or mortality of migratory birds. For example the proposed gen-tie line (like existing and other proposed or reasonably foreseeable future power lines) has the potential to result in avian collisions or electrocutions, and construction of the solar arrays (like existing and other proposed development projects) would clear areas for construction that may contain habitat and introduce a potential attractive nuisance that may result in morality to avian species, particularly neotropical migratory songbirds and water-associated birds (e.g., waterfowl, loons, grebes, rails). The Project would create the impacts noted above, but would mitigate its impacts to biological resources to less than significant levels. There are several transmission line, wind, or solar energy projects within the PVMSP vicinity. The surrounding projects (Table 3-~~1~~2) as implemented would presumably be considered cumulatively significant to migratory birds. The Devers-Palo Verde 2 Transmission Line Project is expected to have the potential to affect and displace raptors and BUOW, as well as the nests of all migratory birds. The Blythe Solar Power Project proposed removal Sonoran creosote bush scrub and desert dry wash scrub that could be used as foraging or nesting habitat by migratory birds, as well as to disturb or cause to fail nesting efforts, increase predation and risks of mortality, and subject birds to hazardous chemicals from project-related evaporation ponds. The McCoy Solar Project may also result in nest abandonment, increased risk of mortality, loss of suitable habitat, and disturbance from night lighting during nighttime construction operations. The surrounding solar projects all contribute to the attractive nuisance referred to as the fake lake effect, whereby birds mistake solar facilities for bodies of water and become susceptible to potential collision with infrastructure, the possibility of being stranded within site fencing once they land, or other forms of distress. Systematic bird fatality monitoring data from solar projects along the Interstate-10 corridor (e.g., Blythe Solar Power Project, Desert Sunlight Project, McCoy Solar Energy Project, and Genesis Solar Energy Project) suggest these projects pose a potentially significant risk to neotropical migratory songbirds and water-associated birds, likely given the large number of birds migrating through the region (USFWS 2016).

When added to the cumulative scenario described above, the effects of the proposed Project would contribute incrementally to the cumulative avian impacts with respect to habitat loss and degradation, displacement, disruption or failure of nesting efforts, decreased foraging activities, increased predation, and mortality of migratory birds. However, the proposed Project consists of 85.1 percent ruderal or agricultural lands and otherwise non-natural lands and 19.3 percent native habitat, while the other projects affect much more substantial areas of native habitat. (Refer to “Wildlife Habitat/Vegetation Communities” above for a vegetation comparison with nearby solar projects.) Therefore, the residual impacts of the Project to avian habitat that remain after mitigation measures are incorporated would be minor and would not materially affect the nature, scope or extent of any significant cumulative impact. The potential impacts associated with the fake lake effect would be reduced to a level

below significance with implementation of a BBCS. The BBCS requires establishment of accepted processes to monitor and mitigate bird and bat fatalities, as well as implementation of an adaptive management framework as new data become available. The BBCS would be a "living document," with USFWS and CDFW providing recommendations for addressing avian mortality as the risks associated with the Project and solar facilities in general become better understood. For ~~this~~ these reasons, the Project's incremental contribution to cumulative effects would not be cumulatively considerable.

3.4-53 *In response to Comment O4-45, the cumulative discussion for Mojave fringe-toed lizard has been revised to clarify that residual impacts of the Project that remain after implementation of Mitigation Measure BIO-8 are expected to be minor and would not materially affect the nature, scope or extent of any significant cumulative impact.*

Mojave Fringe-toed Lizard

This non-listed special-status species is known to occur along the gen-tie line corridors of the PVMSP. Cumulative effects are expected for this species from the combined influence of the projects listed in Table 3-1. Because these projects will require ground to be cleared, there is potentially a large amount of habitat to be removed or degraded by construction of the various projects. Loss of individuals or habitat in these areas would exert a cumulative effect on Mojave fringe-toed lizard by reducing the local population size or removing suitable habitat. Long-term predation vulnerability may occur due to vegetation loss, which decreases dispersal and refuge opportunities from predators. In addition, increased perching opportunities resulting from construction of the all associated transmission lines also increases this species' predation vulnerability. The intensity of the cumulative effect is increased due to the fact that these projects will be ongoing for several years, lost or disturbed habitat is likely to take years to recover, and unless designed with successful perch discouragers, transmission lines would provide permanent perching opportunities. Accordingly, the cumulative effect from all these projects combined is potentially significant.

