

**BLYTHE SOLAR POWER PROJECT  
BIOLOGICAL RESOURCES MITIGATION  
IMPLEMENTATION AND MONITORING PLAN  
RIVERSIDE COUNTY, CALIFORNIA**

**09-AFC-6C**

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## 1.0 INTRODUCTION

Palo Verde Solar I, LLC (PVSI) will construct, own, and operate the Blythe Solar Power Project (Project). The Project is proposed on public lands managed by the Bureau of Land Management (BLM) in Riverside County, California.

The Project is located approximately 8 miles west of Blythe and 2 miles north of Interstate 10 (I-10) in Riverside County, California (Figure 1). The Project is located on a 7,541-acre right-of-way (ROW) owned by the Federal government and administered by BLM, pursuant to an ROW grant issued to PVSI from BLM and the parallel thermal electric power plan certification to be issued by California Energy Commission (CEC). The Project site is currently undeveloped open space.

### 1.1 Purpose of the Biological Resources Mitigation Implementation and Monitoring Plan

The purpose of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) is to identify the means (e.g., mitigation measure, responsible party, timing, schedule, action, performance standard and remedial action) by which PVSI intends to minimize impacts, protect and conserve biological resources, and comply with Federal and State requirements for the Project. The BRMIMP Summary Table (Appendix A) is the principal section of this BRMIMP. The BRMIMP Summary Table will guide PVSI and other responsible parties in the implementation of the CEC's biological Conditions of Certifications (COC) and other biological permitting requirements for the Project and provide a tracking system for implementation (See Appendix B for the Biological Resources COCs as set forth in the CEC Final Decision issued September 15, 2010). The BRMIMP Summary Table provides the following information:

- Condition (e.g., the COC such as BIO-1, BIO-2, etc);
- Source (a COC, such as BIO-1 or a compliance plan, such as the Avian Protection Plan);
- Page number (of the source document);
- Mitigation measure (the specific measure from the COCs or compliance plans);
- Responsible party (the entity responsible for compliance, e.g., Owner<sup>1</sup>, Designated Biologist);

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<sup>1</sup> The COCs use the term "Owner"; therefore, Owner is used in the BRMIMP Summary Table (Appendix A) instead of PVSI, which is used herein.

- 
- Timing (e.g., the timeframe, such as preconstruction, construction, post-construction, operations, and closure);
  - Action (the type of action taken to be taken);
  - Schedule (i.e., when an action is to occur, such as *No fewer than 45 days before start of site mobilization or construction-related ground disturbance* for BIO-1);
  - Notes (any clarifying information to the schedule, mitigation measure, or the action);
  - Performance standard (a decision-making tool to determine if/when a mitigation measure or action is or is not successful);<sup>2</sup>
  - Remedial action (an action to be implemented if the performance standard is not met); and
  - Status (the condition of the action or remedial action).

This BRMIMP Summary Table also incorporates impact avoidance and minimization measures set forth in the biological resources compliance plans prepared to date for the Project. The avoidance and minimization measures from the individual compliance plans that are included in the BRMIMP Summary Table are distinct from those measures in the COCs. In other words, if the COC notes that preconstruction surveys are to occur and these preconstruction surveys are also noted in the compliance plan, the measure is not included in the list of measures under the compliance plan in the BRMIMP Summary Table, unless there is distinct information relevant to the measure. The relevant compliance plans and associated COC references are:

- BIO-8, Item #17: Revegetation Plan
- BIO-10: Desert Tortoise Relocation/Translocation Plan
- BIO-13: Raven Management Plan
- BIO-14: Weed Management Plan
- BIO-15/BIO-8, Item #8b: Avian Protection Plan/Nesting Bird Monitoring and Management Plan
- BIO-18: Burrowing Owl Mitigation Plan
- BIO-19: Special-status Plant Mitigation Plan
- BIO-23: Decommissioning and Reclamation Plan

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<sup>2</sup> Note: Performance standards and remedial actions are forthcoming and will be included in the BRMIMP Summary Table (Appendix A) for the next submittal.

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- BIO-24: Golden Eagle Monitoring and Management Plan
  - BIO-26: Couch's Spadefoot Toad Protection and Mitigation Plan

The BRMIMP Summary Table will also describe the following:

- BIO-6: Biological Resources Worker Environmental Awareness Training Program
- BIO-8: Impact Avoidance and Minimization Measures
- BIO-22, Item #5: Waters of the State Best Management Practices
- Conservation measures specified in the U.S. Fish and Wildlife Service (USFWS) Biological Opinion<sup>3</sup>

The BRMIMP includes accurate and up-to-date maps depicting the location of sensitive biological resources. See the included figures for maps showing the location of the following biological resources:

- Burrowing owl (Figure 2)
- Desert tortoise (Figure 3)
- Special-status plants (Figure 4)
- Special-status wildlife (Figure 5)

### **1.1.1 Regulatory Approvals**

Table 1 lists the regulatory agencies and their respective approvals (e.g., conditions, permits, etc) as they relate to biological resources for the Project.

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<sup>3</sup> Note: The Biological Opinion is forthcoming. Once received, conservations measures will be incorporated into the BRMIMP Summary Table (Appendix A) for the next submittal.

**Table 1 Regulating Agency’s Approvals**

| <b>Agency</b>                           | <b>Approvals</b>   |
|---|--|
| CEC                                     | Final Decision, which includes biological resources conditions of certification  |
| BLM                                     | Final Environmental Impact Statement and Record of Decision<br>ROW Grant<br>California Desert Conservation Area Amendment  |
| California Department of Fish and Game  | 1602 (requirements are incorporated into the Final Decision)<br>2080.1 Consistency Determination on Section 7 Endangered Species Act (ESA) Consultation or a 2081 Incidental Take Permit (requirements are incorporated into the Final Decision) |
| Regional Water Quality Control Board    | Waste Discharge Requirement (requirements are incorporated into the Final Decision)  |
| United States Fish and Wildlife Service | Section 7 ESA Consultation--Biological Opinion   |

## **1.2 Project Background**

The Project site is located in the southern California inland desert, approximately 8 miles west of the city of Blythe and 2 miles north of I-10 in Riverside County, California (Figure 1). The Project will be located on a 7,541-acre ROW owned by the Federal government and managed by the BLM, pursuant to an ROW grant issued to PVSI from BLM and the parallel thermal electric power plan certification to be issued by CEC.

The Project is a commercial solar thermal power generating facility. The total Project Disturbance Area (the Project facilities footprint plus additional areas that will be disturbed by construction and operation) will be 7,025 acres. The Project will have a nominal output of 1,000 megawatts (MW) consisting of four independent 250-MW power plants (Units #1, #2, #3, and #4). The units will be developed in phases, with construction scheduled to begin in late 2010 on Unit #1; that unit will come on line in mid-2013, and subsequent units will come on line in each of the following 3 years.

Each of the four units will have its own solar field using parabolic trough technology that involves rows of parabolic mirrors with piping containing a heat transfer fluid (HTF) at the focal point of the parabola. Each unit will have its own power block, centrally located within the solar field. Each power block will have its own HTF pumping and freeze-protection system, solar steam generator, steam turbine generator, air-cooled condenser (dry cooling tower), and ancillary equipment (e.g., water treatment system and emergency generators). Each power block will have two 4-acre evaporation ponds to manage the cooling tower blowdown stream (a portion of the

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continuously circulated cooling water discarded to prevent the excessive buildup of salts). Two Land Treatment Units (one 12-acre and one 4-acre) will be used to bioremediate or land farm soil contaminated by release of HTF. Each unit will have a natural gas-fired auxiliary boiler; natural gas will be supplied by a new 10-mile (2 miles off site) pipeline connecting to an existing Southern California Gas main located south of I-10. Water for the Project will be supplied from on-site wells.

The Project will require a new double-circuit 230-kilovolt transmission line to interconnect Project electrical output with the Southern California Edison (SCE) regional system. Transmission line features (e.g., crossing structures, pole pads, crane pads, pull sites, splice sites, spur roads, and an access road) will be located along an 8-mile transmission line corridor that extends south from the Project site to a point south of I-10 and then turns west. The transmission line will be connected to the planned Colorado River Substation, which will be developed by SCE as part of upgrading its transmission network to support integration of renewable energy projects. Development of the substation will be the responsibility of SCE.

Access to the Project site will be via a new road heading north from the existing frontage road that parallels I-10. Only a small portion of the overall facility footprint will be paved, primarily the site access road, the service roads to the power blocks, and 6 acres of each of the 18-acre power blocks. The solar fields will be compacted earth but will remain unpaved and without a gravel surface to prevent mirror damage. Soil and water stabilizers will be used to reduce dust deposition on the collectors and minimize soil erosion. The perimeter of the Project site will be secured with chain-link metal-fabric security fencing and controlled-access gates

### **1.3 Project Phasing**

Project construction will occur in phases that follow development of the solar units, beginning with Unit #1 in the northeast quadrant of the Project site. Construction of Unit #1 will be further subdivided into Phases 1a and 1b to facilitate development in the fall of 2010 through the first half of 2011.

Phase 1a will consist of two types of construction areas, which are (1) linear facilities, including the access road, gas line, and communication lines and (2) non-linear facilities to include a staging/laydown area, the Unit #1 power block, and a portion of the Unit #1 solar field. The total disturbance area proposed for Phase 1a is less than 10 percent of the total area for the Project and constitutes those critical Project areas that need to be constructed in 2010 and early 2011.

Phase 1b will include remaining portions of Unit #1 as well as Unit #2 and the gen-tie line. Phase 2 will include all of Units #3 and #4.

Descriptions of the facilities to be constructed during the remaining phases of the Project, as well as the related acreages for each phase are summarized in Table 2.

**Table 2 Forecasted Construction Phasing Summary**

| <b>Phase</b> | <b>Area of Site</b>  | <b>Total Area (acres)</b> |
|--------------|--|---------------------------|
| Phase 1a     | Black Rock Road, Shared Facilities, Construction Power, Utilities Corridor (including the main access road), Water Well and initial portion of Unit #1 | 772.68                    |
| Phase 1b     | Remainder of Unit #1, Unit #2 and Gen-tie line   | 3,024                     |
| Phase 2      | Unit #3 and Unit #4  | 3,227.82                  |
| <b>Total</b> |  | <b>7,024.5</b>            |

Construction activities will occur primarily during the day, but certain construction activities will be conducted at night. For example, cement pours should be conducted at night as the high ambient temperatures during the summer daytime hours in the desert would jeopardize the quality of the concrete, as concrete dries too quickly if it is too hot. Solar collector assembly work would be conducted 24 hours per day. Other low-noise (less than 65 decibel A-weighted), construction activities may be conducted at night, including pulling wire and welding. These various activities would require operation of the concrete batch plant, generators, lights, welders, forklifts, possibly small cranes, and miscellaneous other equipment.

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## **2.0 RESPONSIBLE PARTIES AND LINES OF COMMUNICATION**

This section describes responsibilities of participating parties and key points of authority or notification during implementation of the Project (CEC 2010). For a complete listing of responsible parties, authority or notification actions, refer to Appendix A.

Responsibilities of all participants in the Project are connected through the permitting/licensing process. Each participant, through legally binding instruments, agrees to abide by requirements designed to minimize impacts and document compliance to Federal and State laws that protect or conserve biological resources. Timely, clear and effective communication between PVSİ, CEC, BLM, the construction contractor, and other agencies will be critical to the success of this Project.

Figure 6 a and b shows the key lines of communication.

### **2.1 California Energy Commission Compliance Project Manager**

In their role as state Lead Agency under California Environmental Quality Act, the CEC has the responsibility to complete an independent assessment of the Project's engineering design and its potential effects on the environment. The staff also recommends measures to mitigate potential significant adverse environmental effects, which take the form of COCs (Appendix B) for construction, operation, maintenance and eventual decommissioning of the Project. The CEC Compliance Project Manager (CPM) is responsible for the designated actions shown in Appendices A and B. The name and contact information for the CEC CPM is provided in Section 6.0, Important Contact Information.

Key points of authority or notification are:

- [The CEC CPM will notify the PVSİ of] a determination of success or failure of a corrective action ... within five working days after receipt of notice that corrective action is completed, or notify the PVSİ that coordination with other agencies would require additional time before such a determination could be made (BIO-5).
- The CEC CPM reserves the right to issue a stop work order or allow California Department of Fish and Game (CDFG) to issue a stop work order after giving notice to the PVSİ, if the CEC CPM in consultation with CDFG, determines that the PVSİ has breached any of the terms or conditions of BIO-22.

### **2.2 Bureau of Land Management Authorized Officer**

In their role as Federal Lead Agency, the BLM has oversight responsibility to ensure the mitigation measures and conditions of approval contained in the Project Record of Decision (ROD), BLM ROW grant and BLM use permits are implemented during Project construction,

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operation and maintenance. Compliance will be monitored primarily by a designated BLM Authorized Officer (AO), other BLM designate of the AO, and possibly a BLM Field Monitor. The names and contact information for BLM individuals are provided in Section 6.0, Important Contact Information. BLM's AO is responsible for the designated actions shown in Appendices A and B.

### **2.3 PVSİ Compliance Program Manager**

As the owner of the Project, PVSİ has the responsibility to construct, operate, and maintain the Project in compliance with all Federal, State, and local regulations, and in accordance with the CEC License, ROD/ROW grant and other required permits. The PVSİ<sup>4</sup> CPM will be responsible for overseeing and managing the construction contractor(s), as well as operation and maintenance personnel, to ensure they comply with conditions contained in the COCs and other permits. PVSİ retains final responsibility for compliance with environmental mitigation measures. PVSİ is responsible for the designated actions shown in Appendices A and B.

Key points of authority or notification are:

- In an emergency, the PVSİ CPM will immediately notify the CEC CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist (DB) (see Section 2.3.3, PVSİ Designated Biologist) is proposed to the CPM for consideration (BIO-1).
- PVSİ CPM will notify the CEC CPM of the circumstances and actions being taken to resolve the problem (non-compliance problems) (BIO-5).
- If the non-compliance or halt to construction or operation relates to desert tortoise or any other Federal or State-listed species, PVSİ CPM will notify the Carlsbad Office of USFWS and Ontario Office of CDFG at the same time (BIO-5).
- If a Federal or State-listed plant species or BLM sensitive plant species is detected during summer/fall 2010 surveys, PVSİ CPM will immediately notify the CDFG, USFWS, BLM, and the CEC CPM (BIO-19, Section C.4).
- PVSİ CPM will notify the CEC CPM and CDFG, in writing, at least five days prior to initiation of Project activities in jurisdictional state waters and at least five days prior to completion of Project activities in jurisdictional areas (BIO-22).
- PVSİ CPM will notify the CEC CPM and CDFG of any change of conditions to the Project, impacts to state waters, or the mitigation efforts. The notifying report will be

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<sup>4</sup> Shown as SMLLC Compliance Program Manager on Figure 6 a and b.

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provided to the CEC CPM and CDFG no later than seven days after the change of condition is identified (BIO-22).

### **2.3.1 PVSİ Environmental Compliance Manager**

PVSI will assign an Environmental Compliance Manager (ECM) to the Project. The ECM is responsible for facilitating implementation of the environmental conditions of the Project. Typical ECM duties involve managing, supervising, and/or providing advice on work affecting air quality, water/streambed permits, and biological resources environmental compliance programs. The ECM will have experience in the implementation of general environmental compliance measures.

### **2.3.2 PVSİ Construction and/or Operations**

Construction contractors will be contracted by PVSI to construct the Project. All of the construction contractors will be legally bound to the requirements of the COCs (Appendix B) and other permits through conditions included or otherwise incorporated into PVSI's bid documents. The bid documents include text explaining that the contractor is accountable for their actions about the environment and compliance with environmental regulations will be a condition of employment. Operation staff and contractors will be legally bound to the requirements of the COCs (Appendix B) and other permits through conditions included or otherwise incorporated into PVSI's operating contracts.

#### **2.3.2.1 EPC Contractor Construction Manager**

The Engineering, Procurement, and Construction (EPC) Construction Manager will have ultimate oversight of the construction contractor to ensure compliance with the COCs (Appendix B).

Key points of authority or notification are:

- The construction/operation manager will act on the advice of the DB and Biological Monitor(s) to ensure conformance with the biological resources of the COCs (BIO-5).
- Operations staff at the Project site will also report finding any dead birds or other wildlife at the evaporation ponds to the DB within one day of the detection of the carcass (BIO-25, Item #2).

### **2.3.3 PVSİ Designated Biologist**

The DB is responsible for the designated actions shown in Appendices A and B. The DB is the main contact for PVSI and the CEC CPM. Although contracted by PVSI, the DB will act independently and responsibly in verifying all elements of this BRMIMP or other approved mitigation are carried out in totality and in a timely manner.

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Key points of authority or notification are:

- The DB will have the authority to immediately stop any activity that is not in compliance with these conditions and/or order any reasonable measure to avoid take of an individual of a listed species (BIO-5).
- The DB will notify the CEC CPM immediately (and no later than the morning following the incident, or Monday morning in the case of a weekend) of any non-compliance or a halt of any site mobilization, ground disturbance, grading, construction, and operation activities and advise them of any corrective actions (BIO-5).
- Inform PVSI and the construction or operation manager when to resume activities (BIO-5, Item #2).
- Notify the CEC CPM and if there is a halt of any activities and advise them of any corrective actions that have been taken or would be instituted as a result of the work stoppage. If the work stoppage relates to desert tortoise or any other Federal or State-listed species, the Carlsbad Office of USFWS and the Ontario Office of CDFG shall also be notified. (BIO-5, Item #3).
- Notify the CEC CPM at least 14 calendar days before initiating construction-related ground disturbance activities; immediately notify the CEC CPM in writing if PVSI is not in compliance with any COC, including but not limited to any actual or anticipated failure to implement mitigation measures within the time periods specified in the COCs (BIO-11, Item #1).
- If an injured or dead listed species is detected within or near the Project Disturbance Area, the CPM, the Ontario Office of CDFG, and Carlsbad Office of USFWS shall be notified immediately by phone. Notification will occur no later than noon on the business day following the event if it occurs outside normal business hours so that the agencies can determine if further actions are required to protect listed species. Written follow-up notification via FAX or electronic communication will be submitted to these agencies within two calendar days of the incident and include the information as relevant (BIO-11, Item #4)
- The DB will report any bird or other wildlife deaths or entanglements within two days of the discovery to the CEC CPM, CDFG, and USFWS (BIO-25, Item #1).
- The DB will make immediate efforts to contact and consult the CEC CPM, CDFG, and USFWS by phone and electronic communications prior to taking remedial action upon detection of the problem, but the inability to reach these parties will not delay taking action that would, in the judgment of the DB, prevent further mortality of birds or other wildlife at the evaporation ponds (BIO-25, Item #2).

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### **2.3.3.1 Qualifications of the Designated Biologist**

The DB must meet the following minimum qualifications:

1. Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;
2. Three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society;
3. Have at least one year of field experience with biological resources found in or near the Project area;
4. Meet the current USFWS Authorized Biologist qualifications criteria ([www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)), demonstrate familiarity with protocols and guidelines for desert tortoise, and be approved by the USFWS;
5. Possess a California Endangered Species Act Memorandum of Understanding pursuant to CDFG Code Section 2081(a) for desert tortoise; or
6. In lieu of the above requirements, the resume will demonstrate to the satisfaction of the CEC CPM, in consultation with CDFG and USFWS, that the proposed DB or alternate has the appropriate training and background to implement effectively the COCs.

Resumes for three DBs and a list of references are provided in Appendix C.

### **2.3.4 PVSİ On-Site Biological Monitors**

Biological Monitors are responsible for the designated actions shown in Appendices A and B as well as carrying out the actions assigned to them by the DB and reporting any variations to the DB.

Key points of authority or notification are:

- If required by the DB and Biological Monitor(s), PVSİ's construction/operation manager will halt all site mobilization, ground disturbance, grading, boring, and trenching and operation activities in areas specified by the DB (BIO-5).
- If the DB is unavailable for direct consultation, the Biological Monitor will act on behalf of the DB (BIO-5).
- The Biological Monitor will notify the CEC CPM immediately (and no later than the morning following the incident, or Monday morning in the case of a weekend) of any non-compliance or a halt of any site mobilization, ground disturbance, grading, construction, and operation activities. If the work stoppage relates to desert tortoise or

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any other Federal or State-listed species, the Carlsbad Office of USFWS and the Ontario Office of CDFG shall also be notified (BIO-5).

- For special-status species roadkill, the Biological Monitor will contact the Carlsbad Office of USFWS and the Ontario Office of CDFG within one working day of detection of the carcass for guidance on disposal or storage of the carcass (BIO-8, Item #12).

## **2.4 Designated Botanist**

The Designated Botanist is responsible for the designated actions shown in Appendices A and B as well as carrying out the actions assigned to them by the DB and reporting any variations to the DB.

## **2.5 Regulatory Agency Personnel**

USFWS, CDFG, and the Regional Water Quality Control Board (RWQCB) are responsible for representing Federal and State laws concerning protection of biological resources. The agencies will aid the Project by being responsive to requests for guidance should the need arise. Agency representatives will monitor the success of the Project's compliance with Federal and State laws by monitoring reports prepared by the DB. Table 1 (above) lists the regulating agencies and the various instruments or agreements they will grant or agreements they will enter into regarding the Project. The USFWS Biological Opinion is in Appendix D.

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## **3.0 BIOLOGICAL RESOURCE MONITORING AND REPORTING**

### **3.1 Scope of Compliance Monitoring**

Construction and operation of the Project will result in potentially significant direct and/or indirect impacts to biological resources. The ECM, DB and Biological Monitors shall assist PVSI in conducting the Project in such a manner as to minimize adverse effects to biological resources and in compliance with the COCs.

### **3.2 Monthly and Yearly Compliance Reports**

The DB<sup>5</sup> will prepare monthly compliance reports (MCR) and provide them to PVSI, CEC, BLM, CDFG, and USFWS as appropriate and described in Appendix A. MCRs are due on or before the tenth day of the following month. These reports will include the following information:

- Areas and activities monitored during the prior month;
- The number of persons who have completed the Worker Environmental Awareness Program training in the prior month and a running total of all persons who have completed the training to date;
- Implementation of BRMIMP measures (Appendix A);
- Change evaluation forms;
- Notification forms;
- Non-compliance reports;
- Non-compliance resolution reports;
- An account of all rescued/released animals;
- A detailed account of any injure or dead listed species; and
- Results of pre-activity surveys conducted, if any.

As part of the annual compliance report (ACR) each year following construction, the DB shall provide a report to the CPM that describes compliance with avoidance and minimization measures to be implemented during construction, operation, and maintenance. The ACR will

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<sup>5</sup> The Designated Botanist shall provide a summary of the implementation of the special-status plant impact avoidance and minimization measures to the DB by the first day of the following month for incorporation into the MCRs.

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summarize the previous year's monthly compliance reports and make recommendations for the upcoming year if necessary. ACRs are due on or before January 31 of the reporting year.

Within 30 days after completion of Project construction, PVSII shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed.

### **3.3 Reporting Procedures for Injured or Dead Wildlife**

If an injured or dead listed species is detected within or near the Project Disturbance Area, the DB shall immediately notify by phone the CEC CPM, the Ontario Office of CDFG, and Carlsbad Office of USFWS. Notification shall occur no later than noon on the business day following the event if it occurs outside normal business hours so that the agencies can determine if further actions are required to protect listed species. Written follow-up notification via FAX or electronic communication shall be submitted to these agencies within two calendar days of the incident describing all reported incidents of injury, kill, or relocation of a listed species, identifying who was notified, and explaining when the incidents occurred.

If a desert tortoise is injured because of Project-related activities during construction, the DB or approved Biological Monitor shall immediately take it to a CDFG-approved wildlife rehabilitation and/or veterinarian clinic. Any veterinarian bills for such injured animals shall be paid by PVSII. Following phone notification as required above, the CEC CPM, CDFG, and USFWS shall determine the final disposition of the injured animal, if it recovers. Written notification shall include, at a minimum, the date, time, and location, circumstances of the incident, and the name of the facility where the animal was taken.

If a desert tortoise is killed by Project-related activities during construction or operation, the DB shall submit a written report to the CEC CPM, CDFG, and USFWS with the same information as an injury report. These desert tortoises shall be salvaged according to guidelines described in Salvaging Injured, Recently Dead, Ill, and Dying Wild, Free-Roaming Desert Tortoise (Berry 2001). PVSII will have the desert tortoises transported and necropsied. The report shall include the date and time of the finding or incident.

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## **4.0 ADAPTIVE MANAGEMENT PROGRAM**

To manage unforeseen circumstances, PVSI is committed to implementing an adaptive management program that functions within the constraints of the Project permits and approvals. Adaptive management decisions will be made with input from pertinent CEC and other regulatory agency staff (see Section 6.0, Important Contact Information for a listing of key PVSI, CEC and other regulatory agency staff) in a timely manner so corrections can be made to implement appropriate mitigation measures.

### **4.1 Adaptive Management**

#### **4.1.1 Definition**

Adaptive management is typically used in environmental management efforts to facilitate more effective management of resources to achieve desired objectives. Adaptive management can be defined as an iterative and structured optimal decision-making process intended to reduce uncertainty through system monitoring. The decision-making process simultaneously maximizes one or more resource objectives and accrues information needed to improve future management, either actively or passively. Using current knowledge, passive adaptive management involves the use of conceptual modeling to guide management actions. The model is adjusted as new knowledge is obtained and management decisions are subsequently modified. Active adaptive management involves testing alternative hypotheses through system manipulation employing management strategies. Thus, passive adaptive management is based on information gained from observational studies, whereas active adaptive management is based on information gained from experimental manipulation (Holling 1978, cited in AECOM 2010a). The focus will be on passive adaptive management but may ultimately apply both passive and active adaptive management techniques.

#### **4.1.2 Adaptive Management Triggers and Measures**

Adaptive management triggers are the performance criteria listed in Appendix A<sup>6</sup>. If the performance criteria are not met, any identified remedial actions will be implemented as needed (see Appendix A). Possible remedial actions follow “if/then” scenarios. However, each situation will be evaluated and appropriate adaptive measures will be proposed. If a measure is proposed that is different from the remedial action listed in Appendix A, the responsible party will notify the CEC and regulatory agencies, as appropriate, before implementing the measure, if time allows. If remedial action is time sensitive, the action will be implemented and the CEC and

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<sup>6</sup> Note: this information is forthcoming and will be included in the BRMIMP Summary Table (Appendix A) for the next submittal.

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regulatory agencies, as appropriate, will be notified no later than the morning following the incident, or Monday morning in the case of a weekend (see Appendix A, BIO-5, Schedule).

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## **5.0 MODIFICATIONS TO CONDITIONS OF CERTIFICATIONS, COMPLIANCE PLANS, AND PERMIT CONDITIONS**

### **5.1 Project Changes**

A certain amount of change during the course of any project is inevitable. Once Project construction begins, certain changes to design, procedure, and even locations of Project features may be necessary. These changes could be such that they were not specifically addressed in the CEC or BLM documents, and may require further environmental analysis and agency approval. To examine changes to a Project feature, construction activity, or location, the PVSİ CPM will propose a “Change Evaluation” (CE).

The focus of a CE is a deviation from the Project described and evaluated in the CEC and BLM documents. The CE process described below is designed to assure the CEC and BLM that any given change will avoid significant environmental impacts. It will be the responsibility of the PVSİ CPM to facilitate approval of Project changes.

Changes can fall into one of two categories: major or minor. A major change (e.g., the need to work outside of the Project Disturbance Area) will require a CE form (see Appendix E for a sample form) to document responsible evaluation of the Project change and must be approved by the CEC, BLM, and appropriate regulatory agencies, if necessary, if it is a major change. A minor change (e.g., minor road encroachment outside of flagged impact areas to allow vehicles passing or turning around as long as the minor encroachment area is within the planned impact area or in previously disturbed areas) can be approved by either PVSİ CPM or PVSİ ECM, but it also must be documented with a CE form that will be reported to the CEC and BLM weekly.

Table 3 provides a few examples of the types of Project activities that would constitute a major or a minor change. A sample CE Form is provided in Appendix E.

**Table 3 Examples of Major and Minor Project Changes That Would Require a Change Evaluation**

| Activity   | Major Change | Minor Change |
|--|--------------|--------------|
| Any change involving a State or Federally listed plant or animal species   | X            |              |
| Any Project activities outside of the Project Disturbance Area   | X            |              |
| Any alternative mitigation action to a COC that is necessary due to infeasibility  | X            |              |
| Change construction procedures (This could fall in the major or minor category, depending if the change is substantially different than discussed in CEC and BLM documents.) | X            | X            |
| Temporary use of a road in a buffer zone to access work zone   |              | X            |
| Temporary encroachment in a buffer zone  |              | X            |
| Waiver of mitigation measure (because of error in resource identification or resource no longer in existence)  |              | X            |
| Work after designated/restricted construction hours  |              | X            |

## 5.2 Compliance Levels

PVSI will maintain a record system describing the compliance levels and will use it as a tool to help explain, record, and enforce the compliance requirements. The following levels of compliance measurement will be used:

- Compliance
- Notification
- Non-compliance
- Non-compliance resolution report
- Stop task order

These compliance levels and their associated actions are described in Table 4. Sample forms for notification, non-compliance reports, and non-compliance resolution reports are provided in Appendix E.

**Table 4 Compliance Levels**

| <b>Compliance Level</b> | <b>Description</b>   |
|-------------------------|--|
| Compliance              | Used to identify an action in accordance with all Project requirements.  |
| Notification            | Used to identify an action approaching non-compliance. This is like a “fix-it” notice.   |
| Non-Compliance          | This term identifies an action that does not comply with a Project requirement; therefore, a non-compliance will be issued. A repeat non-compliance would be noted on the Non-Compliance form as a second occurrence. A Non-Compliance Resolution Report must be written by the Compliance Field Specialist and submitted to the CEC and BLM.  |
| Stop Task Order         | A third repeated non-compliance and any “serious” non-compliance (e.g., grading through a protected area) would result in a Stop Task Order (other work may continue). Figure 6 identifies the positions with the authority to issue a Stop Task Order (i.e., PVSJ Project Manager, PVSJ Construction Manager, PVSJ ECM, and PVSJ CPM; DB; CEC CPM; and, BLM AO. A Stop Task Order would require the PVSJ ECM and PVSJ CPM to meet with appropriate decision makers to determine requirements to correct or resolve the issue and resume activity in the problem area. |

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## **6.0 IMPORTANT CONTACT INFORMATION**

### **6.1 PVSİ Representative**

Nicole C. Tenenbaum, Compliance Program Manager  
Solar Millennium, LLC  
1111 Broadway, 5<sup>th</sup> Floor  
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Cell: 510-333-2466  
[Tenenbaum@solarmillennium.com](mailto:Tenenbaum@solarmillennium.com)

**To be determined**

Environmental Compliance Manager

### **6.2 CEC Representatives**

Alan Solomon, Project Manager  
1516 Ninth Street  
Sacramento, CA 95814-5512  
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Mary Dyas, Compliance Project Manger  
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Rick York, Senior Biologist  
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[Ryork@energy.state.ca.us](mailto:Ryork@energy.state.ca.us)

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### **6.3 BLM Representatives**

Holly Roberts, Associate Field Manager  
Palm Springs Field Office  
690 W. Garnet Avenue, P.O. Box 581260  
North Palm Springs, CA 92258-1260  
Phone: 760-833-7100  
[Holly\\_roberts@ca.blm.gov](mailto:Holly_roberts@ca.blm.gov)

Mark Massar, Wildlife Biologist  
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Allison Shaffer, Realty Specialist  
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[Janet\\_Eubanks@blm.gov](mailto:Janet_Eubanks@blm.gov)

#### **6.4 USFWS Representatives**

Pete Sorenson  
Carlsbad Fish and Wildlife Office  
6010 Hidden Valley Road, Suite 101  
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Phone: 760-431-9440  
[pete\\_sorensen@fws.gov](mailto:pete_sorensen@fws.gov)

Tannika Engelhard  
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Carlsbad, CA 92011  
Phone: 760-431-9440  
[Tannika\\_Engelhard@fws.gov](mailto:Tannika_Engelhard@fws.gov)

#### **6.5 CDFG Regional Representatives**

Magdalena Rodriquez  
Eastern Sierra-Inland Deserts Region  
3602 Inland Empire Boulevard, Suite C220  
Ontario, CA 91764  
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Fax: 909-481-2945  
[microdriquez@dfg.ca.gov](mailto:microdriquez@dfg.ca.gov)

Craig Weightman  
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Fax: 760-200-9358  
[cweightman@dfg.ca.gov](mailto:cweightman@dfg.ca.gov)

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Kim Nicol  
Inland Deserts Region  
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Information: 909-484-0167  
Fax: 909-481-2945  
[KNICOL@dfg.ca.gov](mailto:KNICOL@dfg.ca.gov)

Cal Tip Poaching Hotline: 888-334-2258

## **6.6 RWQCB Representatives**

Sam Lamech  
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14440 Civic Drive, # 200  
Victorville, CA 92392  
Phone: 760-241-4942  
[slamech@waterboards.ca.gov](mailto:slamech@waterboards.ca.gov)

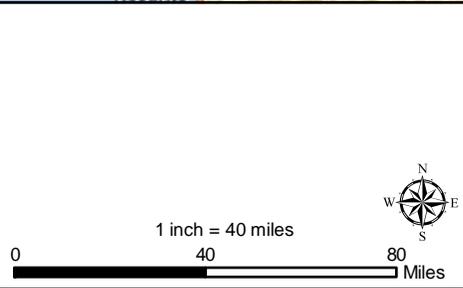
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## 7.0 REFERENCES

- AECOM. 2010. Common Raven Monitoring and Control Plan Blythe Solar Power Project. Prepared for Palo Verde Solar I, LLC, Berkeley, CA. September.
- Berry, K. H. 2001. Protocol -- June 2001. Salvaging injured, recently dead, ill, and dying wild, free-roaming desert tortoises (*Gopherus agassizii*). Prepared at the request of the U. S. Fish and Wildlife Service and the California Department of Fish and Game.
- California Energy Commission (CEC). 2010. Blythe Solar Power Project Commission Decision CEC-800-2010-009-CMF Docket Number 09-AFC-6. September 15. Available at: [http://www.energy.ca.gov/sitingcases/solar\\_millennium\\_blythe/documents/index.html](http://www.energy.ca.gov/sitingcases/solar_millennium_blythe/documents/index.html). Accessed September 24, 2010.
- Holling, C. S. 1978. Adaptive Environmental Assessment and Management. Chichester: Wiley (cited in AECOM 2010).

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## **FIGURES**



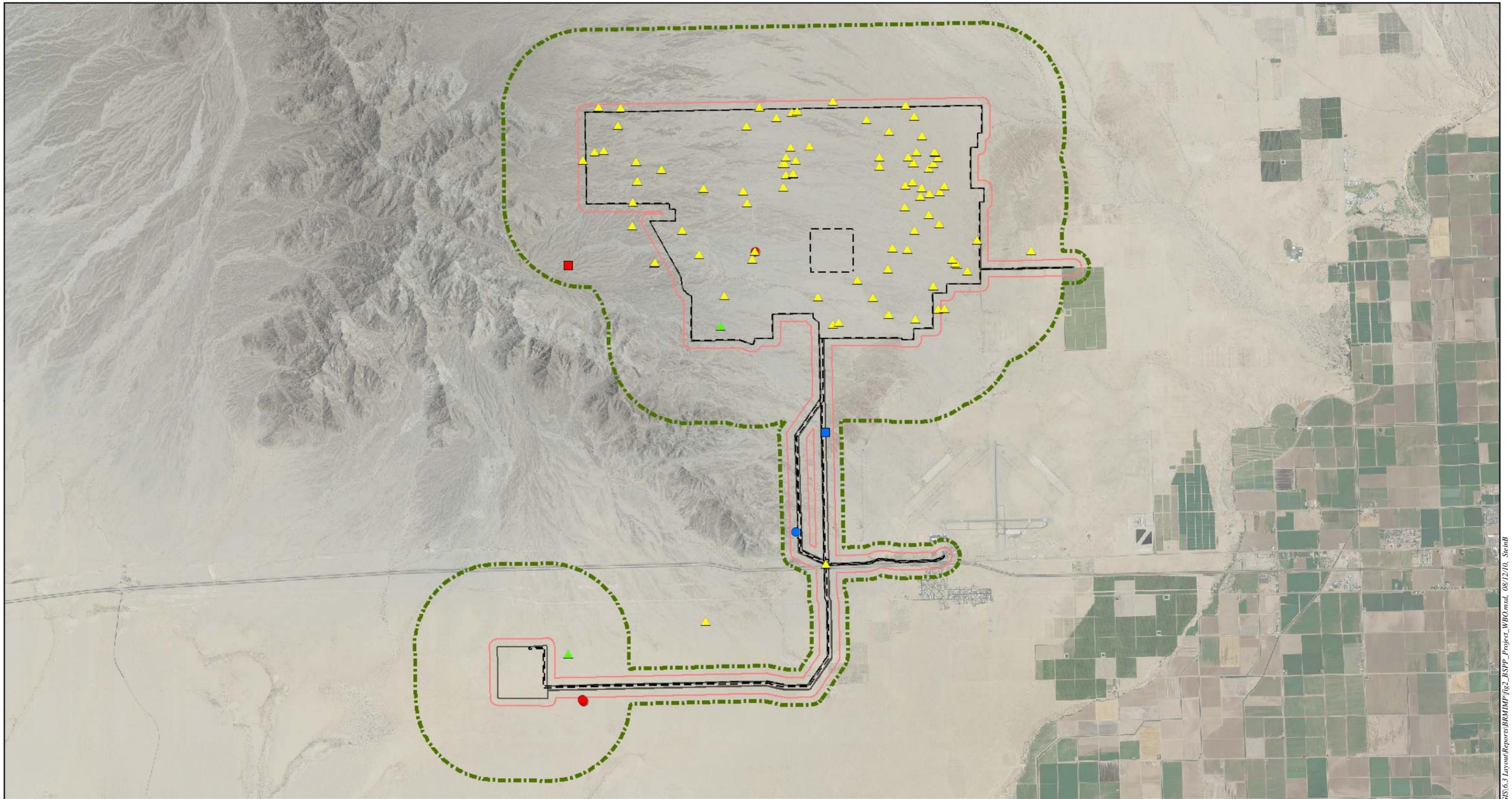
**Blythe Solar Power Project  
Biological Resources  
Mitigation Implementation  
and Monitoring Plan**

**Figure 1  
Regional Map**

Source: ESRI; AECOM 2010

**AECOM**

Date: August 2010



**Legend**

- Proposed Project Study Area
- Proposed Project BRSA
- Project Disturbance Area
- Burrowing Owl Survey Buffer - 492-foot

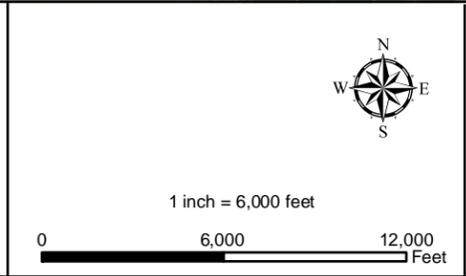
Source: NAIP 2009; AECOM 2010

**Western Burrowing Owl Observations 2010**

- Western Burrowing Owl
- Western Burrowing Owl with Active Burrow
- ▲ Burrow with Sign

**Observations 2009**

- Western Burrowing Owl
- Western Burrowing Owl with Active Burrow
- ▲ Burrow with Sign

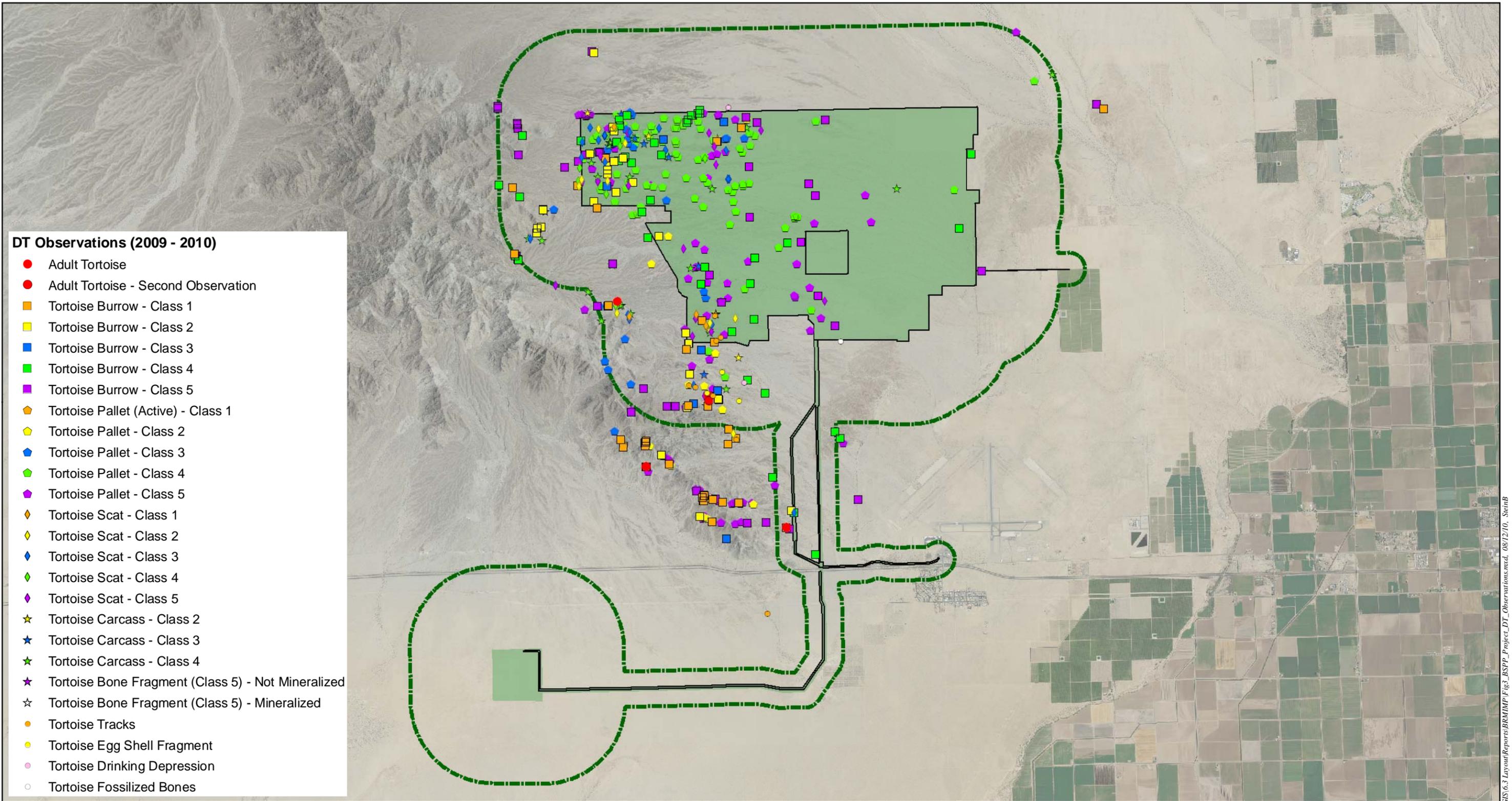


**Blythe Solar Power Project  
Biological Resources Mitigation  
Implementation and Monitoring Plan**

**Figure 2  
Burrowing Owl Observations**

**AECOM**

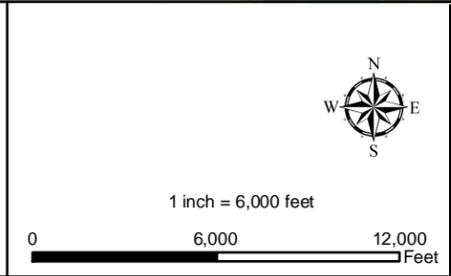
Date: August 2010



- DT Observations (2009 - 2010)**
- Adult Tortoise
  - Adult Tortoise - Second Observation
  - Tortoise Burrow - Class 1
  - Tortoise Burrow - Class 2
  - Tortoise Burrow - Class 3
  - Tortoise Burrow - Class 4
  - Tortoise Burrow - Class 5
  - Tortoise Pallet (Active) - Class 1
  - Tortoise Pallet - Class 2
  - Tortoise Pallet - Class 3
  - Tortoise Pallet - Class 4
  - Tortoise Pallet - Class 5
  - ◆ Tortoise Scat - Class 1
  - ◆ Tortoise Scat - Class 2
  - ◆ Tortoise Scat - Class 3
  - ◆ Tortoise Scat - Class 4
  - ◆ Tortoise Scat - Class 5
  - ★ Tortoise Carcass - Class 2
  - ★ Tortoise Carcass - Class 3
  - ★ Tortoise Carcass - Class 4
  - ★ Tortoise Bone Fragment (Class 5) - Not Mineralized
  - ★ Tortoise Bone Fragment (Class 5) - Mineralized
  - Tortoise Tracks
  - Tortoise Egg Shell Fragment
  - Tortoise Drinking Depression
  - Tortoise Fossilized Bones



- Legend**
- Proposed Project Study Area
  - Proposed Project Disturbance Area
  - ▬ Proposed Project BRSA
- Source: NAIP 2009; USGS; AECOM 2009