When added to the cumulative scenario described above, the effects of the proposed Project would contribute incrementally to the cumulative impacts to Mojave fringe-toed lizard. However, the residual impacts of the Project that remain after implementation of Mitigation Measure BIO-8 are expected to be minor. The contribution would not be cumulatively considerable though, because it would not materially affect the scope, nature or extent of the cumulative impact.

3.4-59 *In response to Comments A5-4 and A5-6, Mitigation Measure BIO-5 has been revised to emphasize authorization from USFWS and CDFW is required for handling of desert tortoise.*

In response to comment A5-4, Mitigation Measure BIO-5 has been revised to clarify that the qualified biologist will require CDFW approval, and that CDFW will be contacted if a tortoise is encountered.

In response to comment A5-5, Mitigation Measure BIO-5 has been revised to confirm that desert tortoise exclusion fencing will remain in place for the life of the Project.

In response to comment A6-13, Mitigation Measure BIO-5 has been revised based on the potential that formal section 7 consultation may be initiated for the gen-tie line alignment.

BIO-5 Desert Tortoise Protection

(1) **Qualified Biologist:** In the following measures, a "qualified biologist" is defined as a person with appropriate education, training, and experience to conduct tortoise surveys, monitor Project activities, provide worker education programs, and supervise or perform other implementing actions. The person must demonstrate an acceptable knowledge of tortoise biology, desert tortoise impact minimization techniques, habitat requirements, sign identification techniques, and survey procedures. Evidence of such knowledge may include work as a compliance monitor on a project in desert tortoise habitat, work on desert tortoise trend plot or transect surveys, conducting surveys for desert tortoise, or other research or field work on desert tortoise. Attendance at a training course endorsed by the agencies (e.g., Desert Tortoise Council tortoise training workshop) is a supporting qualification. All qualified biologists must be approved by the USFWS, CDFW, and the Riverside Environmental Programs Department (EPD) prior to starting any work on site. The names and qualifications of proposed qualified biologists shall be provided to USFWS, CDFW, and EPD for approval at least 30 days prior to the biologists implementing desert tortoise protection measures described herein.

A qualified biologist will be on-site during all construction. The qualified biologist shall conduct a pre-construction clearance survey of the Project area, watch for tortoises wandering into the construction areas, check under vehicles, and examine excavations and other potential pitfalls for entrapped animals. The qualified biologist will be responsible for overseeing compliance with desert tortoise protective measures and for coordination with the Field Contact Representative (FCR) (described below). The qualified biologist shall have the authority to halt all Project activities that are in violation of these measures or that may result in the take of a tortoise. The qualified biologist shall have a copy of the conservation measures prescribed by USFWS for the gen-tie line through the section 7 consultation process ~~previously issued informal consultation letter issued for the Blythe Solar Project (FWS-ERIV-12B0299-12I0497) for construction of the shared gen-tie line when work is being conducted on the site~~. The qualified biologist is not authorized to handle or relocate desert tortoises as part of this Project without proper authorization from USFWS and CDFW.

(2) **Preconstruction Clearance Survey:** The qualified biologist shall conduct a preconstruction clearance survey of the Project area. Transects for clearance surveys will be spaced 15 feet apart. Clearance will be considered complete after two successive surveys have been conducted without finding any desert tortoises. Clearance surveys must be conducted during the active season for desert tortoises (April through May or September through October). The qualified biologist is not authorized to handle or relocate desert tortoises a part of this Project without proper authorization from USFWS and CDFW. If a tortoise or tortoise burrow is located during clearance surveys, the USFWS and CDFW will be contacted for direction on how to proceed.