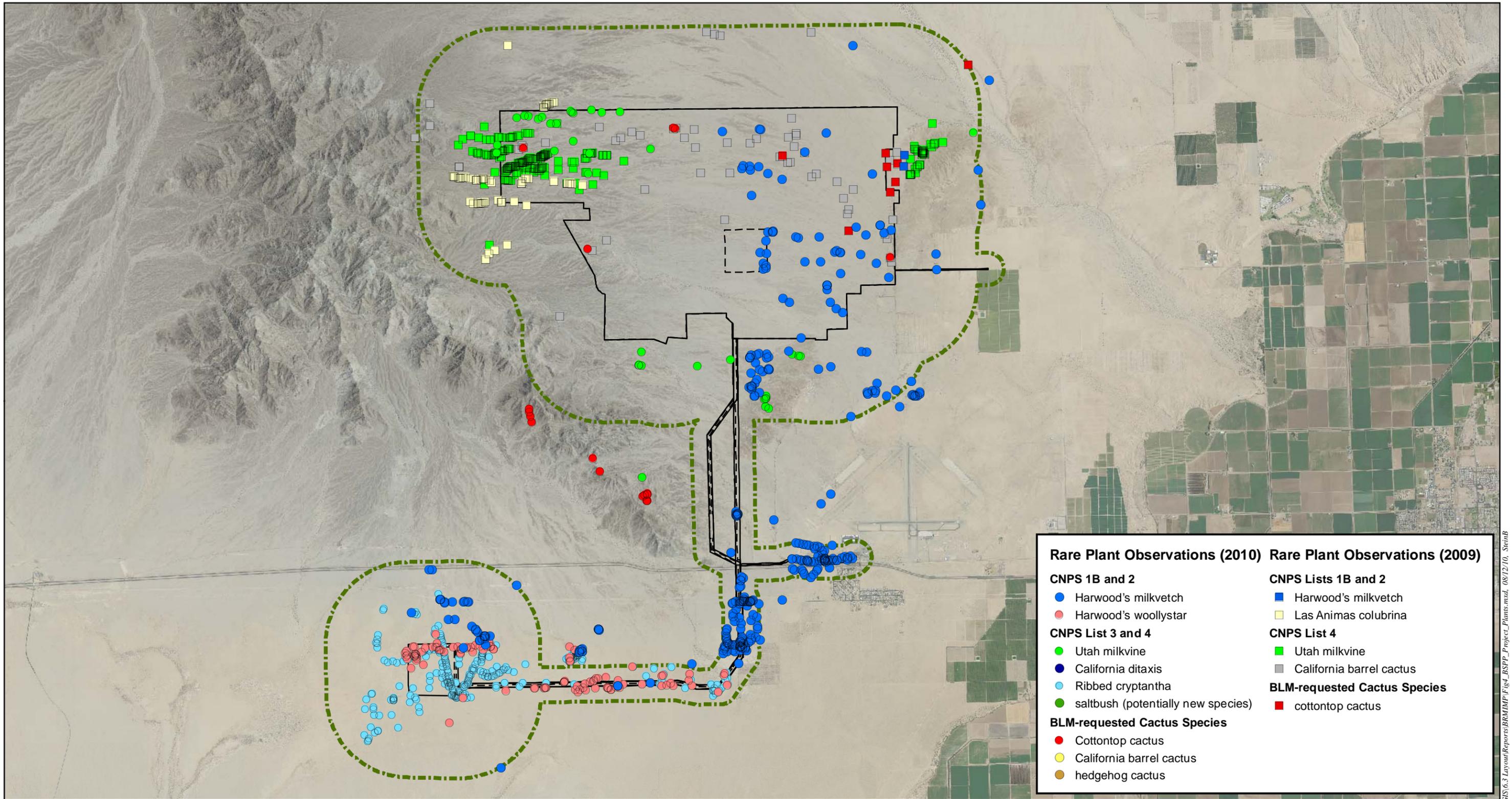


**Blythe Solar Power Project  
Biological Resources Mitigation  
Implementation and Monitoring Plan**

**Figure 3  
Desert Tortoise Observations**

**AECOM**

Date: August 2010



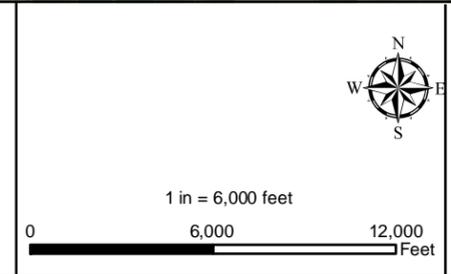
| Rare Plant Observations (2010)       | Rare Plant Observations (2009)      |
|--------------------------------------|-------------------------------------|
| <b>CNPS 1B and 2</b>                 | <b>CNPS Lists 1B and 2</b>          |
| ● Harwood's milkvetch                | ■ Harwood's milkvetch               |
| ● Harwood's woollystar               | ■ Las Animas colubrina              |
| <b>CNPS List 3 and 4</b>             | <b>CNPS List 4</b>                  |
| ● Utah milkvine                      | ■ Utah milkvine                     |
| ● California ditaxis                 | ■ California barrel cactus          |
| ● Ribbed cryptantha                  | <b>BLM-requested Cactus Species</b> |
| ● saltbush (potentially new species) | ■ cottontop cactus                  |
| <b>BLM-requested Cactus Species</b>  |                                     |
| ● Cottontop cactus                   |                                     |
| ● California barrel cactus           |                                     |
| ● hedgehog cactus                    |                                     |



**Legend**

- Proposed Project Study Area
- ▤ Proposed Project BRSA
- ▨ Project Disturbance Area

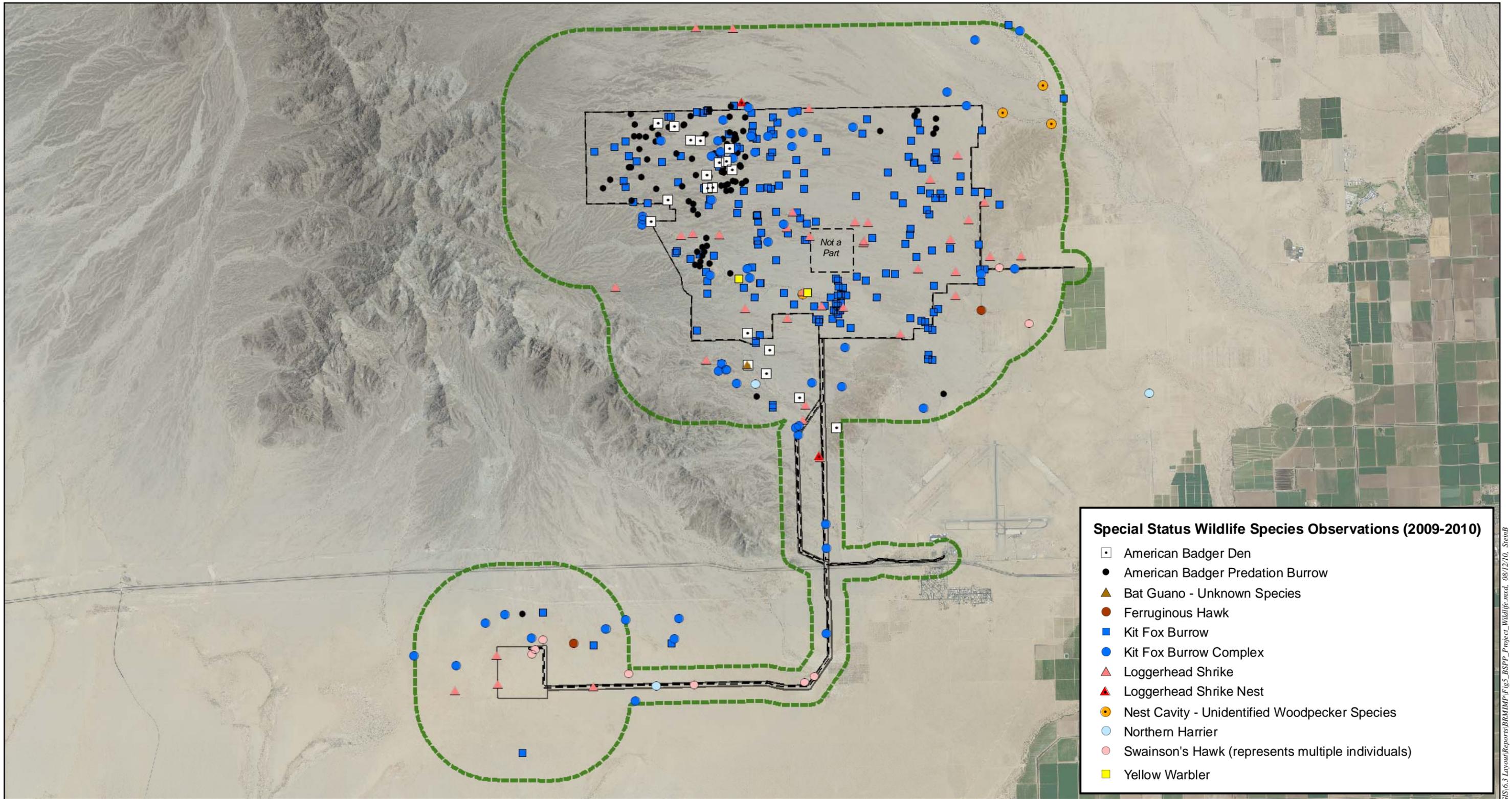
Source: NAIP 2009; EDAW 2009; AECOM 2010



**Blythe Solar Power Project  
Biological Resources Mitigation  
Implementation  
and Monitoring Plan**

**Figure 4  
Special Status Plant Species**

Date: August 2010



**Special Status Wildlife Species Observations (2009-2010)**

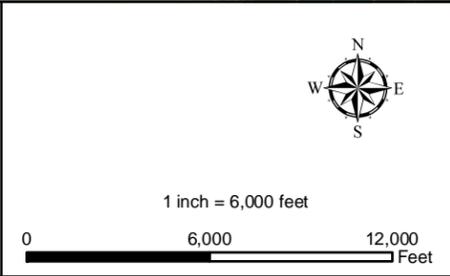
- American Badger Den
- American Badger Predation Burrow
- ▲ Bat Guano - Unknown Species
- Ferruginous Hawk
- Kit Fox Burrow
- Kit Fox Burrow Complex
- ▲ Loggerhead Shrike
- ▲ Loggerhead Shrike Nest
- Nest Cavity - Unidentified Woodpecker Species
- Northern Harrier
- Swainson's Hawk (represents multiple individuals)
- Yellow Warbler



**Legend**

- Proposed Project Study Area
- Project Disturbance Area
- Proposed Project BRSA

Source: NAIP 2009; AECOM 2009-2010



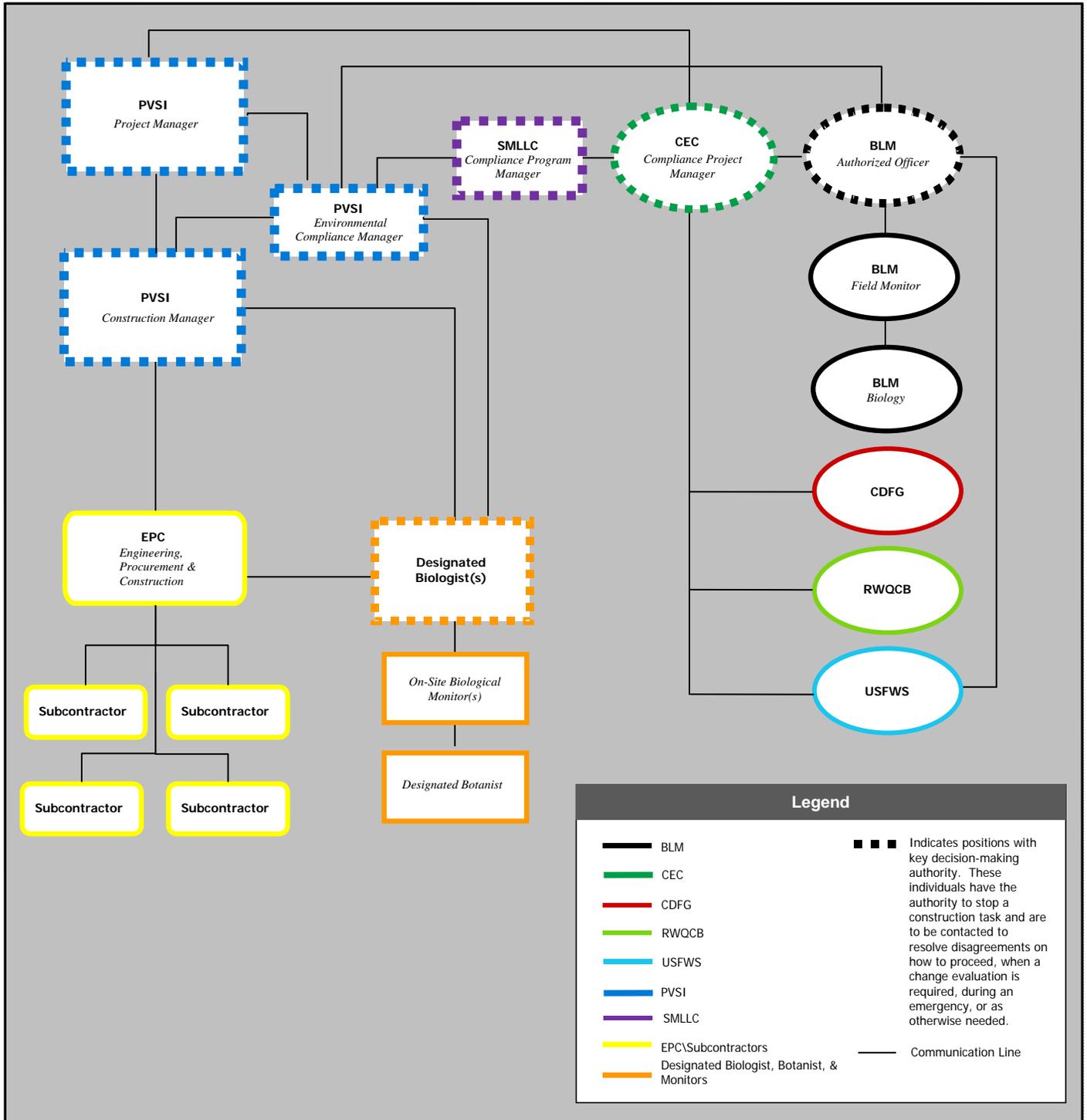
**Blythe Solar Power Project  
Biological Resources Mitigation  
Implementation and Monitoring Plan**

**Figure 5  
Special Status Wildlife Species**

**AECOM**

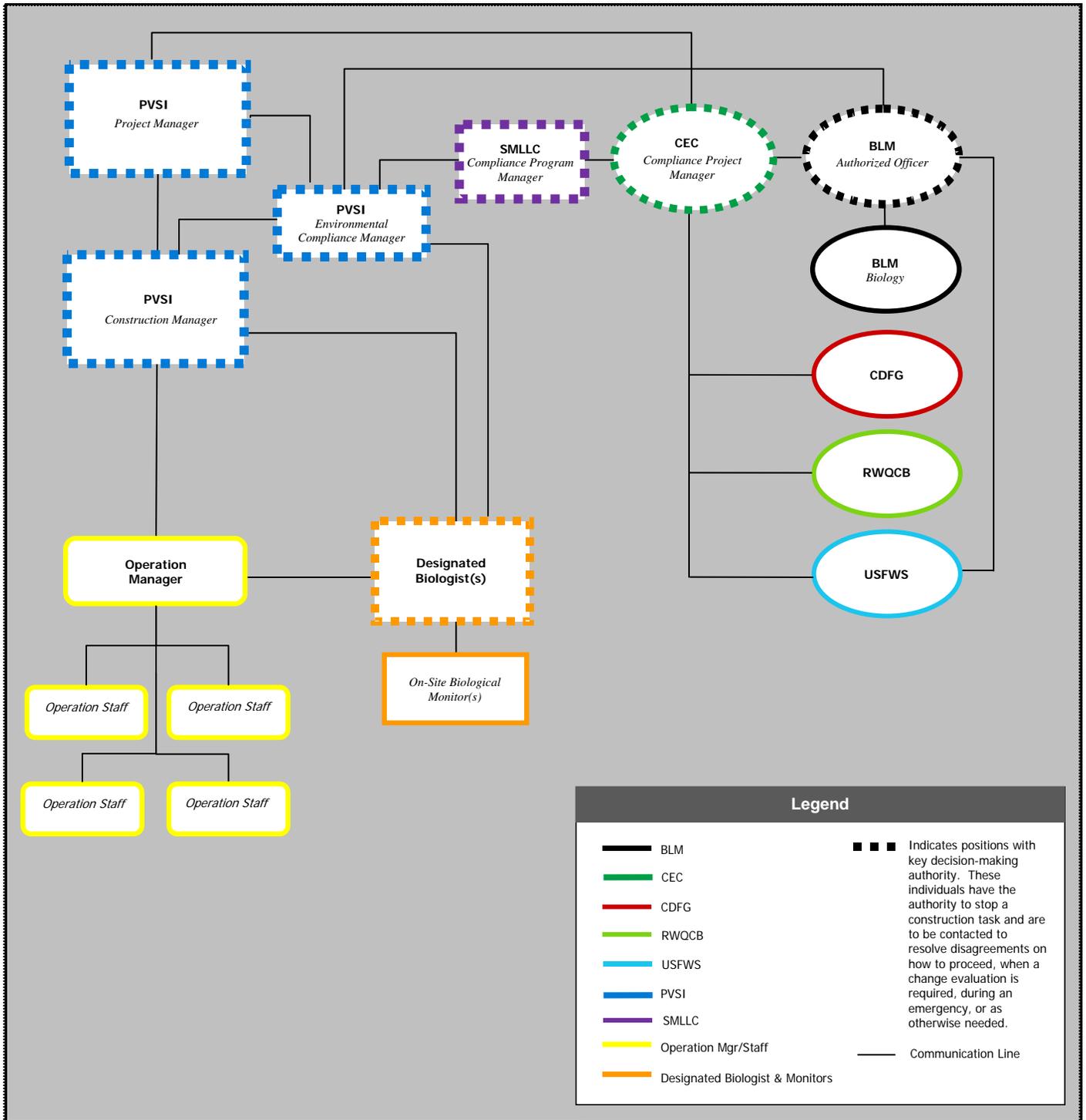
Date: August 2010

**FIGURE 6A**  
**Responsible Parties and Lines of Communication—Preconstruction through Construction**



Source: AECOM 2010

**FIGURE 6B**  
**Responsible Parties and Lines of Communication—Operations**



Source: AECOM 2010

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**APPENDIX A**

**BRMIMP SUMMARY TABLE**

| Condition ID | Source         | Page No | Mitigation Measure  | Responsible Party | Timing               | Action  | Schedule  | Notes   | Performance Standard | Remedial Action | Status |
|--------------|----------------|---------|---|-------------------|----------------------|---|---|---|----------------------|-----------------|--------|
| <b>BIO-1</b> | Final Decision | 248     | <b>DB SELECTION AND QUALS:</b> Assign at least one DB (DB) to the Project. The resume of the proposed DB(s) shall include at least three references and contact information. The DB must meet the minimum qualifications specified in BIO-1 (Appendix B, p. 248).   | Owner             | <b>Precon</b>        | Submit the DB's name along with a USFWS Desert Tortoise (DT) Authorized Biologist Request Form to the USFWS and Compliance Project Manager (CPM) for review and final approval.   | No fewer than 45 days before start of site mobilization or construction-related ground disturbance                                  | No construction related ground disturbance, grading, boring, or trenching shall commence until an approved DB is available to be on site. |                      |                 |        |
|              | Final Decision | 249     | <b>DB REPLACEMENT:</b> If a DB needs to be replaced, the specified information of the proposed replacement must be submitted to the CPM at least 10 working days prior to the termination or release of the preceding DB. In an emergency, the Owner shall immediately notify the CPM to discuss the qualifications and approval of a short-term replacement while a permanent DB is proposed to the CPM and for consideration. | Owner             | <b>Con &amp; Ops</b> | Submit the required information to the CPM.   | At least 10 working days prior to the termination or release of the preceding DB  |   |                      |                 |        |
| <b>BIO-2</b> | Final Decision | 249     | <b>DB DUTIES:</b> Ensure that the DB performs the specific duties set forth in BIO-2 (p. 5; Appendix B of the BRMIMP) during any site mobilization activities, construction related ground disturbance, grading, boring or trenching activities. The DB may be assisted by the approved Biological Monitors (BMs) but remains the contact for Owner and the CPM.  | Owner & DB        | <b>Con &amp; Ops</b> | DB shall provide copies of all written reports and summaries that document biological resources compliance activities, including those conducted by the BMs, in the Monthly Compliance Reports (MCRs) and Annual Compliance Reports (ACRs), as appropriate, to the CPM. | <u>Construction:</u> Include in Monthly Compliance Report (MCR). <u>Operations:</u> Summaries in the Annual Compliance Report (ACR) | MCRs due on or before the tenth day of the following month. ACRs are due on or before January 31 of the reporting year.                   |                      |                 |        |
| <b>BIO-3</b> | Final Decision | 250     | <b>BIOLOGICAL MONITOR SELECTION &amp; QUALIFICATIONS:</b> DB shall submit the resume, at least three references, and contact information of the proposed BM to the CPM. The resume shall demonstrate, to the satisfaction of the CPM, the appropriate education and experience to accomplish the assigned biological resource tasks. The BM is the equivalent of the USFWS designated DT Monitor.                               | DB                | <b>Precon</b>        | Submit the specified information to the CPM for approval.   | At least 30 days prior to the start of site mobilization or construction-related ground disturbance, grading, boring or trenching   |   |                      |                 |        |
|              | Final Decision | 250     | <b>BM TRAINING:</b> DB shall inform BMs of the include familiarity with the COC, Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), Worker Environmental Awareness Program (WEAP), and USFWS guidelines on DT surveys and handling procedures.  | DB                | <b>Precon</b>        | Submit a written statement to the CPM confirming that individual BM(s) has been trained including the date when training was completed.   | Before start of site mobilization or construction-related ground disturbance, grading, boring, or trenching                         |   |                      |                 |        |
|              | Final Decision | 250     | <b>ADDITIONAL BMS:</b> If needed during construction, the specified information shall be submitted to CPM.  | DB                | <b>Con</b>           | Submit the specified information to the CPM for approval.   | At least 10 days prior to their first day of monitoring activities  |   |                      |                 |        |
| <b>BIO-4</b> | Final Decision | 251     | <b>BM DUTIES:</b> The BMs shall assist the DB in conducting surveys and in monitoring of site mobilization activities, construction-related ground disturbance, grading, boring or trenching. The DB shall remain the contact for the Owner and CPM.  | BM                | <b>Con</b>           | Submit written reports to DB. Be available for monitoring and reporting.  | On-going  |   |                      |                 |        |

| Condition ID | Source         | Page No | Mitigation Measure  | Responsible Party | Timing | Action   | Schedule   | Notes | Performance Standard | Remedial Action | Status |
|--------------|----------------|---------|---|-------------------|--------|--|--|-------|----------------------|-----------------|--------|
| BIO-5        | Final Decision | 251     | <b>DB AND BM AUTHORITY:</b> The construction/operation manager shall act on the advice of the DB and BM(s) to ensure conformance with the biological resources COCs. The DB shall have the authority to immediately stop any activity that is not in compliance with these conditions and/or order any reasonable measure to avoid take of an individual of a listed species. If required by the DB and BM(s), Owner's construction/operation manager shall halt all site mobilization, ground disturbance, grading, boring, trenching and operation activities in areas specified by the DB. The DB's duties are described in BIO-5 (Appendix B, p. 251). If the DB is unavailable for direct consultation, the BM shall act on behalf of the DB. If the work stoppage relates to DT or any other federal or state-listed species, the Carlsbad Office of USFWS and the Ontario Office of CDFG shall also be notified. If the non-compliance or halt to construction or operation relates to DT or any other federal or state-listed species, the Project owner shall notify the Carlsbad Office of USFWS and Ontario Office of CDFG at the same time. | Owner, DB or BM   | Con    | Owner to ensure that the DB or BM notifies the CPM. Owner notify the CPM of the circumstances and actions being taken to resolve the problem. DB or BM to stop work that is not in compliance. Owner shall provide the CEC staff with reasonable access to the Project site under the control of the Owner and shall otherwise fully cooperate with the CEC's efforts to verify the Owner's compliance with. or the effectiveness of mitigation measures set forth in the COC. | As-needed. Immediate notification and no later than the morning following the incident, or Monday morning in the case of a weekend.  |       |                      |                 |        |
|              | Final Decision | 251     | <b>CORRECTIVE ACTION:</b> A determination of success or failure would be made by the CPM.   | CPM               | Con    | CPM to notify Owner, in consultation with USFWS and CDFG.  | Within 5 working days after receipt of notice that corrective action is completed, or the Owner would be notified by the CPM that coordination with other agencies would require additional time before a determination can be made. |       |                      |                 |        |

| Condition ID | Source         | Page No | Mitigation Measure   | Responsible Party                        | Timing                                | Action  | Schedule  | Notes  | Performance Standard | Remedial Action | Status |
|--------------|----------------|---------|--|--|---------------------------------------|---|---|--|----------------------|-----------------|--------|
| BIO-6        | Final Decision | 252     | <b>WEAP:</b> Develop and implement a project-specific WEAP and secure approval for the WEAP from the CPM. The WEAP shall be administered to all onsite personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. The WEAP shall be implemented during site Precon, construction, operation, and closure. The WEAP shall also include training related to BIO-19 (Appendix B, p, 282). The WEAP shall describe the items listed in BIO-6 (Appendix B, p. 252). Owner shall also provide the BLM, USFWS and CDFG a copy of all portions of the WEAP relating to DT and any other federal or state-listed species for review and comment. | Owner, DB, Authorized Officer (AO) & CPM | <b>Precon, Con, Ops &amp; Closure</b> | Owner submit WEAP and all supporting written materials and electronic media prepared or reviewed by the DB and a resume of the person(s) administering the program to CPM. Owner provides the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date in the MCR. DB to develop or consult on preparation of WEAP. CPM to approve WEAP. Throughout the life of the Project, the WEAP shall be repeated annually for permanent employees, and shall be routinely administered within 1 week of arrival to any new construction personnel, foremen, contractors, subcontractors, and other personnel potentially working within the Project area. | <b>Precon:</b> Owner provides final WEAP to CPM for review and approval at least 30 days prior to construction-related ground disturbance, and a copy of the final WEAP to BLM, USFWS and CDFG, and all supporting written materials and electronic media prepared or reviewed by the DB, and resume of the person(s) administering the program. <u>Construction, Operations and Closure:</u> Annual training for permanent employees; administer training within 1 week of arrival to any new personnel. <u>Construction:</u> File training acknowledgement forms signed during construction for at least 6 months after the start of commercial operation. <u>Operation:</u> File signed training acknowledgement forms for 6 months following termination of an individual's employment. |  |                      |                 |        |
| BIO-7        | Final Decision | 254     | <b>BRMIMP:</b> Develop a BRMIMP that includes complete and detailed descriptions of the information requested in the BIO-7 (p. 10; Appendix B of the BRMIMP). Implement the measures identified in the approved BRMIMP. The BRMIMP shall incorporate avoidance and minimization measures described in final versions of various biological mitigation and/or monitoring plans. Report implementation in MCR. Owner shall provide to BLM, CDFG, and USFWS a copy of all portions of the BRMIMP relating to DT and any other federal or state-listed species for review and comment.   | Owner, DB & CPM                          | <b>Precon</b>                         | Owner submit the final BRMIMP, which has been prepared in consultation with the DB, to the CPM for review and approval and include up-to-date maps depicting the location of sensitive biological resources. The BRMIMP shall also contain all of the required measures included in the biological COC. At the same time, Owner shall provide to BLM, CDFG, and USFWS a copy of all portions of the draft BRMIMP relating to DT and any other federal or state-listed species.  | Owner provides draft BRMIMP to CPM no fewer than 30 days prior to construction-related ground disturbance. Owner shall provide the final BRMIMP to the CPM at least 7 days prior to the start of any construction-related ground disturbance, grading, boring, or trenching.  | No construction-related ground disturbance, grading, boring or trenching may occur prior to approval of the final BRMIMP by the CPM. |                      |                 |        |
|              | Final Decision | 255     | <b>CHANGES TO BRMIMP:</b> Revise and resubmit changes to the BRMIMP based on permit conditions.  | Owner, DB, CPM, CDFG & USFWS             | <b>Precon</b>                         | 1) Owner to submit permits. 2) Owner revise/resubmit BRMIMP, in consultation with DB, to reflect permit conditions. CPM, CDFG and USFWS to approve. Take aerial photographs, at an approved scale.  | 1) Within 5 days of receipt.  |  |                      |                 |        |
|              | Final Decision | 255     | <b>REPORT IMPLEMENTATION:</b> Report implementation in MCRs.   | DB                                       | <b>Con</b>                            | Include information in MCRs.  | On-going  |  |                      |                 |        |
|              | Final Decision | 255     | <b>CONSTRUCTION DISTURBANCE:</b> Verify extent of construction disturbance does not exceed that described in Staff Assessment/Draft Environmental Impact Statement. Provide a final accounting in whole acres of the areas of vegetation communities/cover types present before and after construction.  | Owner                                    | <b>Postcon</b>                        | Take second set of aerial photographs and determine vegetation acres, communities or cover. Submit aerial photographs and vegetation acres, communities, or cover type to CPM, BLM, USFWS, and CDFG.  | No later than 90 days after completion of construction  |  |                      |                 |        |

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|              | Final Decision | 255     | <b>CONSTRUCTION TERMINATION REPORT:</b> Identify BRMIMP completed items, a summary of all modifications to mitigation measures made during the Project's Precon site mobilization and construction-related ground disturbance, grading, boring, and trenching, and which mitigation and monitoring items are outstanding.  | Owner, BLM & CPM  | Postcon | Owner to submit written report to CPM for review and approval. CPM to review and approve. | Within 30 days after completion |       |                      |                 |        |
| <b>BIO-8</b> | Final Decision | 256     | <b>LIMIT DISTURBANCE AREAS:</b> The boundaries of all areas to be disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to construction activities in consultation with the DB. Spoils and topsoil shall be stockpiled in disturbed areas lacking native vegetation and which do not provide habitat for special-status species. Parking areas, staging and disposal site locations shall similarly be located in areas without native vegetation or special-status species habitat. All disturbances, Project vehicles and equipment shall be confined to the flagged areas. Note: see BIO-9 for methods for clearance surveys, fence specification and installation. | Owner & DB        | Precon  | Owner to implement measure. DB to oversee and report implementation in MCRs.              |                                 |       |                      |                 |        |
|              | Final Decision | 256     | <b>MINIMIZE ROAD IMPACTS:</b> New and existing roads that are planned for construction, widening, or other improvements shall not extend beyond the flagged impact area. All vehicles passing or turning around would do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged and/or staked) prior to the onset of construction. Note: see BIO-9 for methods for clearance surveys, fence specification and installation.   | Owner & DB        | Con     | Owner to implement measure. DB to report implementation in MCRs.                          | On-going                        |       |                      |                 |        |
|              | Final Decision | 256     | <b>MINIMIZE TRAFFIC IMPACTS:</b> Vehicular traffic during Project construction and operation shall be confined to existing routes of travel to and from the Project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit shall not exceed 25 miles per hour within the Project area, on maintenance roads for linear facilities, or on access roads to the Project site. Speed limit signs shall be posted on new access roads to the site.  | Owner & DB        | Con     | Owner to implement measure. DB to report implementation in MCRs.                          | On-going                        |       |                      |                 |        |

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|              | Final Decision | 256     | <b>MONITOR DURING CONSTRUCTION:</b> In areas without DT exclusion fencing and that have been cleared, the DB shall be present at the construction site during all Project activities that have potential to disturb soil, vegetation, and wildlife. If DT are found during construction monitoring, procedures outlined in B10-9 shall be implemented.  | DB & BM           | Con          | The DB or BM shall walk immediately ahead of equipment during brush clearing and grading activities. DB to report implementation in MCRs. | On-going  |       |                      |                 |        |
|              | Final Decision | 256     | <b>MINIMIZE IMPACTS OF TRANSMISSION/PIPELINE ALIGNMENTS, ROADS, STAGING AREAS:</b> Staging areas for construction on the plant site shall be within the area that has been fenced with DT exclusion fencing and cleared. For construction activities outside of the plant site (transmission line, pipeline alignments) access roads, pulling sites, and storage and parking areas shall be designed, installed, and maintained with the goal of minimizing impacts to native plant communities and sensitive biological resources. Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line Interaction Committee's (APLIC's) Suggested Practices for Avian Protection on Power Lines and Mitigating Bird Collisions with Power Lines to reduce the likelihood of large bird electrocutions and collisions. | Owner & DB        | Precon & Con | Owner to implement measure. DB to report implementation in MCRs.  | Precon: design activities;<br>Construction: on-going        |       |                      |                 |        |
|              | Final Decision | 257     | <b>AVOID USE OF TOXIC SUBSTANCES:</b> Soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants.   | Owner & DB        | Con          | Owner to implement measure. DB to report implementation in MCRs.  | On-going  |       |                      |                 |        |
|              | Final Decision | 257     | <b>MINIMIZE LIGHTING IMPACTS:</b> Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards wildlife habitat.   | Owner & DB        | Precon & Con | Owner to implement measure. DB to report implementation in MCRs.  | Precon: plans and specifications;<br>Construction: on-going |       |                      |                 |        |
|              | Final Decision | 257     | <b>MINIMIZE NOISE IMPACTS:</b> A continuous low-pressure technique shall be used for steam blows, to the extent possible, to reduce noise levels in sensitive habitat proximate to the Project. Loud construction activities (e.g., unsilenced high pressure, steam blowing and pile driving, or other) shall be avoided from February 15 to April 15, which is when it would result in noise levels over 65 dBA in nesting habitat (excluding noise from passing vehicles).  | Owner & DB        |              | Owner to implement measure. DB to report implementation in MCRs.  |   |       |                      |                 |        |

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|              | Final Decision | 257     | <b>LOUD CONSTRUCTION ACTIVITIES:</b> May be permitted from February 15 to April 15 only if: a) the DB provides documentation (i.e., nesting bird data collected using methods described in BIO-15 and maps depicting location of the nest survey area in relation to noisy construction) to the CPM indicating that no active nests would be subject to 65 dBA noise, OR b) the DB or BM monitors active nests within the range of construction-related noise exceeding 65 dBA. The monitoring shall be conducted in accordance with Nesting Bird Monitoring and Management Plan approved by the CPM.   | Owner, DB & BM    | <b>Precon &amp; Con</b> | Owner to implement measure. Submit documentation to CPM or monitor nests. DB to report compliance in MCRs.  | <b>Precon:</b> plans and specifications; <b>Construction:</b> on-going. Owner shall submit nest survey results to the CPM no more than 7 days before initiating such construction. If an active nest is detected within this survey area Owner shall submit a Nesting Bird Monitoring and Management Plan to the CPM for review and approval no more than 7 days before initiating noisy construction. | The Nesting Bird Monitoring and Management Plan will be incorporated into the Avian Protection Plan (BIO-15)                               |                      |                 |        |
|              | Final Decision | 258     | <b>AVOID VEHICLE IMPACTS TO DT:</b> Parking and storage shall occur within the area enclosed by DT exclusion fencing to the extent feasible. No vehicles or construction equipment parked outside the fenced area shall be moved prior to an inspection of the ground beneath the vehicle for the presence of DT. If a DT is observed outside the areas permanently fenced with DT exclusion fencing, it shall be left to move on its own. If it does not move within 15 minutes, a DB or BM under the DB's direct supervision may move it out of harm's way as described in the USFWS Desert Tortoise Field Manual (USFWS 2009).   | Owner, DB & BM    | <b>Precon &amp; Con</b> | Owner to implement measure. DB or BM to relocate DT. DB to report compliance in MCRs.   | <b>Precon:</b> plans and specifications; <b>Construction:</b> on-going   | If the USFWS Desert Tortoise Field Manual is updated during the construction period, the latest version of the manual should be consulted. |                      |                 |        |
|              | Final Decision | 258     | <b>BACKFILL TRENCHES:</b> At the end of each work day, the DB shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) outside the area fenced with DT exclusion fencing have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with DT-exclusion fencing. All trenches, bores, and other excavations outside the areas permanently fenced with DT exclusion fencing shall be inspected periodically throughout the day, at the end of each workday and at the beginning of each day by the DB or a BM. Should a DT or other wildlife become trapped, the DB or BM move it out of harm's way as described in the USFWS Desert Tortoise Relocation/Translocation Plan Field Manual (USFWS 2009). Any other wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed. | Owner, DB & BM    | <b>Precon &amp; Con</b> | Owner to implement measure. DB or BM to inspect potential wildlife pitfalls and exclusion fencing for compliance with conditions. DB or BM to relocate DT or other wildlife. DB to report compliance in MCRs. | <b>Precon:</b> plans and specifications; <b>Construction:</b> on-going   |  |                      |                 |        |

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|              | Final Decision | 258     | <b>AVOID ENTRAPMENT OF DT:</b> Any construction pipe, culvert, or similar structure with a diameter greater than 3 inches, stored less than 8 inches aboveground and within DT habitat (i.e., outside the permanently fenced area) for one or more nights, shall be inspected for DT before the material is moved, buried or capped. As an alternative, all such structures may be capped before being stored outside the fenced area, or placed on elevated pipe racks. These materials would not need to be inspected or capped if they are stored within the permanently fenced area after the clearance surveys have been completed.                                  | Owner, DB & BM    | <b>Precon &amp; Con</b> | Owner to implement measure. DB or BM to inspect pipes for compliance with conditions. DB to report compliance in MCRs.  | <b>Precon:</b> plans and specifications; <b>Construction:</b> on-going |       |                      |                 |        |
|              | Final Decision | 259     | <b>MINIMIZE STANDING WATER:</b> Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract DT and common ravens to construction sites. A BM shall patrol these areas to ensure water does not puddle and shall take appropriate action to reduce water application where necessary.   | Owner & BM        | <b>Precon &amp; Con</b> | Owner to implement measure. BM to patrol areas. DB to report compliance in MCRs.  | <b>Precon:</b> plans and specifications; <b>Construction:</b> on-going |       |                      |                 |        |
|              | Final Decision | 259     | <b>DISPOSE OF ROAD-KILLED ANIMALS:</b> Road killed animals or other carcasses detected by personnel on roads associated with the Project area shall be reported immediately to a DB, BM, or Environmental Compliance Manager (ECM) who will promptly remove the roadkill for disposal (i.e. removal to a landfill or disposal at the BSPP facility. For special-status species road kill, the BM shall contact CDFG and USFWS within 1 working day of-detection of the carcass for guidance on disposal or storage of the carcass; all other roadkill shall be disposed of promptly. The BM shall provide the special-status species record as described in BIO-11 below. | DB, ECM & BM.     | <b>Precon &amp; Con</b> | Owner to implement measure. BM contact CDFG and USFWS within 1 working day of receipt of the carcass and report per BIO-11. DB to report compliance in MCRs. As part of the ACR each year following construction, the DB shall provide a report to the CPM that describes compliance with avoidance and minimization measures to be implemented during construction, operation, and maintenance (for example a summary of the incidence of road killed animals during the year, implementation of measures to avoid toxic spills, erosion and sedimentation, efforts to enforce worker guidelines, etc.). | <b>Precon:</b> plans and specifications; <b>Construction:</b> on-going |       |                      |                 |        |

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|              | Final Decision | 259     | <b>MINIMIZE HAZARDOUS MATERIALS SPILLS:</b> All vehicles and equipment shall be maintained in proper working condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. The DB shall be informed of any hazardous spills immediately as directed in the Project Hazardous Materials Plan. Hazardous spills shall be immediately cleaned up and the contaminated soil properly disposed of at a licensed facility. Servicing of construction equipment shall take place only at a designated area. Service/maintenance vehicles shall carry a bucket and pads to absorb leaks or spills. | Owner & DB        | <b>Precon &amp; Con</b> | Owner to implement measure. DB to report compliance in MCRs.                      | <b>Precon:</b> plans and specifications; <b>Construction:</b> on-going |       |                      |                 |        |
|              | Final Decision | 259     | <b>WORKER GUIDELINES:</b> During construction all trash and food-related waste shall be placed in self-closing containers and removed daily from the site. Workers shall not feed wildlife or bring pets to the Project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons. Vehicular traffic shall be confined to existing routes of travel to and from the Project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit when traveling on dirt access routes within DT habitat shall not exceed 25 miles per hour.                         | Owner & DB        | <b>Precon &amp; Con</b> | Owner to implement measure. DB to report compliance in MCRs.                      | <b>Precon:</b> plans and specifications; <b>Construction:</b> on-going |       |                      |                 |        |
|              | Final Decision | 259     | <b>IMPLEMENT EROSION CONTROL MEASURES:</b> Standard erosion control measures shall be implemented for all phases of construction and operation where sediment run-off from exposed slopes threatens to enter 'Waters of the State'. Sediment and other flow-restricting materials shall be moved to a location where they shall not be washed back into the stream. All disturbed soils and roads within the Project site shall be stabilized to reduce erosion potential, both during and following construction. Areas of disturbed soils (access and staging areas) which slopes toward drainages shall be stabilized to reduce erosion potential.                    | Owner & DB        | <b>Precon &amp; Con</b> | Owner to implement measure. DB to report compliance in MCRs.                      | <b>Precon:</b> plans and specifications; <b>Construction:</b> on-going |       |                      |                 |        |
|              | Final Decision | 260     | <b>MONITOR GROUND DISTURBING ACTIVITIES PRIOR TO PRECON SITE MOBILIZATION:</b> If pre-construction site mobilization requires ground-disturbing activities such as for geotechnical borings or hazardous waste evaluations, a DB or BM shall be present to monitor any actions that could disturb soil, vegetation, or wildlife.   | Owner, DB & BM    | <b>Precon</b>           | Owner to implement measure. DB or BM to monitor. DB to report compliance in MCRs. | As-needed.   |       |                      |                 |        |

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|              | Final Decision | 260     | <b>REVEGETATION OF TEMPORARILY DISTURBED AREAS:</b> Owner shall prepare and implement a Revegetation Plan to restore all areas subject to temporary disturbance to pre-Project grade and conditions. Temporarily disturbed areas within the Project area include, but are not limited to: all proposed locations for linear facilities, temporary access roads, berms, areas surrounding the drainage diffusers, construction work temporary lay-down areas, and construction equipment staging areas. | Owner             | <b>Precon</b>  | <b>Prepare Revegetation Plan. See X for more details.</b>  | No less than 30 days prior to construction, Owner shall submit to the CPM a final agency-approved Revegetation Plan that has been reviewed and approved by the CPM. All modifications to the Revegetation Plan shall be made only after approval from the CPM. |       |                      |                 |        |
|              | Final Decision | 260     |  | Owner             | <b>Postcon</b> | Owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed. As part of the ACR each year following construction, the DB shall provide a report to the CPM that describes compliance with avoidance and minimization measures to be implemented during construction, operation, and maintenance (for example a summary of the incidence of roadkilled animals during the year, implementation of measures to avoid toxic spills, erosion and sedimentation, efforts to enforce worker guidelines, etc.). | Within 30 days after completion of project construction.   |       |                      |                 |        |

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| BIO-9        | Final Decision | 261     | <p><b>DESERT TORTOISE EXCLUSION FENCE INSTALLATION:</b> Permanent exclusion fencing shall be installed along the permanent perimeter security fence (boundaries) as phases are constructed. Temporary fencing shall be installed along linear features or any subset of the plant site phasing that does not correspond to permanent perimeter fencing. Temporary fencing shall be installed along linear features unless a BM is present in the immediate vicinity of construction activities for the linear facility. All fencing shall be flagged and surveyed within 24 hours prior to the initiation of fence construction. Clearance surveys of the DT exclusionary fence and utility rights-of-way alignments shall be conducted by the DB using techniques outlined in the USFWS' 2009 Desert Tortoise Field Manual and may be conducted in any season with USFWS and CDFG approval. BM may assist the DB under supervision. These fence clearance surveys shall provide 100-percent coverage of all areas to be disturbed and an additional transect along both sides of the fence line. Disturbance associated with DT exclusionary fence construction shall not exceed 30 feet on either side of the proposed fence alignment. Prior to the surveys the Owner shall provide to the CPM, CDFG and USFWS a figure clearly depicting the limits of construction disturbance for the proposed fence installation.</p> <p>The fence line survey area shall be 90 feet wide centered on the fence alignment. Where construction disturbance for fence line installation can be limited to 15 feet on either side of the fence line, this fence line survey area may be reduced to an area approximately 60 feet wide centered on the fence alignment. Transects shall be no greater than 15 feet apart. DT located within the utility ROW alignments shall be moved out of harm's way in accordance with the USFWS Desert Tortoise Field Manual (USFWS 2009). Any DT detected during clearance surveys for fencing within the Project site and along the perimeter fence alignment shall be translocated and monitored in accordance with the DT Relocation/Translocation Plan (BIO-10). Tortoise shall be handled by the DB in accordance with the USFWS' 2009 Desert Tortoise Field Manual.</p> | Owner, DB & BM    | Precon & Con | Owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed. As part of the ACR each year following construction, the DB shall provide a report to the CPM that describes compliance with avoidance and minimization measures to be implemented during construction, operation, and maintenance (for example a summary of the incidence of roadkilled animals during the year, implementation of measures to avoid toxic spills, erosion and sedimentation, efforts to enforce worker guidelines, etc.). |          |       |                      |                 |        |

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|              | Final Decision | 262     | A. Timing, Supervision of Fence Installation. The exclusion fencing shall be installed in any area subject to disturbance prior to the onset of site clearing and grubbing in that area. The fence installation shall be supervised by the DB and monitored by the BMs to ensure the safety of any tortoise present.  | Owner, DB & BM    | Precon       |        |          |       |                      |                 |        |
|              | Final Decision | 262     | B. Fence Material and Installation. All desert tortoise exclusionary fencing shall be constructed in accordance with the USFWS' 2009 Desert Tortoise Field Manual (Chapter 8: Desert Tortoise Exclusion Fence).   | Owner             | Precon       |        |          |       |                      |                 |        |
|              | Final Decision | 262     | C. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises. The gates may be electronically activated to open and close immediately after the vehicle(s) have entered or exited to prevent the gates from being kept open for long periods of time.  | Owner             | Precon       |        |          |       |                      |                 |        |
|              | Final Decision | 262     | D. Fence Inspections. Following installation of the DT exclusion fencing for both the permanent site fencing and temporary fencing in the utility corridors, the fencing shall be regularly inspected. If tortoise were moved out of harm's way during fence construction, permanent and temporary fencing shall be inspected at least two times a day for the first 7 days to ensure a recently moved tortoise has not been trapped within the fence. Thereafter, permanent fencing shall be inspected monthly and during and within 24 hours following all major rainfall events. A major rainfall event is defined as one for which flow is detectable within the fenced drainage. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within 48 hours of observing damage. Inspections of permanent site fencing shall occur for the life of the Project. Temporary fencing shall be inspected weekly and, where drainages intersect the fencing, during and within 24 hours following major rainfall events. All temporary fencing shall be repaired immediately upon discovery and, if the fence may have permitted tortoise entry while damaged, the DB shall inspect the area for tortoise. | DB & BM           | Precon & Con |        |          |       |                      |                 |        |