(3) **Field Contact Representative:** The Project Applicant will designate a FCR who will be responsible for overseeing compliance with desert tortoise protective measures and for coordination with the USFWS and CDFW. The FCR will have the authority to halt all Project activities that are not in compliance with the conservation measures prescribed by USFWS for the gen-tie line through the section 7 consultation process ~~measures in the previously issued informal consultation letter (FWS-ERIV-12B0299-12I0497)~~. The FCR will have a copy of these conservation measures ~~this letter~~ when work is being conducted on the site. The FCR may be an agent for the company, the site manager, any other Project employee, a biological monitor, or other contracted biologist. ~~The~~ Neither the FCR nor any other project proponent may bar or limit any communications between any Natural Resource Agency or The County of Riverside Environmental Programs Division and any project biologist, biological monitor or contracted biologist. Any incident occurring during the Project activities that is considered by the qualified biologist to be in non-compliance with these measures will be documented immediately by the qualified biologist. The FCR will ensure that appropriate corrective action is taken. Corrective actions will be documented by the qualified biologist. The following incidents will require immediate cessation of the Project activities causing the incident: (1) location of a desert tortoise within the exclusion fencing; (2) imminent threat of injury or death to a desert tortoise; (3) unauthorized handling of a desert tortoise, regardless of intent; (4) operation of construction equipment or vehicles outside a project area cleared of desert tortoise, except on designated roads; and (5) conducting any construction activity without a biological monitor where one is required.

(4) **Worker Training:** Prior to the onset of construction activities, a desert tortoise education program will be presented by the FCR or qualified biologist to all personnel who will be present on work areas within the Project area. Following the onset of construction, any new employee will be required to formally complete the tortoise education program prior to working on-site. At a minimum, the tortoise education program will cover the following topics:

- A detailed description of the desert tortoise, including color photographs;
- The distribution and general behavior of the desert tortoise;
- Sensitivity of the species to human activities;
- The protection the desert tortoise receives under the FESA and CESA Act, including prohibitions and penalties incurred for violation of the FESA and CESA Act;
- The protective measures being implemented to conserve the desert tortoise during construction activities; and
- Procedures and a point of contact if a desert tortoise is observed on-site.

(5) **Site Fencing:** Desert tortoise exclusion fencing will be installed around the Project area and will remain in place for the life of the Project. The fence will adhere to USFWS design guidelines, available at: http://www.fws.gov/venturaispecies _information/protocols guidelines/docs/dtlDT_ Exclusion-Fence_2005.pdf. The qualified biologist will conduct a clearance survey before the tortoise fence is enclosed to ensure no tortoises are on the Project area. If a tortoise is found, all construction activity will halt and the USFWS and CDFW contacted for direction on how to proceed. Once installed, exclusion fencing will be inspected at least monthly and following all rain events, and corrective action taken if needed to maintain the integrity of the tortoise barrier. Fencing around the Project area will include a desert tortoise exclusion gate. This gate will remain closed at all times, except when vehicles are entering or leaving the Project area. If it is deemed necessary to leave the gate open for extended periods of time (e.g., during high traffic periods), the gate may be left open as long as a qualified biologist is present to monitor for tortoise activity in the vicinity. Sites with potential hazards to desert tortoise (e.g., auger holes, steep-sided depressions) that are outside of the desert tortoise exclusion fencing will be fenced by installing exclusionary fencing, or not left unfilled overnight.

(6) **Refuse Disposal:** All trash and food items shall be promptly contained within closed, raven-proof containers. These will be regularly removed from the Project area to reduce the attractiveness of the area to common ravens and other desert predators. The FCR will be responsible for ensuring that trash is removed regularly from the site such that containers do not overflow, and that the trash containers are kept securely closed when not in use.

(7) **Tortoises under vehicles:** The underneath of vehicles parked outside of desert tortoise exclusion fencing will be inspected immediately prior to the vehicle being moved. If a tortoise is found beneath a vehicle, the vehicle will not be moved until the desert tortoise leaves of its own accord. ~~(8) Tortoises on roads: If~~

~~a tortoise is observed on or near the road accessing the Project area, vehicular traffic will stop and the tortoise will be allowed to move off the road on its own.~~

(8) **Tortoise Observations:** No handling of desert tortoise or burrow excavation is allowed as part of the proposed action, unless authorized by USFWS and CDFW. If a tortoise is observed on or near the road accessing the Project area, vehicular traffic will stop and the tortoise will be allowed to move off the road on its own. If a tortoise is observed outside of exclusion fencing, construction will stop and the tortoise shall be allowed to move out of the area on its own. If a tortoise or tortoise burrow is observed within the exclusion fencing, all construction will stop, and the USFWS and CDFW contacted for direction on how to proceed.