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|              | Final Decision | 263     | <p><b>DESERT TORTOISE CLEARANCE SURVEYS WITHIN THE PLANT SITE:</b><br/> Clearance surveys shall be conducted in accordance with the USFWS' 2009 Desert Tortoise Field Manual (Chapter 6 Clearance Survey Protocol for the Desert Tortoise Mojave Population) and shall consist of two surveys covering 100 percent the Project area by walking transects no more than 15-feet apart. If a DT is located on the second survey, a third survey shall be conducted. Each separate survey shall be walked in a different direction to allow opposing angles of observation. Clearance surveys for non-linear areas of Phase 1A may be conducted outside the active season. Clearance surveys of the remaining portions of the power plant site may only be conducted when tortoises are most active (April through May or September through October) unless the Project receives approval from CDFG and USFWS. Clearance surveys of linear features may be conducted during anytime of the year. Surveys outside of the active season in areas other than Phase 1A require approval by USFWS and CDFG. Any tortoise located during clearance surveys of the power plant site and linear features shall be translocated or relocated and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan:</p> | DB & BM           | Precon |        |          |       |                      |                 |        |
|              | Final Decision | 263     | <p>A. Burrow Searches. During clearance surveys all DT burrows, and burrows constructed by other species that might be used by DTs, shall be examined by the DB, who may be assisted by the BMs, to assess occupancy of each burrow by DTs and handled in accordance with the USFWS' 2009 Desert Tortoise Field Manual. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined in accordance with the Desert Tortoise Relocation/Translocation Plan. Tortoises taken from burrows and from elsewhere on the power plant site shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan.</p>   | DB & BM           |        |        |          |       |                      |                 |        |

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|              | Final Decision | 264     | B.Burrow Excavation/Handling. All potential DT burrows located during clearance surveys would be excavated by hand, tortoises removed, and collapsed or blocked in accordance with the Desert Tortoise Relocation/Translocation Plan to prevent occupation by DTs. All DT handling, removal, and burrow excavations, including nests, would be conducted by the DB, who may be assisted by a BM in accordance with the USFWS' 2009 Desert Tortoise Field Manual.   | DB & BM           |              |   |                         |       |                      |                 |        |
|              | Final Decision | 264     | <b>MONITORING FOLLOWING CLEARING:</b> Following the desert tortoise clearance and removal from the power plant site and utility corridors, workers and heavy equipment shall be allowed to enter the Project site to perform clearing, grubbing, leveling, and trenching activities. A DB or BM shall be onsite for clearing and grading activities to move tortoises missed during the initial tortoise clearance survey. Should a tortoise be discovered, it shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan.   | DB & BM           | Con          | Monitor clearing and grading activities | Following site clearing |       |                      |                 |        |
|              | Final Decision | 264     | <b>REPORTING:</b> The DB shall record the following information for any DT handled: a) the locations (narrative and maps) and dates of observation; b) general condition and health, including injuries, state of healing and whether DT voided their bladders; c) location moved from and location moved to (using GPS technology); d) gender, carapace length, and diagnostic markings (i.e., identification numbers or marked lateral scutes); e) ambient temperature when handled and released; and f) digital photograph of each handled DT. DT moved from within Project areas shall be marked and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan. | DB & BM           | Precon & Con | Observe and record DT information       | Ongoing                 |       |                      |                 |        |

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| BIO-10       | Final Decision | 265     | <p><b>DESERT TORTOISE RELOCATION/TRANSLOCATION PLAN:</b><br/> The Owner shall develop and implement a final Desert Tortoise Relocation/Translocation Plan (Plan) that is consistent with current USFWS approved guidelines, and meets the approval of the CPM. The Plan shall include guidance specific to each of the three phases of Project construction, as described in BIO-28 (Phasing), and shall include measures to minimize the potential for repeated translocations of individual desert tortoises. The goals of the Desert Tortoise Relocation/Translocation Plan shall be to relocate or translocate all desert tortoises from the Project site to nearby suitable habitat; minimize impacts on resident desert tortoises outside the Project site; minimize stress, disturbance, and injuries to relocated/translocated tortoises; and assess the success of the relocation/translocation effort through monitoring. The final Plan shall be based on the draft Desert Tortoise Relocation/Translocation Plan prepared by the Applicant (AECOM 2010t) and shall include all revisions deemed necessary by BLM, USFWS, CDFG and the Energy Commission staff.</p> | Owner & DB        | Precon | Owner shall provide BLM's AO and the CPM with the final version of a Desert Tortoise Relocation/Translocation Plan that has been reviewed and approved by BLM's AO and the CPM in consultation with USFWS and CDFG.   | At least 30 days prior to site mobilization                 |       |                      |                 |        |
| BIO-11       | Final Decision | 265     | <p><b>DESERT TORTOISE COMPLIANCE VERIFICATION:</b> The Owner shall provide CEC, CDFG, and USFWS, and BLM staff with reasonable access to the Project site and compensation lands under the control of the Owner and shall otherwise fully cooperate with the Energy Commission's and BLM's efforts to verify the Owner's compliance with, or the effectiveness of, mitigation measures set forth in the COCs. The DB shall do all of the following:</p>  | Owner & DB        | Con    | The DB shall provide the CPM a Final Listed Species Mitigation Report that includes, at a minimum: 1) a copy of the table in the BRMIMP with notes showing when each of the mitigation measures was implemented; 2) all available information about Project-related incidental take of listed species; 3) information about other Project impacts on the listed species; 4) construction dates; 5) an assessment of the effectiveness of COCs in minimizing and compensating for Project impacts; 6) recommendations on how mitigation measures might be changed to more effectively minimize and mitigate the impacts of future Projects on the listed species; and 7) any other pertinent information, including the level of take of the listed species associated with the Project. | No later than 45 days after initiation of Project operation |       |                      |                 |        |
|              | Final Decision | 265     | <p>1. Notification. Notify the CPM at least 14 calendar days before initiating construction-related ground disturbance activities; immediately notify the CPM in writing if the Owner is not in compliance with any COC, including but not limited to any actual or anticipated failure to implement mitigation measures within the time periods specified in the COCs.</p>  | DB                | Precon |   | As needed   |       |                      |                 |        |

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|              | Final Decision | 266     | 2. Monitoring During Grubbing and Grading. Remain onsite daily while vegetation salvage, grubbing, grading and other ground-disturbance construction activities are taking place to avoid or minimize take of listed species, and verify personally or use BMs to check for compliance with all impact avoidance and minimization measures, include checking all exclusion zones to ensure that signs, stakes, and fencing are intact and that human activities are restricted in these protective zones.  | Owner, DB         | Con       | In the case of a sighting in an active construction area, the Owner shall, at the same time, submit a map (e.g., using Geographic Information Systems) depicting both the limits of construction and sighting location to the CPM, CDFG and USFWS.                   | Daily  |       |                      |                 |        |
|              | Final Decision | 266     | 3. Monthly Compliance Inspections. Conduct compliance inspections at a minimum of once per month after clearing, grubbing, and grading are completed and submit a MCR to the CPM, USFWS and CDFG during construction.  | DB                | Con       | Beginning with the first month after clearing, grubbing, and grading are completed and continuing every month until construction is complete. Owner shall submit describe results of the Monthly Compliance Inspections in the MCR for the CPM, BLM, USFWS and CDFG. | Monthly  |       |                      |                 |        |
|              | Final Decision | 266     | Notification of Injured, Dead, or Relocated Listed Species. If an injured or dead listed species is detected within or near the Project Disturbance area, the CPM, the Ontario Office of CDFG, and Carlsbad Office of USFWS shall be notified immediately by phone. Notification shall occur no later than noon on the business day following the event if it occurs outside normal business hours so that the agencies can determine if further actions are required to protect listed species. Written follow-up notification via FAX or electronic communication shall be submitted to these agencies within 2 calendar days of the incident and include the following information as relevant. | DB                | Con & Ops | Telephone and written notification to CPM, CDFG, USFWS   | As-needed. Immediate notification by phone. Notification shall occur no later than noon on the business day following the event if it occurs outside normal business hours. Written follow-up notification via FAX or electronic communication shall be submitted to these agencies within 2 calendar days of the incident describing all reported incidents of injury, kill, or relocation of a listed species, identifying who was notified, and explaining when the incidents occurred. |       |                      |                 |        |
|              | Final Decision | 266     | A. Injured Desert Tortoise. If a DT is injured as a result of Project-related activities during construction, the DB or approved BM shall immediately take it to a CDFG-approved wildlife rehabilitation and/or veterinarian clinic. Any veterinarian bills for such injured animals shall be paid by the Owner. Following phone notification as required above, the CPM, CDFG, and USFWS shall determine the final disposition of the injured animal, if it recovers. Written notification shall include, at a minimum, the date, time, location, circumstances of the incident, and the name of the facility where the animal was taken.   | DB                |           |  |  |       |                      |                 |        |

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|               | Final Decision | 266     | B. Desert Tortoise Fatality. If a desert tortoise is killed by Project-related activities during construction or operation, submit a written report to the CPM, CDFG, and USFWS with the same information as an injury report. These DTs shall be salvaged according to guidelines described in Salvaging Injured, Recently Dead, Ill, and Dying Wild, Free-Roaming Desert Tortoise (Berry 2001). Owner shall pay to have the desert tortoises transported and necropsied. The report shall include the date and time of the finding or incident.   | DB                |  |   |   |       |                      |                 |        |
|               | Final Decision | 267     | 4. Stop Work Order. The CPM may issue the Owner a written stop work order to suspend any activity related to the construction or operation of the Project to prevent or remedy a violation of one or more COCs (including but not limited to failure to comply with reporting, monitoring, or habitat acquisition obligations) or to prevent the illegal take of an endangered, threatened, or candidate species. The Owner shall comply with the stop work order immediately upon receipt thereof.   | CPM               | Con                                    | Issue Stop Work Order   | As needed   |       |                      |                 |        |
| <b>BIO-12</b> | Final Decision | 267     | <b>DESERT TORTOISE COMPENSATORY MITIGATION:</b> The Owner shall provide compensatory mitigation at a 1:1 ratio for impacts to 6,958 acres, adjusted to reflect the final Project footprint. For purposes of this condition, the Project footprint means all lands disturbed in the construction and operation of the Project, including all linears, as well as undeveloped areas inside the Project's boundaries that will no longer provide viable long-term habitat for the DT. To satisfy this condition, the Owner shall acquire, protect and transfer 1 acre of DT habitat for every acre of habitat within the final Project footprint, and provide associated funding for the acquired lands, as specified below. Condition BIO-27 (Appendix B, p. 318) may provide the Owner with another option for satisfying some or all of the requirements in this condition. In lieu of acquiring lands itself, the Owner may satisfy the requirements of this condition by depositing funds into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as provided below in section 3.I. of this condition. If compensation lands are acquired in fee title or in easement, the requirements for acquisition, initial improvement and long-term management of compensation lands include all of the following: | Owner & CPM       | <b>Phase 1a, Phase 1b, and Phase 2</b> | 1) The Owner, or an approved third party, shall provide the CPM, CDFG, BLM and USFWS with a management plan for the compensation lands The CPM shall review and approve the management plan, in consultation with CDFG, BLM and the USFWS.<br>2) The Owner shall provide to the CPM, CDFG, BLM and USFWS an analysis, based on aerial photography, with the final accounting of the amount of habitat disturbed during Project construction. This shall be the basis for the final number of acres required to be acquired. | The timing of the mitigation shall correspond with the timing of the site disturbance activities as stated in BIO-28 (Appendix B, p. 318).<br>1) Within 180 days of the land or easement purchase, as determined by the date on the title.<br>2) Within 90 days after completion of all project related ground disturbance, . |       |                      |                 |        |

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|              | Final Decision | 268     | 1. Selection Criteria for Compensation Lands. The compensation lands selected for acquisition in fee title or in easement shall comply with geographic location and habitat requirements as set forth in BIO-12 (Appendix B, p. 268-269).   |                   |        |  |   |       |                      |                 |        |
|              | Final Decision | 269     | 2. Review and Approval of Compensation Lands Prior to Acquisition. The Owner shall submit a formal acquisition proposal to the CPM, CDFG, USFWS, and BLM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for DT in relation to the criteria listed above. Approval from the CPM and CDFG, in consultation with BLM and the USFWS, shall be required for acquisition of all compensatory mitigation parcels.   | Owner             |        | The Owner shall submit a formal acquisition proposal to the CPM, CDFG, USFWS, and BLM describing the parcels intended for purchase and shall obtain approval from the CPM and CDFG prior to the acquisition. | No fewer than 90 days prior to acquisition of the property. |       |                      |                 |        |
|              | Final Decision | 269     | 3. Compensation Lands Acquisition Requirements. The Owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM and CDFG, in consultation with BLM and the USFWS, have approved the proposed compensation lands:   | Owner             |        |  |   |       |                      |                 |        |
|              | Final Decision | 269     | A. Preliminary Report. The Owner, or approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary or requested documents for the proposed compensation land to the CPM and CDFG. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM and CDFG, in consultation with BLM and the USFWS. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board. | Owner             |        | Provide documents to CPM and CDFG for review and approval  |   |       |                      |                 |        |

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|              | Final Decision | 269     | B. Title/Conveyance. The Owner shall transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement as required by the CPM and CDFG. Transfer of either fee title or an approved conservation easement will usually be sufficient, but some situations, e.g., the donation of lands burdened by a conservation easement to BLM, will require that both types of transfers be completed. Any transfer of a conservation easement or fee title must be to CDFG, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM under terms approved by the CPM and CDFG. If an approved non-profit organization holds title to the compensation lands, a conservation easement shall be recorded in favor of CDFG in a form approved by CDFG. If an approved non-profit holds a conservation easement, CDFG shall be named a third party beneficiary. | Owner             |        | Transfer fee title and/or conservation easement to CDFG, or non-profit organization qualified to hold title to and manage compensation lands |          |       |                      |                 |        |
|              | Final Decision | 270     | C. Initial Habitat Improvement Fund. The Owner shall fund the initial protection and habitat improvement of the compensation lands. Alternatively, a non-profit organization may hold the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965) and if it meets the approval of CDFG and the CPM. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.   | Owner             |        |  |          |       |                      |                 |        |
|              | Final Decision | 270     | D. Property Analysis Record. Upon identification of the compensation lands, the Owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate long-term maintenance and management fee to fund the in-perpetuity management of the acquired mitigation lands.   | Owner             |        | Provide PAR  |          |       |                      |                 |        |

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|              | Final Decision | 270     | E. Long-term Maintenance and Management Fund. In accordance with BIO-28 (Appendix B, p. 318), the Owner shall deposit in NFWF's REAT Account a non-wasting capital long-term maintenance and management fee in the amount determined through the PAR or PAR-like analysis conducted for the compensation lands. The CPM, in consultation with CDFG, may designate another non-profit organization to hold the long-term maintenance and management fee if the organization is qualified to manage the compensation lands in perpetuity. If CDFG takes fee title to the compensation lands, CDFG shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity to manage the long-term maintenance and management fee for CDFG and with CDFG supervision. | Owner, CPM & CDFG |        | The Owner shall deposit the funds required (long term management and maintenance fee) and provide proof of the deposit to the CPM. | No fewer than 30 days after acquisition of the property. |       |                      |                 |        |
|              | Final Decision | 270     | F. Interest, Principal, and Pooling of Funds. The Owner, the CPM and CDFG shall ensure that an agreement is in place with the long-term maintenance and management fee holder/manager to ensure the conditions as set forth in BIO-12 (Appendix B, p. 267).  | Owner, CPM & CDFG |        |  |  |       |                      |                 |        |
|              | Final Decision | 271     | G. Other expenses. In addition to the costs listed above, the Owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to title and document review costs, expenses incurred from other state agency reviews, and overhead related to providing compensation lands to CDFG or an approved third party; escrow fees or costs; environmental contaminants clearance; and other site cleanup measures.   | Owner             |        |  |  |       |                      |                 |        |

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|              | Final Decision | 271     | H. Mitigation Security. The Owner shall provide financial assurances in accordance with BIO-28 (Appendix B, p. 318) to the CPM and CDFG with copies of the document(s) to BLM and the USFWS, to guarantee that an adequate level of funding is available to implement the mitigation measures described in this condition. These funds shall be used solely for implementation of the measures associated with the Project in the event the Owner fails to comply with the requirements specified in this condition, or shall be returned to the Owner upon successful compliance with the requirements in this condition. The CPM's or CDFG's use of the security (Security) to implement measures in this condition may not fully satisfy the Owner's obligations under this condition. Financial assurance can be provided to the CPM and CDFG in the form of an irrevocable letter of credit, a pledged savings account or another form of Security. Prior to submitting the Security to the CPM, the Owner shall obtain the CPM's, in consultation with CDFG, BLM and the USFWS, of the form of the Security. Security shall be provided in the amounts \$2,374,672 for Phase 1 A: \$9,248,560 for Phase 1 Security estimates are based on the most current guidance from the REAT agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010) and may be revised with updated information. This Security estimate reflects the amount that would be required for Security if the project owner acquired the 6.958 acres of mitigation lands itself. | Owner             | Precon | If the mitigation actions required under this COC are not completed prior to the start of ground-disturbing activities, the Owner shall provide the CPM and CDFG with an approved form of Security in accordance with this COC. | No later than 30 days prior to beginning project ground-disturbing activities. |       |                      |                 |        |

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|              | Final Decision | 272     | <p>I. The Owner may elect to fund the acquisition and initial improvement of compensation lands through NFWF by depositing funds for that purpose into NFWF's REAT Account. Initial deposits for this purpose, which includes a NFWF administrative fee, must be made in the amounts of \$2,465,611 for Phase 1 a; \$9,481,161 for Phase 1 b; and \$10,105,186 for Phase 2. If this option is used for the acquisition and initial improvement, the Owner shall make an additional deposit into the REAT Account if necessary to cover the actual acquisition costs and administrative costs and fees of the compensation land purchase once land is identified and the actual costs are known. If the actual costs for acquisition and administrative costs and fees are less than that estimated based on the Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010, or more current guidance from the REAT agencies, the excess money deposited in the REAT Account shall be returned to the Owner. Money deposited for the initial protection and improvement of the compensation lands shall be returned to the Owner. The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the CEC and CDFG. Such delegation shall be subject to approval by the CPM and CDFG, in consultation with BLM and USFWS, prior to land acquisition, initial protection or maintenance and management activities. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be implemented with 18 months of the CEC's approval.</p> | Owner             |        |        |          |       |                      |                 |        |

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| BIO-13       | Final Decision | 274     | <b>RAVEN MANAGEMENT PLAN:</b> The Owner shall implement a Raven Monitoring, Management, and Control Plan (Raven Plan) that is consistent with the most current USFWS-approved raven management guidelines, and which meets the approval of the CPM, in consultation with BLM, USFWS and CDFG. The Raven Plan shall include but not be limited to a program to monitor raven presence in the Project vicinity, determine if raven numbers are increasing, and to implement raven control measures as needed based on that monitoring. The purpose of the plan is to avoid any Project-related increases in raven numbers during construction, operation, and decommissioning. In addition to monitoring at the Project site, the Raven Plan shall address raven monitoring and control at the new water source proposed in the McCoy Mountains in staff's proposed BIO-21 (Appendix B, p. 304).The Owner shall also provide funding for implementation of the USFWS Regional Raven Management Program by submitting payment to the project sub-account of the REAT Account held by the National Fish and Wildlife Foundation (NFWF) to support the USFWS Regional Raven Management Program. The one time fee shall be as described in the cost allocation methodology (Exhibit 214, Renewable Energy Development And Common Raven Predation on the Desert Tortoise Summary, dated May 2010; Cost Allocation Methodology for Implementation of the Regional Raven Management Plan, dated July 9, 2010) or more current guidance as provided by USFWS or CDFG. More detail on the Raven Plan can be found following the list of COCs below. | Owner, CPM, BLM & DB | Precon & Con | 1) The Owner shall provide the CPM, USFWS, and CDFG with the final version of a Raven Plan. 2) Owner shall submit payment to the project sub-account of the REAT Account held by the NFWF to support the USFWS Regional Raven Management Program.  | 1) No less than 10 days prior to the start of any project-related ground disturbance activities, the Owner shall provide the CPM, USFWS, and CDFG with the final version of a Raven Plan. The CPM would determine the plan's acceptability within 15 days of receipt of the final plan. 2) No less than 10 days prior to the start of any Project-related ground disturbance activities, the Owner shall provide documentation to the CPM, BLM, CDFG and USFWS that the one-time fee for the USFWS Regional Raven Management Program of has been deposited to the REAL -NFWF subaccount for the Project. | 1. The Common Raven Plan shall:<br>a. Identify conditions associated with the Project that might provide raven subsidies or attractants;<br>b. Describe management practices to avoid or minimize conditions that might increase raven numbers and predatory activities;<br>c. Describe control practices for ravens;<br>d. Establish thresholds that would trigger implementation of control practices;<br>e. Address monitoring and nest removal during construction and for the life of the Project, and;<br>f. Discuss reporting requirements.<br>All modifications to the approved Raven Plan shall be made only with approval of CPM in consultation with USFWS and CDFG. Current estimate of the fee is \$105/acre. Phase 1a disturbance is estimated to be 769 acres. Phase 1b disturbance is estimated to |                      |                 |        |
|              | Final Decision | 275     |  | Owner & CPM          | Postcon      | The Owner shall provide to the CPM for review and approval, a written report identifying which items of the Raven Plan have been completed, a summary of all modifications to mitigation measures made during the Project's construction phase, and which items are still outstanding.                                     | Within 30 days after completion of Project construction  |  |                      |                 |        |
|              | Final Decision | 275     |  | Owner                | Postcon      | As part of the ACR, the DB shall provide a report to the CPM that includes: a summary of the results of raven management and control activities for the year; a discussion of whether raven control and management goals for the year were met; and recommendations for raven management activities for the upcoming year. | Annually   |  |                      |                 |        |

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| BIO-14       | Final Decision | 275     | <b>WEED MANAGEMENT PLAN:</b> The Owner shall implement a Weed Management Plan that meets the approval of the CPM. The objective of the Weed Management Plan shall be to prevent the introduction of any new weeds and the spread of existing weeds as a result of Project construction, operation, and decommissioning. The Weed Management Plan shall include at a minimum the following information: specific weed management objectives and measures for each target non-native weed species; baseline conditions; a map of the Weed Management Areas; weed risk assessment and measures to prevent the introduction and spread of weeds; monitoring and surveying methods; and reporting requirements. More detail on the Weed Management Plan can be found following the list of COCs. | Owner             | Precon, Con, Ops & Closure | Provide the CPM with the final version of a Weed Management Plan that has been reviewed and approved by BLM, and Energy Commission staff, USFWS, and CDFG. Modifications to the approved Weed Management Plan shall be made only after consultation with the Energy Commission staff, BLM, USFWS, and CDFG.   | No less than 10 days prior to start of any Project-related ground disturbance activities |       |                      |                 |        |
|              | Final Decision | 276     |   | Owner             |                            | Provide to the CPM for review and approval, a written report identifying which items of the Weed Management Plan have been completed, a summary of all modifications to mitigation measures made during the Project's construction phase, and which items   | Within 30 days after completion of Project construction                                  |       |                      |                 |        |
|              | Final Decision | 276     |   | DB                |                            | As part of the ACR, each year following construction the DB shall provide a report to the CPM that includes: a summary of the results of noxious weeds surveys and management activities for the year; a discussion of whether weed management goals for the year were met; and recommendations for weed management activities for the upcoming year. | Annually following construction.   |       |                      |                 |        |

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| <b>BIO-15</b> | Final Decision | 276     | <b>AVIAN PROTECTION PLAN:</b> The Owner shall prepare and implement an Avian Protection Plan to monitor the death and injury of birds from collisions with facility features such as transmission lines, reflective mirror-like surfaces and from heat, and bright light from concentrating sunlight. The monitoring data shall be used to inform an adaptive management program that would avoid and minimize Project-related avian impacts. The study design shall be approved by the CPM in consultation with CDFG and USFWS, and shall be incorporated into the Project's BRMIMP and implemented. The Avian Protection Plan shall include detailed specifications on data and carcass collection protocol and a rationale justifying the proposed schedule of carcass searches. The plan shall also include seasonal trials to assess bias from carcass removal by scavengers as well as searcher bias. More detail on the Avian Protection Plan can be found following the list of COCs. | Owner             | <b>Precon</b> | Owner shall submit to the CPM, USFWS, and CDFG a final Avian Protection Plan.   | No fewer than 30 days prior to commercial operation of any of the power plant units.   | Modifications to the Avian Protection Plan shall be made only after approval from the CPM. |                      |                 |        |
|               | Final Decision | 276     |   | DB                | <b>Ops</b>    | Submit quarterly reports to the CPM, CDFG, and USFWS describing the dates, durations, results of monitoring, a detailed description of any Project-related bird or wildlife deaths or injuries detected during the monitoring study or at any other time, and describe adaptive management measures implemented to avoid or minimize deaths or injuries.              | Quarterly for 1 year following the beginning of power plant operation. Quarterly reporting shall continue until the CPM, in consultation with CDFG and USFWS determine whether more years of monitoring are needed, and whether mitigation and adaptive management measures are necessary. |  |                      |                 |        |
|               | Final Decision | 276     |   | DB                |               | Following the completion of the fourth quarter of monitoring, the DB shall prepare an Annual Report that shall be provided to the CPM, CDFG, and USFWS. The report shall summarize the year's data, analyzes any Project-related bird fatalities or injuries detected, and provides recommendations for future monitoring and any adaptive management actions needed. | Annually   |  |                      |                 |        |

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| BIO-16       | Final Decision | 277     | <b>PRE-CONSTRUCTION NEST SURVEYS:</b><br>Pre-construction nest surveys shall be conducted if construction activities would occur from February 1 through July 31. The DB or BM conducting the surveys shall be experienced bird surveyors familiar with standard nest-locating techniques such as those described in Martin and Guepel (1993). The goal of the nesting surveys shall be to identify the general location of the nest sites, sufficient to establish a protective buffer zone around the potential nest site, and need not include identification of the precise nest locations. Surveyors performing nest surveys shall not concurrently be conducting DT surveys. The bird surveyors shall perform surveys in accordance with the following guidelines: | DB & BM           | Precon | Owner shall provide the CPM a letter-report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor (s); and a list of species observed. If active or suspected active nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest or suspected nest location and shall depict the boundaries of the no-disturbance buffer zone around the nest(s) that would be avoided during Project construction. | At least 10 days prior to the start of any Project-related ground disturbance activities |       |                      |                 |        |
|              | Final Decision | 277     | 1. Surveys shall cover all potential nesting habitat areas that could be disturbed by each phase of construction, as described in BIO-28 (Phasing). Surveys shall also include areas within 500 feet of the boundaries of the active construction areas (including linear facilities);   | DB & BM           |        |   |  |       |                      |                 |        |
|              | Final Decision | 277     | 2. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys shall be conducted within a 14-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks, an interval during which birds may establish a nesting territory and initiate egg laying and incubation;   | DB & BM           |        |   |  |       |                      |                 |        |
|              | Final Decision | 277     | 3. If active nests or suspected active nests are detected during the survey, a buffer zone (protected area surrounding the nest, the size of which is to be determined by the DB in consultation with CDFG) and monitoring plan shall be developed. Nest locations shall be mapped and submitted, along with a report stating the survey results, to the CPM.  | DB & BM           |        |   |  |       |                      |                 |        |
|              | Final Decision | 277     | 4. The DB shall monitor the nest until he or she determines that nestlings have fledged and dispersed; activities that might, in the opinion of the DB disturb nesting activities, shall be prohibited within the buffer zone until such a determination is made.  | DB & BM           |        |   |  |       |                      |                 |        |

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| <b>BIO-17</b> | Final Decision | 278     | <b>AMERICAN BADGER AND DESERT KIT FOX IMPACT AVOIDANCE AND MINIMIZATION MEASURES:</b> To avoid direct impacts to American badgers and desert kit fox, pre-construction surveys shall be conducted for these species concurrent with the DT surveys. Surveys shall be conducted as described below.   | Owner             | Precon | Submit a report to the CPM and CDFG. The report shall describe survey methods, results, impact avoidance and minimization measures implemented, and the results of those measures. | Within 30 days of completion of badger and kit fox surveys. |  |                      |                 |        |
|               | Final Decision | 278     | 1. BMs shall perform pre-construction surveys for badger and kit fox dens in the Project disturbance area, including a 20 foot swath beyond the disturbed area, utility corridors, and access roads. If dens are detected each den shall be classified as inactive, potentially active, or definitely active.  | BM                |        |  |   | According to the USFWS' 2009 Desert Tortoise Field Manual <a href="http://www.fws.gov/ventura/speciesinfo/protocols_guidelines">http://www.fws.gov/ventura/speciesinfo/protocols_guidelines</a> , ten-meter (~30-ft) wide belt transects should be used during DT surveys. |                      |                 |        |
|               | Final Decision | 278     | 2. Inactive dens that would be directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by badgers or kit fox.  | BM                |        |  |   |  |                      |                 |        |
|               | Final Decision | 278     | 3. Potentially and definitely active dens that would be directly impacted by construction activities shall be monitored by the BM for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance.  | BM                |        |  |   |  |                      |                 |        |
|               | Final Decision | 278     | 4. 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.   | BM                |        |  |   |  |                      |                 |        |
|               | Final Decision | 278     | 5. If tracks are observed, the den shall be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage the badger or kit fox from continued use. After verification that the den is unoccupied it shall then be excavated and backfilled by hand to ensure that no badgers or kit fox are trapped in the den. BLM approval may be required prior to release of badgers on public lands. | BM                |        |  |   |  |                      |                 |        |
| <b>BIO-18</b> | Final Decision | 279     | <b>BURROWING OWL IMPACT AVOIDANCE, MINIMIZATION AND COMPENSATION MEASURES:</b> Owner shall implement the following measures to avoid, minimize and offset impacts to western burrowing owls (BO):  |                   |        |  |   | The BO Plan notes 'qualified biologists' may perform the actions. 'Qualified biologists' are equivalent to BMs.  |                      |                 |        |

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|              | Final Decision | 279     | 1. Pre-Construction Surveys. The DB or BM shall conduct pre-construction surveys for burrowing owls no more than 30 days prior to initiation of construction activities. Surveys shall be focused exclusively on detecting BO, and shall be conducted from two hours before sunset to one hour after or from one hour before to two hours after sunrise. The survey area shall include the Project Disturbance Area and surrounding 500 foot survey buffer for each phase of construction in accordance with BIO-28 (Appendix B, p. 328).  | DB & BM           | Precon | Conduct pre-construction surveys.   | No more than 30 days prior to initiation of construction activities.        | If passive relocation has already occurred (see BO Plan below), this survey will serve to document that burrows excavated during passive relocation continue to be unoccupied by BO and no newly established BO-occupied or BO-suitable burrows are available for BO occupation in the Project Disturbance Area. |                      |                 |        |
|              | Final Decision | 279     | 2. Implement BO Mitigation Plan. The Owner shall implement measures described in the final BO Mitigation Plan. The final BO Mitigation Plan shall be approved by the CPM, in consultation with BLM, USFWS and CDFG, and shall: <ul style="list-style-type: none"> <li>a. identify suitable sites within 1 mile of the Project Disturbance Areas for creation or enhancement of burrows prior to passive relocation efforts;</li> <li>b. provide guidelines for creation or enhancement of at least two natural or artificial burrows per relocated owl;</li> <li>c. provide detailed methods and guidance for passive relocation of BOs occurring within the Project Disturbance Area; and</li> <li>d. describe monitoring and management of the passive relocation effort, including the created or enhanced burrow location and the project area where BO were relocated from and provide a reporting plan.</li> </ul> | Owner             | Precon | If pre-construction surveys detect burrowing owls within the Project Disturbance Area and relocation of the owls is required, Owner submit a BO Mitigation Plan and submit to BLM, the CPM, CDFG and USFWS. | Within 30 days of completion of the burrowing owl pre-construction surveys. |  |                      |                 |        |

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|              | Final Decision | 279     | <p>3. Implement Avoidance Measures. If an active BO burrow is detected within 500 feet from the Project Disturbance Area the following avoidance and minimization measures shall be implemented:</p> <p>a. Establish Non-Disturbance Buffer. Fencing shall be installed at a 250-foot radius from the occupied burrow to create a non-disturbance buffer around the burrow. The non-disturbance buffer and fence line may be reduced to 160 feet if all Project-related activities that might disturb BOs would be conducted during the non-breeding season (September 1st through January 31st). Signs shall be posted in English and Spanish at the fence line indicating no entry or disturbance is permitted within the fenced buffer.</p> <p>b. Monitoring: If construction activities would occur within 500 feet of the occupied burrow during the nesting season (February 1 through August 31st) the DB or BM shall monitor to determine if these activities have potential to adversely affect nesting efforts, and shall make recommendations to minimize or avoid such disturbance.</p>   | Owner, DB & BM                | <b>Precon &amp; Con</b> | <p>1) DB shall provide to the CPM documentation indicating that non-disturbance buffer fencing has been installed. 2) The Owner shall report monthly to BLM, the CPM, CDFG and USFWS for the duration of construction on the implementation of BO avoidance and minimization measures. 3.) Owner shall provide to the CDFG and CPM a report identifying how mitigation measures described in the plan have been completed. 4) As part of the ACR, each year following construction for a period of 5 years, the DB shall provide a report to the CPM, BLM, USFWS and CDFG that describes the results of monitoring and management of the BO relocation area.</p> | <p>1) At least 10 days prior to the start of any project-related site disturbance activities. 2) Monthly. 3.) Within 30 days after completion of construction. 4) Annually.</p>  | The documentation will include a description of the burrow, summary of the occupants of the burrow, account of the surrounding habitat conditions, a photograph of the burrow, and latitude/longitude coordinates for the burrow per BO Plan, p. 11. |                      |                 |        |
|              | Final Decision | 280     | <p>4. Acquire 39 Acres of BO Habitat. Owner shall acquire, in fee or in easement 39 acres of land suitable to support a resident population of BOs and provide funding for the enhancement and long-term management of these compensation lands. The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat.</p> <p>a. Criteria for BO Mitigation Lands. The terms and conditions of this acquisition or easement shall be as described in BIO-12 [Appendix B, p. 267], with the additional criteria to include: 1) the 39 acres of mitigation land must provide suitable habitat for BOs, and 2) the acquisition lands must either currently support BOs or be no farther than 5 miles from an active BO nesting territory. The 39 acres of BO mitigation lands may be included with the DT mitigation lands ONLY if these two BO criteria are met</p> | Owner (or approved 3rd party) | <b>Precon</b>           | <p>1) Submit formal acquisition proposal describing the parcels intended for purchase and a PAR or Par-like analysis for the parcels to the CPM, BLM, CDFG, and USFWS. 2) Provide management plan to the CPM and BLM for review and approval, in consultation with BLM, CDFG and USFWS, for the compensation lands and associated funds. 3) Provide a form of Security in accordance with this COC.</p>  | <p>1) No less than 90 days prior to acquisition of the BO compensation lands. 2) Within 90 days of the land or easement purchase, as determined by the date on the title. 3) No later than 30 days prior to beginning Project ground-disturbing activities. No later than 7 days prior to beginning Project ground-disturbing activities, the Owner shall provide written verification of the actual Security.</p> |  |                      |                 |        |

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|               |                |         | <p>If the 39 acres of BO mitigation land is separate from the acreage required for desert tortoise compensation lands, the Owner shall fulfill the requirements described below in this condition.</p> <p>b. Security. If the 39 acres of BO mitigation land is separate from the acreage required for DT compensation lands, the Owner or an approved third party shall complete acquisition of the proposed compensation lands within the time period specified for this acquisition. Alternatively, financial assurance can be provided by the Owner to the CPM and CDFG, according to the measures outlined in BIO-12 (Appendix B, p. 267). These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM and the BLM's AO in the form of an irrevocable letter of credit, a pledged savings account or another form of Security prior to initiating ground-disturbing Project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with BLM, CDFG and the USFWS, to ensure funding. The final amount due will be determined by an updated appraisal and PAR analysis conducted as described in BIO-12 (Appendix B, p. 267).</p> |                   |        |        |          |       |                      |                 |        |
| <b>BIO-19</b> | Final Decision | 282     | <p><b>SPECIAL-STATUS PLANT IMPACT AVOIDANCE, MINIMIZATION AND COMPENSATION:</b> The Owner shall implement the following measures in Section A, B, C, and D to avoid, minimize, and compensate for impacts to special-status plant species:</p>  | Owner             | Precon |        |          |       |                      |                 |        |
|               | Final Decision | 283     | <p>Section A: Special-Status Plant Impact Avoidance and Minimization Measures: To protect all special-status plants located outside of the Project Disturbance Area and within 100 feet of the permitted Project Disturbance Area from accidental and indirect impacts during construction, operation, and closure, the Owner shall implement the following measures:</p>   | Owner             |        |        |          |       |                      |                 |        |

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|              | Final Decision | 283     | 1. Designated Botanist. An experienced botanist who meets the qualifications described in Section B-2 below shall oversee compliance with all special-status plant avoidance, minimization, and compensation measures described in this condition throughout construction and closure. The Designated Botanist shall oversee and train all other BMs tasked with conducting botanical survey and monitoring work. During operation of the Project, the DB shall be responsible for protecting special-status plant occurrences within 100 feet of the Project boundaries.  | Designated botanist, DB & BMs | Con, Ops & Closure |        |          |       |                      |                 |        |
|              | Final Decision | 283     | 2. Special-Status Plant Impact Avoidance and Minimization Measures. Owner shall incorporate all measures for protecting special-status plants in close proximity to the site into the BRMIMP (BIO-7). These measures shall include the following elements:   | Owner                         |                    |        |          |       |                      |                 |        |
|              | Final Decision | 283     | a. Site Design Modifications: Incorporate site design modifications to minimize impacts to special-status plants along the Project linears: limiting the width of the work area; adjusting the location of staging areas, lay downs, spur roads and poles or towers; driving and crushing vegetation as an alternative to blading temporary roads to preserve the seed bank, and minor adjustments to the alignment of the roads and pipelines within the constraints of the ROW. Design the engineered channel discharge points to maintain the natural surface drainage patterns between the engineered channel and the outlet of the natural washes that flow toward the south and east, downstream of the Project These modifications shall be clearly depicted on the grading and construction plans, and on report-sized maps in the BRMIMP. | Owner                         | Precon             |        |          |       |                      |                 |        |

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|              | Final          | 283     | <p>b. Establish Environmentally Sensitive Areas (ESAs). Prior to the start of any ground- or vegetation-disturbing activities, the Designated Botanist shall establish ESAs to protect avoided special-status plants that occur outside of the Project Disturbance Areas and within 100 feet of Project Disturbance Areas. This includes plant occurrences identified during the spring 2009-2010 surveys and the late season 2010 surveys. The locations of ESAs shall be clearly depicted on construction drawings, which shall also include all avoidance and minimization measures on the margins of the construction plans. The boundaries of the ESAs shall be placed a minimum of 20 feet from the uphill side of the occurrence and 10 feet from the downhill side. Where this is not possible due to construction constraints, other protection measures, such as silt-fencing and sediment controls, may be employed to protect the occurrences. Equipment and vehicle maintenance areas, and wash areas, shall be located 100 feet from the uphill side of any ESAs.</p> <p>ESAs shall be clearly delineated in the field with temporary construction fencing and signs prohibiting movement of the fencing or sediment controls under penalty of work stoppages and additional compensatory mitigation. ESAs shall also be clearly identified (with signage or by mapping on site plans) to ensure that avoided plants are not inadvertently harmed during construction, operation, or closure.</p> | Designated botanist | Precon            |        |          |       |                      |                 |        |
|              | Final Decision | 284     | <p>c. Special-Status Plant WEAP. The WEAP (BIO-6; Appendix B, p. 252) shall include training components specific to protection of special-status plants as outlined in this condition.</p>  |                     | Precon, Con & Ops |        |          |       |                      |                 |        |

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|              | Final Decision | 284     | d. Herbicide and Soil Stabilizer Drift Control Measures. Special-status plant occurrences within 100 feet of the Project Disturbance Area shall be protected from herbicide and soil stabilizer drift. The Weed Control Program (BIO-14; Appendix B, p. 275) shall include measures to avoid chemical drift or residual toxicity to special-status plants consistent with guidelines such as those provided by the Nature Conservancy's The Global Invasive Species Team, the U.S. Environmental Protection Agency, and the Pesticide Action Network Database. |                     | Precon, Con & Ops |        |          |       |                      |                 |        |
|              | Final decision | 284     | e. Erosion and Sediment Control Measures. Erosion and sediment control measures shall not inadvertently impact special-status plants (e.g., by using invasive or non-native plants in seed mixes, introducing pest plants through contaminated seed or straw, etc.). These measures shall be incorporated in the Drainage, Erosion, and Sedimentation Control Plan required  |                     | Precon, Con & Ops |        |          |       |                      |                 |        |
|              | Final Decision | 285     | f. Avoid Special-Status Plant Occurrences. Areas for spoils, equipment, vehicles, and materials storage areas; parking; equipment and vehicle maintenance areas, and wash areas shall be placed at least 100 feet from any ESAs.   |                     | Precon, Con & Ops |        |          |       |                      |                 |        |
|              | Final Decision | 285     | g. Monitoring and Reporting Requirements. The Designated Botanist shall conduct weekly monitoring of the ESAs that protect special-status plant occurrences during construction and decommissioning activities.  | Designated botanist | Con & Closure     |        |          |       |                      |                 |        |
|              | Final Decision | 285     | Section B: Conduct Late-Season Botanical Surveys: The Owner shall conduct late-summer/fall botanical surveys for late-season special-status plants prior to start of construction or by the end of 2010, as described below:   | Owner               | Precon            |        |          |       |                      |                 |        |

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|              | Final Decision | 285     | 1. Survey Timing. Surveys shall be timed to detect: a) summer annuals triggered to germinate by the warm, tropical summer storms (which may occur any time between June and October). Fall-blooming perennials that respond to the cooler, later season storms (typically beginning in September or October) shall only be required if blooms and seeds are necessary for identification or the species are summer-deciduous and require leaves for identification. The surveys shall not be timed to coincide with the statistical peak bloom period of the target species but shall instead be based on plant phenology and the timing of a significant storm event (i.e., a 10mm or greater rain or multiple storm events of sufficient volume to trigger germination, as measured at or within 1 mile of the Project site). Surveys shall occur at the appropriate time to capture the characteristics necessary to identify the taxon. Construction of Phase 1A as outlined in COC BIO-28 (Appendix B, p.318) is authorized to commence following a September survey.   |                    |        |        |          |       |                      |                 |        |
|              | Final Decision | 285     | 2. Surveyor Qualifications and Training. Surveys shall be conducted by a qualified botanist knowledgeable in the complex biology of the local flora, and consistent with CDFG protocols. Each surveyor shall be equipped with a GPS unit and record a complete tracklog; these data shall be compiled and submitted along with the Summer-Fall Survey Botanical Report (described below). Prior to the start of surveys, all crew members shall, at a minimum, visit reference sites (where available) and/or review herbarium specimens of all BLM Sensitive plants, CNPS List 1B or 2 (Nature Serve rank S1 and S2) or proposed List 1B or 2 taxa, and any new reported or documented taxa, to obtain a search image. Because the potential for range extensions is unknown, the list of potentially occurring special-status plants shall include all special-status taxa known to occur within the Sonoran Desert region and the eastern portion of the Mojave in California. The list shall also include taxa with bloom seasons that begin in fall and extend into the early spring as many of these are reported to be easier to detect in fall, following the start of the fall rains. | Qualified botanist |        |        |          |       |                      |                 |        |

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|              | Final Decision | 286     | 3. Survey Coverage. The survey coverage or intensity shall be in accordance with BLM Survey Protocols, which specify that intuitive controlled surveys shall only be accomplished by botanists familiar with the habitats and species that may reasonably be expected to occur in the project area.   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 286     | 4. Documenting Occurrences. If a special-status plant is detected, the full extent of the population onsite shall be recorded using GPS in accordance with BLM survey protocols. Additionally, the extent of the population within one mile of Project boundaries shall be assessed at least qualitatively to facilitate an accurate estimation of the proportion of the population affected by the Project. For populations that are very dense or very large, the population size may be estimated by simple sampling techniques. When populations are very extensive or locally abundant, the surveyor must provide some basis for this assertion and roughly map the extent on a topographic map. All but the smallest populations (e.g., a population occupying less than 100 square feet) shall be recorded as area polygons; the smallest populations may be recorded as point features. All GPS-recorded occurrences shall include: the number of plants, phenology, observed threats (e.g., OHV or invasive exotics), and habitat or community type. | Owner             |        |        |          |       |                      |                 |        |
|              |                |         | The map of occurrences submitted with the final botanical report shall be prepared to ensure consistency with definition of an occurrence by CNDDDB, i.e., occurrences found within 0.25 miles of another occurrence of the same taxon, and not separated by significant habitat discontinuities, shall be combined into a single 'occurrence'. The Owner shall also submit the raw GPS shape files and metadata, and completed CNDDDB forms for each 'occurrence' (as defined by CNDDDB).  |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 40      | 5. Reporting. Raw GPS data, metadata, and CNDDDB field forms shall be provided to the CPM within two weeks of the completion of each survey. If surveys are split into two or more periods (e.g., a late summer survey and a fall survey), then a summary letter shall be submitted following each survey period.   |                   |        |        |          |       |                      |                 |        |

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|              | Final Decision | 286     | 6. The Final Summer-Fall Botanical Survey Report shall be prepared consistent with CDFG guidelines, and BLM 2009 guidelines and shall include all of the following components: a. the BLM designation, NatureServe Global and State Rank of each species or taxon found (or proposed rank, or CNPS List); b. the number or percent of the occurrence that will be directly affected, and indirectly affected by changes in drainage patterns or altered geomorphic processes; c. the habitat or plant community that supports the occurrence and the total acres of that habitat or community type that occurs in the Project Disturbance Area; d. an indication of whether the occurrence has any local or regional significance (e.g., if it exhibits any unusual morphology, occurs at the periphery of its range in California, represents a significant range extension or disjunct occurrence, or occurs in an atypical habitat or substrate); e. a completed CNDDDB field form for every occurrence (occurrences of the same species within one-quarter mile or less of each other combined as one occurrence, consistent with CNDDDB methodology), and f. two maps: one that depicts the raw GPS data (as collected in the field) on a topographic base map with Project features; and a second map that follows the CNDDDB protocol for occurrence mapping. | Owner             |                         |        |          |   |                      |                 |        |
|              | Final Decision | 287     | Section C: Avoidance Requirements for Special-Status Plants Detected in the Summer/Fall 2010 Surveys: The Owner shall apply the following avoidance standards to late blooming special-status plants that might be detected during late summer/fall season surveys. Avoidance and/or the mitigation measures described in Section D below would reduce impacts to these special-status plant species to less than significant levels.  | Owner             | <b>To be determined</b> |        |          | Depending on the results of the surveys, requirements of this section may not be necessary. |                      |                 |        |
|              | Final Decision | 287     | 1. Mitigation for CNDDDB Rank 1 Plants (Critically Imperiled) - Avoidance Required: If late blooming species with a CNDDDB rank of 1 are detected within the Project Disturbance Area, the Owner shall prepare and implement a Special-Status Plant Mitigation Plan (Plan). The goal of the Plan shall be to retain at least 75% of the local population of the affected species. Compensatory mitigation, as described in Section D of this condition, and at a mitigation ratio of 3:1, shall be required for the 25% or portion that is not avoided. The Plan shall include, at a minimum, the following components and definitions:  |                   |                         |        |          |   |                      |                 |        |

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|              | Final Decision | 287     | a. A description of the occurrences of the CNDDDB rank 1 species on the Project, ecological characteristics such as micro-habitat requirements, ecosystem processes required for maintenance of the habitat, reproduction and dispersal mechanisms, pollinators, local distribution, a description of the extent of the population off-site, the percentage of the local population affected, and a description of how these occurrences would be impacted by the Project, including direct and indirect effects. The 'local population' shall include the number of individuals occurring within the Palo Verde Watershed boundaries. Occurrences shall be considered impacted if they are within the Project footprint, and if they would be affected by Project-related hydrologic changes or changes to the local sand transport system. |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 288     | b. A description of the avoidance and minimization measures that would achieve complete avoidance of occurrences on the Project linears and construction laydown areas, unless such avoidance would create greater environmental impacts in other resource areas (e.g. , Cultural Resource Sites) or other restrictions (e.g., FAA or other restrictions for placement of transmission poles).   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 288     | c. A description of the measures that would be implemented to avoid or minimize impacts to occurrences on the solar facility. Avoidance is generally considered not feasible if the species is located within the Permanent Project Disturbance Area (bounded by the permanent tortoise exclusion fence and the drainage channels).  |                   |        |        |          |       |                      |                 |        |

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|              | Final Decision | 288     | d. If avoidance on the linears, construction laydown areas, and solar facility combined protect less than 75% of the local population of the affected species, the Owner shall implement offsite mitigation that demonstrates that the impacts will not cause a loss of viability for that species. Implementation of the compensatory offsite mitigation must meet the performance standards described in section D of this Condition, and may include land acquisition or implementation of a restoration/enhancement program for the species.   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 288     | e. Avoidance shall include protection of the ecosystem processes essential for maintenance of the protected plant occurrence. For all but one of the late blooming plant species with potential to occur, the plant species are annuals that depend on a viable seed bank to maintain population health and persistence. The primary goal of avoidance for these annual species will be protection of the soil integrity and the seed bank that is closely associated with undisturbed soils. Any impacts to the soil structure or surface features will be considered an impact, but measures like temporary mowing or brush removal that does not disturb the soil will not be considered impacts to the population. Isolated 'islands' of protected plants disconnected by the Project from natural fluvial, aeolian (wind), or other processes essential for maintenance of the species, shall not be considered to be protected and shall not be credited as contributing to the 75% avoidance requirement because such isolated populations are not sustainable. |                   |        |        |          |       |                      |                 |        |

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|              | Final Decision | 289     | 2. Mitigation for CNDDDB Rank 2 Plants (Imperiled): Avoidance on Linears Required: If species with a CNDDDB rank of 2 are detected within the Project Disturbance Area, the Owner shall prepare and implement a Special-Status Plant Mitigation Plan (Plan) that describes measures to achieve complete avoidance of occurrences on the Project linears and construction laydown areas, unless such avoidance would create greater environmental impacts in other resource areas (e.g. Cultural Resource Sites) or other restrictions (e.g., FAA or other restrictions for placement of transmission poles). The Owner shall provide compensatory mitigation, at a ratio of 2:1, as described below in Section D for impacts to Rank 2 plants that could not be avoided. The content of the Plan and definitions shall be as described above in subsection C.1.   | Owner             |        |        |          |       |                      |                 |        |
|              | Final Decision | 289     | 3. Mitigation for CNDDDB Rank 3 Plants: No On-Site Avoidance Required Unless Local or Regional Significance: If species with a CNDDDB rank of 3 are detected within the Project Disturbance Area, no onsite avoidance or compensatory mitigation shall be required unless the occurrence has local or regional significance, in which case the plant occurrence shall be treated as a CNDDDB rank 2 plant species. A plant occurrence would be considered to have local or regional significance if: a. It occurs at the outermost periphery of its range in California; b. It occurs in an atypical habitat, region, or elevation for the taxon that suggests that the occurrence may have genetic significance (e.g., that may increase its ability to survive future threats), or; c. It exhibits any unusual morphology that is not clearly attributable to environmental factors that may indicate a potential new variety or sub-species. |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 289     | 4. Pre-Construction Notification for State- or Federal-Listed Species, or BLM Sensitive Species. If a state or federal-listed species or BLM Sensitive species is detected, the Owner shall immediately notify the CDFG, USFWS, BLM, and the CPM.   |                   |        |        |          |       |                      |                 |        |

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|              | Final Decision | 289     | 5. Preservation of the Germplasm of Affected Special-Status Plants. For all significant impacts to special-status plants, regardless of whether compensatory mitigation is required, mitigation shall include seed collection from the affected special-status plants on-site prior to construction to conserve the germplasm and provide a seed source for restoration efforts. The seed shall be collected under the supervision or guidance of a reputable seed storage facility such as the Rancho Santa Ana Botanical Garden Seed Conservation Program, San Diego Natural History Museum, or the Missouri Botanical Garden. The costs associated with the long-term storage of the seed shall be the responsibility of the Owner. Any efforts to propagate and reintroduce special-status plants from seeds in the wild shall be carried out under the direct supervision of specialists such as those listed above and as part of a Habitat Restoration/Enhancement Plan approved by the CPM.   |                   |                  |        |          |  |                      |                 |        |
|              | Final Decision | 290     | Section D: Off-Site Compensatory Mitigation for Special-Status Plants: Where compensatory mitigation is required under the terms of Section C, above, the Owner shall mitigate Project impacts to special-status plant occurrences with compensatory mitigation. Compensatory mitigation shall consist of acquisition of habitat supporting the target species, or restoration/enhancement of populations of the target species, and shall meet the performance standards for mitigation described below. In the event that no opportunities for acquisition or restoration/enhancement exist, the Owner can fund a species distribution study designed to promote the future preservation, protection or recovery of the species. Compensatory mitigation shall be at a ratio of 3:1 for Rank 1 plants, with three acres of habitat acquired or restored/enhanced for every acre of habitat occupied by the special status plant that will be disturbed by the Project Disturbance Area (for example if the area occupied by the special status plant collectively measured is ¼ acre than the compensatory mitigation will be ¾ of an acre). The mitigation ratio for Rank 2 plants shall be 2:1. So, for the example above, the mitigation ratio would be one-half acre for the Rank 2 plants. | Owner             | To be determined |        |          | Depending on the results of the srveys, requirements of this section may not be necessary. |                      |                 |        |

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|              | Final Decision | 260     | The Owner shall provide funding for the acquisition and/or restoration/enhancement, initial improvement, and long-term maintenance and management of the acquired or restored lands. The actual costs to comply with this condition will vary depending on the Project Disturbance Area, the actual costs of acquiring compensation habitat, the actual costs of initially improving the habitat, the actual costs of long-term management as determined by a PAR report, and other transactional costs related to the use of compensatory mitigation. |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 260     | The Owner shall comply with other related requirements in this condition: 1. Compensatory Mitigation by Acquisition: The requirements for the acquisition, initial protection and habitat improvement, and long-term maintenance and management of special-status plant compensation lands include all of the following: 6. Selection Criteria for Acquisition Lands. The compensation lands selected for acquisition may include any of the following three categories:   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 291     | a. Occupied Habitat, No Habitat Threats: The compensation lands selected for acquisition shall be occupied by the target plant population and shall be characterized by site integrity and habitat quality that are required to support the target species, and shall be of equal or better habitat quality than that of the affected occurrence. The occurrence of the target special-status plant on the proposed acquisition lands should be viable, stable or increasing (in size and reproduction).   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 291     | b. Occupied Habitat, Habitat Threats. Occupied compensation lands characterized by habitat threats may also be acquired as long as the population could be reasonably expected to recover with habitat restoration efforts (e.g., OHV or grazing exclusion, or removal of invasive non-native plants) and is accompanied by a Habitat Enhancement/Restoration Plan as  |                   |        |        |          |       |                      |                 |        |

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|              | Final Decision | 291     | c. Unoccupied but Adjacent. The Owner may also acquire habitat for which occupancy by the target species has not been documented, if the proposed acquisition lands are adjacent to occupied habitat. The Owner shall provide evidence that acquisitions of such unoccupied lands would improve the defensibility and long-term sustainability of the occupied habitat by providing a protective buffer around the occurrence and by enhancing connectivity with undisturbed habitat. This acquisition may include habitat restoration efforts where appropriate, particularly when these restoration efforts will benefit adjacent habitat that is occupied by the target species. |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 291     | 7. Review and Approval of Compensation Lands Prior to Acquisition. The Owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for special-status plants in relation to the criteria listed above, and must be approved by the CPM.   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 291     | 8. Management Plan. The Owner or approved third party shall prepare a management plan for the compensation lands in consultation with the entity that will be managing the lands. The goal of the management plan shall be to support and enhance the long-term viability of the target special-status plant occurrences. The Management Plan shall be submitted for review and approval to the CPM.  |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 291     | 9. Integrating Special-Status Plant Mitigation with Other Mitigation lands. If all or any portion of the acquired DT, Waters of the State, or other required compensation lands meets the criteria above for special-status plant compensation lands, the portion of the other species' or habitat compensation lands that meets any of the criteria above may be used to fulfill that portion of the obligation for special-status plant mitigation.   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 292     | 10. Compensation Lands Acquisition Requirements. The Owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM, has approved the proposed compensation lands:  |                   |        |        |          |       |                      |                 |        |

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|              | Final Decision | 292     | <u>Preliminary Report.</u> The Owner, or an approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary or requested documents for the proposed compensation land to the CPM. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board.   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 292     | <u>Title/Conveyance.</u> The Owner shall acquire and transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement, as required by the CPM. Any transfer of a conservation easement or fee title must be to CDFG, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM or other public agency approved by the CPM. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFG or another entity approved by the CPM. If an entity other than CDFG holds a conservation easement over the compensation lands, the CPM may require that CDFG or another entity approved by the CPM, in consultation with CDFG, be named a third party beneficiary of the conservation easement. The Owner shall obtain approval of the CPM of the terms of any transfer of fee title or conservation easement to the compensation lands. |                   |        |        |          |       |                      |                 |        |

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|              | Final Decision | 292     | <p><u>Initial Protection and Habitat Improvement.</u> The Owner shall fund activities that the CPM requires for the initial protection and habitat improvement of the compensation lands. These activities will vary depending on the condition and location of the land acquired, but may include trash removal, construction and repair of fences, invasive plant removal, and similar measures to protect habitat and improve habitat quality on the compensation lands. The costs of these activities shall be estimated based on the Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010, or more current guidance from the REAT agencies, at the ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, but actual costs will vary depending on the measures that are required for the compensation lands. A non-profit organization, CDFG or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFG, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.</p> |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 293     | <p><u>Property Analysis Record.</u> Upon identification of the compensation lands, the Owner shall conduct a PAR or PAR-like analysis to establish the appropriate amount of the long-term maintenance and management fund to pay the in-perpetuity management of the compensation lands. The PAR or PAR-like analysis must be approved by the CPM before it can be used to establish funding levels or management activities for the compensation lands.</p>   |                   |        |        |          |       |                      |                 |        |

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|              | Final Decision | 293     | <u>Long-term Maintenance and Management Funding.</u> In accordance with BIO-28 (Appendix B, p. 318), the Owner shall deposit in NFWF's REAT Account a non-wasting capital long-term maintenance and management fee in the amount determined through the PAR or PAR-like analysis conducted for the compensation lands.   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 293     | The CPM, in consultation with CDFG, may designate another non-profit organization to hold the long-term maintenance and management fee if the organization is qualified to manage the compensation lands in perpetuity. If CDFG takes fee title to the compensation lands, CDFG shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity to manage the long-term maintenance and management fee for CDFG and with CDFG supervision. | CPM               |        |        |          |       |                      |                 |        |
|              | Final Decision | 293     | <u>Interest, Principal, and Pooling of Funds.</u> The Owner shall ensure that an agreement is in place with the long-term maintenance and management fund (endowment) holder/manager to ensure the following requirements are met:   | Owner             |        |        |          |       |                      |                 |        |
|              | Final Decision | 293     | <u>Interest.</u> Interest generated from the initial capital long-term maintenance and management fund shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action that is approved by the CPM and is designed to protect or improve the habitat values of the compensation lands.       |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 294     | <u>Withdrawal of Principal.</u> The long-term maintenance and management fund principal shall not be drawn upon unless such withdrawal is deemed necessary by the CPM or by the approved third-party long-term maintenance and management fund manager, to ensure the continued viability of the species on the compensation   |                   |        |        |          |       |                      |                 |        |

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|              | Final Decision | 294     | <u>Pooling Long-Term Maintenance and Management Funds.</u> An entity approved to hold long-term maintenance and management funds for the Project may pool those funds with similar non-wasting funds that it holds from other projects for long-term maintenance and management of compensation lands for special-status plants. However, for reporting purposes, the long-term maintenance and management funds for this Project must be tracked and reported individually to the CPM. |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 294     | Other Expenses. In addition to the costs listed above, the Owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to the title and document review costs incurred from other state agency reviews, overhead related to providing compensation lands to CDFG or an approved third party, escrow fees or costs, environmental contaminants clearance, and other site cleanup measures.         | Owner             |        |        |          |       |                      |                 |        |

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|              | Final Decision | 294     | <p><u>Mitigation Security.</u> The Owner shall provide financial assurances in accordance with BIO-28 (Appendix B, p. 318) to the CPM to guarantee that an adequate level of funding is available to implement any of the mitigation measures required by this condition that are not completed prior to the start of ground-disturbing Project activities. Financial assurances shall be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of Security approved by the CPM. The amount of the Security shall be estimated based on the Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010, or more current guidance from the REAT agencies at a ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, for every acre of habitat supporting the target special-status plant species which is significantly impacted by the project. The actual costs to comply with this condition will vary depending on the actual costs of acquiring compensation habitat, the costs of initially improving the habitat, and the actual costs of long-term management as determined by a PAR report. Prior to submitting the Security to the CPM, the Owner shall obtain the CPM's approval of the form of the Security. The CPM may draw on the Security if the CPM determines the Owner has failed to comply with the requirements specified in this condition. The CPM may use money from the Security solely for implementation of the requirements of this condition. The CPM's use of the Security to implement measures in this condition may not fully satisfy the Owner's obligations under this condition, and the Owner remains responsible for satisfying the obligations under this condition if the Security is insufficient. The unused Security shall be returned to the Owner in whole or in part upon successful completion of the associated requirements in this condition.</p> | Owner             |        |        |          |       |                      |                 |        |

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|              | Final Decision | 295     | The Owner may elect to comply with the requirements in this condition for acquisition of compensation lands, initial protection and habitat improvement on the compensation lands, or long-term maintenance and management of the compensation lands by funding, or any combination of these three requirements, by providing funds to implement those measures into the REAT Account established with the NFWF. To use this option, the Owner must make an initial deposit to the REAT Account in an amount equal to the estimated costs (as set forth in the Security section of this Final Decision) of implementing the requirement. If the actual cost of the acquisition, initial protection and habitat improvements, or long-term funding is more than the estimated amount initially paid by the Owner, the Owner shall make an additional deposit into the REAT Account sufficient to cover the actual acquisition costs, the actual costs of initial protection and habitat improvement on the compensation lands, and the long-term funding requirements as established in an approved PAR or PAR-like analysis. If those actual costs or PAR projections are less than the amount initially transferred by the Owner, the | Owner             |        |        |          |       |                      |                 |        |

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|              | Final Decision | 296     | <p>II. Compensatory Mitigation by Habitat Enhancement/Restoration: As an alternative or adjunct to land acquisition for compensatory mitigation the Owner may undertake habitat enhancement or restoration for the target special-status plant species. Habitat enhancement or restoration activities must achieve protection at a 3:1 ratio for Rank 1 plants and 2:1 for Rank 2 plants, with improvements applied to three acres, or two acres, respectively, of habitat for every acre special-status plant habitat directly or indirectly disturbed by the Project Disturbance Area (for example if the area occupied by the special status plant collectively measured is ¼ acre than the improvements would be applied to an area equal to ¾ of an acre at a 3:1 ratio, or one-half acre at a 2:1 ratio). Examples of suitable enhancement projects include but are not limited to the following: i) control unauthorized vehicle use into an occurrence (or pedestrian use if clearly damaging to the species); ii) control of invasive non-native plants that infest or pose an immediate threat to an occurrence; iii) exclude grazing by wild burros or livestock from an occurrence;</p> <p>or iv) restore lost or degraded hydrologic or geomorphic functions critical to the species by restoring previously diverted flows, removing obstructions to the wind sand transport corridor above an occurrence, or increasing groundwater availability for dependent species.</p> <p>If the Owner elects to undertake a habitat enhancement project for mitigation, the project must meet the following performance standards: The proposed enhancement project shall achieve rescue of an off-site occurrence that is currently assessed, based on the NatureServe threat ranking system with one of the following threat ranks: a) long-term decline &gt;30%; b) an immediate threat that affects &gt;30% of the population, or c) has an overall threat impact that is High to Very High. 'Rescue' would be considered successful if it achieves an improvement in the occurrence trend to 'stable' or 'increasing' status, or downgrading of the overall threat rank to slight or low (from 'High' to 'Very High').</p> | Owner             |        |        |          |       |                      |                 |        |

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|              | Final Decision | 296     | <p>If the Owner elects to undertake a habitat enhancement project for mitigation, they shall submit a Habitat Enhancement/Restoration Plan to the CPM for review and approval, and shall provide sufficient funding for implementation and monitoring of the Plan. The amount of the Security shall be estimated based on the Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010, or more current guidance from the REAT agencies at the ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, for every acre of habitat supporting the target special-status plant species which is directly or indirectly impacted by the project. The amount of the security may be adjusted based on the actual costs of implementing the enhancement, restoration and monitoring. The implementation and monitoring of the enhancement/restoration may be undertaken by an appropriate third party such as NFWF, subject to approval by the CPM. The Habitat Enhancement/Restoration Plan shall include each of the items listed in this section of BIO-19 (Appendix B, p. 296).</p> |                   |        |        |          |       |                      |                 |        |

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|               | Final Decision | 298     | III. Compensatory Mitigation by Conducting or Contributing to a Special-Status Plant Species Distribution Study: As a contingency measure in the event that there are no opportunities for acquisition or restoration/enhancement, a Scientific Study of Special-status Plant Species Distribution Study may be funded. Distribution and occurrence health data is very limited for many of the sensitive species that occur on the Project or have potential to occur on the project, especially the late summer and fall blooming species. Some of these late blooming species are only known from a few viable occurrences in California, and historic occurrences that have not been re-located or surveyed since they were first documented. The objectives of this study would be to better understand the full distribution of the affected species, the degree and immediacy of threats to occurrences, and ownership and management opportunities, with the primary goal of future preservation, protection, or recovery. This study would include each of the items listed in this section of BIO-19 (Appendix B, p. 298). |  |                                  |  |   |       |                      |                 |        |
| <b>BIO-20</b> | Final Decision | 302     | <b>SAND DUNE/FRINGE-TOED LIZARD MITIGATION:</b> To mitigate for habitat loss and direct impacts to Mojave fringe-toed lizards the Owner shall provide compensatory mitigation at a 3:1ratio, 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 (58 acres or the acreage of sand dune/partially stabilized sand dune habitat impacted by the final Project footprint). If compensation lands are acquired, the Owner 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.  | Owner (or approved 3rd party), BLM & CPM | <b>Precon, Con &amp; Postcon</b> | 1) Owner to submit a formal acquisition proposal to BLM's AO, the CPM, CDFG and USFWS describing the parcels intended for purchase. 2) Owner to provide BLM, the CPM, CDFG and USFWS with a management plan for the compensation lands and associated funds the CPM shall review and approve the management plan, in consultation with BLM, CDFG and the USFWS. 3) Owner shall provide to the CPM and BLM an analysis with the final accounting of the amount of sand dune/stabilized sand dune habitat disturbed during Project construction. 4) Owner shall provide written verification to BLM, the CPM, USFWS, and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient . | 1) No less than 90 days prior to acquisition of the property. 2) Within 180 days of the land or easement purchase, as determined by the date on the title. 3) Within 90 days after completion of Project construction. 4) No later than 18 months from the start of ground-disturbing activities. |       |                      |                 |        |
|               | Final Decision | 302     | 1. Criteria for Compensation Lands: The compensation lands selected for acquisition shall:   | Owner                                    |                                  |  |   |       |                      |                 |        |

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|              | Final Decision | 302-303 | <p>a. Be sand dune or partially stabilized sand dune habitat within the Palen Valley or Chuckwalla Valley with potential to contribute to Mojave fringe-toed lizard habitat connectivity and build linkages between known populations of Mojave fringe-toed lizards and preserve lands with suitable habitat;</p> <p>b. To the extent feasible, be connected to lands currently occupied by Mojave fringe-toed lizard;</p> <p>c. To the extent feasible, be near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;</p> <p>d. Provide quality habitat for Mojave fringe-toed lizard, that has the capacity to regenerate naturally when disturbances are removed;</p> <p>e. Not have a history of intensive recreational use or other disturbance that might make habitat recovery and restoration infeasible;</p> <p>f. Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;</p> | Owner             |               |  |   |       |                      |                 |        |
|              | Final Decision | 303     | <p>2. Security for Implementation of Mitigation: The Owner shall provide financial assurances to the CPM to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of Mojave fringe-toed lizard habitat as described in this condition. These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM and BLM's AO according to the measures outlined in BIO-12, and within the time period specified for this assurance (see Schedule). The final amount due will be determined by an updated appraisal and a PAR analysis conducted as described in BIO-12 (Appendix B, p. 267).</p>   | Owner             | <b>Precon</b> | Owner shall provide written verification of approved form of Security in accordance with this COC. | No later than 30 days prior to beginning Project ground-disturbing activities. Actual Security shall be provided no later than 7 days prior to beginning of Project ground-disturbing activities. |       |                      |                 |        |

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|               | Final Decision | 303     | 3. Preparation of Management Plan: The Owner shall submit to the CPM, BLM, CDFG and USFWS a draft Management Plan that reflects site-specific enhancement measures for the Mojave fringe-toed lizard habitat on the acquired compensation lands. The objective of the Management Plan shall be to enhance the value of the compensation lands for Mojave fringe-toed lizards, and may include enhancement actions such as weed control, fencing to exclude livestock, erosion control, or protection of sand sources or sand transport corridors.                                | Owner             |                         |  |  |       |                      |                 |        |
| <b>BIO-21</b> | Final Decision | 304     | <b>MITIGATION FOR IMPACTS TO BIGHORN SHEEP:</b> To compensate for Project contributions to loss of spring foraging habitat for Nelson's bighorn sheep, the Owner shall either do Item #1 or #2 below:  | Owner             |                         |  |  |       |                      |                 |        |
|               | Final Decision | 304     | 1. Create a New Water Source. The Owner shall create a new water source for the Southern Mojave metapopulation of bighorn sheep in the McCoy Mountains or in other mountain ranges in the vicinity of the Project north of I-10. The proposed location of the water source shall be developed in consultation with the CPM, BLM and CDFG. The Owner shall monitor and manage the artificial water source for the benefit of bighorn sheep for the life of the Project, or shall provide sufficient funding to support such monitoring and management by an approved third party. | Owner & CPM       | <b>Precon &amp; Con</b> | 1) Owner shall provide the CPM with a form of Security for installation, management and monitoring of the water source. 2) Owner shall submit to the CPM for review and approval a description of the proposed location of the water source that will be created. 3) Owner shall provide written verification to the CPM that construction of the water source has been completed. Owner shall: (a) provide a monitoring and management plan for bighorn use of the water source; and (b) provide evidence of an agreement (Memorandum of Understanding) and a funding mechanism to provide ongoing maintenance of the water source by BLM or some other party approved by the CPM in consultation with BLM and CDFG. 4) the Owner shall provide a report to the CPM, BLM and CDFG that includes: a description of bighorn sheep detections at the water source and a summary of management activities for the year; a discussion of whether management goals for the year were met. | 1) No later than 30 days prior to beginning project ground disturbing activities for approval. Actual Security shall be provided no later than 7 days prior to the beginning of project ground-disturbing activities. 2) No later than 6 months following start of ground disturbance activities. 3) No later than 24 months following the project ground-disturbing activities. 4) Annually as part of the ACR. |       |                      |                 |        |

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|              | Final Decision | 304     | <p>Or, Owner may elect to fund the creation of a new water source by depositing funds into a REAT subaccount established with the NFWF. Actual costs shall be developed in consultation with the CPM, BLM and CDFG. Owner shall be responsible for providing adequate funding for installation of the water source and all costs associated with that installation, as well as costs of operation, monitoring and management of the water source for the life of the Project. Owner shall also provide sufficient funding for any administrative fees that NFWF may require to implement the measures described in this condition. The initial estimate of funding required to fulfill the measures described above is \$100,000. The total costs shall not exceed \$120,000. If less than \$100,000 is required to fulfill the terms of this condition, the excess shall be refunded to the Owner. Based on the letter from Jim Abbott, Acting State Director of BLM to Alice Harron dated August 26, 2010, deposit of the funds by the Owner into the NFWF Account will discharge the Owner's obligations under this COC. Owner shall provide financial assurances to the CPM with copies of the document(s) to CDFG and BLM to</p> <p>guarantee that an adequate level of funding is available to implement the mitigation measures described in this condition. Security shall be in the amount of the initial estimate of \$100,000.</p> | Owner & CPM                   | Precon         | Owner shall provide written verification to the CPM, BLM and CDFG that \$100,000 has been deposited to that subaccount.  | No less than 30 days prior to beginning project ground-disturbing activities.  |       |                      |                 |        |
|              | Final Decision | 304     | <p>2. Acquire Compensatory Habitat. As an alternative to providing a water source as described above, the Owner may elect to secure compensatory mitigation lands that would offset the loss of spring foraging habitat (desert dry wash woodland, vegetated swales, and unvegetated washes) for Southern Mojave metapopulation Nelson's bighorn sheep. If the Owner selects this compensatory mitigation option the Owner shall acquire, in fee or in easement no less than 929 acres of lands that:</p>   | Owner (or approved 3rd party) | See 'Schedule' | <p>1) Submit a formal acquisition proposal to the CPM, BLM, CDFG describing the 929 acres of lands intended for purchase and submit a PAR or PAR-like analysis for the parcels for review and approval by the CPM, in consultation with BLM and CDFG. 2) Owner shall provide written verification to the BLM, the CPM, and CDFG that no fewer than 929 acres of compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient.</p> | <p>1) No less than 90 days prior to acquisition of the bighorn sheep compensation lands. 2) No later than 18 months from initiation of construction.</p> |       |                      |                 |        |
|              | Final Decision | 305     | <p>a. Provide suitable spring foraging habitat for bighorn sheep in the form of desert dry wash woodland and vegetated swales within intermixed Sonoran creosote bush scrub habitat and</p>   | Owner                         |                |  |  |       |                      |                 |        |

| Condition ID | Source         | Page No | Mitigation Measure   | Responsible Party | Timing | Action | Schedule | Notes | Performance Standard | Remedial Action | Status |
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|              | Final Decision | 305     | b. Includes spring foraging habitat that would benefit the Southern Mojave metapopulation (i.e., north of I-10). Priority acquisition areas would be in eastern Riverside County roughly bounded by Interstate 10, Highway 62, and Highway 177   |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 305     | <u>Acquisition Terms and Conditions.</u> The terms and conditions of this acquisition or easement shall be as described in BIO-12 (Appendix B, p. 267) and the timing associated with BIO-28 (Appendix B, p. 318). The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 305     | <u>Review and Approval of Compensation Lands Prior to Acquisition.</u> The Owner shall submit a formal acquisition proposal to the CPM, CDFG, and BLM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for the southern Mojave metapopulation of bighorn in relation to the criteria listed above. Approval from the CPM, in consultation with BLM and CDFG, shall be required for acquisition of all parcels comprising the compensation lands.  |                   |        |        |          |       |                      |                 |        |

| Condition ID  | Source         | Page No | Mitigation Measure   | Responsible Party                           | Timing                      | Action  | Schedule  | Notes  | Performance Standard | Remedial Action | Status |
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|               | Final Decision | 305     | Acquisition Security. If the 929 acres of bighorn sheep mitigation land is separate from the acreage required for DT compensation lands, the Owner or an approved third party shall complete acquisition of the proposed compensation lands within the time period specified for this acquisition. Alternatively, financial assurance can be provided by the Owner to the CPM and CDFG, according to the measures outlined in BIO-12 and BIO-28 (Appendix B, p. 267 & 318), with the Security estimate based on the Desert Renewable Energy REAT Biological Resource Compensation /Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010 or more current guidance from the REAT agencies. These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of Security prior to initiating ground-disturbing Project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM and in consultation with BLM and CDFG, to ensure funding. The final amount due will be determined by an updated appraisal and PAR analysis conducted as described in BIO-12 (Appendix B, p. 267). |   |                             | Owner shall provide written verification to the CPM, BLM and CDFG that \$100,000 has been deposited to that subaccount.   | No less than 30 days prior to beginning project ground-disturbing activities.   | Security shall be refunded to Project owner once land has been acquired and recorded in favor of the approved recipient. |                      |                 |        |
| <b>BIO-22</b> | Final Decision | 307     | <b>MITIGATION FOR IMPACTS TO STATE WATERS:</b> The Owner shall implement the following measures to avoid, minimize and mitigate for direct and indirect impacts to waters of the state and to satisfy requirements of California Fish and Game Code sections 1600 and 1607.  | Owner (or approved 3rd party), CPM & BLM AO | <b>Precon, Con, Postcon</b> | 1)Provide written verification (i.e., through incorporation into the BRMIMP) to the CPM that the best management practices will be implemented. 2) Complete and provide written verification of the proposed compensation lands acquisition. 3) Provide BLM, the CPM, CDFG, and USFWS with a management plan for the compensation lands and associated funds. The CPM shall review and approve the management plan, in consultation with CDFG. 4) Provide to the CPM and CDFG an analysis with the final accounting of the amount of jurisdictional state waters disturbed during Project construction. 5) Notify the CPM and CDFG, in writing. | 1) No less than 30 days prior to the start of construction-related ground disturbance activities potentially affecting waters of the state. 2) Within 18 months of the start of Project ground-disturbing activities. 3) Within 180 days of the land or easement purchase, as determined by the date on the title. 4) Within 90 days after completion of Project construction. 5) At least 5 days prior to initiation of Project activities in jurisdictional state waters and at least 5 days prior to completion of Project activities in jurisdictional areas. |  |                      |                 |        |

| Condition ID | Source         | Page No | Mitigation Measure   | Responsible Party | Timing         | Action  | Schedule   | Notes  | Performance Standard | Remedial Action | Status |
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|              | Final Decision | 310     |  |                   |                | 1) Notify the CPM and CDFG of any change of conditions to the Project, impacts to state waters, or the mitigation efforts. The notifying report shall be provided to the CPM and CDFG. See Notes. A copy of the notifying change of conditions report shall be included in the annual reports or until it is deemed unnecessary by the CPM and CDFG. Provide a discussion of work in waters of the state in Compliance Reports for the duration of the Project. | 1) No later than 7 days after the change of conditons is identified.   | <p><u>Changed Biological Conditions:</u> includes, but is not limited to: 1) the presence of biological resources within or adjacent to the Project area, whether native or non-native, not previously known to occur in the area; or 2) the presence of biological resources within or adjacent to the Project area, whether native or non-native, the status of which has changed to endangered, rare, or threatened.</p> <p><u>Changed Physical Conditions:</u> includes, but is not limited to: 1) a change in the morphology of a river, stream, or lake, or substantial changes in stream form and configuration caused by storm events; 2) the movement of a river or stream channel to a different location; 3) a reduction of or other change in vegetation on the bed, channel, or bank of a drainage, or 4) changes to the hydrologic regime. Changd <u>Legal Conditions:</u> includes, but is not limited to: a change in Regulations, Statutory Law, a Judicial or Court decision, or the listing of a species, the status of which has changed to endangered, rare, or threatened.</p> |                      |                 |        |
|              | Final Decision | 307     | <p>1. Acquire Off-Site State Waters: The Owner shall acquire, in fee or in easement, a parcel or parcels of land that includes at least 1,384 acres of state jurisdictional waters, or the area of state waters directly or indirectly impacted by the final Project footprint. The Project footprint means all lands disturbed by construction and operation of the Blythe Project, including all linears. The parcel or parcels comprising the 1,384 acres of ephemeral washes shall include at least 639 acres of desert dry wash woodland or the acreage of desert dry wash woodland impacted by the final Project footprint at a 3:1 ratio. The terms and conditions of this acquisition or easement shall be as described in COC BIO-12 (Appendix B, p. 267) and the timing associated with BIO-28 (Appendix B, p. 318). Mitigation for impacts to state waters shall be within the Chuckwalla Valley or Colorado River Hydrological Units (HUs), as close to the Project site as practicable.</p> | Owner             | See 'Schedule' | Provide written verification to BLM, the CPM, USFWS and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient.  | No later than 18 months from adoption of the Final Energy Commission Decision for the Project, which was September 15, 2010. |  |                      |                 |        |

| Condition ID | Source         | Page No | Mitigation Measure  | Responsible Party | Timing                   | Action   | Schedule  | Notes | Performance Standard | Remedial Action | Status |
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|              | Final Decision | 307     | 2. Security for Implementation of Mitigation: The Owner shall provide financial assurances to the CPM and CDFG to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of state waters as described in this condition. These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM and CDFG in the form of an irrevocable letter of credit, a pledged savings account or Security prior to initiating ground-disturbing Project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with BLM, CDFG and the USFWS, to ensure funding. The final amount due will be determined by and updated appraisal and a PAR analysis conducted pursuant to BIO-12 (Appendix B, p. 267).   | Owner             | Precon                   | 1) Provide the form of Security in accordance with this COC. 2) Provide written verification of the actual Security. | 1) No less than 30 days prior to beginning Project ground-disturbing activities. 2) No later than 7 days prior to beginning Project ground-disturbing activities. |       |                      |                 |        |
|              | Final Decision | 308     | 3, Preparation of Management Plan: The Owner shall submit to the CPM and CDFG a draft Management Plan that reflects site-specific enhancement measures for the drainages on the acquired compensation lands. The objective of the Management Plan shall be to enhance the wildlife value of the drainages, and may include enhancement actions such as weed control, fencing to exclude livestock, or erosion control.  | Owner             | See 'Schedule' #3 above. |  |   |       |                      |                 |        |
|              | Final Decision | 308     | 4. Code of Regulations: The Owner shall provide a copy of this condition (COC BIO-22) from the Energy Commission Decision to all contractors, subcontractors, and the supervisors. Copies shall be readily available at work sites at all times during periods of active work and must be presented to any CDFG personnel upon demand. The CPM reserves the right to issue a stop work order or allow CDFG to issue a stop work order after giving notice to the Owner, the CPM, if the CPM in consultation with CDFG, determines that the Owner has breached any of the terms or conditions or for other reasons, including but not limited to the following: a. The information provided by the Owner regarding streambed alteration is incomplete or inaccurate; b. New information becomes available that was not known to it in preparing the terms and conditions; or c. The Project or Project activities as described in the Staff Assessment have changed. | Owner             | Precon                   |  |   |       |                      |                 |        |

| Condition ID | Source         | Page No | Mitigation Measure   | Responsible Party | Timing            | Action | Schedule | Notes | Performance Standard | Remedial Action | Status |
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|              | Final Decision | 308     | 5. Best Management Practices: The Owner shall also comply with the following conditions to protect drainages near the Project Disturbance Area:  | Owner             | Precon, Con & Ops |        |          |       |                      |                 |        |
|              | Final Decision | 308     | a. The Owner shall minimize road building, construction activities and vegetation clearing within ephemeral drainages to the extent feasible.  |                   |                   |        |          |       |                      |                 |        |
|              | Final Decision | 308     | b. The Owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows.  |                   |                   |        |          |       |                      |                 |        |
|              | Final Decision | 308     | c. The Owner shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws, and it shall be the responsibility of the Owner to ensure compliance.   |                   |                   |        |          |       |                      |                 |        |
|              | Final Decision | 308     | d. Spoil sites shall not be located at least 30 feet from the boundaries and drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.  |                   |                   |        |          |       |                      |                 |        |
|              | Final Decision | 309     | e. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from Project-related activities, shall be prevented from contaminating the soil and/or entering waters of the state. These materials, placed within or where they may enter a drainage by the Owner or any party working under contract or with the permission of the Owner, shall be removed immediately. |                   |                   |        |          |       |                      |                 |        |
|              | Final Decision | 309     | f. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the state.   |                   |                   |        |          |       |                      |                 |        |
|              | Final Decision | 309     | g. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.  |                   |                   |        |          |       |                      |                 |        |

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|               | Final Decision | 309     | h. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.  |                     |                |  |   |       |                      |                 |        |
| <b>BIO-23</b> | Final Decision | 311     | <b>DECOMMISSIONING AND RECLAMATION PLAN:</b> Upon Project closure, the Owner shall implement a final Decommissioning and Reclamation Plan. The Decommissioning and Reclamation Plan shall include a cost estimate for implementing the proposed decommissioning and reclamation activities, and shall be consistent with the guidelines in BLM's 43 CFR 3809.550 et seq.   | Owner, CPM & BLM AO | <b>Postcon</b> | Owner shall provide to the CPM (for review) and BLM's AO (for review and approval) a draft Decommissioning and Reclamation Plan. The plan shall be finalized prior to the start of commercial operation and reviewed every 5 years thereafter and submitted to the CPM for review and to the BLM's AO for approval. Modifications to the approved Decommissioning and Reclamation Plan shall be made only after approval from BLM's AO. Owner shall provide a copy of the approved Decommissioning and Reclamation Plan and any BLM approved revisions to the CPM. | No fewer than 30 days prior to the start of Project-related ground disturbing activities  |       |                      |                 |        |
| <b>BIO-25</b> | Final Decision | 311     | <b>GOLDEN EAGLE INVENTORY AND MONITORING:</b> The Owner shall implement the following measures to avoid or minimize Project-related construction impacts to golden eagles.   | Owner & CPM         | <b>Con</b>     | 1) Owner shall submit a report to the CPM, CDFG, and USFWS documenting the results of the inventory. 2) If an occupied nest is detected within one mile of the Project boundary during the inventory the Owner shall contact staff at the USFWS Carlsbad Office and CDFG for interim guidance on monitoring and nest protection. 3) Owner shall provide the CPM, CDFG, and USFWS with the final version of the Golden Eagle Monitoring and Management Plan. This final Plan shall have been reviewed and approved by the CPM in consultation with USFWS and CDFG.  | 1) No fewer than 30 days from completion of the golden eagle inventory. 2) Within 1 working day of detection of the nest. 3) Within 30 days after detection of the nest |       |                      |                 |        |
|               | Final Decision | 311     | 1. Annual Inventory During Construction. For each calendar year during which construction will occur an inventory shall be conducted to determine if golden eagle territories occur within 1 mile of the Project boundaries. Survey methods for the inventory shall be as described in the Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations or more current guidance from the USFWS. |                     |                |  |   |       |                      |                 |        |
|               | Final Decision | 311     | 2. Inventory Data: Data collected during the inventory shall include at least the following: territory status (unknown, vacant, occupied, breeding successful, breeding unsuccessful); nest location, nest elevation; age class of golden eagles observed; nesting chronology; number of young at each visit; digital photographs; and substrate upon which nest is placed.  |                     |                |  |   |       |                      |                 |        |

| Condition ID | Source         | Page No | Mitigation Measure  | Responsible Party | Timing | Action                                | Schedule   | Notes | Performance Standard | Remedial Action | Status |
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|              | Final Decision | 311     | 3. Determination of Unoccupied Territory Status: A nesting territory or inventoried habitat shall be considered unoccupied by golden eagles ONLY after completing at least 2 full surveys in a single breeding season. In circumstances where ground observation occurs rather than aerial surveys, at least 2 ground observation periods lasting at least 4 hours or more are necessary to designate an inventoried habitat or territory as unoccupied as long as all potential nest sites and alternate nests are visible and monitored.  |                   |        | 2 full surveys during breeding season | At least 30 days apart for an inventory, and at least 30 days apart for monitoring of known territories. |       |                      |                 |        |
|              | Final Decision | 312     | 4. Monitoring and Adaptive Management Plan: If an occupied nest is detected within 1 mile of the Project boundaries, the Owner shall prepare and implement a Golden Eagle Monitoring and Management Plan for the duration of construction to ensure that Project construction activities do not result in injury or disturbance to golden eagles. The monitoring methods shall be consistent with those described in the Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations or more current guidance from the USFWS. The Monitoring and Management Plan shall be prepared in consultation with the USFWS. Triggers for adaptive management shall include any evidence of Project-related disturbance to nesting golden eagles, including but not limited to: agitation behavior (displacement, avoidance, and defense); increased vigilance behavior at nest sites; changes in foraging and feeding behavior, or nest site abandonment. The Monitoring and Management Plan shall include a description of adaptive management actions, which shall include, but not be limited to, cessation of construction activities that are deemed by the DB to be the source of golden eagle disturbance. |                   |        |                                       |  |       |                      |                 |        |

| Condition ID | Source         | Page No | Mitigation Measure   | Responsible Party | Timing | Action   | Schedule  | Notes  | Performance Standard | Remedial Action | Status |
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| BIO-25       | Final Decision | 313     | <b>EVAPORATION POND NETTING AND MONITORING:</b> The Owner shall cover the evaporation ponds prior to any discharge with 1.5-inch mesh netting designed to exclude birds and other wildlife from drinking or landing on the water of the ponds. Netting with mesh sizes other than 1.5-inches may be installed if approved by the CPM in consultation with CDFG and USFWS. The netted ponds shall be monitored regularly to verify that the netting remains intact, is fulfilling its function in excluding birds and other wildlife from the ponds, and does not pose an entanglement threat to birds and other wildlife. The ponds shall include a visual deterrent in addition to the netting, and the pond shall be designed such that the netting shall never contact the water. Monitoring of the evaporation ponds shall include the following:  | Owner, CPM & DB   | Ops    | 1) Owner shall provide to the CPM as-built drawings and photographs of the ponds indicating that the bird exclusion netting has been installed.<br>2) DB shall submit quarterly reports to the CPM, CDFG, and USFWS describing the dates, durations and results of site visits conducted at the evaporation ponds. Thereafter the DB shall submit annual monitoring reports with this information. | 1) No less than 30 days prior to operation of the evaporation ponds. 2) Quarterly reports for the 1st year and annually thereafter. | The quarterly and annual reports shall fully describe any bird or wildlife death or entanglements detected during the site visits or at any other time, and shall describe actions taken to remedy these problems. |                      |                 |        |
|              | Final Decision | 313     | 1. Monthly Monitoring. The DB or BM shall regularly survey the ponds at least once per month starting with the first month of operation of the evaporation ponds. The purpose of the surveys shall be to determine if the netted ponds are effective in excluding birds, if the nets pose an entrapment hazard to birds and wildlife, and to assess the structural integrity of the nets. The monthly surveys shall be conducted in one day for a minimum of two hours following sunrise (i.e., dawn), a minimum of one hour mid-day (i.e., 1100 to 1300), and a minimum of two hours preceding sunset (i.e., dusk) in order to provide an accurate assessment of bird and wildlife use of the ponds during all seasons. Surveyors shall be experienced with bird identification and survey techniques. Operations staff at the Project site shall also report finding any dead birds or other wildlife at the evaporation ponds to the DB within one day of the detection of the carcass. The DBs shall report any bird or other wildlife deaths or entanglements within two days of the discovery to the CPM, CDFG, and USFWS. | DB & BM           |        |  |   |  |                      |                 |        |

| Condition ID | Source         | Page No | Mitigation Measure   | Responsible Party | Timing | Action | Schedule | Notes | Performance Standard | Remedial Action | Status |
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|              | Final Decision | 313     | 2. Dead or Entangled Birds. If dead or entangled birds are detected, the DB shall take immediate action to correct the source of mortality or entanglement. The DB shall make immediate efforts to contact and consult the CPM, CDFG, and USFWS by phone and electronic communications prior to taking remedial action upon detection of the problem, but the inability to reach these parties shall not delay taking action that would, in the judgment of the DB, prevent further mortality of birds or other wildlife at the evaporation ponds.   | DB                |        |        |          |       |                      |                 |        |
|              | Final Decision | 313     | 3. Quarterly Monitoring. If after 12 consecutive monthly site visits no bird or wildlife deaths or entanglements are detected at the evaporation ponds by or reported to the DB, monitoring can be reduced to quarterly visits.  | DB                |        |        |          |       |                      |                 |        |
|              | Final Decision | 314     | 4. Biannual Monitoring. If after 12 consecutive quarterly site visits no bird or wildlife deaths or entanglements are detected by or reported to the DB and with approval from the CPM, USFWS and CDFG, future surveys may be reduced to two surveys per year, during the spring nesting season and during fall migration. If approved by the CPM, USFWS and CDFG, monitoring outside the nesting season may be conducted by the ECM.  | DB                |        |        |          |       |                      |                 |        |
|              | Final Decision | 314     | 5. Modification of Monitoring Program. Without respect to the above requirements the Owner, CDFG or USFWS may submit to the CPM a request for modifications to the evaporation pond monitoring program based on information acquired during monitoring, and may also suggest adaptive management measures to remedy any problems that are detected during monitoring or modifications if bird impacts are not observed. Modifications to the evaporation pond monitoring described above and implementation of adaptive management measures shall be made only after approval from the CPM, in consultation with USFWS and CDFG. |                   |        |        |          |       |                      |                 |        |
|              | Final Decision | 314     | In addition, the Owner shall prepare and implement measures that will prevent Couch's spadefoot toads from using the evaporative basins (see COC BIO-26 below).  | Owner             |        |        |          |       |                      |                 |        |