The following activities are not authorized and will require immediate cessation of the construction activities causing the incident: (1) location of a desert tortoise within the exclusion fencing; (2) imminent threat of injury or death to a desert tortoise; (3) unauthorized handling of a desert tortoise, regardless of intent; (4) operation of construction equipment or vehicles outside a project area cleared of desert tortoise, except on designated roads; and (5) conducting any construction activity without a biological monitor where one is required.

(9) **Dead or Injured Specimens:** Upon locating a dead or injured tortoise, the Applicant or agent is to immediately notify the Palm Springs Fish and Wildlife Office by telephone within three days of the finding. Written notification must be made within five days of the finding, both to the appropriate USFWS field office and to the USFWS' Division of Law Enforcement. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, cause of death, if known, and other pertinent information.

3.4-62 *In response to Comments A5-8 and O4-33, Mitigation Measure BIO-6 has been revised to clarify consistency with CDFW 2012 guidelines that take avoidance surveys will be completed no less than 14 days prior to site grading and that time lapses between project phases/activities could trigger the need for subsequent take avoidance surveys.*

In response to Comment A5-10, Mitigation Measure BIO-6 has been revised to clarify that use of down-hole cameras will occur only after one-way doors and visual monitoring have taken place.

BIO-6 **Burrowing Owl Protection:** A Draft Burrowing Owl Monitoring and Mitigation Plan (Plan) has been developed to describe monitoring, reporting, and management of the burrowing owl during the construction, O&M, and decommissioning of the proposed Project, as required by CDFW and County of Riverside. It has been prepared following the 2012 CDFW Staff Report on Burrowing Owl Mitigation

(CDFW, 2012), and describes a multi-tiered approach to prevent or reduce impacts during construction and operation of the Project. Below is a general summary of the Plan requirements:

- Pre-construction surveys will be conducted throughout the Project area and laydown areas for burrowing owls, possible burrows, and sign of owls (e.g., pellets, feathers, white wash) no less than 14~~30~~ days prior to ~~construction~~, site grading;
- Time lapses between project phases/activities could trigger the need for subsequent take avoidance surveys, as stated in Appendix D of the CDFW 2012 survey guidelines. The approved Biologist will determine when subsequent surveys are needed;
- Should any of the pre-construction surveys yield positive results for the presence of burrowing owl or active burrows within the Project area, the approved Biologist will coordinate with the Construction Contractor to implement avoidance and set-back distances. Disturbance of owls or occupied burrows during the breeding season (February 1 through August 31) will not be permitted and, to minimize disturbance, use of down-hole cameras to inspect burrows will be used only after one-way doors and visual monitoring have taken place;
- If suitable burrows are observed and documented during the preconstruction surveys within the Project footprint and determined to be inactive, these burrows will be excavated and filled in under the supervision of the approved Biologist(s) prior to clearing and grading;
- To compensate for impacts to burrowing owls in activity areas on the northern part of the Project, 146 acres of habitat have been identified adjacent to the Project area. A letter agreeing to dedicate the existing compensation lands must be approved by CDFW and the County prior to ground disturbance. Land used for compensation must be of equal value or better than the land impacted. Ownership of compensation lands will be transferred prior to any surface disturbance to one of the following: the County, or an entity acceptable to the County or CDFW that can effectively manage listed species and their habitats.
- The Plan provides detailed methods and guidance for passive relocation of burrowing owls occurring within the Project disturbance area; and
- The Plan describes monitoring and management of the passive relocation, including a three-year monitoring program.

3.4-63 *In response to Comments A5-15, O4-34, and O4-37, Mitigation Measure BIO-7 has been revised to define the general avian breeding season as January 1 through September 30.*

In response to Comments A5-17 and A6-9, Mitigation Measure BIO-7 has been revised to clarify that the BBCS will be based on recommendations from CDFW.