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| BIO-26       | Final Decision | 314     | <b>COUCH'S SPADEFOOT TOAD IMPACT AVOIDANCE AND MINIMIZATION MEASURES:</b> The Owner shall prepare and implement a Couch's Spadefoot Toad Protection and Mitigation Plan (Protection and Mitigation Plan) to avoid, minimize or mitigate impacts to Couch's spadefoot toads and their breeding habitat during construction and operation of the Project. The Protection and Mitigation Plan shall be approved by the CPM in consultation with CDFG, and shall be incorporated into the Project's BRMIMP and implemented. It is expected that, as currently proposed, the Project would impact three potential breeding ponds. The Protection and Mitigation Plan shall address methods to achieve this avoidance and minimization, and shall include avoidance, minimization, and mitigation measures that would be required if additional habitat or Couch's spadefoot toad are found during habitat surveys. The Protection and Mitigation Plan shall include, at a minimum, the items listed under BIO-26 (Appendix B, p. 315-317). | Owner & CPM       | Precon & Con | 1) Owner shall submit to the CPM and CDFG, a final Protection and Mitigation Plan. 2) Submit reports to the CPM documenting the capacity of the created ponds to hold water.  | 1) No less than 30 days prior to any Project-related ground disturbance. 2) At least 9 days during the spadefoot toad breeding season.              | The Protection and Mitigation Plan shall address on-site protection and mitigation measures to be implemented during construction. Modifications to the Protection and Mitigation Plan shall be made only after approval from the CPM, in consultation with CDFG. The annual reporting may be terminated upon satisfactory demonstration of this performance standard, and with approval of the CPM. |                      |                 |        |
|              | Final Decision | 317     | If the Protection and Mitigation Plan includes creation of ponds, the number and acreage of created ponds shall be described in the plan.   | Owner             | Preops & Ops | 1) Provide to the CPM as-built drawings and photographs of the created ponds and maps showing the size and location of the ponds in relation to project features. 2) Submit reports to the CPM documenting the capacity of the created ponds to hold water for at least 9 days during the spadefoot toad breeding season. If ponds fail to hold water as described above the Project owner shall implement remedial actions. The annual reporting may be terminated upon satisfactory demonstration of this performance standard, and with approval of the CPM. | 1) No less than 90 days prior to operation of project the Owner. 2) On January 31st of every year following initiation of operation of the Project. |  |                      |                 |        |

| Condition ID  | Source         | Page No | Mitigation Measure  | Responsible Party                   | Timing                                  | Action  | Schedule   | Notes  | Performance Standard | Remedial Action | Status |
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|               | Final Decision | 318     | Mitigation land is purchased as an alternative to pond creation.  | Owner (or approved 3rd party) & CPM | Precon                                  | 1) Owner shall provide the CPM and CDFG with an approved form of Security and the calculation of such Security in accordance with this COC and BIO-12. 2) Actual Security shall be provided. 3) Owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition. 4) Owner shall submit a formal acquisition proposal to the CPM, CDFG and USFWS describing the parcels intended for purchase. 5) Owner, or an approved third party, shall provide the CPM, CDFG and USFWS with a management plan for the compensation lands and associated funds. The CPM shall review and approve the management plan, in consultation with CDFG. 6) Owner shall provide written verification to the CPM, and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient. | 1) No later than 30 days prior to beginning Project ground-disturbing activities. 2) No later than 7 days prior to the beginning of Project ground-disturbing activities. 3) Within 18 months of the start of Project ground-disturbing activities if Security is provided. 4) No less than 90 days prior to acquisition of the property. 5) Within 180 days of the land or easement purchase, as determined by the date on the title. 6) No later than 18 months from the start of ground-disturbing activities |  |                      |                 |        |
| <b>BIO-27</b> | Final Decision | 318     | <b>IN-LIEU FEE MITIGATION OPTION:</b> The Owner may choose to satisfy its mitigation obligations by paying an in lieu fee instead of acquiring compensation lands, pursuant to Fish and Game code sections 2069 and 2099 or any other applicable in-lieu fee provision, to the extent the in-lieu fee provision is found by the Commission to mitigate the impacts identified herein.   | Owner                               |   | If electing to use this provision, the Owner shall notify the Commission that it would like a determination that the Project's in-lieu fee proposal mitigate for the impacts identified herein.   |  |  |                      |                 |        |
| <b>BIO-28</b> | Final Decision | 318     | <b>PROJECT CONSTRUCTION PHASING PLAN:</b> The Owner shall provide compensatory mitigation for the total Project Disturbance Area and may provide such mitigation in three phases, Phase 1a, Phase 1b, and Phase 2, as described in Palo Verde Solar 1, LLC's Proposed Phased Construction and Mitigation (Galati & Blek [tn:57593]. Palo Verde Solar 1, LLC's Proposed Phased Construction and Mitigation: Blythe Solar Power Project Docket No.(09-AFC-6), dated July 15, 2010.). 'Project Disturbance Area' encompasses all areas to be temporarily and permanently disturbed by the Project. | Owner                               | <b>Phase 1a, Phase 1b, and Phase 2.</b> | Owner shall submit a description of the proposed construction activities for that phase to CDFG, USFWS and BLM for review and to the CPM for review and approval. The description for each phase shall include the proposed construction schedule, a figure depicting the locations of proposed construction and amount of acres of each habitat type to be disturbed.  | No less than 30 days prior to the start of DT clearance surveys for each phase.  | Owner shall not disturb any area outside of the area that has been approved for that phase of construction and for the previously approved phases of construction. |                      |                 |        |

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|              | Final Decision         | 319     | The disturbance area for each project Phase and resource type is provided in Appendix B (p. 319). The tables shall be refined prior to the start of each construction phase with the disturbance area adjusted to reflect the final Project footprint for each phase. Prior to initiating each phase of construction the Owner shall submit the actual construction schedule, a figure depicting the locations of proposed construction and amount of acres to be disturbed. Mitigation acres are calculated based on the compensation requirements for each resource type as described in the above COC BIO-12 (Appendix B, p. 267), BIO-20 (Appendix B, p. 302), BIO-18 (Appendix B, p. 279), and BIO-22 (Appendix B, p. 307). Compensatory mitigation for each phase shall be implemented according to the timing required by each condition. |                   |        |   |          | Phase 1b shall consist of the remainder of Unit 1 and Unit 2, and Phase 2 shall consist of the remainder of the Project (Units 3 and 4). These phases will generally include installation of fencing, clearing, grubbing and grading, and development of common facilities first, followed by the remaining power block units. All construction activities for the non-linear features during these subsequent phases will occur within DT exclusionary fenced areas that have been cleared in accordance with USFWS protocols.   |                      |                 |        |
|              | Reveg Plan (BIO-8 #17) |         | <b>REVEGETATION PLAN</b>   |                   |        |   |          |   |                      |                 |        |
|              | DT Plan (BIO-10)       |         | <b>DESERT TORTOISE RELOCATION/TRANSLOCATION PLAN</b>   |                   |        |   |          |   |                      |                 |        |
|              | Raven Plan (BIO-13)    | 8, 10   | <b>RAVEN MANAGMENT PLAN:</b> Raven Perching, Roosting, and Nesting Sites: Weekly monitoring will evaluate the presence of ravens during construction. If ravens are identified perching, roosting, or nesting on building materials, equipment, waste piles, or other construction debris, hazing will be employed to discourage use.  | ECM               | Con    | Surveys will focus on all potential subsidies including waste disposal areas, erected structures, staging areas where large equipment or material may be stored, evaporation ponds, and any area where water is applied to control dust and erosion or there are recent surface disturbances. |          | Data will be recorded for each raven observed, including activity, categorized as flying, perched, or on the ground (likely scavenging); type of perch (if applicable); and the general location of the bird within the Project area. In addition, any nesting locations will be recorded and unoccupied nests will be removed (see Raven Management Plan for a discussion on nest removal). Data sheets be used to record survey information will be developed and submitted to the agencies prior to implementation of this Plan, after final Project design is complete. |                      |                 |        |

| Condition ID | Source              | Page No | Mitigation Measure   | Responsible Party | Timing | Action  | Schedule | Notes | Performance Standard | Remedial Action | Status |
|--------------|---------------------|---------|--|-------------------|--------|---|----------|-------|----------------------|-----------------|--------|
|              |                     | 16      |  |                   |        | The ECM will prepare monthly monitoring reports during construction and the first year of operation summarizing the results of the biweekly and breeding season monitoring events as well as observations reported by operations staff and describing any noted raven activity in the Project area. These reports will summarize the survey results, discuss the success or failure of PDFs, and make recommendations for modification of PDFs or implementation of control measures as necessary. These monitoring reports will be submitted to the Owner and DB for review. Owner will forward reports to the CEC, USFWS, BLM and CDFG. |          |       |                      |                 |        |
|              | Raven Plan (BIO-13) | 8       | <u>Ponding Water:</u> To minimize the occurrence of ponding water, the application rates of water for dust suppression activities will be predetermined to minimize excessive application. The application rate will consider soil infiltration and evaporation rates. The ECM or designee will patrol areas to verify water does not puddle for long periods (more than 1 hour) and make recommendations for reduced water application rates where necessary. The fill station will be designed to adequately drain water to prevent ponding.                     | ECM               | Con    |   |          |       |                      |                 |        |
|              | Raven Plan (BIO-13) | 8       | <u>Raven Food Sources from Soil Disturbance:</u> During construction activities, specifically grading, there is a potential for animals to be unearthed, providing a food subsidy for scavengers and thereby resulting in increased attraction of ravens to the Project Disturbance Area. Daily observations of the construction site and of access roads will expedite proper disposal of food subsidies to the extent feasible.  | ECM               | Con    |   |          |       |                      |                 |        |
|              | Raven Plan (BIO-13) | 9       | <u>Human Food and Waste Management:</u> A trash abatement program will be established during the construction phase. Trash and food items will be contained in closed, secured containers on the Project site and removed daily to reduce the attractiveness to opportunistic predators such as ravens. Daily observations of the construction site and access roads will expedite proper disposal of roadkill. In addition, the WEAP will assist in reinforcing with workers that no trash or roadkill, that might attract DT predators, will be left for ravens. | Owner & ECM       | Con    |   |          |       |                      |                 |        |

| Condition ID | Source              | Page No | Mitigation Measure  | Responsible Party | Timing | Action  | Schedule  | Notes   | Performance Standard | Remedial Action | Status |
|--------------|---------------------|---------|---|-------------------|--------|---|---|---|----------------------|-----------------|--------|
|              | Raven Plan (BIO-13) | 9, 11   | <u>Raven Perching, Roosting, and Nesting Sites:</u> Project Design Features (PDFs) will be implemented to avoid introducing new subsidies by minimizing the attractiveness of Project components. Potential PDFs that will be considered to reduce impacts from these Project components primarily include the use of physical bird deterrents such as, but not limited to, bird spikes, Bird-B-Gones, and WhirlyBirds, etc. In addition, nest removal will occur in conjunction with monitoring. | ECM & DB          | Ops    | 1) The ECM, following training by the DB, will conduct biweekly surveys (every two weeks) for raven activity at predesignated locations throughout the Project area for the first 5 years of Project operation, commencing when the initial plant becomes operational. 2) After the first 5 years of Project operation, surveys will be conducted biweekly for 1 year, unless results, reviewed in consultation with USFWS, indicate more frequent or less frequent monitoring is necessary following completion of the first 5 years of Project operation. The ECM will be accompanied by the DB during the first four surveys to facilitate appropriate data collection. Survey locations will focus on Project components that may influence raven abundance, activity, and behavior by potentially allowing perching, roosting, and nesting opportunities or by providing supplemental resources such as food and water. These Project components include tower structures, transmission poles and lines, and support structures, as well as evaporation ponds and waste disposal facilities. | 1) Every other week for 1st 5 years. 2) After the 1st 5 years, every other week for 1 year every 5 years. | Up to 5 permanent sampling locations will be identified by the DB based on areas that have the greatest likelihood of attracting ravens (e.g., tower structures, transmission poles and lines, evaporation ponds and waste facilities). A 5-minute sampling session observing and listening for ravens will occur at each survey location. The surveyor will record raven detections and will document the behavior of the raven (e.g., perched, flying, on the ground, nesting), perch type (if applicable), and distance and direction from the survey location. Additional data collected will include the survey start/stop time, and weather (including temperature, average wind speed, and percent cloud cover). In addition, the location of any nests detected during a survey will be noted and Universal Transverse Mercator (UTM) coordinates recorded immediately following the conclusion of the survey session.<br><br>To aid the ECM and ensure consistency throughout the duration of the Project's life, a data sheet will be prepared in advance outlining the required data to be collected. Surveys will be conducted unless wind or rain interferes with audible or visual detection of ravens. |                      |                 |        |

| Condition ID | Source              | Page No | Mitigation Measure | Responsible Party | Timing | Action  | Schedule  | Notes  | Performance Standard | Remedial Action | Status |
|--------------|---------------------|---------|--------------------|-------------------|--------|---|---|--|----------------------|-----------------|--------|
|              | Raven Plan (BIO-13) | 11      |                    | Owner, ECM & DB   |        | Breeding season surveys will be conducted by the ECM biweekly starting at the beginning of the typical breeding season (mid-February) and continue to the end of June to identify nests and evidence of DT predation at nests. These surveys will be conducted for the life of the Project on Project controlled lands and along the Project transmission line and switchyard. Each survey will consist of systematically searching a survey area, which will include the Project site and the aboveground linear features associated with the Project. | Every other week during breeding season for life of project | Surveys will be conducted by vehicle when possible and on foot when necessary. Native trees, landscape trees, utility poles, transmission towers, and other structures within the survey area will be searched for nests. If nests are identified, the DB will be contacted to verify the nest conditions. UTM coordinates, as well as nesting substrate and current breeding status (if detectable) will be recorded for each nest. DB will determine if the nest is unoccupied, and if so, the nest will be removed by the DB or the ECM (see Raven Plan for a description of nest removal). The DB will search a 98 foot radius surrounding each nest or perch site for evidence of DT predation. All DTs depredated will be photographed, a UTM coordinate collected, and the length measured (or estimated). In addition, each DT will be marked to avoid duplication of data recording on subsequent surveys. If occupied nests are detected during surveys, the Owner will notify the Raven Management Workgroup for assistance with control measures. Descriptions of nesting behavior and DT predation will be semi-quantitative and qualitative and will produce data valuable for assessing raven behavior and documenting potential problem individuals for management actions. In addition, an increase in the number of raven nests in the Project area may suggest the potential need for revisions to PDFs or additional control measures. |                      |                 |        |

| Condition ID | Source              | Page No | Mitigation Measure  | Responsible Party | Timing | Action   | Schedule                                  | Notes | Performance Standard | Remedial Action | Status |
|--------------|---------------------|---------|---|-------------------|--------|--|---|-------|----------------------|-----------------|--------|
|              |                     | 16      |   | ECM               | Ops    | The ECM will prepare monthly monitoring reports the first year of operation summarizing the results of the biweekly and breeding season monitoring events as well as observations reported by operations staff and describing any noted raven activity in the Project Disturbance Area. Following the first year of operation, a summary of monitoring data will be provided monthly and a report will be submitted annually. These reports will summarize the survey results, discuss the success or failure of PDFs, and make recommendations for modification of PDFs or implementation of control measures as necessary. These monitoring reports will be submitted to the DB for review and then reports will be provided to the CEC, USFWS, BLM, and CDFG. | Monthly for 1st year, annually thereafter |       |                      |                 |        |
|              | Raven Plan (BIO-13) | 9       | <u>Ponding Water:</u> To minimize the occurrence of ponding water, the application rates of water for dust suppression activities will be predetermined to minimize excessive application. The application rate will consider soil infiltration and evaporation rates. The ECM or designee will patrol areas to ensure water does not puddle for long periods and make recommendations for reduced water application rates where necessary. During operations, deionized water will be used to wash mirrors; however, the amount of water used will be minimal and is not anticipated to result in ponded water onsite. If water should be found to be a concern, changes will be made through adaptive management. | ECM               | Ops    | Patrol areas and make recommendations as necessary.  |   |       |                      |                 |        |
|              | Raven Plan (BIO-13) | 10      | <u>Human Food and Waste Management:</u> The trash abatement program developed for the construction phase will be carried forward for the life of the Project. Trash and food items will be contained in closed, secured containers and removed daily to reduce the attractiveness to opportunistic predators such as ravens. The ECM will continue to ensure that these practices are enforced and make recommendations for improvements where applicable.  | ECM               | Ops    | Ensure proper trash disposal.  |   |       |                      |                 |        |

| Condition ID | Source              | Page No | Mitigation Measure  | Responsible Party | Timing         | Action   | Schedule  | Notes | Performance Standard | Remedial Action | Status |
|--------------|---------------------|---------|---|-------------------|----------------|--|-----------|-------|----------------------|-----------------|--------|
|              | Raven Plan (BIO-13) | 13      | <u>Decommissioning Phase:</u> the ECM will conduct a biweekly reconnaissance-level survey will be conducted in the Project area during ground disturbance activities associated with decommissioning. Surveys will focus on all potential subsidies including waste disposal areas, erected structures, staging areas where large equipment or material may be stored, evaporation ponds, and any area where water is applied to control dust and erosion or there are recent surface disturbances. Data will be recorded for each raven observed, including activity, categorized as flying, perched, or on the ground (likely scavenging); type of perch (if applicable); and the general location of the bird within the Project Disturbance Area. In addition, any nesting locations will be recorded and unoccupied nests will be removed (refer to the Raven Mangement Plan for a description of nest removal). | ECM               | <b>Closure</b> | Perform reconnaissance level surveys in the Project area during ground disturbance activities associated with decommissioning. Surveys will focus on all potential subsidies including waste disposal areas, erected structures, staging areas where large equipment or material may be stored, evaporation ponds, and any area where water is applied to control dust and erosion or there are recent surface disturbances.   | Biweekly  |       |                      |                 |        |
|              | Raven Plan (BIO-13) | 13      | <u>Adaptive Management Triggers:</u> Implementation of adaptive management measures (described below) would occur if both of the following conditions are met:  | ECM & DB          |                | Adaptive management measures will be identified during implementation of the monitoring program and will be discussed by the Owner, CEC, USFWS, BLM, and CDFG before any decisions are made. Adaptive management measures may include modifications to PDFs, monitoring strategies, or implementation of additional control measures. Key examples will be 1) modifications to the monitoring program survey frequency, including increase or reduction of the monitoring frequency and survey points, should results of surveys deem it warranted; 2) eliminating or refining a PDF or management measure if it is not working; or 3) incorporating a defined control measure, if impacts are observed, that will not otherwise be implemented (triggered). Potential control measures are discussed in the Raven Plan. | As-needed |       |                      |                 |        |
|              | Raven Plan (BIO-13) | 13      | a. The results of annual breeding season raven monitoring and/or Project area monitoring during the operational phase suggest that current PDFs provide evidence that the number of raven occurrences in the Project area is increasing, thereby increasing the potential for DT predation.   | DB                |                |  |           |       |                      |                 |        |

| Condition ID | Source              | Page No    | Mitigation Measure  | Responsible Party    | Timing                        | Action   | Schedule  | Notes  | Performance Standard | Remedial Action | Status |
|--------------|---------------------|------------|---|----------------------|-------------------------------|--|---|--|----------------------|-----------------|--------|
|              | Raven Plan (BIO-13) | 13         | b. Owner has made an attempt to adjust PDFs to control raven occurrences and avoid the need for additional control measures, and has contacted and worked with the DB and the resource agencies to identify other sources of ravens and/or management measures, but increased raven occurrences continue.   | Owner & DB           |                               |  |   |  |                      |                 |        |
|              | Weed Plan (BIO-14)  | 11, 28, 29 | <b>WEED MANAGEMENT PLAN</b><br>1. Weed Risk Assessment: Consistent with BLM guidelines for weed management, the Owner will conduct a weed risk assessment for each component of the Project, including construction, operation and closure which will involve soil disturbing activities or altering vegetation. BLM's stepwise risk assessment is available online at: <a href="http://blm.gov/ca/st/en/prog/weeds/9015.html">http://blm.gov/ca/st/en/prog/weeds/9015.html</a> | Owner                | <b>Con, Ops &amp; Closure</b> | Conduct weed risk assessment using BLM's stepwise risk, which is available on-line. Prepare monitoring reports.  | 1) Weed management activities will be documented as part of the MCR. 2) Upon completion of construction activities for Units # 1 and 2, a post-construction report will be prepared describing the overall results of invasive weed management and current weed status of the Project. 3) Annual long-term weed control progress reports will be produced during the operational phase. See Weed Management Plan pp. 28-29                          | The risk assessment per BLM standards provides for a 3-year monitoring program. The BM will initiate weed mapping and regular inventories if more modest procedures cannot adequately prevent spread of weeds (see p. 18 of the Weed Management Plan) for further information. |                      |                 |        |
|              | Weed Plan (BIO-14)  | 16         | 2. Weed Identification: Inspect all vulnerable areas of the ROW where construction activity has occurred  | BM & qualified staff | <b>Con, Ops &amp; Closure</b> | Conduct inspections.   |   |  |                      |                 |        |
|              | Weed Plan (BIO-14)  | 17         | 3. Surveys and Monitoring Methodology: Surveys and monitoring will verify timely detection and prompt eradication of weed infestations, which are essential to a long-term strategy for weed management.  | BM & ECM             | <b>Con</b>                    | BM will be present during site clearing and construction activities and will be responsible for inspecting all construction areas, identifying the presence of invasive weeds, and inspecting equipment-cleaning facilities for weed seed removal. The ECM will be responsible for prescribing management activities consistent with this plan when weeds become established. Monitoring of active construction areas will include access routes and will consist of walking or driving slowly over construction areas and searching for seedlings of exotic species. Staff trained to recognize common weeds will alert the BM and ECM to the presence of any potential weed invasions that the BM may have overlooked. | Monitoring will be done with sufficient frequency that the entire construction area is inspected during both early and in later phases of construction, within the summer and winter rainy seasons, and until ground-disturbing construction activities are completed. Monitoring thereafter will be of sufficient frequency to cover the entire disturbed area at least once during early to mid portions of both summer and winter rainy seasons. |  |                      |                 |        |
|              | Weed Plan (BIO-14)  | 18         |   | Grounds personnel    | <b>Ops</b>                    | General site monitoring of the operating facility will be conducted by grounds personnel on an ongoing basis. Weed control will be conducted, as needed, by Project personnel, whenever notified by the BM or ECM the presence of weeds.   | Need not be conducted more often than every other week during the growing season (March through August) and once a month otherwise.   |  |                      |                 |        |

| Condition ID | Source   | Page No | Mitigation Measure   | Responsible Party           | Timing            | Action   | Schedule  | Notes  | Performance Standard | Remedial Action | Status |
|--------------|--|---------|--|-----------------------------|-------------------|--|---|--|----------------------|-----------------|--------|
|              | Weed Plan (BIO-14)                             | 19      | 4. Preventive Measures: The most appropriate management action should be chosen based on the weed species, the physical characteristics of the Project, and economic and social considerations. The use of herbicides will also take into account the chemical nature of the active compounds to avoid chemical drift or residual toxicity to special-status plants adjacent to the treatment areas. Monitoring and rapid implementation of control measures should be performed to verify early detection and eradication for weed invasions. | BM, ECM & grounds personnel | Con, Ops, Closure | 1) Limit ingress and egress to designated routes. 2) Monitor materials brought onto the Project site to minimize the potential for weed introduction. 3) Educate workers about invasive weeds that are potentially problematic at the Project and enlist their help in preventing invasive weed introduction and spread. 4) Reestablish vegetation as quickly as practicable on temporarily disturbed sites as the most effective long-term strategy to avoid weed invasions. 5) Preventing introduction through contaminated seed, feed, mulch, gravel or fill. 6) Preventing introduction through movement of animals, people, or machinery through erection of fencing and/or gates to restrict access. 7) Preventing introduction through proper planning. |   | Construction: Worker Environmental Training; Weed-Free Products; and Weed-Free Seed. Operations: Infestation Containment and Control and Early Detection and Rapid Response  |                      |                 |        |
|              | Weed Plan (BIO-14)                             | 21      | 5. Eradication and Control Methods: Weed infestations are typically targeted to a level of control located between eradication and elimination of seed production. Best management practices approved by BLM will be incorporated prior to implementation of eradication and control methods.  | Grounds personnel           | Con, Ops, Closure | 1) Cut Stump (Chemical): Effective on all plants over 3/8-inch diameter; reserved for tamarisk and other weedy trees. 2) Foliar Spray (Chemical): For dense stands of small plants and regrowth on salt cedar. 3) Wipe Method (Chemical): For dense stands of small plants and regrowth on perennial plants; similar to foliar spray, but more selective, as only target plants receive the chemical treatment. 4) Mowing: Mowing can be conducted with string trimmers or tractor-mounted mower.  | Monitoring will be conducted yearly until the weeds are eradicated. | Monitoring will collect data on percent kill, survival, damage to nontarget species, reinvasion of weed species, reintroduction of native species, and the need for retreatments. Treatments over or adjacent to water would include monitoring for water quality as specified in the State guidelines and BLM guidance. |                      |                 |        |
|              | Avian Protection Plan (BIO-15/BIO-8, Item #8b) |         | <b>AVIAN PROTECTION PLAN</b>   |                             |                   |  |   |  |                      |                 |        |
|              | BO Plan (BIO-18)                               | 1       | <b>BURROWING OWL RELOCATION/TRANSLOCATION PLAN:</b><br>The primary purpose of this Plan is to provide a strategy that will facilitate the protection of burrowing owls (BO). The Plan specifies a passive relocation approach that, when implemented, will facilitate avoidance, minimization, and the offset of impacts to BO relocated from the Project Disturbance Area.  |                             |                   | Include results in MCR and ACR.  |   |  |                      |                 |        |

| Condition ID | Source           | Page No | Mitigation Measure   | Responsible Party             | Timing | Action   | Schedule  | Notes   | Performance Standard | Remedial Action | Status |
|--------------|------------------|---------|--|-------------------------------|--------|--|---|---|----------------------|-----------------|--------|
|              | BO Plan (BIO-18) | 6       | 1. Nonnesting Season Preactivity Surveys (OPTIONAL): Conduct surveys in the Project Disturbance Area for that construction year plus a 500-foot construction buffer of that area.  | DB & qualified biologists     | Precon | Conduct preactivity surveys (per California Burrowing Owl Consortium [CBOC] Phase II guidelines) by walking survey transects spaced to allow 100 percent visual coverage of the ground surface; distance between transect center lines will be no more than 98 feet and will be reduced to account for differences in terrain, vegetation density, and ground surface visibility. This survey will be conducted by walking through suitable habitat over the Project Disturbance Area for the year and in areas within 492 feet of the Project Disturbance Area. | September 1 to January 31 prior to planned activity in all Project Disturbance Areas.                 | If Project disturbance is scheduled to start within 30 days of this preactivity survey, this survey serves as the preconstruction survey (see BIO-18 (1) above).  |                      |                 |        |
|              | BO Plan (BIO-18) | 8       | 2. Passive Relocation: BOs must be excluded from BO-occupied and BO-suitable burrows identified during the nonnesting preactivity survey prior to the following nesting season (February 1 through August 31) and any Project Disturbance Area.  | DB & qualified biologists     | Precon | BOs will be excluded from identified burrows by installing one-way doors (e.g., 4-inch corrugated irrigation pipe with gravity-closing see-through door), in each burrow entrance within the Project Disturbance Area and 500-foot buffer area. See BO Plan for sequence of events to exclude BO.  |   | If work in the Project Disturbance Area is scheduled to commence more than 30 days after passive relocation activities are complete, monitoring of that area will occur until disturbance commences. The frequency of the monitoring will depend on the abundance of fossorial mammal activity and the friability of soils in the passive relocation area.  |                      |                 |        |
|              | BO Plan (BIO-18) | 10      | 3. Burrow Enhancement/Artificial Burrow and Relocation Location Sites: Burrows will be enhanced and/or artificial BO burrows will be installed at a ratio of 2:1 to replace occupied burrows from which BO are excluded during passive relocation. These burrows will be installed/enhanced on BO suitable habitat, with natural burrows where available, located on BLM lands greater than 500 feet from, but within 1 mile of, the combined Project Disturbance Areas of all phases of the Project. The specific location of each burrow enhancement site or artificial burrow will be determined in consultation with BLM, CDFG, USFWS, and the CPM. A 250-foot buffer will be enclosed with fencing surrounding the enhanced/artificial burrow and relocation areas and signs will be posted in English and Spanish at the fence line indicating no entry or disturbance is permitted within the fenced buffer. Provide maintenance for 24 months. | DB, BM & qualified biologists | Precon | 1) Enhance or install BO burrows. 2) Repair any damage to the perimeter fence, signage, or any unoccupied artificial burrows observed during monthly visits. Monthly visits will occur for a total of 24 months (for each enhancement/artificial burrow and relocation area) after the enhancement and/or construction of the artificial burrows, at which point the fence surrounding the area will be removed and the artificial burrows will be left in place.  | 1) <b>NEED TO DETERMINE.</b> 2) First month after enhancement/installation for a period of 24 months. | Prior to ground disturbance at an enhancement/artificial burrow installation site, surveys for other sensitive species (e.g., DT, sensitive plants) may be required to verify that the construction of artificial burrows at the relocation site will not adversely impact those species. During monthly visits, the DB or a BM will record observations of relocated BO and/or occurrences of migrating or other local BO using the artificial burrows and relocation site, evidence of known predators or humans visiting or disturbing the site, any damage to the fence or signage, and any other pertinent data gathered through monitoring. |                      |                 |        |

| Condition ID | Source            | Page No | Mitigation Measure   | Responsible Party         | Timing            | Action  | Schedule   | Notes | Performance Standard | Remedial Action | Status |
|--------------|-------------------|---------|--|---------------------------|-------------------|---|--|-------|----------------------|-----------------|--------|
|              | BO Plan (BIO-18)  | 12      | In the event any BO-suitable burrows with no sign of occupation are found (e.g., no wash, pellets, feathers, etc.) during the pre-construction survey, such burrows will be remotely investigated to ensure BO and other wildlife do not occupy the burrow (e.g., with a fiber-optic scope camera), excavated with hand tools using flexible pipe to allow wildlife to escape, and refilled to prevent occupation by BO.   | DB & qualified biologists | Precon            | Conduct remote investigation, excavate burrow and refill to prevent occupation. |  |       |                      |                 |        |
|              | SSP Plan (BIO-19) |         | <b>SPECIAL-STATUS PLANT SPECIES AVOIDANCE AND MITIGATION PLAN:</b> A draft Special-Status Plant (SSP) Species Avoidance and Mitigation (DR-BIO-95) was prepared January 2010. This plan would only be affected if late season sensitive plant species are found, in which case Sections B-D would be applicable.   |                           |                   |   |  |       |                      |                 |        |
|              | SSP Plan (BIO-19) | 14      | 1. Designated Persons: In addition to the responsible parties listed for BIO-19 COC above, the SSP Plan recommends A Field Contact Representative (FCR) to be appointed to oversee compliance with the final SSP Plan. Owner's ECM will act as the FCR. The FCR will be responsible for upper-level management decisions related to special-status plant species issues associated with the Project. This person will be the primary point of contact with the resource agencies during construction. The FCR will have the authority to halt any activities that may result in the loss of a special-status plant species and/or noncompliance with the measures contained within the final Plan. The FCR will also submit the MCRs to the CPM. | FCR/ECM                   | Con, Ops, Closure |   |  |       |                      |                 |        |
|              | SSP Plan (BIO-19) | 14      | 2. The BM will be responsible for the Worker Environmental Awareness Program (WEAP) training, special-status plant surveys, compliance monitoring and reporting.   |                           |                   |   |  |       |                      |                 |        |
|              | SSP Plan (BIO-19) | 15      | 3. Preconstruction surveys will be conducted in accordance with the standardized guidelines issued by USFS, CDFG and the California Native Plant Society. Preconstruction surveys will be performed by BMs where land disturbance will occur. Pre-construction surveys for special-status plants will be conducted during the blooming or identification period of special-status plants with potential to occur in the Project Disturbance Area.  | BM                        | Precon            | Conduct pre-construction surveys.   | Within the 30 days prior to commencement of construction activities. If this is not possible, due to the identification period of certain special-status plant species, the surveys will be conducted at the time of year when the target species are in bloom or otherwise clearly identifiable and the locations will be clearly marked in the field (by staking or flagging) for avoidance. |       |                      |                 |        |

| Condition ID | Source | Page No | Mitigation Measure   | Responsible Party                   | Timing            | Action | Schedule | Notes   | Performance Standard | Remedial Action | Status |
|--------------|--------|---------|--|-------------------------------------|-------------------|--------|----------|---|----------------------|-----------------|--------|
|              |        |         | 4. The special-status plant component of the WEAP will be comprised of, but not limited to, the following key components: a. Information on special-status plant species known to occur within the Project Site and buffer. At a minimum, the program will contain information on the species' physical characteristics, distribution, ecology, sensitivity to human activities, legal protection, penalties for violation, and reporting requirements; b. The types of construction activities that may adversely affect special-status plant species; c. A summary of the environmental laws, regulation, and penalties driving implementation of the WEAP; d. Explanation of worker responsibilities and general work practices; e. Explanation of the BM duties; f. The protective measures developed for special-status plant species and the consequences of noncompliance; g. Clear guidance on identification of special-status plant ESAs in the Project area; h. A detailed explanation of the onsite communication plan and how it applies the WEAP, including reporting procedures and notifying onsite personnel if there are any changes to this Plan; and i. Key contact information. | FCR, DB, Designated Botanist, or BM | Precon, Con & Ops |        |          | Participants will sign an attendance sheet. The WEAP sign-in sheets will be kept on file for at least 6 months after the start of commercial operation. |                      |                 |        |
|              |        |         | 5. Plant Protection: a. Construction and Operation Dust: Enforcing a 20 mph speed limit within the Project site boundary; Applying water or other acceptable material to keep fugitive dust to a minimum; Suspending grading activities when wind gusts at or above 25 mph occur more than once an hour and create a dust plume that leaves the project boundaries; Limiting road construction to 100 feet away from any known special status plant populations (ESAs), where feasible; and Graveling dirt access roads that fall within 100 feet of known special status plant populations, where feasible.   | DB & BM                             | Con & Ops         |        |          | Plan called for 300 feet, but BIO-19 states that 100 feet is adequate   |                      |                 |        |

| Condition ID | Source   | Page No | Mitigation Measure  | Responsible Party | Timing       | Action | Schedule | Notes | Performance Standard | Remedial Action | Status |
|--------------|--|---------|---|-------------------|--------------|--------|----------|-------|----------------------|-----------------|--------|
|              |  |         | b. Fire: Exercising care when driving and not parking vehicles in areas where catalytic converters can ignite dry vegetation; In times of high fire hazard (e.g., high wind or drought conditions), construction support vehicles may need to carry water, shovels, or fire extinguishers in the field. In extreme fire hazard conditions, high fire risk installations may need to be delayed; The use of shields, protective mats, or other fire prevention equipment shall be used during grinding and welding to prevent or minimize the potential fire; Smoking and disposal of cigarette butts will be prohibited in vegetated areas. | Owner             | Con & Ops    |        |          |       |                      |                 |        |
|              |  |         | c. Alteration of Site Hydrology: Alteration of site hydrology will be avoided and minimized by the proposed drainage modifications, which replicate as nearly as possible the existing flow patterns for the drainages as they exit the Project. A Post-Development Conditions Report will provide an analysis that confirms the project design for the rerouted drainages for the Project create post-development flows that mimic pre-development flows; thereby avoiding and minimizing impacts to special-plant species downstream of the Project.  | Owner             | Precon & Con |        |          |       |                      |                 |        |
|              | Decommission Plan (BIO-23)                                     |         | <b>DECOMMISSIONING PLAN</b>   |                   |              |        |          |       |                      |                 |        |
|              | Golden Eagle Monitoring and Management Plan (BIO-24)           |         | <b>GOLDEN EAGLE MONITORING AND MANAGEMENT PLAN</b>  |                   |              |        |          |       |                      |                 |        |
|              | Couch's Spadefoot Toad Protection and Mitigation Plan (BIO-26) |         | <b>COUCH'S SPADEFOOT TOAD PROTECTION AND MITIGATION PLAN</b>  |                   |              |        |          |       |                      |                 |        |

Notes:

Source: Final Decision refers to the CEC Commission Decision September 15, 2010. The biological resources COCs are found in Appendix B.

Responsible Party: In the BRMIMP report, 'PVSI' is used instead of 'Owner.' 'Owner' used in this table to be consistent with useage in COCs.

Precon: Preconstruction; Con: Construction; Postcon: Postconstruction; Ops: Operations

Yellow highlighted columns: to be filled out

Yellow highlighted rows: plans are still in process.

CPM - refers to the CEC Compliance Project Manager

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**APPENDIX B**

**FINAL DECISION CONDITIONS OF CERTIFICATION  
CONDITIONS: BIOLOGICAL RESOURCES**

## CONDITIONS OF CERTIFICATION

### Designated Biologist Selection and Qualifications<sup>37</sup>

**BIO-1** The project owner shall assign at least one Designated Biologist to the project. The project owner shall submit the resume of the proposed Designated Biologist(s), with at least three references and contact information, to the Energy Commission Compliance Project Manager (CPM) for approval in consultation with CDFG and USFWS.

The Designated Biologist must meet the following minimum qualifications:

1. Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;
2. Three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society;
3. Have at least one year of field experience with biological resources found in or near the project area;
4. Meet the current USFWS Authorized Biologist qualifications criteria ([www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)), demonstrate familiarity with protocols and guidelines for the desert tortoise, and be approved by the USFWS; and
5. Possess a California ESA Memorandum of Understanding pursuant to Section 2081(a) for desert tortoise.
6. In lieu of the above requirements, the resume shall demonstrate to the satisfaction of the CPM, in consultation with CDFG and USFWS, that the proposed Designated Biologist or alternate has the appropriate training and background to effectively implement the Conditions of Certification.

**Verification:** No fewer than 45 days prior to the start of site mobilization or construction-related ground disturbance, the project Owner shall submit the names of the Designated Biologist (s) along with completed

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<sup>37</sup> USFWS <[www.fws.gov/ventura/speciesinfo/protocols\\_guidelines/docs/dt](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/dt)> designates biologists who are approved to handle tortoises as "Authorized Biologists." Such biologists have demonstrated to the USFWS that they possess sufficient desert tortoise knowledge and experience to handle and move tortoises appropriately, and have received USFWS approval. Authorized Biologists are responsible for the implementation of all desert tortoise measures for which a project is approved and are permitted to then approve specific monitors to handle tortoises, at their discretion. The California Department of Fish and Game (CDFG) must also approve such biologists, potentially including individual approvals for Biological Monitors approved by the Authorized Biologist. **Designated Biologists are the equivalent of Authorized Biologists.** Only Designated Biologists and certain Biological Monitors who have been approved by the Designated Biologist would be allowed to handle desert tortoises.

USFWS Desert Tortoise Authorized Biologist Request Form ([www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)) to the USFWS and the CPM for review and final approval.

No construction-related ground disturbance, grading, boring, or trenching shall commence until an approved Designated Biologist is available to be on site.

If a Designated Biologist needs to be replaced, the specified information of the proposed replacement must be submitted to the CPM at least 10 working days prior to the termination or release of the preceding Designated Biologist. In an emergency, the project owner shall immediately notify the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist is proposed to the CPM and for consideration.

### ***Designated Biologist Duties***

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

1. Advise the project owner's Construction and Operation Managers on the implementation of the biological resources Conditions of Certification;
2. Consult on the preparation of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) to be submitted by the project owner;
3. Be available to supervise, conduct and coordinate mitigation, monitoring, and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as special-status species or their habitat;
4. Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and Conditions;
5. Inspect active construction areas where animals may have become trapped prior to construction commencing each day. At the end of the day, inspect for the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity (e.g., parking lots) for animals in harm's way;
6. Notify the project owner and the CPM of any non-compliance with any biological resources Conditions of Certification;

7. Respond directly to inquiries of the CPM regarding biological resource issues;
8. Maintain written records of the tasks specified above and those included in the BRMIMP. Summaries of these records shall be submitted in the Monthly Compliance Report and the Annual Compliance Report;
9. Train the Biological Monitors as appropriate, and ensure their familiarity with the BRMIMP, Worker Environmental Awareness Program (WEAP) training, and USFWS guidelines on desert tortoise surveys and handling procedures <[www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)>; and
10. Maintain the ability to be in regular, direct communication with representatives of CDFG, USFWS, and the CPM, including notifying these agencies of dead or injured listed species and reporting special-status species observations to the California Natural Diversity Data Base.

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

### ***Biological Monitor SELECTION AND Qualifications***

**BIO-3** The Designated Biologist shall submit the resume, at least three references, and contact information of the proposed Biological Monitors to the CPM. The resume shall demonstrate, to the satisfaction of the CPM, the appropriate education and experience to accomplish the assigned biological resource tasks. The Biological Monitor is the equivalent of the USFWS designated Desert Tortoise Monitor (USFWS 2008).

Biological Monitor(s) training by the Designated Biologist shall include familiarity with the Conditions of Certification, BRMIMP, WEAP, and USFWS guidelines on desert tortoise surveys and handling procedures <[www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)>.

**Verification:** The project owner shall submit the specified information to the CPM for approval at least 30 days prior to the start of any site mobilization or construction-related ground disturbance, grading, boring and trenching. The Designated Biologist shall submit a written statement to the CPM confirming that individual Biological Monitor(s) has been trained including the date when training was completed. If additional biological monitors are needed during construction

the specified information shall be submitted to the CPM and for approval at least 10 days prior to their first day of monitoring activities.

### ***BIOLOGICAL MONITOR Duties***

**BIO-4** The Biological Monitors shall assist the Designated Biologist in conducting surveys and in monitoring of site mobilization activities, construction-related ground disturbance, grading, boring or trenching. The Designated Biologist shall remain the contact for the project owner and the CPM.

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

### ***Designated Biologist and Biological Monitor Authority***

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

1. Require a halt to all activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued;
2. Inform the project owner and the construction/operation manager when to resume activities; and
3. Notify the CPM and if there is a halt of any activities and advise them of any corrective actions that have been taken or would be instituted as a result of the work stoppage. If the work stoppage relates to desert tortoise or any other federal or state-listed species,

the Carlsbad Office of USFWS and the Ontario Office of CDFG shall also be notified.

If the Designated Biologist is unavailable for direct consultation, the Biological Monitor shall act on behalf of the Designated Biologist.

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

Whenever corrective action is taken by the project owner, a determination of success or failure would be made by the CPM, in consultation with USFWS and CDFG, within five working days after receipt of notice that corrective action is completed, or the project owner would be notified by the CPM that coordination with other agencies would require additional time before a determination can be made

### ***Worker Environmental Awareness Program (WEAP)***

**BIO-6** The project owner shall develop and implement a Blythe Project-specific Worker Environmental Awareness Program (WEAP) and shall secure approval for the WEAP from the CPM. The project owner shall also provide the BLM, USFWS and CDFG a copy of all portions of the WEAP relating to desert tortoise and any other federal or state-listed species for review and comment. The WEAP shall be administered to all onsite personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. The WEAP shall be implemented during site preconstruction, construction, operation, and closure. The WEAP shall:

1. Be developed by or in consultation with the Designated Biologist and consist of an on-site or training center presentation in which supporting written material and electronic media, including photographs of protected species, is made available to all participants;
2. Discuss the locations and types of sensitive biological resources on the project site and adjacent areas, and explain the reasons for protecting these resources; provide information to participants that no snakes, reptiles, or other wildlife shall be harmed;
3. Place special emphasis on desert tortoise, including information on physical characteristics, distribution, behavior, ecology, sensitivity

to human activities, legal protection, penalties for violations, reporting requirements, and protection measures;

4. Include a discussion of fire prevention measures to be implemented by workers during project activities; request workers dispose of cigarettes and cigars appropriately and not leave them on the ground or buried;
5. Describe the temporary and permanent habitat protection measures to be implemented at the project site;
6. Identify whom to contact if there are further comments and questions about the material discussed in the program; and
7. Include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines.