BIO-7 If Project construction activities cannot occur completely outside the bird breeding season, then pre-construction surveys for active nests shall be conducted by a qualified biologist within 1,200 feet of the construction zone no more than seven days before the initiation of construction that would occur between ~~February~~ January 1 and ~~August~~ September ~~15~~30. The qualified biologist will hold a current Memorandum of Understanding with the County of Riverside to conduct nesting bird surveys. If breeding birds with active nests are found, a biological monitor shall establish a species-specific buffer around the nests for construction activities, 250 feet or 1,200 feet for raptor nests. Extent of protection will be based on proposed management activities, human activities existing at the onset of nesting initiation, species, topography, vegetative cover, and other factors. When appropriate, a no-disturbance buffer around active nest sites will be required from nest-site selection to fledging. If for any reason a bird nest must be removed during the nesting season, written documentation providing concurrence from the USFWS and CDFW authorizing the nest relocation shall be obtained. All nest removals shall occur after the nest is demonstrated to be inactive by a qualified biologist and have been shown to not result in take as defined by the Migratory Bird Treaty Act (MBTA). A Bird and Bat Conservation Strategy (BBCS) will be developed for this Project and include additional protections for avian species. The BBCS would be based on specific recommendations from the USFWS and CDFW, and would provide:

- a statement of the Applicant's understanding of the importance of bird and bat safety and management's commitment to remain in compliance with relevant laws;
- documentation of conservation measures PVMSP would implement through design and operations to avoid and reduce bird and bat fatalities at both solar generation facilities as well as the associated gen-tie line, including consideration of bird height and wingspan requirements and use of flight diverters, perch and nest discouraging material, etc.;
- consistent, practical and up-to-date direction to PVMSP staff on how to avoid, reduce, and monitor bird and bat fatalities;

- establishment of accepted processes to monitor and mitigate bird and bat fatalities; establishment of accepted fatality thresholds that, if surpassed, would trigger adaptive changes to management and mitigation management;
- an adaptive management framework to be applied, if thresholds are surpassed; and
- A three year post-construction monitoring study.

The BBCS will be submitted to USFWS and CDFW for review at least 60 days prior to construction. The BBCS would be considered a "living document" that articulates the Applicant's commitment to develop and implement a program to increase avian and bat safety and reduce risk. As progress is made through the program or challenges are encountered, the BBCS may be reviewed, modified, and updated. The initial goals of this BBCS are to:

- provide a framework to facilitate compliance with federal law protecting avian species and a means to document compliance for regulators and the interested public;
- allow the Agent to manage risk to protected bird and bat species in an organized and cost-effective manner;
- establish a mechanism for communication between PVMSP managers and natural resource regulators (primarily USFWS and CDFW);
- foster a sense of stewardship with PVMSP owners, managers, and field engineers; and
- articulate and cultivate a culture of wildlife awareness (specifically birds and bats) and the importance of their protection.

3.4-64 *In response to comment A5-18, Mitigation Measure BIO-9 has been revised to clarify that a formal jurisdictional delineation would be required prior to construction to verify avoidance of regulated wetlands/waters.*

BIO-9 Impacts to areas under jurisdiction of the USACE, Regional Water Quality Control Board (RWQCB), and CDFW shall be avoided as necessary to reduce impacts to less than significant levels. A formal jurisdictional delineation of regulated waters and wetlands shall be conducted on the Project site prior to construction to verify avoidance of such resources. Where avoidance of jurisdictional areas is not necessary to reduce impacts to less than significant levels, including emergency repairs, and access/spur roads within the ephemeral channel, the applicant shall provide the necessary mitigation required as part of wetland permitting. This will include creation, restoration, and/or preservation of suitable jurisdictional habitat along with adequate buffers

to protect the function and values of jurisdictional area mitigation. The location(s) of the mitigation will be determined in consultation with the Applicant and the responsible agency(s) as part of the permitting process.

3.4-64 *In response to Comments A5-14 and A6-14, Mitigation Measure BIO-10 has been revised to provide a 90-day review period for CDFW, USFWS, and the County.*

In response to comment A6-13, Mitigation Measure BIO-10 has been revised based on the potential that formal section 7 consultation may be initiated for the gen-tie line alignment.

BIO-10 A Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) will be developed to summarize all of the various biological mitigation, monitoring, and compliance measures and include measures from the various biological plans and permits developed for PVMSP. The BRMIMP shall include the following:

1. All biological resources mitigation, monitoring, and compliance measures outlined in this EIR;
2. All biological resource mitigation, monitoring and compliance measures required in federal agency terms and conditions, such as conservation measures prescribed by USFWS for the gen-tie line through the section 7 consultation process ~~those provided in the USFWS concurrence letter that the Project is "not likely to incidentally take or otherwise adversely affect" federally listed species (FWS-ERIV-12B0299-12I0497)~~;
3. All biological resource mitigation, monitoring and compliance measures outlined in the Burrowing Owl Mitigation and Monitoring Plan and the Bird and Bat Conservation Strategy (the full biological plans will be included in the attachments to the BRMIMP);
4. All locations on a map, at an approved scale, of sensitive biological resource areas subject to disturbance and areas requiring temporary protection and avoidance during construction and operation;
5. Duration for each type of monitoring and a description of monitoring methodologies and frequency;
6. Performance standards to be used to help decide if/when proposed mitigation is or is not successful; and
7. A process for proposing plan modifications to appropriate agencies for review and approval. The BRMIMP document shall be provided at least ~~60~~90 days prior to start of any Project-related ground disturbing activities to the USFWS, CDFW, and County for review and approval. Implementation of BRMIMP measures will be reported in the monthly compliance reports by the Lead Biologist

(i.e., survey results, construction activities that were monitored, species observed).

3.2.9 Section 3.5, Cultural Resources

No text changes have been made to Section 3.5, *Cultural Resources.*

3.2.10 Section 3.6, Geology, Soils, and Mineral Resources

No text changes have been made to Section 3.6, Geology, Soils, and Mineral Resources.

3.2.11 Section 3.7, Agriculture and Forestry Resources

No text changes have been made to Section 3.2, *Agriculture and Forestry Resources*

3.2.13 Section 3.8, Hazards and Hazardous Materials

No text changes have been made to Section 3.13, *Hazards and Hazardous Materials.*

3.2.14 Section 3.9, Hydrology and Water Quality

No text changes have been made to Section 3.9, *Hydrology and Water Quality.*

3.2.15 Section 3.10, Land Use and Planning

No text changes have been made to Section 3.10, *Land Use and Planning.*

3.2.16 Section 3.11, Noise

No text changes have been made to Section 3.11, *Noise.*

3.2.17 Section 3.12, Paleontological Resources

No text changes have been made to Section 3.12, *Paleontological Resources.*

3.2.18 Section 3.13, Population and Housing

No text changes have been made to Section 3.13, *Population and Housing.*

3.2.19 Section 3.14, Public Services and Utilities

No text changes have been made to Section 3.14, *Public Services and Utilities.*

3.2.20 Section 3.15, Recreation

No text changes have been made to Section 3.15, *Recreation.*

3.2.21 Section 3.16, Traffic and Transportation

No text changes have been made to Section 3.16, *Traffic and Transportation.*

3.2.22 Chapter 4, Other CEQA Considerations

No text changes have been made to Chapter 4, *Other CEQA Considerations.*

3.2.23 Chapter 5, Alternatives

5-5 *As discussed for pages 2-15 and 2-34 (see Section 3.2.3 above), the Applicant provided revisions to the Chapter 2, Project Description, proposing to allow the potential use of PV panels that contain a thin semiconductor layer containing CdTe. These revisions are also applicable to Draft EIR page 5-5, as shown below.*

Alternative Conclusions

Although there is potential to achieve up to 470 MW of distributed solar energy, the limited number of existing facilities makes it unlikely to be feasible or present environmental benefits. The proposed Project would utilize single-axis PV trackers with high efficiency~~, monocrystalline, silicon~~ solar panels. The panel design minimizes shading, and by grouping trackers close together, the technology requires 20 percent less land than conventional crystalline fixed tilt systems and 60 percent less land than thin film systems.