The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist.

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

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

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

Throughout the life of the project, the WEAP shall be repeated annually for permanent employees, and shall be routinely administered within one week of arrival to any new construction personnel, foremen, contractors, subcontractors, and other personnel potentially working within the project area. Upon completion of the orientation, employees shall sign a form stating that they attended the program and understand all protection measures. These forms shall be maintained by the project owner and shall be made available to the CPM, BLM, USFWS, and CDFG and upon request. Workers shall receive and be required to visibly display a hardhat sticker or certificate that they have completed the training.

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

## ***Biological Resources Mitigation Implementation and Monitoring Plan***

**BIO-7** The project owner shall develop a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), and shall submit two copies of the proposed BRMIMP to the CPM for review and approval. The project owner shall implement the measures identified in the approved BRMIMP. The BRMIMP shall incorporate avoidance and minimization measures described in final versions of the Desert Tortoise Relocation Translocation Plan, the Raven Management Plan, the Closure, Conceptual Restoration Plan, the Burrowing Owl Mitigation and Monitoring Plan, the Weed Management Plan, and all other biological mitigation and/or monitoring plans associated with the project. The project owner shall provide to BLM, CDFG, and USFWS a copy of all portions of the BRMIMP relating to desert tortoise and any other federal or state-listed species for review and comment.

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

1. All biological resources mitigation, monitoring, and compliance measures proposed and agreed to by the project owner;
2. All biological resources Conditions of Certification identified as necessary to avoid or mitigate impacts;
3. All biological resource mitigation, monitoring and compliance measures required in federal agency terms and conditions, such as those provided in the USFWS Biological Opinion;
4. All sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation, and closure;
5. All required mitigation measures for each sensitive biological resource;
6. All measures that shall be taken to avoid or mitigate temporary disturbances from construction activities;
7. Duration for each type of monitoring and a description of monitoring methodologies and frequency;
8. Performance standards to be used to help decide if/when proposed mitigation is or is not successful;
9. All performance standards and remedial measures to be implemented if performance standards are not met;
10. Biological resources-related facility closure measures including a description of funding mechanism(s);

11. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval; and
12. A requirement to submit any sightings of any special-status species that are observed on or in proximity to the project site, or during project surveys, to the California Natural Diversity Data Base (CNDDDB) per CDFG requirements.

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

If any permits have not yet been received when the final BRMIMP is submitted, these permits shall be submitted to the CPM within five days of their receipt, and the BRMIMP shall be revised or supplemented to reflect the permit conditions.

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

Any changes to the approved BRMIMP must be approved by the CPM and in consultation with CDFG and USFWS.

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

## ***Impact Avoidance AND MINIMIZATION MEASURES***

**BIO-8** The project owner shall undertake the following measures to manage the project site and related facilities in a manner to avoid or minimize impacts to biological resources:

1. Limit Disturbance Areas. The boundaries of all areas to be disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to construction activities in consultation with the Designated Biologist. Spoils and topsoil shall be stockpiled in disturbed areas lacking native vegetation and which do not provide habitat for special-status species. Parking areas, staging and disposal site locations shall similarly be located in areas without native vegetation or special-status species habitat. All disturbances, project vehicles and equipment shall be confined to the flagged areas.
2. Minimize Road Impacts. New and existing roads that are planned for construction, widening, or other improvements shall not extend beyond the flagged impact area as described above. All vehicles passing or turning around would do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged and/or staked) prior to the onset of construction.
3. Minimize Traffic Impacts. Vehicular traffic during project construction and operation shall be confined to existing routes of travel to and from the project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit shall not exceed 25 miles per hour within the project area, on maintenance roads for linear facilities, or on access roads to the project site. Speed limit signs shall be posted on new access roads to the site.
4. Monitor During Construction. In areas that have not been fenced with desert tortoise exclusion fencing but have been cleared, the Designated Biologist shall be present at the construction site during all project activities that have potential to disturb soil, vegetation, and wildlife. The Designated Biologist or Biological Monitor shall walk immediately ahead of equipment during brushing and grading activities. If desert tortoise are found during construction monitoring, procedures outlined in **BIO-9** shall be implemented.
5. Minimize Impacts of Transmission/Pipeline Alignments, Roads, and Staging Areas. Staging areas for construction on the plant site shall be within the area that has been fenced with desert tortoise exclusion fencing and cleared. For construction activities outside of

the plant site (transmission line, pipeline alignments) access roads, pulling sites, and storage and parking areas shall be designed, installed, and maintained with the goal of minimizing impacts to native plant communities and sensitive biological resources. Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line Interaction Committee's (APLIC's) *Suggested Practices for Avian Protection on Power Lines* (APLIC 1994) and *Mitigating Bird Collisions with Power Lines* (APLIC 2004) to reduce the likelihood of large bird electrocutions and collisions.

6. Avoid Use of Toxic Substances. Soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants.
7. Minimize Lighting Impacts. Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards wildlife habitat.
8. Minimize Noise Impacts A continuous low-pressure technique shall be used for steam blows, to the extent possible, in order to reduce noise levels in sensitive habitat proximate to the Blythe Project. Loud construction activities (e.g., unsilenced high pressure steam blowing and pile driving, or other) shall be avoided from February 15 to April 15 when it would result in noise levels over 65 dBA in nesting habitat (excluding noise from passing vehicles). Loud construction activities may be permitted from February 15 to April 15 only if:
  - a. the Designated Biologist provides documentation (i.e., nesting bird data collected using methods described in **BIO-15** and maps depicting location of the nest survey area in relation to noisy construction) to the CPM indicating that no active nests would be subject to 65 dBA noise, OR
  - b. the Designated Biologist or Biological Monitor monitors active nests within the range of construction-related noise exceeding 65 dBA. The monitoring shall be conducted in accordance with Nesting Bird Monitoring and Management Plan approved by the CPM. The Plan shall include adaptive management measures to prevent disturbance to nesting birds from construction related noise. Triggers for adaptive management shall be evidence of project-related disturbance to nesting birds such as: agitation behavior (displacement, avoidance, and defense); increased vigilance behavior at nest sites; changes in foraging and feeding behavior, or nest site abandonment. The Nesting Bird Monitoring and Management Plan shall include a description of adaptive management actions, which shall include, but not be limited to, cessation of construction activities that are deemed

by the Designated Biologist to be the source of disturbance to the nesting bird.

9. Avoid Vehicle Impacts to Desert Tortoise. Parking and storage shall occur within the area enclosed by desert tortoise exclusion fencing to the extent feasible. No vehicles or construction equipment parked outside the fenced area shall be moved prior to an inspection of the ground beneath the vehicle for the presence of desert tortoise. If a desert tortoise is observed outside the areas permanently fenced with desert tortoise exclusion fencing, it shall be left to move on its own. If it does not move within 15 minutes, a Designated Biologist or Biological Monitor under the Designated Biologist's direct supervision may move it out of harm's way as described in the USFWS Desert Tortoise Field Manual (USFWS 2009).

10. Avoid Wildlife Pitfalls:

- a. Backfill Trenches. At the end of each work day, the Designated Biologist shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) outside the area fenced with desert tortoise exclusion fencing have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with desert tortoise-exclusion fencing. All trenches, bores, and other excavations outside the areas permanently fenced with desert tortoise exclusion fencing shall be inspected periodically throughout the day, at the end of each workday and at the beginning of each day by the Designated Biologist or a Biological Monitor. Should a tortoise or other wildlife become trapped, the Designated Biologist or Biological Monitor move it out of harm's way as described in the USFWS Desert Tortoise Field Manual (USFWS 2009). Any other wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed.
- b. Avoid Entrapment of Desert Tortoise. Any construction pipe, culvert, or similar structure with a diameter greater than 3 inches, stored less than eight inches aboveground and within desert tortoise habitat (i.e., outside the permanently fenced area) for one or more nights, shall be inspected for tortoises before the material is moved, buried or capped. As an alternative, all such structures may be capped before being stored outside the fenced area, or placed on elevated pipe racks. These materials would not need to be inspected or capped if they are stored within the permanently fenced area after the clearance surveys have been completed.

11. Minimize Standing Water. Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract desert tortoises and common ravens to construction sites. A Biological Monitor shall patrol these areas to ensure water does not puddle and shall take appropriate action to reduce water application where necessary.
12. Dispose of Road-killed Animals. Road killed animals or other carcasses detected by personnel on roads associated with the project area shall be reported immediately to a Designated Biologist, Biological Monitor or Project Environmental Compliance Manager who will promptly remove the roadkill for disposal (i.e. removal to a landfill or disposal at the BSPP facility). For special-status species roadkill, the Biological Monitor shall contact CDFG and USFWS within 1 working day of detection of the carcass for guidance on disposal or storage of the carcass; all other roadkill shall be disposed of promptly. The Biological Monitor shall provide the special-status species record as described in **BIO-11** below.
13. Minimize Spills of Hazardous Materials. All vehicles and equipment shall be maintained in proper working condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. The Designated Biologist shall be informed of any hazardous spills immediately as directed in the Project Hazardous Materials Plan. Hazardous spills shall be immediately cleaned up and the contaminated soil properly disposed of at a licensed facility. Servicing of construction equipment shall take place only at a designated area. Service/maintenance vehicles shall carry a bucket and pads to absorb leaks or spills.
14. Worker Guidelines. During construction all trash and food-related waste shall be placed in self-closing containers and removed daily from the site. Workers shall not feed wildlife or bring pets to the project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons. Vehicular traffic shall be confined to existing routes of travel to and from the Project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit when traveling on dirt access routes within desert tortoise habitat shall not exceed 25 miles per hour.
15. Implement Erosion Control Measures. Standard erosion control measures shall be implemented for all phases of construction and operation where sediment run-off from exposed slopes threatens to enter "Waters of the State". Sediment and other flow-restricting materials shall be moved to a location where they shall not be

washed back into the stream. All disturbed soils and roads within the project site shall be stabilized to reduce erosion potential, both during and following construction. Areas of disturbed soils (access and staging areas) which slope toward drainages shall be stabilized to reduce erosion potential.

16. Monitor Ground Disturbing Activities Prior to Pre-Construction Site Mobilization. If pre-construction site mobilization requires ground-disturbing activities such as for geotechnical borings or hazardous waste evaluations, a Designated Biologist or Biological Monitor shall be present to monitor any actions that could disturb soil, vegetation, or wildlife.
17. Revegetation of Temporarily Disturbed Areas. The project owner shall prepare and implement a Revegetation Plan to restore all areas subject to temporary disturbance to pre-project grade and conditions. Temporarily disturbed areas within the project area include, but are not limited to: all proposed locations for linear facilities, temporary access roads, berms, areas surrounding the drainage diffusers, construction work temporary lay-down areas, and construction equipment staging areas. The Revegetation Plan shall include a description of topsoil salvage and seeding techniques and a monitoring and reporting plan, and the following performance standards by the end of monitoring year 2:
  - a. at least 80 percent of the species observed within the temporarily disturbed areas shall be native species that naturally occur in desert scrub habitats; and
  - b. relative cover and density of plant species within the temporarily disturbed areas shall equal at least 60 percent.

**Verification:** All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures would be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed. As part of the Annual Compliance Report each year following construction, the Designated Biologist shall provide a report to the CPM that describes compliance with avoidance and minimization measures to be implemented during construction, operation, and maintenance (for example a summary of the incidence of road-killed animals during the year, implementation of measures to avoid toxic spills, erosion and sedimentation, efforts to enforce worker guidelines, etc.).

No less than 30 days prior to construction, the project owner shall submit to the CPM a final agency-approved Revegetation Plan that has been reviewed and approved by the CPM. All modifications to the Revegetation Plan shall be made only after approval from the CPM.

Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the Revegetation Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which items are still outstanding.

As part of the Annual Compliance Report, each year following construction until the completion of the revegetation monitoring specified in the Revegetation Plan, the Designated Biologist shall provide a report to the CPM that includes: a summary of revegetation activities for the year, a discussion of whether revegetation performance standards for the year were met; and recommendations for revegetation remedial action, if warranted, are planned for the upcoming year.

If loud construction activities are proposed between February 15 and April 15 which would result in noise levels over 65 dBA in nesting habitat, the project owner shall submit nest survey results (as described in 8a) to the CPM no more than seven days before initiating such construction. If an active nest is detected within this survey area the project owner shall submit a Nesting Bird Monitoring and Management Plan to the CPM for review and approval no more than seven days before initiating noisy construction.

### ***DESERT TORTOISE CLEARANCE SURVEYS AND FENCING***

**BIO-9** The project owner shall undertake appropriate measures to manage the project site and related facilities in a manner to avoid or minimize impacts to desert tortoise. Methods for clearance surveys, fence specification and installation, tortoise handling, artificial burrow construction, egg handling and other procedures shall be consistent with those described in the USFWS' Desert Tortoise Field Manual (USFWS 2009) <[http://www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)> or more current guidance provided by CDFG and USFWS. The project owner shall also implement all terms and conditions described in the Biological Opinion prepared by USFWS. The project owner shall implement the following measures:

1. Desert Tortoise Exclusion Fence Installation. To avoid impacts to desert tortoises, permanent exclusion fencing shall be installed along the permanent perimeter security fence (boundaries) as phases are constructed. Temporary fencing shall be installed along any subset of the plant site phasing that does not correspond to permanent perimeter fencing. Temporary fencing shall be installed along linear features unless a Biological Monitor is present in the immediate vicinity of construction activities for the linear facility. All fencing shall be flagged and surveyed within 24 hours prior to the initiation of fence construction. Clearance surveys of the desert tortoise exclusionary fence and utility rights-of-way alignments shall

be conducted by the Designated Biologist(s) using techniques outlined in the *Desert Tortoise Field Manual* (USFWS 2009) and may be conducted in any season with USFWS and CDFG approval. Biological Monitors may assist the Designated Biologist under his or her supervision. These fence clearance surveys shall provide 100-percent coverage of all areas to be disturbed and an additional transect along both sides of the fence line. Disturbance associated with desert tortoise exclusionary fence construction shall not exceed 30 feet on either side of the proposed fence alignment. Prior to the surveys the project owner shall provide to the CPM, CDFG and USFWS a figure clearly depicting the limits of construction disturbance for the proposed fence installation. The fence line survey area shall be 90 feet wide centered on the fence alignment. Where construction disturbance for fence line installation can be limited to 15 feet on either side of the fence line, this fence line survey area may be reduced to an area approximately 60 feet wide centered on the fence alignment. Transects shall be no greater than 15 feet apart. Desert tortoise located within the utility ROW alignments shall be moved out of harm's way in accordance with the USFWS *Desert Tortoise Field Manual* (USFWS 2009). Any desert tortoise detected during clearance surveys for fencing within the project site and along the perimeter fence alignment shall be translocated and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan (**BIO-10**). Tortoise shall be handled by the Designated Biologist(s) in accordance with the USFWS' *Desert Tortoise Field Manual* (USFWS 2009).

- a. Timing, Supervision of Fence Installation. The exclusion fencing shall be installed in any area subject to disturbance prior to the onset of site clearing and grubbing in that area. The fence installation shall be supervised by the Designated Biologist and monitored by the Biological Monitors to ensure the safety of any tortoise present.
- b. Fence Material and Installation. All desert tortoise exclusionary fencing shall be constructed in accordance with the USFWS' *Desert Tortoise Field Manual* (USFWS 2009) (Chapter 8 – Desert Tortoise Exclusion Fence).
- c. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises. The gates may be electronically activated to open and close immediately after the vehicle(s) have entered or exited to prevent the gates from being kept open for long periods of time.
- d. Fence Inspections. Following installation of the desert tortoise exclusion fencing for both the permanent site fencing and temporary fencing in the utility corridors, the fencing

shall be regularly inspected. If tortoise were moved out of harm's way during fence construction, permanent and temporary fencing shall be inspected at least two times a day for the first 7 days to ensure a recently moved tortoise has not been trapped within the fence. Thereafter, permanent fencing shall be inspected monthly and during and within 24 hours following all major rainfall events. A major rainfall event is defined as one for which flow is detectable within the fenced drainage. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within 48 hours of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing shall be inspected weekly and, where drainages intersect the fencing, during and within 24 hours following major rainfall events. All temporary fencing shall be repaired immediately upon discovery and, if the fence may have permitted tortoise entry while damaged, the Designated Biologist shall inspect the area for tortoise.

2. Desert Tortoise Clearance Surveys within the Plant Site. Clearance surveys shall be conducted in accordance with the USFWS *Desert Tortoise Field Manual* (USFWS 2009) (Chapter 6 – Clearance Survey Protocol for the Desert Tortoise – Mojave Population) and shall consist of two surveys covering 100 percent the project area by walking transects no more than 15-feet apart. If a desert tortoise is located on the second survey, a third survey shall be conducted. Each separate survey shall be walked in a different direction to allow opposing angles of observation.—Clearance surveys for non-linear areas of Phase 1A may be conducted outside the active season. Clearance surveys of the remaining portions of the power plant site may only be conducted when tortoises are most active (April through May or September through October) unless the project receives approval from CDFG and USFWS. Clearance surveys of linear features may be conducted during anytime of the year. Surveys outside of the active season in areas other than Phase 1A require approval by USFWS and CDFG. Any tortoise located during clearance surveys of the power plant site and linear features shall be translocated or relocated and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan:
  - a. Burrow Searches. During clearance surveys all desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined by the Designated Biologist, who may be assisted by the Biological Monitors, to assess occupancy of each burrow by desert tortoises and handled in accordance with the USFWS *Desert Tortoise Field Manual* (USFWS 2009). To prevent

reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined in accordance with the Desert Tortoise Relocation/Translocation Plan. Tortoises taken from burrows and from elsewhere on the power plant site shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan.

- b. Burrow Excavation/Handling. All potential desert tortoise burrows located during clearance surveys would be excavated by hand, tortoises removed, and collapsed or blocked to prevent occupation by desert tortoises in accordance with the Desert Tortoise Relocation/Translocation Plan. All desert tortoise handling, ~~and~~ removal, and burrow excavations, including nests, would be conducted by the Designated Biologist, who may be assisted by a Biological Monitor in accordance with the USFWS *Desert Tortoise Field Manual* (USFWS 2009).
3. Monitoring Following Clearing. Following the desert tortoise clearance and removal from the power plant site and utility corridors, workers and heavy equipment shall be allowed to enter the project site to perform clearing, grubbing, leveling, and trenching activities. A Designated Biologist or Biological Monitor shall be onsite for clearing and grading activities to move tortoises missed during the initial tortoise clearance survey. Should a tortoise be discovered, it shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan.
4. Reporting. The Designated Biologist shall record the following information for any desert tortoises handled: a) the locations (narrative and maps) and dates of observation; b) general condition and health, including injuries, state of healing and whether desert tortoise voided their bladders; c) location moved from and location moved to (using GPS technology); d) gender, carapace length, and diagnostic markings (i.e., identification numbers or marked lateral scutes); e) ambient temperature when handled and released; and f) digital photograph of each handled desert. Desert tortoise moved from within project areas shall be marked and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan.

**Verification:** All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to BLM, the CPM, USFWS, and CDFG describing implementation of each of the mitigation measures listed above. The report shall include the desert tortoise survey results, capture and release

locations of any relocated desert tortoises, and any other information needed to demonstrate compliance with the measures described above.

### ***DESERT TORTOISE RELOCATION/TRANSLOCATION PLAN***

**BIO-10** The project owner shall develop and implement a final Desert Tortoise Relocation/Translocation Plan (Plan) that is consistent with current USFWS approved guidelines, and meets the approval of the CPM. The Plan shall include guidance specific to each of the three phases of project construction, as described in **BIO-28** (Phasing), and shall include measures to minimize the potential for repeated translocations of individual desert tortoises. The goals of the Desert Tortoise Relocation/Translocation Plan shall be to relocate or translocate all desert tortoises from the project site to nearby suitable habitat; minimize impacts on resident desert tortoises outside the project site; minimize stress, disturbance, and injuries to relocated/translocated tortoises; and assess the success of the relocation/translocation effort through monitoring. The final Plan shall be based on the draft Desert Tortoise Relocation/Translocation Plan prepared by the Applicant (AECOM 2010t) and shall include all revisions deemed necessary by BLM, USFWS, CDFG and the Energy Commission staff.

**Verification:** At least 30 days prior to site mobilization the project owner shall provide the CPM with the final version of a Desert Tortoise Relocation/Translocation Plan that has been reviewed and approved by the CPM in consultation with BLM, USFWS and CDFG. All modifications to the approved Plan shall be made only after approval by the CPM, in consultation with BLM, USFWS and CDFG.

Within 30 days after initiation of relocation and/or translocation activities, the Designated Biologist shall provide to the CPM for review and approval, a written report identifying which items of the Plan have been completed, and a summary of all modifications to measures made during implementation of the Plan.

### ***Desert Tortoise Compliance Verification***

**BIO-11** The project owner shall provide Energy Commission, CDFG, and USFWS and BLM staff with reasonable access to the project site and compensation lands under the control of the project owner and shall otherwise fully cooperate with the Energy Commission's and BLM's efforts to verify the project owner's compliance with, or the effectiveness of, mitigation measures set forth in the Conditions of Certification. The Designated Biologist shall do all of the following:

1. Notification. Notify the CPM at least 14 calendar days before initiating construction-related ground disturbance activities; immediately notify the CPM in writing if the project owner is not in

compliance with any Conditions of Certification, including but not limited to any actual or anticipated failure to implement mitigation measures within the time periods specified in the Conditions of Certification;

2. Monitoring During Grubbing and Grading. Remain onsite daily while vegetation salvage, grubbing, grading and other ground-disturbance construction activities are taking place to avoid or minimize take of listed species and verify personally or use Biological Monitors, to check for compliance with all impact avoidance and minimization measures, including checking all exclusion zones to ensure that signs, stakes, and fencing are intact and that human activities are restricted in these protective zones.
3. Monthly Compliance Inspections. Conduct compliance inspections at a minimum of once per month after clearing, grubbing, and grading are completed and submit a monthly compliance report to the BLM, CPM, USFWS and CDFG during construction. Notification of Injured, Dead, or Relocated Listed Species. If an injured or dead listed species is detected within or near the Project Disturbance area, the CPM, the Ontario Office of CDFG, and Carlsbad Office of USFWS shall be notified immediately by phone. Notification shall occur no later than noon on the business day following the event if it occurs outside normal business hours so that the agencies can determine if further actions are required to protect listed species. Written follow-up notification via FAX or electronic communication shall be submitted to these agencies within two calendar days of the incident and include the following information as relevant:
  - a. Injured Desert Tortoise. If a desert tortoise is injured as a result of project-related activities during construction, the Designated Biologist or approved Biological Monitor shall immediately take it to a CDFG-approved wildlife rehabilitation and/or veterinarian clinic. Any veterinarian bills for such injured animals shall be paid by the project owner. Following phone notification as required above, the CPM, CDFG, and USFWS shall determine the final disposition of the injured animal, if it recovers. Written notification shall include, at a minimum, the date, time, location, circumstances of the incident, and the name of the facility where the animal was taken.
  - b. Desert Tortoise Fatality. If a desert tortoise is killed by project-related activities during construction or operation, submit a written report with the same information as an injury report to the CPM, CDFG, and USFWS. These desert tortoises shall be salvaged according to guidelines described in *Salvaging Injured, Recently Dead, Ill, and Dying Wild, Free-Roaming Desert Tortoise* (Berry 2001). The project owner shall pay to have the

desert tortoises transported and necropsied. The report shall include the date and time of the finding or incident.

4. Stop Work Order. The CPM may issue the project owner a written stop work order to suspend any activity related to the construction or operation of the project to prevent or remedy a violation of one or more Conditions of Certification (including but not limited to failure to comply with reporting, monitoring, or habitat acquisition obligations) or to prevent the illegal take of an endangered, threatened, or candidate species. The project owner shall comply with the stop work order immediately upon receipt thereof.

**Verification:** No later than two days following the above required notification of a sighting, kill, or relocation of a listed species, the project owner shall deliver to the CPM, CDFG, and USFWS via FAX or electronic communication the written report from the Designated Biologist describing all reported incidents of injury, kill, or relocation of a listed species, identifying who was notified, and explaining when the incidents occurred. In the case of a sighting in an active construction area, the project owner shall, at the same time, submit a map (e.g., using Geographic Information Systems) depicting both the limits of construction and sighting location to the CPM, CDFG and USFWS.

No later than 45 days after initiation of project operation the Designated Biologist shall provide the CPM a Final Listed Species Mitigation Report that includes, at a minimum: 1) a copy of the table in the BRMIMP with notes showing when each of the mitigation measures was implemented; 2) all available information about project-related incidental take of listed species; 3) information about other project impacts on the listed species; 4) construction dates; 5) an assessment of the effectiveness of Conditions of Certification in minimizing and compensating for project impacts; 6) recommendations on how mitigation measures might be changed to more effectively minimize and mitigate the impacts of future projects on the listed species; and 7) any other pertinent information, including the level of take of the listed species associated with the project. Beginning with the first month after clearing, grubbing, and grading are completed and continuing every month until construction is complete, the project owner shall submit a report describing their results of the Monthly Compliance Inspections to the CPM, BLM, USFWS, and CDFG.

### ***DESERT TORTOISE COMPENSATORY MITIGATION***

**BIO-12** To fully mitigate for habitat loss and potential take of desert tortoise, the project owner shall provide compensatory mitigation at a 1:1 ratio for impacts to 6,958 acres, adjusted to reflect the final project footprint. For purposes of this Condition, the project footprint means all lands disturbed in the construction and operation of the Blythe Project, including all linears, as well as undeveloped areas inside the project's boundaries that will no longer provide viable long-term habitat for the desert tortoise. To satisfy this Condition, the project owner shall acquire, protect and transfer 1 acre of desert tortoise habitat for every

acre of habitat within the final project footprint, and provide associated funding for the acquired lands, as specified below. Condition **BIO-27** may provide the project owner with another option for satisfying some or all of the requirements in this Condition. In lieu of acquiring lands itself, the project owner may satisfy the requirements of this Condition by depositing funds into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as provided below in section 3.i. of this Condition.

The timing of the mitigation shall correspond with the timing of the site disturbance activities as stated in **BIO-28** (phasing). If compensation lands are acquired in fee title or in easement, the requirements for acquisition, initial improvement and long-term management of compensation lands include all of the following:

1. Selection Criteria for Compensation Lands. The compensation lands selected for acquisition in fee title or in easement shall:
  - a. be within the Colorado Desert Recovery Unit, with potential to contribute to desert tortoise habitat connectivity and build linkages between desert tortoise designated critical habitat, known populations of desert tortoise, and/or other preserve lands;
  - b. provide habitat for desert tortoise with capacity to regenerate naturally when disturbances are removed;
  - c. be prioritized near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;
  - d. be connected to lands with desert tortoise habitat equal to or better quality than the project Site, ideally with populations that are stable, recovering, or likely to recover;
  - e. not have a history of intensive recreational use or other disturbance that does not have the capacity to regenerate naturally when disturbances are removed or might make habitat recovery and restoration infeasible;
  - f. not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;
  - g. not contain hazardous wastes that cannot be removed to the extent that the site could not provide suitable habitat; and
  - h. have water and mineral rights included as part of the acquisition, unless the CPM, in consultation with CDFG,

BLM and USFWS, agrees in writing to the acceptability of land.

2. Review and Approval of Compensation Lands Prior to Acquisition. The project owner shall submit a formal acquisition proposal to the CPM, CDFG, USFWS, and BLM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for desert tortoise in relation to the criteria listed above. Approval from the CPM and CDFG, in consultation with BLM and the USFWS, shall be required for acquisition of all compensatory mitigation parcels.
3. Compensation Lands Acquisition Requirements. The project owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM and CDFG, in consultation with BLM and the USFWS, have approved the proposed compensation lands:
  - a. Preliminary Report. The project owner, or approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary or requested documents for the proposed compensation land to the CPM and CDFG. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM and CDFG, in consultation with BLM and the USFWS. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board.
  - b. Title/Conveyance. The project owner shall transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement as required by the CPM and CDFG. Transfer of either fee title or an approved conservation easement will usually be sufficient, but some situations, e.g., the donation of lands burdened by a conservation easement to BLM, will require that both types of transfers be completed. Any transfer of a conservation easement or fee title must be to CDFG, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM under terms approved by the CPM and CDFG. If an approved non-profit organization holds title to the compensation lands, a conservation easement shall be recorded in favor of CDFG in a form approved by CDFG. If an approved non-profit holds a conservation easement, CDFG shall be named a third party beneficiary.

- c. Initial Habitat Improvement Fund. The project owner shall fund the initial protection and habitat improvement of the compensation lands. Alternatively, a non-profit organization may hold the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965) and if it meets the approval of CDFG and the CPM. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.
- d. Property Analysis Record. Upon identification of the compensation lands, the project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate long-term maintenance and management fee to fund the in-perpetuity management of the acquired mitigation lands.
- e. Long-term Maintenance and Management Fund. In accordance with **BIO-28** (phasing), the project owner shall deposit in NFWF's REAT Account a non-wasting capital long-term maintenance and management fee in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis conducted for the compensation lands.

The CPM, in consultation with CDFG, may designate another non-profit organization to hold the long-term maintenance and management fee if the organization is qualified to manage the compensation lands in perpetuity. If CDFG takes fee title to the compensation lands, CDFG shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity to manage the long-term maintenance and management fee for CDFG and with CDFG supervision.

- f. Interest, Principal, and Pooling of Funds. The project owner, the CPM and CDFG shall ensure that an agreement is in place with the long-term maintenance and management fee holder/manager to ensure the following conditions:
  - i. Interest. Interest generated from the initial capital long-term maintenance and management fee shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action

approved by CDFG designed to protect or improve the habitat values of the compensation lands.

- ii. Withdrawal of Principal. The long-term maintenance and management fee principal shall not be drawn upon unless such withdrawal is deemed necessary by the CDFG or the approved third-party long-term maintenance and management fee manager to ensure the continued viability of the species on the compensation lands. If CDFG takes fee title to the compensation lands, monies received by CDFG pursuant to this provision shall be deposited in a special deposit fund established solely for the purpose to manage lands in perpetuity unless CDFG designates NFWF or another entity to manage the long-term maintenance and management fee for CDFG.
- iii. Pooling Long-Term Maintenance and Management Fee Funds. CDFG, or a CPM-and CDFG-approved non-profit organization qualified to hold long-term maintenance and management fees solely for the purpose to manage lands in perpetuity, may pool the endowment with other endowments for the operation, management, and protection of the compensation lands for local populations of desert tortoise. However, for reporting purposes, the long-term maintenance and management fee fund must be tracked and reported individually to the CDFG and CPM.
- g. Other expenses. In addition to the costs listed above, the project owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to title and document review costs, expenses incurred from other state agency reviews, and overhead related to providing compensation lands to CDFG or an approved third party; escrow fees or costs; environmental contaminants clearance; and other site cleanup measures.
- h. Mitigation Security. The project owner shall provide financial assurances in accordance with **BIO-28** (phasing) to the CPM and CDFG with copies of the document(s) to BLM and the USFWS, to guarantee that an adequate level of funding is available to implement the mitigation measures described in this Condition. These funds shall be used solely for implementation of the measures associated with the project in the event the project owner fails to comply with the

requirements specified in this Condition, or shall be returned to the project owner upon successful compliance with the requirements in this Condition. The CPM's or CDFG's use of the security to implement measures in this Condition may not fully satisfy the project owner's obligations under this condition. Financial assurance can be provided to the CPM and CDFG in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security"). Prior to submitting the Security to the CPM, the project owner shall obtain the CPM's approval, in consultation with CDFG, BLM and the USFWS, of the form of the Security. Security shall be provided in the amounts of \$2,374,672 for Phase 1A; \$9,248,560 for Phase 1B, and \$9,859,984 for Phase 2. These Security estimates are based on the most current guidance from the REAT agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010) and may be revised with updated information. This Security estimate reflects the amount that would be required for Security if the project owner acquired the 6,958 acres of mitigation lands itself.

The amount of security shall be adjusted for any change in the project footprints for each phase as described above.

- i. The project owner may elect to fund the acquisition and initial improvement of compensation lands through NFWF by depositing funds for that purpose into NFWF's REAT Account. Initial deposits for this purpose, which includes a NFWF administrative fee, must be made in the amounts of \$2,465,611 for Phase 1a; \$9,481,161 for Phase 1b; and \$10,105,186 for Phase 2. If this option is used for the acquisition and initial improvement, the project owner shall make an additional deposit into the REAT Account if necessary to cover the actual acquisition costs and administrative costs and fees of the compensation land purchase once land is identified and the actual costs are known. If the actual costs for acquisition and administrative costs and fees are less than that estimated based on the *Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010*, or more current guidance from the REAT agencies, the excess money deposited in the REAT Account shall be returned to the project owner. Money deposited for the initial protection and improvement of the compensation lands shall not be returned to the project owner.

The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission and CDFG. Such delegation shall be subject to approval by the CPM and CDFG, in consultation with BLM and USFWS, prior to land acquisition, initial protection or maintenance and management activities. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be implemented with 18 months of the Energy Commission's approval.

**Verification:** If the mitigation actions required under this Condition are not completed prior to the start of ground-disturbing activities, the project owner shall provide the CPM and CDFG with an approved form of Security in accordance with this Condition of Certification no later than 30 days prior to beginning project ground-disturbing activities. Actual Security shall be provided no later than 7 days prior to the beginning of project ground-disturbing activities. If Security is provided, the project owner, or an approved third party, shall complete and provide written verification to the CPM, CDFG, BLM and USFWS of the compensation lands acquisition and transfer within 18 months of the start of project ground-disturbing activities.

The project owner may elect to fund the acquisition and initial improvement of compensation lands through NFWF or other approved third party by depositing funds for that purpose into NFWF's REAT Account. Initial deposits for this purpose must be made in the amounts in section 3 of this Condition. Payment of the initial funds for acquisition and initial improvement must be made at least 30 days prior to the start of ground-disturbing activities for each phase.

No fewer than 90 days prior to acquisition of the property, the project owner shall submit a formal acquisition proposal to the CPM, CDFG, USFWS, and BLM describing the parcels intended for purchase and shall obtain approval from the CPM and CDFG prior to the acquisition.

No fewer than 30 days after acquisition of the property the project owner shall deposit the funds required by Section 3e above (long term management and maintenance fee) and provide proof of the deposit to the CPM.

The project owner, or an approved third party, shall provide the CPM, CDFG, BLM and USFWS with a management plan for the compensation lands within 180 days of the land or easement purchase, as determined by the date on the title. The CPM shall review and approve the management plan, in consultation with CDFG, BLM and the USFWS.

Within 90 days after completion of all project related ground disturbance, the project owner shall provide to the CPM, CDFG, BLM and USFWS an analysis, based on aerial photography, with the final accounting of the amount of habitat disturbed during project construction. This shall be the basis for the final number of acres required to be acquired.

## **RAVEN MANAGEMENT PLAN**

**BIO-13** The project owner shall implement a Raven Monitoring, Management, and Control Plan (Raven Plan) that is consistent with the most current USFWS-approved raven management guidelines, and which meets the approval of the CMP, in consultation with BLM, USFWS and CDFG. The draft Raven Plan submitted by the Applicant (AECOM 10a, Attachment DR-BIO-49) shall provide the basis for the final Raven Plan, subject to review, revisions and approval from BLM, the CPM, CDFG and USFWS. The Raven Plan shall include but not be limited to a program to monitor raven presence in the project vicinity, determine if raven numbers are increasing, and to implement raven control measures as needed based on that monitoring. The purpose of the plan is to avoid any project-related increases in raven numbers during construction, operation, and decommissioning. In addition to monitoring at the project site, the Plan shall address raven monitoring and control at the new water source proposed in the McCoy Mountains in staff's proposed Condition of Certification **BIO-21**. The project owner shall also provide funding for implementation of the USFWS Regional Raven Management Program, as described below.

### The Raven Plan shall:

- a. Identify conditions associated with the project that might provide raven subsidies or attractants;
- b. Describe management practices to avoid or minimize conditions that might increase raven numbers and predatory activities;
- c. Describe control practices for ravens;
- d. Establish thresholds that would trigger implementation of control practices;
- e. Address monitoring and nest removal during construction and for the life of the project, and;
- f. Discuss reporting requirements.

USFWS Regional Raven Management Program. The project owner shall submit payment to the project sub-account of the REAT Account held by the National Fish and Wildlife Foundation (NFWF) to support the USFWS Regional Raven Management Program. The one time fee shall be as described in the cost allocation methodology (Exhibit 213, *Renewable Energy Development And Common Raven Predation on the Desert Tortoise – Summary*, dated May 2010; *Cost Allocation Methodology for Implementation of the Regional Raven Management Plan*, dated July 9, 2010) or more current guidance as provided by USFWS or CDFG.

**Verification:** No less than 10 days prior to the start of any project-related ground disturbance activities, the project owner shall provide the CPM, USFWS, and CDFG with the final version of a Raven Plan. The CPM would determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Raven Plan shall be made only with approval of CPM in consultation with USFWS and CDFG.

No less than 10 days prior to the start of any project-related ground disturbance activities, the project owner shall provide documentation to the CPM, BLM, CDFG and USFWS that the one-time fee for the USFWS Regional Raven Management Program of has been deposited to the REAT-NFWS subaccount for the project.

Current estimate of the fee for the USFWS Regional Raven Management Program is \$105/acre. Phase 1a disturbance is estimated to be 769 acres. Phase 1b disturbance is estimated to be 2,995 acres. Phase 2 disturbance is estimated to be 3,193 acres.

Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the Raven Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which items are still outstanding.

As part of the annual compliance report, each year following construction the Designated Biologist shall provide a report to the CPM that includes: a summary of the results of raven management and control activities for the year; a discussion of whether raven control and management goals for the year were met; and recommendations for raven management activities for the upcoming year.

## ***WEED MANAGEMENT PLAN***

**BIO-14** The project owner shall implement a Weed Management Plan that meets the approval of the CPM. The objective of the Weed Management Plan shall be to prevent the introduction of any new weeds and the spread of existing weeds as a result of project construction, operation, and decommissioning. The Weed Management Plan shall include at a minimum the following information: specific weed management objectives and measures for each target non-native weed species; baseline conditions; a map of the Weed Management Areas; weed risk assessment and measures to prevent the introduction and spread of weeds; monitoring and surveying methods; and reporting requirements. The draft Weed Management Plan submitted by the Applicant (AECOM 2010a, Attachment DR-BIO-97) shall provide the basis for the final plan, subject to review and revisions from the CPM.

**Verification:** No less than 10 days prior to start of any project-related ground disturbance activities, the project owner shall provide the CPM with the final version of a Weed Management Plan that has been reviewed and approved by BLM, and Energy Commission staff, USFWS, and CDFG. Modifications to the approved Weed Control Plan shall be made only after consultation with the Energy Commission staff, BLM, USFWS, and CDFG.

Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the Weed Management Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which items are still outstanding.

As part of the annual compliance report, each year following construction the Designated Biologist shall provide a report to the CPM that includes: a summary of the results of noxious weeds surveys and management activities for the year; a discussion of whether weed management goals for the year were met; and recommendations for weed management activities for the upcoming year.

### ***Avian protection plan***

**BIO-15** The project owner shall prepare and implement an Avian Protection Plan to monitor the death and injury of birds from collisions with facility features such as transmission lines, reflective mirror-like surfaces and from heat, and bright light from concentrating sunlight. The monitoring data shall be used to inform an adaptive management program that would avoid and minimize project-related avian impacts. The study design shall be approved by the CPM in consultation with CDFG and USFWS, and shall be incorporated into the project's BRMIMP and implemented. The Avian Protection Plan shall include detailed specifications on data and carcass collection protocol and a rationale justifying the proposed schedule of carcass searches. The plan shall also include seasonal trials to assess bias from carcass removal by scavengers as well as searcher bias.

**Verification:** No fewer than 30 days prior to commercial operation of any of the power plant units, the project owner shall submit to the CPM, USFWS, and CDFG a final Avian Protection Plan. Modifications to the Avian Protection Plan shall be made only after approval from the CPM.

For one year following the beginning of power plant operation the Designated Biologist shall submit quarterly reports to the CPM, CDFG, and USFWS describing the dates, durations, and results of monitoring. The quarterly reports shall provide a detailed description of any project-related bird or wildlife deaths or injuries detected during the monitoring study or at any other time, and describe adaptive management measures implemented to avoid or minimize deaths or injuries. Following the completion of the fourth quarter of monitoring the Designated Biologist shall prepare an Annual Report that summarizes the year's data, analyzes any project-related bird fatalities or injuries detected, and provides

recommendations for future monitoring and any adaptive management actions needed. The Annual Report shall be provided to the CPM, CDFG, and USFWS. Quarterly reporting shall continue until the CPM, in consultation with CDFG and USFWS determine whether more years of monitoring are needed, and whether mitigation and adaptive management measures are necessary.

### ***PRE-CONSTRUCTION NEST SURVEYS***

**BIO-16** Pre-construction nest surveys shall be conducted if construction activities would occur from February 1 through July 31. The Designated Biologist or Biological Monitor conducting the surveys shall be experienced bird surveyors familiar with standard nest-locating techniques such as those described in Martin and Guepel (1993). The goal of the nesting surveys shall be to identify the general location of the nest sites, sufficient to establish a protective buffer zone around the potential nest site, and need not include identification of the precise nest locations. Surveyors performing nest surveys shall not concurrently be conducting desert tortoise surveys. The bird surveyors shall perform surveys in accordance with the following guidelines:

1. Surveys shall cover all potential nesting habitat areas that could be disturbed by each phase of construction, as described in **BIO-28** (Phasing). Surveys shall also include areas within 500 feet of the boundaries of the active construction areas (including linear facilities);
2. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys shall be conducted within a 14-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks, an interval during which birds may establish a nesting territory and initiate egg laying and incubation;
3. If active nests or suspected active nests are detected during the survey, a buffer zone (protected area surrounding the nest, the size of which is to be determined by the Designated Biologist in consultation with CDFG) and monitoring plan shall be developed. Nest locations shall be mapped and submitted, along with a report stating the survey results, to the CPM; and
4. The Designated Biologist shall monitor the nest until he or she determines that nestlings have fledged and dispersed; activities that might, in the opinion of the Designated Biologist, disturb nesting activities, shall be prohibited within the buffer zone until such a determination is made.

**Verification:** At least 10 days prior to the start of any project-related ground disturbance activities, the project owner shall provide the CPM a letter-report

describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor (s); and a list of species observed. If active or suspected active nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest or suspected nest location and shall depict the boundaries of the no-disturbance buffer zone around the nest(s) that would be avoided during project construction.

## **AMERICAN BADGER AND DESERT KIT FOX IMPACT AVOIDANCE AND MINIMIZATION MEASURES**

**BIO-17** To avoid direct impacts to American badgers and desert kit fox, pre-construction surveys shall be conducted for these species concurrent with the desert tortoise surveys. Surveys shall be conducted as described below:

1. Biological Monitors shall perform pre-construction surveys for badger and kit fox dens in the Project Disturbance Area, including a 20 foot swath beyond the disturbed area, utility corridors, and access roads. If dens are detected each den shall be classified as inactive, potentially active, or definitely active.
2. Inactive dens that would be directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by badgers or kit fox.
3. Potentially and definitely active 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 earth or fire clay) and/or infrared camera stations at the entrance.
4. 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.
5. If tracks are observed, the den shall be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage the badger or kit fox from continued use. After verification that the den is unoccupied it shall then be excavated and backfilled by hand to ensure that no badgers or kit fox are trapped in the den. BLM approval may be required prior to release of badgers on public lands.

**Verification:** The project owner shall submit a report to the CPM and CDFG within 30 days of completion of badger and kit fox surveys. The report shall describe survey methods, results, impact avoidance and minimization measures implemented, and the results of those measures.

## ***Burrowing Owl Impact Avoidance, Minimization, AND COMPENSATION Measures***

**BIO-18** The project owner shall implement the following measures to avoid, minimize and offset impacts to burrowing owls:

1. Pre-Construction Surveys. The Designated Biologist or Biological Monitor shall conduct pre-construction surveys for burrowing owls no more than 30 days prior to initiation of construction activities. Surveys shall be focused exclusively on detecting burrowing owls, and shall be conducted from two hours before sunset to one hour after or from one hour before to two hours after sunrise. The survey area shall include the Project Disturbance Area and surrounding 500 foot survey buffer for each phase of construction in accordance with **BIO-28** (phasing).
2. Implement Burrowing Owl Mitigation Plan. The project owner shall implement measures described in the final Burrowing Owl Mitigation Plan. The final Burrowing Owl Mitigation Plan shall be approved by the CPM, in consultation with BLM, USFWS and CDFG, and shall:
  - a. identify suitable sites within 1 mile of the Project Disturbance Areas for creation or enhancement of burrows prior to passive relocation efforts;
  - b. provide guidelines for creation or enhancement of at least two natural or artificial burrows per relocated owl;
  - c. provide detailed methods and guidance for passive relocation of burrowing owls occurring within the Project Disturbance Area; and
  - d. describe monitoring and management of the passive relocation effort, including the created or enhanced burrow location and the project area where WBO were relocated from and provide a reporting plan.
3. Implement Avoidance Measures. If an active burrowing owl burrow is detected within 500 feet from the Project Disturbance Area the following avoidance and minimization measures shall be implemented:
  - a. Establish Non-Disturbance Buffer. Fencing shall be installed at a 250-foot radius from the occupied burrow to create a non-disturbance buffer around the burrow. The non-disturbance buffer and fence line may be reduced to 160 feet if all project-related activities that might disturb burrowing owls would be conducted during the non-breeding season (September 1<sup>st</sup> through January 31<sup>st</sup>). Signs shall be posted

in English and Spanish at the fence line indicating no entry or disturbance is permitted within the fenced buffer.

- b. Monitoring: If construction activities would occur within 500 feet of the occupied burrow during the nesting season (February 1 – August 31<sup>st</sup>) the Designated Biologist or Biological Monitor shall monitor to determine if these activities have potential to adversely affect nesting efforts, and shall make recommendations to minimize or avoid such disturbance.
4. Acquire 39 Acres of Burrowing Owl Habitat. The project owner shall acquire, in fee or in easement 39 acres of land suitable to support a resident population of burrowing owls and shall provide funding for the enhancement and long-term management of these compensation lands. The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with BLM, CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat.
    - a. Criteria for Burrowing Owl Mitigation Lands. The terms and Conditions of this acquisition or easement shall be as described in **BIO-12** [Desert Tortoise Compensatory Mitigation], with the additional criteria to include: 1) the 39 acres of mitigation land must provide suitable habitat for burrowing owls, and 2) the acquisition lands must either currently support burrowing owls or be no farther than five miles from an active burrowing owl nesting territory. The 39 acres of burrowing owl mitigation lands may be included with the desert tortoise mitigation lands ONLY if these two burrowing owl criteria are met. If the 39 acres of burrowing owl mitigation land is separate from the acreage required for desert tortoise compensation lands, the project owner shall fulfill the requirements described below in this Condition.
    - b. Security. If the 39 acres of burrowing owl mitigation land is separate from the acreage required for desert tortoise compensation lands, the project owner or an approved third party shall complete acquisition of the proposed compensation lands within the time period specified for this acquisition (see the verification section at the end of this Condition). Alternatively, financial assurance can be provided by the project owner to the CPM and CDFG, according to the measures outlined in **BIO-12**. These funds

shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") prior to initiating ground-disturbing project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with BLM, CDFG and the USFWS, to ensure funding. The final amount due will be determined by an updated appraisal and PAR analysis conducted as described in **BIO-12**.

**Verification:** If pre-construction surveys detect burrowing owls within 500 feet of proposed construction activities, at least 10 days prior to the start of any project-related site disturbance activities the Designated Biologist shall provide to the CPM documentation indicating that non-disturbance buffer fencing has been installed. The project owner shall report monthly to BLM, the CPM, CDFG and USFWS for the duration of construction on the implementation of burrowing owl avoidance and minimization measures. Within 30 days after completion of construction the project owner shall provide to the CDFG and CPM a report identifying how mitigation measures described in the plan have been completed.

If pre-construction surveys detect burrowing owls within the Project Disturbance Area and relocation of the owls is required, the project owner shall do the following:

- a. Within 30 days of completion of the burrowing owl pre-construction surveys, submit to BLM, the CPM, CDFG and USFWS a Burrowing Owl Mitigation Plan.
- b. No less than 90 days prior to acquisition of the burrowing owl compensation lands, the project owner, or an approved third party, shall submit a formal acquisition proposal to the CPM, BLM, CDFG, and USFWS describing the parcels intended for purchase. At the same time the project owner shall submit a PAR or PAR-like analysis for the parcels for review and approval by the CPM, BLM, CDFG and USFWS.
- c. Within 90 days of the land or easement purchase, as determined by the date on the title, the project owner shall provide the CPM with a management plan for review and approval, in consultation with BLM, CDFG and USFWS, for the compensation lands and associated funds.
- d. No later than 30 days prior to beginning project ground-disturbing activities, the project owner shall provide a form of Security in accordance with this Condition of Certification. No later than seven days prior to beginning project ground-disturbing activities, the project owner shall provide written verification of the actual Security.

- e. No later than 18 months from an initiation of construction the project owner shall provide written verification to BLM, the CPM, and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient.
- f. As part of the Annual Compliance Report, each year following construction for a period of five years, the Designated Biologist shall provide a report to the CPM, BLM, USFWS and CDFG that describes the results of monitoring and management of the burrowing owl relocation area.

***SPECIAL-STATUS PLANT impact avoidance, minimization and compensation***

**BIO-19** This Condition contains the following four sections:

- **Section A: Special-Status Plant Impact Avoidance and Minimization Measures** contains the Best Management Practices and other measures designed to avoid accidental impacts to plants occurring outside of the Project Disturbance Area and within 100 feet of the Project Disturbance Area during construction, operation, and closure.
- **Section B: Conduct Late Season Botanical Surveys** describes guidelines for conducting summer-fall 2010 surveys to detect special-status plants that would have been missed during the spring 2010 surveys.
- **Section C: Avoidance Requirements for Special-Status Plants Detected in the Summer/Fall 2010 Surveys** outlines the level of avoidance required for plants detected during the summer-fall surveys, based on the species' rarity and status codes.
- **Section D: Off-Site Compensatory Mitigation for Special-Status Plants** describes performance standards for mitigation for a range of options for compensatory mitigation through acquisition, restoration/enhancement, or a combination of acquisition and restoration/enhancement.

“Project Disturbance Area” encompasses all areas to be temporarily and permanently disturbed by the project, including the plant site, linear facilities, and areas disturbed by temporary access roads, fence installation, construction work lay-down and staging areas, parking, storage, or by any other activities resulting in disturbance to soil or vegetation.

The project owner shall implement the following measures in Section A, B, C, and D to avoid, minimize, and compensate for impacts to special-status plant species:

## Section A: Special-Status Plant Impact Avoidance and Minimization Measures

To protect all special-status plants<sup>38</sup> located outside of the Project Disturbance Area and within 100 feet of the permitted Project Disturbance Area from accidental and indirect impacts during construction, operation, and closure, the project owner shall implement the following measures:

1. Designated Botanist. An experienced botanist who meets the qualifications described in Section B-2 below shall oversee compliance with all special-status plant avoidance, minimization, and compensation measures described in this Condition throughout construction and closure. The Designated Botanist shall oversee and train all other Biological Monitors tasked with conducting botanical survey and monitoring work. During operation of the project, the Designated Biologist shall be responsible for protecting special-status plant occurrences within 100 feet of the project boundaries.
2. Special-Status Plant Impact Avoidance and Minimization Measures. The project owner shall incorporate all measures for protecting special-status plants in close proximity to the site into the BRMIMP (**BIO-7**). These measures shall include the following elements:
  - a. Site Design Modifications: Incorporate site design modifications to minimize impacts to special-status plants along the project linears: limiting the width of the work area; adjusting the location of staging areas, lay downs, spur roads and poles or towers; driving and crushing vegetation as an alternative to blading temporary roads to preserve the seed bank, and minor adjustments to the alignment of the roads and pipelines within the constraints of the ROW. Design the engineered channel discharge points to maintain the natural surface drainage patterns between the engineered channel and the outlet of the natural washes that flow toward the south and east, downstream of the project. These modifications shall be clearly depicted on the grading and construction plans, and on report-sized maps in the BRMIMP.
  - b. Establish Environmentally Sensitive Areas (ESAs). Prior to the start of any ground- or vegetation-disturbing activities, the Designated Botanist shall establish ESAs to protect avoided special-status plants that occur outside of the Project Disturbance Areas and within 100 feet of Project Disturbance Areas. This includes plant occurrences identified during the

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<sup>38</sup> Staff defines special-status plants as described in *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (California Natural Resources Agency, Department of Fish and Game, issued November 24, 2009).

spring 2009-2010 surveys and the late season 2010 surveys. The locations of ESAs shall be clearly depicted on construction drawings, which shall also include all avoidance and minimization measures on the margins of the construction plans. The boundaries of the ESAs shall be placed a minimum of 20 feet from the uphill side of the occurrence and 10 feet from the downhill side. Where this is not possible due to construction constraints, other protection measures, such as silt-fencing and sediment controls, may be employed to protect the occurrences. Equipment and vehicle maintenance areas, and wash areas, shall be located 100 feet from the uphill side of any ESAs. ESAs shall be clearly delineated in the field with temporary construction fencing and signs prohibiting movement of the fencing or sediment controls under penalty of work stoppages and additional compensatory mitigation. ESAs shall also be clearly identified (with signage or by mapping on site plans) to ensure that avoided plants are not inadvertently harmed during construction, operation, or closure.

- c. Special-Status Plant Worker Environmental Awareness Program (WEAP). The WEAP (**BIO-6**) shall include training components specific to protection of special-status plants as outlined in this Condition.
- d. Herbicide and Soil Stabilizer Drift Control Measures. Special-status plant occurrences within 100 feet of the Project Disturbance Area shall be protected from herbicide and soil stabilizer drift. The Weed Control Program (**BIO-14**) shall include measures to avoid chemical drift or residual toxicity to special-status plants consistent with guidelines such as those provided by the Nature Conservancy's *The Global Invasive Species Team*<sup>39</sup>, the U.S. Environmental Protection Agency, and the Pesticide Action Network Database<sup>40</sup>.
- e. Erosion and Sediment Control Measures. Erosion and sediment control measures shall not inadvertently impact special-status plants (e.g., by using invasive or non-native plants in seed mixes, introducing pest plants through contaminated seed or straw, etc.). These measures shall be incorporated in the Drainage, Erosion, and Sedimentation Control Plan required under **SOIL&WATER-1**.

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<sup>39</sup> Hillmer, J. & D. Liedtke. 2003. Safe herbicide handling: a guide for land stewards and volunteer stewards. Ohio Chapter, The Nature Conservancy, Dublin, OH. 20 pp. Online: <<http://www.invasive.org/gist/products.html>>

<sup>40</sup> Pesticide Action Network of North America. Kegley, S.E., Hill, B.R., Orme S., Choi A.H., PAN Pesticide Database, Pesticide Action Network, North America. San Francisco, CA, 2010 <<http://www.pesticideinfo.org>>

- f. Avoid Special-Status Plant Occurrences. Areas for spoils, equipment, vehicles, and materials storage areas; parking; equipment and vehicle maintenance areas, and wash areas shall be placed at least 100 feet from any ESAs.
- g. Monitoring and Reporting Requirements. The Designated Botanist shall conduct weekly monitoring of the ESAs that protect special-status plant occurrences during construction and decommissioning activities.

## **Section B: Conduct Late-Season Botanical Surveys**

The project owner shall conduct late-summer/fall botanical surveys for late-season special-status plants prior to start of construction or by the end of 2010, as described below:

1. Survey Timing. Surveys shall be timed to detect: a) summer annuals triggered to germinate by the warm, tropical summer storms (which may occur any time between June and October). Fall-blooming perennials that respond to the cooler, later season storms (typically beginning in September or October) shall only be required if blooms and seeds are necessary for identification or the species are summer-deciduous and require leaves for identification. The surveys shall not be timed to coincide with the statistical peak bloom period of the target species but shall instead be based on plant phenology and the timing of a significant storm event (i.e., a 10mm or greater rain or multiple storm events of sufficient volume to trigger germination, as measured at or within one mile of the project site). Surveys shall occur at the appropriate time to capture the characteristics necessary to identify the taxon. Construction of Phase 1A as outlined in Condition of Certification **BIO-28** is authorized to commence following a September survey.
2. Surveyor Qualifications and Training. Surveys shall be conducted by a qualified botanist knowledgeable in the complex biology of the local flora, and consistent with CDFG protocols (CDFG 2009). Each surveyor shall be equipped with a GPS unit and record a complete tracklog; these data shall be compiled and submitted along with the Summer-Fall Survey Botanical Report (described below). Prior to the start of surveys, all crew members shall, at a minimum, visit reference sites (where available) and/or review herbarium specimens of all BLM Sensitive plants, CNPS List 1B or 2 (Nature Serve rank S1 and S2) or proposed List 1B or 2 taxa, and any new reported or documented taxa, to obtain a search image. Because the potential for range extensions is unknown, the list of potentially occurring special-status plants shall include all special-status taxa known to occur within the Sonoran Desert region and the eastern portion of the Mojave in California. The list shall also include taxa with bloom seasons that begin in fall and extend into the early

spring as many of these are reported to be easier to detect in fall, following the start of the fall rains.

3. Survey Coverage. The survey coverage or intensity shall be in accordance with BLM Survey Protocols (issued July 2009)<sup>41</sup>, which specify that intuitive controlled surveys shall only be accomplished by botanists familiar with the habitats and species that may reasonably be expected to occur in the project area.
4. Documenting Occurrences. If a special-status plant is detected, the full extent of the population onsite shall be recorded using GPS in accordance with BLM survey protocols. Additionally, the extent of the population within one mile of project boundaries shall be assessed at least qualitatively to facilitate an accurate estimation of the proportion of the population affected by the project. For populations that are very dense or very large, the population size may be estimated by simple sampling techniques. When populations are very extensive or locally abundant, the surveyor must provide some basis for this assertion and roughly map the extent on a topographic map. All but the smallest populations (e.g., a population occupying less than 100 square feet) shall be recorded as area polygons; the smallest populations may be recorded as point features. All GPS-recorded occurrences shall include: the number of plants, phenology, observed threats (e.g., OHV or invasive exotics), and habitat or community type. The map of occurrences submitted with the final botanical report shall be prepared to ensure consistency with definition of an occurrence by CNDDDB, i.e., occurrences found within 0.25 miles of another occurrence of the same taxon, and not separated by significant habitat discontinuities, shall be combined into a single 'occurrence'. The project owner shall also submit the raw GPS shape files and metadata, and completed CNDDDB forms for each 'occurrence' (as defined by CNDDDB).
5. Reporting. Raw GPS data, metadata, and CNDDDB field forms shall be provided to the CPM within two weeks of the completion of each survey. If surveys are split into two or more periods (e.g., a late summer survey and a fall survey), then a summary letter shall be submitted following each survey period.

The Final Summer-Fall Botanical Survey Report shall be prepared consistent with CDFG guidelines (CDFG 2009), and BLM 2009 guidelines and shall include all of the following components:

- a. the BLM designation, NatureServe Global and State Rank of each species or taxon found (or proposed rank, or CNPS List);

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<sup>41</sup> Bureau of Land Management (BLM), California State Office. *Survey Protocols Required for NEPA/ESA Compliance for BLM Special Status Plant Species*. Issued July 2009.

- b. the number or percent of the occurrence that will be directly affected, and indirectly affected by changes in drainage patterns or altered geomorphic processes;
- c. the habitat or plant community that supports the occurrence and the total acres of that habitat or community type that occurs in the Project Disturbance Area;
- d. an indication of whether the occurrence has any local or regional significance (e.g., if it exhibits any unusual morphology, occurs at the periphery of its range in California, represents a significant range extension or disjunct occurrence, or occurs in an atypical habitat or substrate);
- e. a completed CNDDDB field form for every occurrence (occurrences of the same species within one-quarter mile or less of each other combined as one occurrence, consistent with CNDDDB methodology), and
- f. two maps: one that depicts the raw GPS data (as collected in the field) on a topographic base map with project features; and a second map that follows the CNDDDB protocol for occurrence mapping.

**Section C: Avoidance Requirements for Special-Status Plants Detected in the Summer/Fall 2010 Surveys**

The project owner shall apply the following avoidance standards to late blooming special-status plants that might be detected during late summer/fall season surveys. Avoidance and/or the mitigation measures described in Section D below would reduce impacts to these special-status plant species to less than significant levels.

1. Mitigation for CNDDDB Rank 1 Plants (Critically Imperiled) - Avoidance Required: If late blooming species with a CNDDDB rank of 1 are detected within the Project Disturbance Area the project owner shall prepare and implement a Special-Status Plant Mitigation Plan (Plan). The goal of the Plan shall be to retain at least 75 percent of the local population of the affected species. Compensatory mitigation, as described in Section D of this Condition, and at a mitigation ratio of 3:1, shall be required for the 25% or portion that is not avoided. The Plan shall include, at a minimum, the following components and definitions:
  - a. A description of the occurrences of the CNDDDB rank 1 species on the project, ecological characteristics such as micro-habitat requirements, ecosystem processes required for maintenance of the habitat, reproduction and dispersal mechanisms, pollinators, local distribution, a description of the extent of the population off-site, the percentage of the local population affected, and a description of how these occurrences would be

impacted by the project, including direct and indirect effects. The “local population” shall include the number of individuals occurring within the Palo Verde Watershed boundaries. Occurrences shall be considered impacted if they are within the project footprint, and if they would be affected by project-related hydrologic changes or changes to the local sand transport system.

- b. A description of the avoidance and minimization measures that would achieve complete avoidance of occurrences on the project linears and construction laydown areas, unless such avoidance would create greater environmental impacts in other resource areas (e.g. Cultural Resource Sites) or other restrictions (e.g., FAA or other restrictions for placement of transmission poles).
- c. A description of the measures that would be implemented to avoid or minimize impacts to occurrences on the solar facility. Avoidance is generally considered not feasible if the species is located within the Permanent Project Disturbance Area (bounded by the permanent tortoise exclusion fence and the drainage channels).
- d. If avoidance on the linears, construction laydown areas, and solar facility combined protect less than 75 percent of the local population of the affected species, the project owner shall implement offsite mitigation that demonstrates that the impacts will not cause a loss of viability for that species. Implementation of the compensatory offsite mitigation must meet the performance standards described in section D of this Condition, and may include land acquisition or implementation of a restoration/enhancement program for the species.
- e. “Avoidance” shall include protection of the ecosystem processes essential for maintenance of the protected plant occurrence. For all but one of the late blooming plant species with potential to occur, the plant species are annuals that depend on a viable seed bank to maintain population health and persistence. The primary goal of avoidance for these annual species will be protection of the soil integrity and the seed bank that is closely associated with undisturbed soils. Any impacts to the soil structure or surface features will be considered an impact, but measures like temporary mowing or brush removal that does not disturb the soil will not be considered impacts to the population. Isolated ‘islands’ of protected plants disconnected by the project from natural fluvial, aeolian (wind), or other processes essential for maintenance of the species, shall not be considered to be protected and shall not be credited as

contributing to the 75 percent avoidance requirement because such isolated populations are not sustainable.

2. Mitigation for CNDDDB Rank 2 Plants (Imperiled) –Avoidance on Linears Required: If species with a CNDDDB rank of 2 are detected within the Project Disturbance Area, the project owner shall prepare and implement a Special-Status Plant Mitigation Plan (Plan) that describes measures to achieve complete avoidance of occurrences on the project linears and construction laydown areas, unless such avoidance would create greater environmental impacts in other resource areas (e.g. Cultural Resource Sites) or other restrictions (e.g., FAA or other restrictions for placement of transmission poles). The project owner shall provide compensatory mitigation, at a ratio of 2:1, as described below in Section D for impacts to Rank 2 plants that could not be avoided. The content of the Plan and definitions shall be as described above in subsection C.1.
3. Mitigation for CNDDDB Rank 3 Plants – No On-Site Avoidance Required Unless Local or Regional Significance: If species with a CNDDDB rank of 3 are detected within the Project Disturbance Area, no onsite avoidance or compensatory mitigation shall be required unless the occurrence has local or regional significance, in which case the plant occurrence shall be treated as a CNDDDB rank 2 plant species. A plant occurrence would be considered to have local or regional significance if:
  - a. It occurs at the outermost periphery of its range in California;
  - b. It occurs in an atypical habitat, region, or elevation for the taxon that suggests that the occurrence may have genetic significance (e.g., that may increase its ability to survive future threats), or;
  - c. It exhibits any unusual morphology that is not clearly attributable to environmental factors that may indicate a potential new variety or sub-species.
4. Pre-Construction Notification for State- or Federal-Listed Species, or BLM Sensitive Species. If a state or federal-listed species or BLM Sensitive species is detected, the project owner shall immediately notify the CDFG, USFWS, BLM, and the CPM.
5. Preservation of the Germplasm of Affected Special-Status Plants. For all significant impacts to special-status plants, regardless of whether compensatory mitigation is required, mitigation shall include seed collection from the affected special-status plants on-site prior to construction to conserve the germplasm and provide a seed source for restoration efforts. The seed shall be collected under the supervision or guidance of a reputable seed storage facility such as the Rancho Santa Ana Botanical Garden Seed Conservation Program, San Diego Natural History Museum, or the

Missouri Botanical Garden. The costs associated with the long-term storage of the seed shall be the responsibility of the project owner. Any efforts to propagate and reintroduce special-status plants from seeds in the wild shall be carried out under the direct supervision of specialists such as those listed above and as part of a Habitat Restoration/Enhancement Plan approved by the CPM.

#### **Section D: Off-Site Compensatory Mitigation for Special-Status Plants**

Where compensatory mitigation is required under the terms of Section C, above, the project owner shall mitigate project impacts to special-status plant occurrences with compensatory mitigation. Compensatory mitigation shall consist of acquisition of habitat supporting the target species, or restoration/enhancement of populations of the target species, and shall meet the performance standards for mitigation described below. In the event that no opportunities for acquisition or restoration/enhancement exist, the project owner can fund a species distribution study designed to promote the future preservation, protection or recovery of the species. Compensatory mitigation shall be at a ratio of 3:1 for Rank 1 plants, with three acres of habitat acquired or restored/enhanced for every acre of habitat occupied by the special status plant that will be disturbed by the Project Disturbance Area (for example if the area occupied by the special status plant collectively measured is one-fourth acre than the compensatory mitigation will be three-fourths of an acre). The mitigation ratio for Rank 2 plants shall be 2:1. So, for the example above, the mitigation ratio would be one-half acre for the Rank 2 plants.

The project owner shall provide funding for the acquisition and/or restoration/enhancement, initial improvement, and long-term maintenance and management of the acquired or restored lands. The actual costs to comply with this Condition will vary depending on the Project Disturbance Area, the actual costs of acquiring compensation habitat, the actual costs of initially improving the habitat, the actual costs of long-term management as determined by a Property Analysis Record (PAR) report, and other transactional costs related to the use of compensatory mitigation.

The project owner shall comply with other related requirements in this Condition:

**I. Compensatory Mitigation by Acquisition:** The requirements for the acquisition, initial protection and habitat improvement, and long-term maintenance and management of special-status plant compensation lands include all of the following:

6. **Selection Criteria for Acquisition Lands.** The compensation lands selected for acquisition may include any of the following three categories:

- a. Occupied Habitat, No Habitat Threats: The compensation lands selected for acquisition shall be occupied by the target plant population and shall be characterized by site integrity and habitat quality that are required to support the target species, and shall be of equal or better habitat quality than that of the affected occurrence. The occurrence of the target special-status plant on the proposed acquisition lands should be viable, stable or increasing (in size and reproduction).
  - b. Occupied Habitat, Habitat Threats. Occupied compensation lands characterized by habitat threats may also be acquired as long as the population could be reasonably expected to recover with habitat restoration efforts (e.g., OHV or grazing exclusion, or removal of invasive non-native plants) and is accompanied by a Habitat Enhancement/Restoration Plan as described in Section D.II, below.
  - c. Unoccupied but Adjacent. The project owner may also acquire habitat for which occupancy by the target species has not been documented, if the proposed acquisition lands are adjacent to occupied habitat. The project owner shall provide evidence that acquisitions of such unoccupied lands would improve the defensibility and long-term sustainability of the occupied habitat by providing a protective buffer around the occurrence and by enhancing connectivity with undisturbed habitat. This acquisition may include habitat restoration efforts where appropriate, particularly when these restoration efforts will benefit adjacent habitat that is occupied by the target species.
7. Review and Approval of Compensation Lands Prior to Acquisition. The project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for special-status plants in relation to the criteria listed above, and must be approved by the CPM.
  8. Management Plan. The project owner or approved third party shall prepare a management plan for the compensation lands in consultation with the entity that will be managing the lands. The goal of the management plan shall be to support and enhance the long-term viability of the target special-status plant occurrences. The Management Plan shall be submitted for review and approval to the CPM.
  9. Integrating Special-Status Plant Mitigation with Other Mitigation lands. If all or any portion of the acquired Desert Tortoise, Waters of the State, or other required compensation lands meets the criteria above for special-status plant compensation lands, the portion of the other species' or habitat compensation lands that

meets any of the criteria above may be used to fulfill that portion of the obligation for special-status plant mitigation.

10. Compensation Lands Acquisition Requirements. The project owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM, has approved the proposed compensation lands:

Preliminary Report. The project owner, or an approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary or requested documents for the proposed compensation land to the CPM. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board.

Title/Conveyance. The project owner shall acquire and transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement, as required by the CPM. Any transfer of a conservation easement or fee title must be to CDFG, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM or other public agency approved by the CPM. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFG or another entity approved by the CPM. If an entity other than CDFG holds a conservation easement over the compensation lands, the CPM may require that CDFG or another entity approved by the CPM, in consultation with CDFG, be named a third party beneficiary of the conservation easement. The project owner shall obtain approval of the CPM of the terms of any transfer of fee title or conservation easement to the compensation lands.

Initial Protection and Habitat Improvement. The project owner shall fund activities that the CPM requires for the initial protection and habitat improvement of the compensation lands. These activities will vary depending on the condition and location of the land acquired, but may include trash removal, construction and repair of fences, invasive plant removal, and similar measures to protect habitat and improve habitat quality on the compensation lands. The costs of these activities shall be estimated based on the *Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010*, or more current guidance from the REAT at the ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, but actual costs will vary depending on the

measures that are required for the compensation lands. A non-profit organization, CDFG or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFG, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.

Property Analysis Record. Upon identification of the compensation lands, the project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate amount of the long-term maintenance and management fund to pay the in-perpetuity management of the compensation lands. The PAR or PAR-like analysis must be approved by the CPM before it can be used to establish funding levels or management activities for the compensation lands.

Long-term Maintenance and Management Funding. In accordance with **BIO-28** (phasing), the project owner shall deposit in NFWF's REAT Account a non-wasting capital long-term maintenance and management fee in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis conducted for the compensation lands.

The CPM, in consultation with CDFG, may designate another non-profit organization to hold the long-term maintenance and management fee if the organization is qualified to manage the compensation lands in perpetuity. If CDFG takes fee title to the compensation lands, CDFG shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity to manage the long-term maintenance and management fee for CDFG and with CDFG supervision. .

Interest, Principal, and Pooling of Funds. The project owner shall ensure that an agreement is in place with the long-term maintenance and management fund (endowment) holder/manager to ensure the following requirements are met:

Interest. Interest generated from the initial capital long-term maintenance and management fund shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action that is approved by the CPM

and is designed to protect or improve the habitat values of the compensation lands.

Withdrawal of Principal. The long-term maintenance and management fund principal shall not be drawn upon unless such withdrawal is deemed necessary by the CPM or by the approved third-party long-term maintenance and management fund manager, to ensure the continued viability of the species on the compensation lands.

Pooling Long-Term Maintenance and Management Funds. An entity approved to hold long-term maintenance and management funds for the project may pool those funds with similar non-wasting funds that it holds from other projects for long-term maintenance and management of compensation lands for special-status plants. However, for reporting purposes, the long-term maintenance and management funds for this project must be tracked and reported individually to the CPM.

Other Expenses. In addition to the costs listed above, the project owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to the title and document review costs incurred from other state agency reviews, overhead related to providing compensation lands to CDFG or an approved third party, escrow fees or costs, environmental contaminants clearance, and other site cleanup measures.

Mitigation Security. The project owner shall provide financial assurances in accordance with **BIO-28** (phasing) to the CPM to guarantee that an adequate level of funding is available to implement any of the mitigation measures required by this Condition that are not completed prior to the start of ground-disturbing project activities. Financial assurances shall be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") approved by the CPM. The amount of the Security shall be estimated based on the *Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010*, or more current guidance from the REAT agencies, at a ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, for every acre of habitat supporting the target special-status plant species which is significantly impacted by the project. The actual costs to comply with this Condition will vary depending on the actual costs of acquiring compensation habitat, the costs of initially improving the habitat, and the actual costs of long-term management as determined by a PAR report. Prior to submitting the Security to the CPM, the project owner shall obtain the CPM's approval of the form

of the Security. The CPM may draw on the Security if the CPM determines the project owner has failed to comply with the requirements specified in this Condition. The CPM may use money from the Security solely for implementation of the requirements of this Condition. The CPM's use of the Security to implement measures in this Condition may not fully satisfy the project owner's obligations under this Condition, and the project owner remains responsible for satisfying the obligations under this Condition if the Security is insufficient. The unused Security shall be returned to the project owner in whole or in part upon successful completion of the associated requirements in this Condition.

The project owner may elect to comply with the requirements in this Condition for acquisition of compensation lands, initial protection and habitat improvement on the compensation lands, or long-term maintenance and management of the compensation lands by funding, or any combination of these three requirements, by providing funds to implement those measures into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF). To use this option, the project owner must make an initial deposit to the REAT Account in an amount equal to the estimated costs (as set forth in the Security section of this Condition) of implementing the requirement. If the actual cost of the acquisition, initial protection and habitat improvements, or long-term funding is more than the estimated amount initially paid by the project owner, the project owner shall make an additional deposit into the REAT Account sufficient to cover the actual acquisition costs, the actual costs of initial protection and habitat improvement on the compensation lands, and the long-term funding requirements as established in an approved PAR or PAR-like analysis. If those actual costs or PAR projections are less than the amount initially transferred by the Applicant, the remaining balance shall be returned to the project owner.

The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFG, BLM and USFWS, prior to land acquisition, enhancement or management activities. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be executed and implemented within 18 months of the Energy Commission's certification of the project.

## II. Compensatory Mitigation by Habitat Enhancement/Restoration:

As an alternative or adjunct to land acquisition for compensatory mitigation the project owner may undertake habitat enhancement or restoration for the target special-status plant species. Habitat enhancement or restoration activities must achieve protection at a 3:1 ratio for Rank 1 plants and 2:1 for Rank 2 plants, with improvements applied to three acres, or two acres, respectively, of habitat for every acre special-status plant habitat directly or indirectly disturbed by the Project Disturbance Area (for example if the area occupied by the special status plant collectively measured is one-fourth acre than the improvements would be applied to an area equal to three-fourths of an acre at a 3:1 ratio, or one-half acre at a 2:1 ratio). Examples of suitable enhancement projects include but are not limited to the following: i) control unauthorized vehicle use into an occurrence (or pedestrian use if clearly damaging to the species); ii) control of invasive non-native plants that infest or pose an immediate threat to an occurrence; iii) exclude grazing by wild burros or livestock from an occurrence; or iv) restore lost or degraded hydrologic or geomorphic functions critical to the species by restoring previously diverted flows, removing obstructions to the wind sand transport corridor above an occurrence, or increasing groundwater availability for dependent species.

If the project owner elects to undertake a habitat enhancement project for mitigation, the project must meet the following performance standards: The proposed enhancement project shall achieve rescue of an off-site occurrence that is currently assessed, based on the NatureServe threat ranking system<sup>42</sup> with one of the following threat ranks: a) long-term decline >30 percent; b) an immediate threat that affects >30 percent of the population, or c) has an overall threat impact that is High to Very High. "Rescue" would be considered successful if it achieves an improvement in the occurrence trend to "stable" or "increasing" status, or downgrading of the overall threat rank to slight or low (from "High" to "Very High").

If the project owner elects to undertake a habitat enhancement project for mitigation, they shall submit a Habitat Enhancement/Restoration Plan to the CPM for review and

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<sup>42</sup> Master, L., D. Faber-Langendoen, R. Bittman, G. A., Hammerson, B. Heidel, J. Nichols, L. Ramsay, and A. Tomaino. 2009. *NatureServe Conservation Status Assessments: Factors for Assessing Extinction Risk*. NatureServe, Arlington, VA. Online: [http://www.natureserve.org/publications/ConsStatusAssess\\_StatusFactors.pdf](http://www.natureserve.org/publications/ConsStatusAssess_StatusFactors.pdf) , "Threats". See also: Morse, L.E., J.M. Randall, N. Benton, R. Hiebert, and S. Lu. 2004. *An Invasive Species Assessment Protocol: Evaluating Non-Native Plants for Their Impact on Biodiversity*. Version 1. NatureServe, Arlington, Virginia. Online: <http://www.natureserve.org/publications/pubs/invasiveSpecies.pdf>

approval, and shall provide sufficient funding for implementation and monitoring of the Plan. The amount of the Security shall be estimated based on the *Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010*, or more current guidance from the REAT agencies, at the ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, for every acre of habitat supporting the target special-status plant species which is directly or indirectly impacted by the project. The amount of the security may be adjusted based on the actual costs of implementing the enhancement, restoration and monitoring. The implementation and monitoring of the enhancement/restoration may be undertaken by an appropriate third party such as NFWF, subject to approval by the CPM. The Habitat Enhancement/Restoration Plan shall include each of the following:

1. Goals and Objectives. Define the goals of the restoration or enhancement project and a measurable course of action developed to achieve those goals. The objective of the proposed habitat enhancement plan shall include restoration of a target special-status plant occurrence that is currently threatened with a long-term decline. The proposed enhancement plan shall achieve an improvement in the occurrence trend to “stable” or “increasing” status, or downgrading of the overall threat rank to slight or low (from “High” to “Very High”).
2. Historical Conditions. Provide a description of the pre-impact or historical conditions (before the site was degraded by weeds or grazing or ORV, etc.), and the desired conditions.
3. Site Characteristics. Describe other site characteristics relevant to the restoration or enhancement project (e.g., composition of native and pest plants, topography and drainage patterns, soil types, geomorphic and hydrologic processes important to the site or species).
4. Ecological Factors. Describe other important ecological factors of the species being protected, restored, or enhanced such as total population, reproduction, distribution, pollinators, etc.
5. Methods. Describe the restoration methods that will be used (e.g., invasive exotics control, site protection, seedling protection, propagation techniques, etc.) and the long-term maintenance required. The implementation phase of the enhancement must be completed within five years.
6. Budget. Provide a detailed budget and time-line, and develop clear, measurable, objective-driven annual success criteria.

7. Monitoring. Develop clear, measurable monitoring methods that can be used to evaluate the effectiveness of the restoration and the benefit to the affected species. The Plan shall include a minimum of five years of quarterly monitoring, and then annual monitoring for the remainder of the enhancement project, and until the performance standards for rescue of a threatened occurrence are met. At a minimum the progress reports shall include: quantitative measurements of the projects progress in meeting the enhancement project success criteria, detailed description of remedial actions taken or proposed, and contact information for the responsible parties.
8. Reporting Program. The Plan shall ensure accountability with a reporting program that includes progress toward goals and success criteria. Include names of responsible parties.
9. Contingency Plan. Describe the contingency plan for failure to meet annual goals.
10. Long-term Protection. Include proof of long-term protection for the restoration site. For private lands this would include conservations easements or other deed restrictions; projects on public lands must be contained in a Desert Wildlife Management Area, Wildlife Habitat Management Area, or other land use protections that will protect the mitigation site and target species.

**III. Compensatory Mitigation by Conducting or Contributing to a Special-Status Plant Species Distribution Study:** As a contingency measure in the event that there are no opportunities for acquisition or restoration/enhancement, a Scientific Study of Special-status Plant Species Distribution Study may be funded. Distribution and occurrence health data is very limited for many of the sensitive species that occur on the project or have potential to occur on the project, especially the late summer and fall blooming species. Some of these late blooming species are only known from a few viable occurrences in California, and historic occurrences that have not been re-located or surveyed since they were first documented. The objectives of this study would be to better understand the full distribution of the affected species, the degree and immediacy of threats to occurrences, and ownership and management opportunities, with the primary goal of future preservation, protection, or recovery. This study would include the following:

1. Historical Occurrence Review. The Study would include an evaluation of historical localities for the species known to occur on the project or with potential to occur. This would

include a review of the CNDDDB database, herbarium records from regional herbaria (U.C. Riverside, San Diego Natural History Museum, etc.), other biotechnical reports from the region, and information from regional botanical experts.

2. Conduct Site Visits to Historical Localities. Historical occurrences would be evaluated in the field during the appropriate time of the year for each late blooming species. If located, these occurrences would be evaluated for population size, numbers, plant associates, soils, habitat quality, and potential threats, degree and immediacy of threats, ownership and management opportunities. GPS location data would also be collected during these site visits.
3. Survey Areas with habitat potential that surround each of these species occurrences to better determine the full range of distribution. If additional populations are found, collect data (GPS and assessment) on these additional populations consistent with III.2 above.
4. Prepare a Distribution Study Report. A report that discusses the finding from the historical information and the range extension surveys would be prepared that summarizes the information for each of the late season surveys. This report will provide valuable information and a better understanding of the actual distribution of these late blooming species within California and will help to determine when and when not there is potential for these species to occur. This valuable information will include a better understand of the ecological factors driving the distribution of these species and will help to better target appropriate habitat for both future surveys as well as potential future mitigation lands. All data from this study will be submitted for incorporation into the CNDDDB system and the study report will be made available to resource agencies, conservation groups, and other interested parties.

Currently there is no program or study in place that is attempting to address the distributional issues for these late blooming species. If an existing study is identified or if one is developed prior to the study outlined here, an option to fund the existing study may be considered. If an existing study cannot be indentified then one will be developed that follows the guidelines discussed above. The funding provided for the program would be no greater than the cost for acquisition, enhancement, and long-term management of compensatory mitigation lands based on impacts to late blooming sensitive plant species.

**Verification:** The Special-Status Plant Impact Avoidance and Minimization Measures shall be incorporated into the BRMIMP as required under Condition of Certification **BIO-7**.

Raw GPS data, metadata, and CNDDDB field forms shall be submitted to the CPM within two weeks of the completion of each survey. A preliminary summary of results for the late summer/fall botanical surveys shall also be submitted to the CPM and BLM's State Botanist within two weeks following the completion of the surveys. If surveys are split into more than one period, then a summary letter shall be submitted following each survey period. The Final Summer-Fall Botanical Survey Report, GIS shape files and metadata shall be submitted to the BLM State Botanist and the CPM no less than 30 days prior to the start of ground-disturbing activities. The Final Report shall include a detailed accounting of the acreage of project impacts to special-status plant occurrences.

The draft conceptual Special-Status Plant Mitigation Plan shall be submitted to the CPM for review and approval no less than 30 days prior to the start of ground-disturbing activities.

The project owner shall immediately provide written notification to the CPM, CDFG, USFWS, and BLM if it detects a State- or Federal-Listed Species, or BLM Sensitive Species at any time during its late summer/fall botanical surveys or at any time thereafter through the life of the project, including conclusion of project decommissioning.

No fewer than 30 days prior to the start of ground-disturbing activities the project owner shall submit grading plans and construction drawings to the CPM which depict the location of Environmentally Sensitive Areas and the Avoidance and Minimization Measures contained in Section A of this Condition.

If compensatory mitigation is required, no less than 30 days prior to the start of ground-disturbing activities, the project owner shall submit to the CPM the form of Security adequate to acquire compensatory mitigation lands and/or undertake habitat enhancement or restoration activities, as described in this Condition. Actual Security shall be provided seven days prior to start of ground-disturbing activities.

No fewer than 90 days prior to acquisition of compensatory mitigation lands, the project owner shall submit a formal acquisition proposal and draft Management Plan for the proposed lands to the CPM, with copies to CDFG, USFWS, and BLM, describing the parcels intended for purchase and shall obtain approval from the CPM prior to the acquisition. No fewer than 90 days prior to acquisition of compensatory mitigation lands, the project owner shall submit to the CPM and obtain CPM approval of any agreements to delegate land acquisition to an approved third party, or to manage compensation lands; such agreement shall be executed and implemented within 18 months of the start of ground disturbance.

No fewer than 30 days after acquisition of the property the project owner shall deposit the funds required by Section I e above (long term management and maintenance fee) and provide proof of the deposit to the CPM.

The project owner or an approved third party shall complete the acquisition and all required transfers of the compensation lands, and provide written verification to the CPM of such completion no later than 18 months after the start of project ground-disturbing activities. If NFWF or another approved third party is being used for the acquisition, the project owner shall ensure that funds needed to accomplish the acquisition are transferred in timely manner to facilitate the planned acquisition and to ensure the land can be acquired and transferred prior to the 18-month deadline. If habitat enhancement is proposed, no later than six months following the start of ground-disturbing activities, the project owner shall obtain CPM approval of the final Habitat Enhancement/Restoration Plan, prepared in accordance with Section D, and submit to the CPM or a third party approved by the CPM Security adequate for long-term implementation and monitoring of the Habitat Enhancement/Restoration Plan.

Enhancement/restoration activities shall be initiated no later than 12 months from the start of construction. The implementation phase of the enhancement project shall be completed within five years of initiation. Until completion of the five-year implementation portion of the enhancement action, a report shall be prepared and submitted as part of the Annual Compliance Report. This report shall provide, at a minimum: a summary of activities for the preceding year and a summary of activities for the following year; quantitative measurements of the project's progress in meeting the enhancement project success criteria; detailed description of remedial actions taken or proposed; and contact information for the responsible parties.

If a Distribution Study is implemented as contingency mitigation, the study shall be initiated no later than 6 months from the start of construction. The implementation phase of the study shall be completed within two years of the start of construction.

Within 18 months of ground-disturbing activities, the project owner shall transfer to the CPM or an approved third party the difference between the Security paid and the actual costs of (1) acquiring compensatory mitigation lands, completing initial protection and habitat improvement , and funding the long-term maintenance and management of compensatory mitigation lands; and/or (2) implementing and providing for the long-term protection and monitoring of habitat enhancement or restoration activities.

Implementation of the special-status plant impact avoidance and minimization measures shall be reported in the Monthly Compliance Reports prepared by the Designated Botanist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, in consultation with the BLM State Botanist, a written construction termination report identifying how measures have been completed.

The project owner shall submit a monitoring report every year for the life of the project to monitor effectiveness of protection measures for all avoided special-status plants to the CPM and BLM State Botanist. The monitoring report shall include: dates of worker awareness training sessions and attendees, completed

CNDDDB field forms for each avoided occurrence on-site and within 100 feet of the project boundary off-site, and description of the remedial action, if warranted and planned for the upcoming year. The completed forms shall include an inventory of the special-status plant occurrences and description of the habitat conditions, an indication of population and habitat quality trends.

### ***Sand dune/fringe-toed lizard mitigation***

**BIO-20** To mitigate for habitat loss and direct impacts to Mojave fringe-toed lizards the project owner 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 (58 acres or the acreage of sand dune/partially stabilized sand dune habitat impacted by the final project footprint). If compensation lands are acquired, the project owner 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.

1. Criteria for Compensation Lands: The compensation lands selected for acquisition shall:
  - a. Be sand dune or partially stabilized sand dune habitat within the Palen Valley or Chuckwalla Valley with potential to contribute to Mojave fringe-toed lizard habitat connectivity and build linkages between known populations of Mojave fringe-toed lizards and preserve lands with suitable habitat;
  - b. To the extent feasible, be connected to lands currently occupied by Mojave fringe-toed lizard;
  - c. To the extent feasible, be near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;
  - d. Provide quality habitat for Mojave fringe-toed lizard, that has the capacity to regenerate naturally when disturbances are removed;
  - e. Not have a history of intensive recreational use or other disturbance that might make habitat recovery and restoration infeasible;
  - f. Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;

- g. Not contain hazardous wastes that cannot be removed to the extent the site is suitable for habitat;
  - h. Not be subject to property constraints (i.e. mineral leases, cultural resources); and
  - i. Be on land for which long-term management is feasible.
2. Security for Implementation of Mitigation: The project owner shall provide financial assurances to the CPM to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of Mojave fringe-toed lizard habitat as described in this Condition. These funds shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM according to the measures outlined in **BIO-12**, and within the time period specified for this assurance (see the verification section at the end of this Condition). The final amount due will be determined by an updated appraisal and a PAR analysis conducted as described in **BIO-12**.
  3. Preparation of Management Plan: The project owner shall submit to the CPM, BLM, CDFG and USFWS a draft Management Plan that reflects site-specific enhancement measures for the Mojave fringe-toed lizard habitat on the acquired compensation lands. The objective of the Management Plan shall be to enhance the value of the compensation lands for Mojave fringe-toed lizards, and may include enhancement actions such as weed control, fencing to exclude livestock, erosion control, or protection of sand sources or sand transport corridors.

**Verification:** No later than 30 days prior to beginning project ground disturbing activities, the project owner shall provide written verification of approved form of Security in accordance with this Condition of Certification. Actual Security shall be provided no later than seven days prior to the beginning of project ground-disturbing activities. The project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities.

No less than 90 days prior to acquisition of the property, the project owner shall submit a formal acquisition proposal to BLM, the CPM, CDFG and USFWS describing the parcels intended for purchase.

The project owner, or an approved third party, shall provide BLM, the CPM, CDFG and USFWS with a management plan for the compensation lands and associated funds within 180 days of the land or easement purchase, as determined by the date on the title. The CPM shall review and approve the management plan, in consultation with BLMCDFG and the USFWS.

Within 90 days after completion of project construction, the project owner shall provide to the CPM an analysis with the final accounting of the amount of sand dune/stabilized sand dune habitat disturbed during project construction.

The project owner shall provide written verification to BLM, the CPM, USFWS, and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient no later than 18 months from the start of ground-disturbing activities.

### ***MITIGATION FOR IMPACTS TO BIGHORN SHEEP***

**BIO-21** To compensate for project contributions to loss of spring foraging habitat for Nelson's bighorn sheep, the project owner shall:

1. Create a New Water Source. The project owner shall create a new water source for the Southern Mojave metapopulation of bighorn sheep in the McCoy Mountains or in other mountain ranges in the vicinity of the project north of I-10. The proposed location of the water source shall be developed in consultation with the CPM, BLM and CDFG. The project owner shall monitor and manage the artificial water source for the benefit of bighorn sheep for the life of the project, or shall provide sufficient funding to support such monitoring and management by an approved third party.

The project owner may elect to fund the creation of a new water source by depositing funds into a Renewable Energy Action Team (REAT) subaccount established with the National Fish and Wildlife Foundation (NFWF). Actual costs shall be developed in consultation with the CPM, BLM and CDFG. The project owner shall be responsible for providing adequate funding for installation of the water source and all costs associated with that installation, as well as costs of operation, monitoring and management of the water source for the life of the project. The project owner shall also provide sufficient funding for any administrative fees that NFWF may require to implement the measures described in this Condition. The initial estimate of funding required to fulfill the measures described above is \$100,000. The total costs shall not exceed \$120,000. If less than \$100,000 is required to fulfill the terms of this Condition, the excess shall be refunded to the project owner. Based on the letter from Jim Abbott, Acting State Director of BLM to Alice Harron dated August 26, 2010; deposit of the funds by the project Owner into the NFWF Account will discharge the project owner's obligations under this Condition of Certification.

The project owner shall provide financial assurances to the CPM with copies of the document(s) to CDFG and BLM to guarantee that an adequate level of funding is available to implement the mitigation measures described in this Condition. Security shall be in the amount of the initial estimate of \$100,000.

Or

2. Acquire Compensatory Habitat. As an alternative to providing a water source as described above, the project owner may elect to

secure compensatory mitigation lands that would offset the loss of spring foraging habitat (desert dry wash woodland, vegetated swales, and unvegetated washes) for Southern Mojave metapopulation Nelson's bighorn sheep. If the project owner selects this compensatory mitigation option the project owner shall acquire, in fee or in easement no less than 929 acres of lands that:

- a. Provide suitable spring foraging habitat for bighorn sheep in the form of desert dry wash woodland and vegetated swales within intermixed Sonoran creosote bush scrub habitat, and
- b. Includes spring foraging habitat that would benefit the Southern Mojave metapopulation (i.e., north of I-10). Priority acquisition areas would be in eastern Riverside County roughly bounded by Interstate 10, Highway 62, and Highway 177.

Acquisition Terms and Conditions. The terms and conditions of this acquisition or easement shall be as described in **BIO-12** (Desert Tortoise Compensatory Mitigation) and the timing associated with **BIO-28** (phasing). The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat.

Review and Approval of Compensation Lands Prior to Acquisition. The project owner shall submit a formal acquisition proposal to the CPM, CDFG, and BLM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for the Southern Mojave metapopulation of bighorn in relation to the criteria listed above. Approval from the CPM, in consultation with BLM and CDFG, shall be required for acquisition of all parcels comprising the compensation lands.

Acquisition Security. If the 929 acres of bighorn sheep mitigation land is separate from the acreage required for desert tortoise compensation lands, the project owner or an approved third party shall complete acquisition of the proposed compensation lands within the time period specified for this acquisition (see the Verification section at the end of this Condition). Alternatively, financial assurance can be provided by the project owner to the CPM, BLM and CDFG, according to the measures outlined in **BIO-12** and **BIO-28**, with the Security estimate based on the Desert Renewable Energy REAT Biological Resource Compensation /Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010 or more current

guidance from the REAT agencies. These funds shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") prior to initiating ground-disturbing project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM and, in consultation with BLM and CDFG, to ensure funding. The final amount due will be determined by an updated appraisal and PAR analysis conducted as described in **BIO-12**.

**Verification:** The project owner shall provide the CPM with a form of Security for installation, management and monitoring of the water source as described in this Condition Of Certification no later than 30 days prior to beginning project ground-disturbing activities for approval. Actual Security shall be provided no later than seven days prior to the beginning of project ground-disturbing activities. Security shall be \$100,000.

If the project owner elects to fund the creation of a new water source by depositing funds into the REAT-NFWF subaccount, no less than 30 days prior to beginning project ground-disturbing activities the project owner shall provide written verification to the CPM, BLM and CDFG that \$100,000 has been deposited to that subaccount. Based on the letter from Jim Abbott, Acting State Director of BLM to Alice Harron, Solar Millennium dated August 26, 2010, deposit of the funds by the project Owner into the NFWF Account will discharge the project owner's obligations under this Condition of Certification.

No later than 6 months following start of ground disturbance activities, the project owner shall submit to the CPM for review and approval a description of the proposed location of the water source that will be created. No later than 24 months following the project ground-disturbing activities, the project owner shall provide written verification to the CPM that construction of the water source has been completed. At the same time, the project owner shall: (1) provide a monitoring and management plan for bighorn use of the water source; and (2) provide evidence of an agreement (Memorandum of Understanding) and a funding mechanism to provide ongoing maintenance of the water source by BLM or some other party approved by the CPM in consultation with BLM and CDFG.

As part of the annual compliance report, each year following completion of construction/restoration of the water source, the project owner shall provide a report to the CPM, BLM and CDFG that includes: a description of bighorn sheep detections at the water source and a summary of management activities for the year, and a discussion of whether management goals for the year were met. If the project owner elects to mitigate for loss of bighorn sheep spring foraging habitat with acquisition of compensatory mitigation lands as described above, no less than 90 days prior to acquisition of the bighorn sheep compensation lands, the project owner, or an approved third party, shall submit a formal acquisition proposal to the CPM, BLM, and CDFG describing the 929 acres of lands intended for purchase. At the same time the project owner shall submit a PAR or

PAR-like analysis for the parcels for review and approval by the CPM, in consultation with BLM and CDFG.

No later than 18 months from initiation of construction the project owner shall provide written verification to the BLM, the CPM, and CDFG that no fewer than 929 acres of compensation lands or conservation easements that meet the criteria described in this Condition have been acquired and recorded in favor of the approved recipient.

Security shall be refunded to project owner once land has been acquired and recorded in favor of the approved recipient.

### ***MITIGATION FOR IMPACTS TO STATE WATERS***

**BIO-22** The project owner shall implement the following measures to avoid, minimize and mitigate for direct and indirect impacts to waters of the state and to satisfy requirements of California Fish and Game Code sections 1600 and 1607.

1. Acquire Off-Site State Waters: The project owner shall acquire, in fee or in easement, a parcel or parcels of land that includes at least 1,384 acres of state jurisdictional waters, or the area of state waters directly or indirectly impacted by the final project footprint. The project footprint means all lands disturbed by construction and operation of the Blythe Project, including all linears. The parcel or parcels comprising the 1,384 acres of ephemeral washes shall include at least 639 acres of desert dry wash woodland or the acreage of desert dry wash woodland impacted by the final project footprint at a 3:1 ratio. The terms and conditions of this acquisition or easement shall be as described in Condition of Certification **BIO-12** and the timing associated with **BIO-28** (phasing). Mitigation for impacts to state waters shall be within the Chuckwalla Valley or Colorado River Hydrological Units (HUs), as close to the project site as practicable.
2. Security for Implementation of Mitigation: The project owner shall provide financial assurances to the CPM and CDFG to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of state waters as described in this Condition. These funds shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM and CDFG in the form of an irrevocable letter of credit, a pledged savings account or Security prior to initiating ground-disturbing project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with BLMCDFG and the USFWS, to ensure funding. The final amount due will be determined by and updated appraisal and a PAR analysis conducted pursuant to **BIO-12**.

3. Preparation of Management Plan: The project owner shall submit to the CPM and CDFG a draft Management Plan that reflects site-specific enhancement measures for the drainages on the acquired compensation lands. The objective of the Management Plan shall be to enhance the wildlife value of the drainages, and may include enhancement actions such as weed control, fencing to exclude livestock, or erosion control.
4. Code of Regulations: The project owner shall provide a copy of this Condition (Condition of Certification **BIO-22**) from the Energy Commission Decision to all contractors, subcontractors, and the Applicant's project supervisors. Copies shall be readily available at work sites at all times during periods of active work and must be presented to any CDFG personnel upon demand. The CPM reserves the right to issue a stop work order or allow CDFG to issue a stop work order after giving notice to the project owner, the CPM, if the CPM in consultation with CDFG, determines that the project owner has breached any of the terms or Conditions or for other reasons, including but not limited to the following:
  - a. The information provided by the Applicant regarding streambed alteration is incomplete or inaccurate;
  - b. New information becomes available that was not known to it in preparing the terms and Conditions; or
  - c. The project or project activities as described in the Staff Assessment have changed.
5. Best Management Practices: The project owner shall also comply with the following Conditions to protect drainages near the Project Disturbance Area:
  - a. The project owner shall minimize road building, construction activities and vegetation clearing within ephemeral drainages to the extent feasible.
  - b. The project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows.
  - c. The project owner shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws, and it shall be the responsibility of the project owner to ensure compliance.
  - d. Spoil sites shall not be located at least 30 feet from the boundaries and drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.

- e. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering waters of the state. These materials, placed within or where they may enter a drainage by the project owner or any party working under contract or with the permission of the project owner, shall be removed immediately.
- f. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the state.
- g. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.
- h. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.

**Verification:** No less than 30 days prior to the start of construction-related ground disturbance activities potentially affecting waters of the state, the project owner shall provide written verification (i.e., through incorporation into the BRMIMP) to the CPM that the above best management practices will be implemented. The project owner shall also provide a discussion of work in waters of the state in Compliance Reports for the duration of the project.

No less than 30 days prior to beginning project ground-disturbing activities, the project owner shall provide the form of Security in accordance with this Condition of Certification. No later than seven days prior to beginning project ground-disturbing activities, the project owner shall provide written verification of the actual Security. The project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities.

The project owner, or an approved third party, shall provide BLM, the CPM, CDFG and USFWS with a management plan for the compensation lands and associated funds within 180 days of the land or easement purchase, as determined by the date on the title. The CPM shall review and approve the management plan, in consultation with CDFG.

Within 90 days after completion of project construction, the project owner shall provide to the CPM and CDFG an analysis with the final accounting of the amount of jurisdictional state waters disturbed during project construction.

The project owner shall provide written verification to BLM, the CPM, USFWS and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient no later than 18 months from adoption of the Final Energy Commission Decision for the Blythe Solar Power Project).

The project owner shall notify the CPM and CDFG, in writing, at least five days prior to initiation of project activities in jurisdictional state waters and at least five days prior to completion of project activities in jurisdictional areas. The project owner shall notify the CPM and CDFG of any change of conditions to the project, impacts to state waters, or the mitigation efforts. The notifying report shall be provided to the CPM and CDFG no later than seven days after the change of conditions is identified. As used here, change of condition refers to the process, procedures, and methods of operation of a project; the biological and physical characteristics of a project area; or the laws or regulations pertinent to the project as defined below. A copy of the notifying change of conditions report shall be included in the annual reports or until it is deemed unnecessary by the CPM and CDFG.

Biological Conditions: a change in biological conditions includes, but is not limited to, the following: 1) the presence of biological resources within or adjacent to the Project area, whether native or non-native, not previously known to occur in the area; or 2) the presence of biological resources within or adjacent to the project area, whether native or non-native, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.

Physical Conditions: a change in physical conditions includes, but is not limited to, the following: 1) a change in the morphology of a river, stream, or lake, such as the lowering of a bed or scouring of a bank, or substantial changes in stream form and configuration caused by storm events; 2) the movement of a river or stream channel to a different location; 3) a reduction of or other change in vegetation on the bed, channel, or bank of a drainage, or 4) changes to the hydrologic regime such as fluctuations in the timing or volume of water flows in a river or stream.

Legal Conditions: a change in legal conditions includes, but is not limited to, a change in Regulations, Statutory Law, a Judicial or Court decision, or the listing of a species, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.

## ***DECOMMISSIONING and reclamation PLAN***

**BIO-23** Upon project closure the project owner shall implement a final Decommissioning and Reclamation Plan. The Decommissioning and Reclamation Plan shall include a cost estimate for implementing the proposed decommissioning and reclamation activities, and shall be consistent with the guidelines in BLM's 43 CFR 3809.550 et seq.

**Verification:** No fewer than 30 days prior to the start of project-related ground disturbing activities the project owner shall provide to the CPM (for review) and BLM's Authorized Officer (for review and approval) a draft Decommissioning and Reclamation Plan. The plan shall be finalized prior to the start of commercial operation and reviewed every five years thereafter and submitted to the CPM for review and to the BLM's Authorized Officer for approval. Modifications to the approved Decommissioning and Reclamation Plan shall be made only after approval from BLM's Authorized Officer. The project owner shall provide a copy of the approved Decommissioning and Reclamation Plan and any BLM approved revisions to the CPM.

## ***GOLDEN EAGLE INVENTORY AND MONITORING***

**BIO-24** The project owner shall implement the following measures to avoid or minimize project-related construction impacts to golden eagles.

1. Annual Inventory During Construction. For each calendar year during which construction will occur an inventory shall be conducted to determine if golden eagle territories occur within one mile of the project boundaries. Survey methods for the inventory shall be as described in the Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations (Pagel et al. 2010) or more current guidance from the USFWS.
2. Inventory Data: Data collected during the inventory shall include at least the following: territory status (unknown, vacant, occupied, breeding successful, breeding unsuccessful); nest location, nest elevation; age class of golden eagles observed; nesting chronology; number of young at each visit; digital photographs; and substrate upon which nest is placed.
3. Determination of Unoccupied Territory Status: A nesting territory or inventoried habitat shall be considered unoccupied by golden eagles ONLY after completing at least two full surveys in a single breeding season. In circumstances where ground observation occurs rather than aerial surveys, at least two ground observation periods lasting at least four hours or more are necessary to designate an inventoried habitat or territory as unoccupied as long as all potential nest sites and alternate nests are visible and monitored. These observation periods

shall be at least 30 days apart for an inventory, and at least 30 days apart for monitoring of known territories.

4. **Monitoring and Adaptive Management Plan:** If an occupied nest<sup>43</sup> is detected within one mile of the project boundaries, the project owner shall prepare and implement a Golden Eagle Monitoring and Management Plan for the duration of construction to ensure that project construction activities do not result in injury or disturbance to golden eagles. The monitoring methods shall be consistent with those described in the Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations (Pagel et al. 2010) or more current guidance from the USFWS. The Monitoring and Management Plan shall be prepared in consultation with the USFWS. Triggers for adaptive management shall include any evidence of project-related disturbance to nesting golden eagles, including but not limited to: agitation behavior (displacement, avoidance, and defense); increased vigilance behavior at nest sites; changes in foraging and feeding behavior, or nest site abandonment. The Monitoring and Management Plan shall include a description of adaptive management actions, which shall include, but not be limited to, cessation of construction activities that are deemed by the Designated Biologist to be the source of golden eagle disturbance.

**Verification:** No fewer than 30 days from completion of the golden eagle inventory the project owner shall submit a report to the CPM, CDFG, and USFWS documenting the results of the inventory.

If an occupied nest is detected within one mile of the project boundary during the inventory the project owner shall contact staff at the USFWS Carlsbad Office and CDFG within one working day of detection of the nest for interim guidance on monitoring and nest protection. The project owner shall provide the CPM, CDFG, and USFWS with the final version of the Golden Eagle Monitoring and Management Plan within 30 days after detection of the nest. This final Plan shall have been reviewed and approved by the CPM in consultation with USFWS and CDFG.

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<sup>43</sup> An occupied nest is one used for breeding by a pair of golden eagles in the current year. Presence of an adult, eggs, or young, freshly molted feathers or plucked down, or current years' mutes (whitewash) also indicate site occupancy. Additionally, all breeding sites within a breeding territory are deemed occupied while raptors are demonstrating pair bonding activities and developing an affinity to a given area. If this culminates in an individual nest being selected for use by a breeding pair, then the other nests in the nesting territory will no longer be considered occupied for the current breeding season. A nest site is considered occupied throughout the periods of initial courtship and pair - bonding, egg laying, incubation, brooding, fledging, and post - fledging dependency of the young.

## ***Evaporation Pond Netting and Monitoring***

**BIO-25** The project owner shall cover the evaporation ponds prior to any discharge with 1.5-inch mesh netting designed to exclude birds and other wildlife from drinking or landing on the water of the ponds. Netting with mesh sizes other than 1.5-inches may be installed if approved by the CPM in consultation with CDFG and USFWS. The netted ponds shall be monitored regularly to verify that the netting remains intact, is fulfilling its function in excluding birds and other wildlife from the ponds, and does not pose an entanglement threat to birds and other wildlife. The ponds shall include a visual deterrent in addition to the netting, and the pond shall be designed such that the netting shall never contact the water. Monitoring of the evaporation ponds shall include the following:

1. Monthly Monitoring. The Designated Biologist or Biological Monitor shall regularly survey the ponds at least once per month starting with the first month of operation of the evaporation ponds. The purpose of the surveys shall be to determine if the netted ponds are effective in excluding birds, if the nets pose an entrapment hazard to birds and wildlife, and to assess the structural integrity of the nets. The monthly surveys shall be conducted in one day for a minimum of two hours following sunrise (i.e., dawn), a minimum of one hour mid-day (i.e., 1100 to 1300), and a minimum of two hours preceding sunset (i.e., dusk) in order to provide an accurate assessment of bird and wildlife use of the ponds during all seasons. Surveyors shall be experienced with bird identification and survey techniques. Operations staff at the project site shall also report finding any dead birds or other wildlife at the evaporation ponds to the Designated Biologist within one day of the detection of the carcass. The Designated Biologists shall report any bird or other wildlife deaths or entanglements within two days of the discovery to the CPM, CDFG, and USFWS.
2. Dead or Entangled Birds. If dead or entangled birds are detected, the Designated Biologist shall take immediate action to correct the source of mortality or entanglement. The Designated Biologist shall make immediate efforts to contact and consult the CPM, CDFG, and USFWS by phone and electronic communications prior to taking remedial action upon detection of the problem, but the inability to reach these parties shall not delay taking action that would, in the judgment of the Designated Biologist, prevent further mortality of birds or other wildlife at the evaporation ponds.
3. Quarterly Monitoring. If after 12 consecutive monthly site visits no bird or wildlife deaths or entanglements are detected at the

evaporation ponds by or reported to the Designated Biologist, monitoring can be reduced to quarterly visits.

4. Biannual Monitoring. If after 12 consecutive quarterly site visits no bird or wildlife deaths or entanglements are detected by or reported to the Designated Biologist and with approval from the CPM, USFWS and CDFG, future surveys may be reduced to two surveys per year, during the spring nesting season and during fall migration. If approved by the CPM, USFWS and CDFG, monitoring outside the nesting season may be conducted by the Environmental Compliance Manager.
5. Modification of Monitoring Program. Without respect to the above requirements the project owner, CDFG or USFWS may submit to the CPM a request for modifications to the evaporation pond monitoring program based on information acquired during monitoring, and may also suggest adaptive management measures to remedy any problems that are detected during monitoring or modifications if bird impacts are not observed. Modifications to the evaporation pond monitoring described above and implementation of adaptive management measures shall be made only after approval from the CPM, in consultation with USFWS and CDFG.

In addition, the project owner shall prepare and implement measures that will prevent Couch's spadefoot toads from using the evaporative basins (see Condition of Certification **BIO-26**)

**Verification:** No less than 30 days prior to operation of the evaporation ponds the project owner shall provide to the CPM as-built drawings and photographs of the ponds indicating that the bird exclusion netting has been installed. For the first year of operation the Designated Biologist shall submit quarterly reports to the CPM, CDFG, and USFWS describing the dates, durations and results of site visits conducted at the evaporation ponds. Thereafter the Designated Biologist shall submit annual monitoring reports with this information. The quarterly and annual reports shall fully describe any bird or wildlife death or entanglements detected during the site visits or at any other time, and shall describe actions taken to remedy these problems.

### ***COUCH'S SPADEFOOT TOAD IMPACT AVOIDANCE AND MINIMIZATION MEASURES***

**BIO-26** The project owner shall prepare and implement a Couch's Spadefoot Toad Protection and Mitigation Plan (Protection and Mitigation Plan) to avoid, minimize or mitigate impacts to Couch's spadefoot toads and their breeding habitat during construction and operation of the project. The Protection and Mitigation Plan shall be approved by the CPM in consultation with CDFG, and shall be incorporated into the project's

BRMIMP and implemented. It is expected that, as currently proposed, the project would impact three potential breeding ponds.

The Protection and Mitigation Plan shall address methods to achieve this avoidance and minimization, and shall include avoidance, minimization, and mitigation measures that would be required if additional habitat or Couch's spadefoot toad are found during habitat surveys. The Protection and Mitigation Plan shall include, at a minimum:

1. Habitat Survey Results:

- a. Survey methodology that focuses on areas that are susceptible to ponding (such as areas that are disturbed and/or artificially compacted);
- b. Survey results, including a detailed discussion of potential breeding sites, and a description of areas determined not to include breeding habitat; and
- c. Figures showing the areas surveyed and the location of potential breeding habitat in relation to proposed project features.

2. Impacts Assessment from:

- a. Habitat disturbance from construction;
- b. Noise from construction, operations, and potential ORV traffic;
- c. Increased access for vehicles from road construction or improvements;
- d. Changes in breeding habitat due to changes in flow levels and flow patterns to breeding ponds;
- e. Increased traffic from construction and operations;
- f. Risk of exposure to elevated selenium and salinity levels in evaporative ponds; and
- g. Increased risk of predation.

3. Avoidance and Minimization Measures:

- a. Description of measures that would be implemented to avoid impacts to potential breeding ponds, such as design strategies; protective fencing or other barriers, worker's education, minimizing construction traffic within the vicinity of breeding ponds, and biological monitoring;
- b. Designation of a Management Area around breeding ponds that includes an appropriate upland buffer, and a description of measures used to minimize impacts within this buffer; and

- c. Design and operation measures that will bar individuals from entering evaporative ponds.

- 4. Mitigation: If complete avoidance of the ponds or other breeding sites identified during surveys is not possible, the Protection and Mitigation Plan shall include plans to create additional breeding habitats (ephemeral pond) at least equal in area to the acreage of ponds being impacted. Alternatively, the project owner may purchase mitigation land that has the potential for ponding that is equal to or greater than the ponds identified as potential Toad breeding ponds within the Project Disturbance Area.

If ponds are to be created, the created ponds shall be capable of holding water for at least nine days during the spadefoot toad breeding season. The created ponds shall be monitored and managed to ensure fulfillment of this performance standard by site visits at the pond following summer rainfall events. If the created ponds fail to achieve this standard, remedial action shall be implemented (for example, by compacting the soil in the pond to increase water-holding capacity).

If compensation lands are acquired, the project owner 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. Criteria for Mitigation Lands: If the Applicant chooses to mitigate in whole or in part by purchasing habitat:
  - i. The Applicant shall purchase habitats in fee title or easement within the known range of the Couch's spadefoot toad. The habitat shall have similar characteristics to those impacted on site including
    1. artificial or natural depressions should be deep enough to have the potential to support the Couch's spade foot toad
    2. depressions should have potential to pond water for nine days
    3. adjacent uplands should have potential to provide refugia and foraging habitat
    4. other characteristics that a trained biologist would employ in designating potential habitat for the species
  - ii. If the above criteria are met, these habitats may overlap on other lands preserved by the Applicant for other mitigation (e.g., desert tortoise habitat within Northern and Eastern Colorado Desert Coordinated Management) and shall:

1. Provide quality habitat for Couch's spadefoot toad, that has the capacity to regenerate naturally when disturbances are removed;
  2. Not have a history of intensive recreational use or other disturbance that might make habitat recovery and restoration infeasible;
  3. Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;
  4. Not contain hazardous wastes that cannot be removed to the extent the site is suitable for habitat;
  5. Not be subject to property constraints (i.e. mineral leases, cultural resources); and
  6. Be on land for which long-term management is feasible.
- b. Security for Implementation of Mitigation: The project owner shall provide financial assurances to the CPM to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of Couch's spadefoot toad habitat as described in this Condition. These funds shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM and according to the measures outlined in **BIO-12**, and within the time period specified for this assurance (see the verification section at the end of this Condition). The final amount due will be determined by an updated appraisal and a PAR analysis conducted as described in **BIO-12**.

**Verification**: No less than 30 days prior to any project-related ground disturbance, the project owner shall submit to the CPM and CDFG, a final Protection and Mitigation Plan. The Protection and Mitigation Plan shall address on-site protection and mitigation measures to be implemented during construction. Modifications to the Protection and Mitigation Plan shall be made only after approval from the CPM, in consultation with CDFG.

If the Protection and Mitigation Plan includes creation of ponds, the number and acreage of created ponds shall be described in the plan. No less than 90 days prior to operation of project the project owner shall provide to the CPM as-built drawings and photographs of the created ponds and maps showing the size and location of the ponds in relation to project features. On January 31<sup>st</sup> of every year following initiation of operation of the project, the project owner shall submit reports to the CPM documenting the capacity of the created ponds to hold water for at least nine days during the spadefoot toad breeding season. If ponds fail to hold water as described above the project owner shall implement remedial

actions. The annual reporting may be terminated upon satisfactory demonstration of this performance standard, and with approval of the CPM.

If mitigation land is purchased as an alternative to pond creation, the project owner shall provide the CPM and CDFG with an approved form of Security and the calculation of such security in accordance with this Condition of Certification and **BIO-12** no later than 30 days prior to beginning project ground-disturbing activities. Actual Security shall be provided no later than seven days prior to the beginning of project ground-disturbing activities. If Security is provided, the project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities.

No less than 90 days prior to acquisition of the property, the project owner shall submit a formal acquisition proposal to the CPM, CDFG and USFWS describing the parcels intended for purchase.

The project owner, or an approved third party, shall provide the CPM, CDFG and USFWS with a management plan for the compensation lands and associated funds within 180 days of the land or easement purchase, as determined by the date on the title. The CPM shall review and approve the management plan, in consultation with CDFG.

The project owner shall provide written verification to the CPM, and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient no later than 18 months from the start of ground-disturbing activities.

### ***IN-LIEU FEE MITIGATION OPTION***

**BIO-27** The project owner may choose to satisfy its mitigation obligations by paying an in lieu fee instead of acquiring compensation lands, pursuant to Fish and Game code sections 2069 and 2099 or any other applicable in-lieu fee provision, to the extent the in-lieu fee provision is found by the Commission to mitigate the impacts identified herein.

**Verification:** If electing to use this provision, the project owner shall notify the Commission that it would like a determination that the project's in-lieu fee proposal mitigate for the impacts identified herein.

### ***Project construction phasing plan***

**BIO-28** The project Owner shall provide compensatory mitigation for the total Project Disturbance Area and may provide such mitigation in three phases, Phase 1a, Phase 1b, and Phase 2, as described in Palo Verde Solar 1, LLC's Proposed Phased Construction and Mitigation (Galati & Blek [tn:57593]. Palo Verde Solar 1, LLC's Proposed Phased Construction and Mitigation: Blythe Solar Power Project Docket No. (09-AFC-6), dated July 15, 2010.). "Project Disturbance Area"

encompasses all areas to be temporarily and permanently disturbed by the project.

Project construction will occur in three phases that generally follow development of the solar units, with the exception of the first phase of the project, Phase 1a, which will consist of two types of construction areas: (1) linear facilities, including the access road and communication lines and (2) non-linear facilities to include a staging/laydown area and a portion of the Unit 1 solar block area.

Phase 1b shall consist of the remainder of Unit 1 and Unit 2, and Phase 2 shall consist of the remainder of the project (Units 3 and 4). These phases will generally include installation of fencing, clearing, grubbing and grading, and development of common facilities first, followed by the remaining power block units. All construction activities for the non-linear features during these subsequent phases will occur within desert tortoise exclusionary fenced areas that have been cleared in accordance with USFWS protocols.

The disturbance area for each project Phase and resource type is provided in the tables below. This table shall be refined prior to the start of each construction phase with the disturbance area adjusted to reflect the final project footprint for each phase. Prior to initiating each phase of construction the project owner shall submit the actual construction schedule, a figure depicting the locations of proposed construction and amount of acres to be disturbed. Mitigation acres are calculated based on the compensation requirements for each resource type as described in the above Conditions of Certification – **BIO-12** (Desert Tortoise), **BIO-20** (Mojave Fringe-toed Lizard), **BIO-18** (Western Burrowing Owl), and **BIO-22** (State Waters). Compensatory mitigation for each phase shall be implemented according to the timing required by each Condition.

| Phase    | Desert Tortoise |                    | MFTL           |                    | WBO                        |                   |
|----------|-----------------|--------------------|----------------|--------------------|----------------------------|-------------------|
|          | Impact (acres)  | Mitigation (acres) | Impact (acres) | Mitigation (acres) | Impact (individuals/pairs) | Mitigation(acres) |
| Phase 1a | 769             | 769                | 0              | 0                  | 0                          | 0                 |
| Phase 1b | 2,995           | 2,995              | 58             | 174                | 1                          | 19.5              |
| Phase 2  | 3,193           | 3,193              | 0              | 0                  | 1                          | 19.5              |
| Total    | 6,958           | 6,958              | 58             | 174                | 2                          | 39                |

| Phase    | Desert Tortoise |                    | MFTL           |                    |
|----------|-----------------|--------------------|----------------|--------------------|
|          | Impact (acres)  | Mitigation (acres) | Impact (acres) | Mitigation (acres) |
| Phase 1a | 67              | 130                | 0              | 0                  |
| Phase 1b | 231             | 409                | 36             | 51                 |
| Phase 2  | 294             | 665                | 146            | 189                |
| Total    | 593             | 1,205              | 133            | 179                |

| Phase    | State Waters - Direct |                    | State Waters – Indirect |                    | Bighorn Sheep  |                    |
|----------|-----------------------|--------------------|-------------------------|--------------------|----------------|--------------------|
|          | Impact (acres)        | Mitigation (acres) | Impact (acres)          | Mitigation (acres) | Impact (acres) | Mitigation (acres) |
| Phase 1a | 67                    | 130                | 0                       | 0                  | 27             | 27                 |
| Phase 1b | 231                   | 409                | 36                      | 51                 | 488            | 488                |
| Phase 2  | 294                   | 665                | 146                     | 189                | 414            | 414                |
| Total    | 592                   | 1204               | 182                     | 240                | 929            | 929                |

**Verification:** The project owner shall not disturb any area outside of the area that has been approved for that phase of construction and for the previously approved phases of construction.

No less than 30 days prior to the start of desert tortoise clearance surveys for each phase, the project owner shall submit a description of the proposed construction activities for that phase to CDFG, USFWS and BLM for review and to the CPM for review and approval. The description for each phase shall include the proposed construction schedule, a figure depicting the locations of proposed construction and amount of acres of each habitat type to be disturbed.

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**APPENDIX C**

**DESIGNATED BIOLOGISTS RESUMES AND REFERENCES**

# Raymond D. Romero

## Principal Biologist

### Professional History

AECOM, 2010  
Tetra Tech, 2008-2010  
CH2M HILL, 2001-2007  
Charis Corporation, 2000-2001  
Independent Consultant, 1999-2000  
Computer Sciences Corporation  
1991-1999  
Independent Consultant, 1990-1991  
California Department of Fish and  
Game, 1989-1990

### Education

BS, Wildlife Management, Fisheries  
(minor), Humboldt State University  
AA, General Liberal Arts and  
Sciences, Ventura College

### Registrations

Certified Wildlife Biologist (CWB),  
TWS, 2007

### Years of Experience

With AECOM 0  
With other firms 21

### Technical Specialties

Regulatory Permitting  
Desert Ecology  
USFWS Authorized Desert Tortoise  
Biologist

Mr. Romero has over 21 years of professional experience as a staff and consulting wildlife biologist supporting various corporations, consulting firms, military installations, and Federal/State regulatory agencies. He has over 18 years experience managing various projects and supervising multi-disciplinary environmental professionals. Mr. Romero has over 10 years experience supporting Department of Defense (DoD) contracts including the United States (U.S.) Air Force, Army, Marines and Navy. In 2007, he received his Wildlife Biologist Certification from The Wildlife Society (TWS). He has also been an authorized biologist on over 50 U.S. Fish and Wildlife Service (USFWS) biological opinions for the desert tortoise. His primary duties have included technical and management support to ensure compliance with various environmental regulations such as the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), Endangered Species Act (ESA), Sikes Act (SA), Migratory Bird Treaty Act (MBTA), Fish and Wildlife Coordination Act (FWCA), Clean Water Act (CWA), as well as numerous State and DoD regulations. He has routinely coordinated with such agencies as the USFWS, U.S. Department of Agriculture (USDA), U.S. Geological Survey-Biological Resources Division (USGS-BRD), Natural Resources Conservation Service (NRCS), National Park Service (NPS), U.S. Bureau of Land Management (BLM), U.S. Army Corps of Engineers (USACE), California Department of Fish and Game (CDFG), California State Parks Service (CSPS), Federal Energy Regulatory Commission (FERC), California Energy Commission (CEC), California State Lands Commission (CSLC), California Public Utilities Commission (CPUC), Nevada Department of Wildlife (NDOW), Arizona Game and Fish Department (AGFD), and Union Pacific Railroad (UPR). He has obtained permits including USFWS Biological Opinion (BO), USFWS Section 10A permit, USFWS Right-of-Way (ROW) and Standard Use Permit (SUP), USFWS depredation permit, BLM ROW permit, CDFG Section 2081 permit, CDFG 1600 Agreement, CDFG scientific collecting permit, CWA Section 401/404 permit, and NPS SUP.

## Professional Affiliations

The Wildlife Society  
Desert Tortoise Council  
The Nature Conservancy

## Training and Certifications

CPR and First Aid, AECOM, 2010  
Driver Training, AECOM, 2010  
Supervisor Training, Tetra Tech, 2009  
Loss Control Leadership, Tetra Tech, 2009  
Project Management (PM 101 and 201), Tetra Tech, 2008  
Wind Energy Project Management, Tetra Tech, 2008  
Bat Ecology and Field Techniques Workshop, TWS, 2006  
Bat Management Conference, TWS, 2005  
California Tiger Salamander Workshop, TWS, 2003  
Flat-tailed Horned Lizard Workshop, BLM, 2001  
Southwestern Willow Flycatcher Workshop, Southern Sierra Research Station, 2001  
Desert Springs & Wetlands Assessment Workshop, Desert Managers Group, 2001  
Desert Tortoise Line-Distance Sampling Workshop, USFWS, 2001  
Frontline Leadership, Computer Sciences Corporation, 1999  
Environmental Compliance Assessment Management, Shipley and Associates, 1999  
National Military Fish and Wildlife Association Conference, Wildlife Management Institute, 1998  
Effective Technical Writing, Shipley and Associates, 1996  
Regional Habitat and Species Conservation Planning Conference, UC Davis, 1996  
The Wildlife Society Annual Conference, TWS, 1995 - 1998, 2001, 2003, 2009  
Desert Tortoise Conference, Desert Tortoise Council, 1992 - 1995, 2001, 2003, 2009  
Mohave Ground Squirrel Workshop, TWS, 1992, 2005  
Desert Tortoise Workshop, Desert Tortoise Council, 1990, 1993, 2000 - 2006 (Instructor)

## Experience

### **Southern California Edison, Stirling Transmission Line, Mojave Desert, California. Principal Biologist.**

Performed vegetation community mapping and habitat suitability assessment along a nearly 100-mile long portion of the Stirling transmission line corridors – Pisgah to Gale substations and Pissgah to Lugo substations. Supervised up to 6 field biologists. Assisted with production of a biological resources technical report to document the findings. [06/2010: AECOM]

### **Southern California Edison, Leatherneck Transmission Line, Yucca Valley, California. Principal Biologist.** Performed a biological survey for special status species within a 22-mile long portion of the Leatherneck transmission line corridor. [05/2010: AECOM]

**CPV, Lazy J Wind Energy Project, New Mexico. Project Manager.** Managed biological resource surveys and technical reports in support of this proposed wind energy project. [04/2010-05/2010: Tetra Tech]

**RES, Granite Mountain Wind Energy Project, Apple Valley, California. Project Manager.** Managed biological resource surveys, technical reports, agency coordination, and regulatory permitting in support of this proposed wind energy project in southern California. [03/2010 - 05/2010: Tetra Tech]

**CPV, Saltdale Wind Energy Project, Ridgecrest, California. Project Manager.** Managed biological and cultural resource surveys, technical reports, Worker Environmental Awareness Program (WEAP), and agency coordination in support of this proposed wind energy project in southern California. [11/2009 - 05/2010: Tetra Tech]

**Iberdrola, Dillon Wind Energy Project, San Geronio Pass, California. Project Manager.** Managed biological resource survey and technical report in support of this wind energy project in southern California. [07/2009 - 11/2009: Tetra Tech]

**US Navy, Moffett Field, California. Task Manager.** Managed biological resource technical report in support of a remediation project. [04/2009 - 5/2010: Tetra Tech]

**Iberdrola, Amargosa Solar Energy Project, Amargosa Valley, Nevada. Project/Task Manager.** Project manager of engineering support, cultural resource survey, technical reports, and agency coordination in support of a proposed solar energy project in southwestern Nevada. Biological resources task manager to conduct plant and wildlife surveys in Spring 2010 and produce technical reports in support of the EIS. [01/2009 - 05/2010: Tetra Tech]

**Cogentrix, Proposed Solar Energy Projects, Silurian Valley and Daggett, California and Jean, Nevada. Task Manager.** Biological resources task manager that led wildlife, botanical, and waters field surveys at 4 proposed utility scale solar sites. Managed staff and subcontractors, produced proposals, procured equipment, consulted with agencies, produced and reviewed technical reports. Support in anticipation of two Applications for Certification (AFC) documents for southern CA, two EIS documents for southern NV and various permit applications. [07/2008 - 05/2010: Tetra Tech]

**eSolar, Alta Vista/Gaskell/Willow Springs Solar Energy Projects, Antelope Valley, California. Project Manager.** Managed staff and subcontractors in support of the three

AFCs for the proposed solar energy projects. [07/2008 - 09/2009: Tetra Tech]

**Iberdrola, Tule Wind Energy Project, Eastern San Diego County, California. Project Manager.** Managed biological and cultural resource surveys, technical reports, agency coordination, and production of an EA in support of a proposed wind energy project. [07/2008 - 05/2010: Tetra Tech]

**Confidential Client, Alternative Energy Prospecting in Arizona, California, Colorado, New Mexico, and Utah. Task Manager.** Biological resources task lead in support of five critical issues analysis (CIA) reports. [03/2008 - 05/2008: Tetra Tech]

**Edison Mission Energy, Proposed Solar Energy Project, Edwards, California. Task Manager.** Biological resources task lead in support of a CIA field survey and report for a proposed site in southern California. [03/2008 - 04/2008: Tetra Tech]

**Florida Power and Light (FPL), Solar Energy Prospecting, Mojave Desert, California. Task Manager.** Biological resources task lead in support of a due diligence desk top analysis and ground truthing for various sites in southern California. [03/2008 - 09/2008: Tetra Tech]

**PPM Energy, Inc., Mojave Desert Wind Energy Projects, Mojave Desert, California. Task Manager.** Provided management and technical support for biology related tasks including proposals, literature searches, and special-status species (desert tortoise, burrowing owl, Mohave ground squirrel, and raptor) presence/absence surveys. Provided technical writing for fatal flaws analyses of three potential wind energy farms. Interfaced with BLM staff on surveying and reporting efforts. [08/2007 - 10/2007: CH2M Hill]

**Los Angeles County Sanitation District, Mesquite Regional Landfill Project, El Centro, California. Task Manager.** Provided management and technical support for all biology related tasks including proposals, literature searches, awareness trainings, special-status species (plants, desert tortoise, burrowing owl, and nesting migratory bird) presence/absence surveys, compliance monitoring and technical reporting for the construction of the landfill railroad spur. Authorized biologist to work under the auspices of the USFWS BO issued for the project. [01/2007 - 10/2007: CH2M Hill]

**BrightSource Energy, Ivanpah Solar Energy Generating System (ISEGS) Project, Primm, Nevada. Task Manager.** Provided management and technical support for all biology related tasks including proposals, literature searches, habitat characterization, special-status species (plants, desert tortoise and raptor) presence/absence surveys, and technical writing (fatal flaws analyses, Application for Certification, and Biological Assessments [BA]) for the proposed installation of a 5.25 square mile solar energy plant. Provided supervision of numerous staff and subcontract biologists for the field survey effort. Worked with GIS to create data dictionaries to standardize data collection. Coordinated with USFWS, BLM, CDFG and CEC regarding surveying, reporting, and permitting efforts. [12/2006 - 10/2007: CH2M Hill]

**County of Santa Barbara, Lompoc Wind Energy Farm Project, Lompoc, California. Task Manager.** Provided management and technical support for all biology related tasks including proposals, literature searches, habitat characterization and mapping, special-status species surveys, avian point counts, and technical writing for the proposed installation of a 1,000 acre wind energy farm. Technical writing was provided for the draft EIR. Coordinated with the County of Santa Barbara, local experts, and Audubon Society. [08/2006 - 10/2007: CH2M Hill]

**Corrections Corporation of America, California City Prison Expansion Project, California City, California. Task Manager.** Provided management and technical support for all biology related tasks including proposals, literature searches, agency coordination, technical writing in support of the supplemental EIR, special-status species (desert tortoise, Mohave ground squirrel and burrowing owl) presence/absence surveys, awareness training, compliance monitoring, and agency reporting. Authorized biologist to work under the auspices of the USFWS BO issued for the project. [06/2006 - 10/2007: CH2M Hill]

**U.S. Air Force, Plant 42 Area of Concern 3 Project, Palmdale, California. Task Manager.** Provided management and technical support for all biology related tasks including proposals, literature searches, special-status species (plants, desert tortoise, Mohave ground squirrel, burrowing owl, migratory bird) surveys, production and presentation of an environmental awareness training, as well as coordinating and writing technical reports for the Department of Toxic Substances Control and CDFG. [05/2006 - 10/2007: CH2M Hill]

**National Aeronautics and Space Administration, X-37 Test Program, Edwards Air Force Base, California. Task Manager.** Provided management and technical support for all biology related tasks including literature searches, agency coordination, technical writing in support of the EA and permitting for the proposed National Aeronautics and Space Administration (NASA) X- 37 Test Program. Focused wildlife species included the desert tortoise. Coordinated with NASA and Air Force personnel on EA content. [11/2003 - 05/2004: CH2M Hill]

**California High Speed Rail Authority, California High Speed Rail Project, Sacramento, California. Task Manager.** Co-wrote the biological resources and jurisdictional waters technical evaluation for the linear railway project segment between Los Angeles and San Diego, CA via the Inland Empire. The program level analysis primarily relied on GIS, databases, and literature searches focusing on jurisdictional waters including wetlands and vernal pools, sensitive plant communities, threatened and endangered species, species of special concern, and wildlife movement corridors. The evaluation was incorporated into the joint EIS/EIR for the project. [10/2002 - 04/2003: CH2M Hill]

**Pacific Gas and Electric, Investigative and Remedial Action Project, Hinkley, California. Task Manager.** Provided management and technical support for all biology related tasks including proposals, literature searches, special-status species (desert tortoise, Mohave ground squirrel, and burrowing owl) surveys, technical writing in support of the Mitigated Negative Declaration (MND) and permitting for the ground water treatment system and extraction wells. Authorized biologist to work under the auspices of the USFWS BO issued to Pacific Gas and Electric (PG&E). [08/2002 - 10/2007: CH2M Hill]

**Pacific Gas and Electric, Investigative and Remedial Action Project, Topock, Arizona. Project Manager.** Provided long-term management and technical support for the groundwater remediation project. Managed nearly 1 million dollar budget, provided oversight of numerous staff and subcontract biologists, and responsible for numerous reports and permits. Liaison between regulatory agencies (USFWS, BLM, and CDFG) and project staff. Biological oversight and support included special-status species (desert tortoise and southwestern willow flycatcher) surveys, wetlands and jurisdictional waters delineations, preconstruction surveys, compliance monitoring, awareness trainings, and technical writing. Produced numerous biological reports, construction completion reports, restoration plan, streambed alteration agreement applications, BAs including a programmatic biological assessment, various sections for CEQA documents, and

regulatory permits (USFWS BO, BLM ROW, USFWS ROW/SUP, CDFG 1600, etc.). Authorized biologist to work under the auspices of the USFWS BO issued to PG&E. [08/2002 - 10/2007: CH2M Hill]

**Lockheed Martin, On-call Biological Support Services, Palmdale, California. Task Manager.** Provided management and technical support for all biology related tasks including proposals, literature searches, special-status species (desert tortoise, Mohave ground squirrel, burrowing owl, and migratory bird) surveys, production and presentation of a desert tortoise awareness training, and Section 7 Consultation with the USFWS to obtain a BO for the desert tortoise. Tasks performed at Lockheed Martin Plants 9 and 10. Regularly interfaced with client. Coordinated with USFWS and CDFG regarding Section 7 and 2081 permitting, respectively. Authorized biologist to work under the auspices of the USFWS BO issued to Lockheed Martin. [07/2002 - 10/2007: CH2M Hill]

**PPM Energy, Inc., Fairmont Wind Energy Project, Lancaster, California. Task Manager.** Provided management and technical support for all biology related tasks including proposals, literature searches, habitat characterization and mapping, special-status species surveys, avian point counts, and technical reporting for the proposed installation of a wind farm. Technical writing support was provided for the draft EIR and regulatory permitting. [03/2002 - 11/2005: CH2M Hill]

**Los Angeles Department of Water and Power, Owens Lake Dust Mitigation Project, Owens Lake, California. Task Manager.** As the biological resources task lead, provided management and technical support for wildlife biology related tasks including the Western Snowy Plover Mitigation Monitoring Program. Over four years, managed an annual budget of more than 0.5 million dollars, provided oversight of several staff and subcontract biologists, and responsible for numerous deliverables. Streamlined the environmental compliance reporting process for the appropriate regulatory agencies. Responsible for a program that entailed performing awareness trainings, preconstruction and presence/absence surveys, and mitigation monitoring. Liaison between the field biologists and client/regulatory agencies. Provided technical writing support for several CEQA documents, regulatory permits, and biological reports. Routinely coordinated and ensured compliance with CDFG, CSLC, and Great Basin Unified Air Pollution Control District permit conditions to minimize potential impacts to sensitive biological resources. [01/2002 - 12/2006: CH2M Hill]

**Pacific Gas and Electric, Environmental Permitting Review, San Francisco, California. Senior Wildlife Biologist.** As part of a senior review team, categorized several hundred land, planning, and environmental permits in preparation for the restructuring of PG&E. Key elements of the permits were entered into a standardized Excel spreadsheet. Permits included grants, titles, deeds, right of ways, easements, joint use agreements, etc. [01/2002 - 05/2002: CH2M Hill]

**BLM, Imperial Sand Dunes Recreation Area, El Centro, California. Senior Wildlife Biologist.** Served as the liaison between CH2M HILL and the BLM. Onsite within the BLM office full-time and coordinated with BLM staff on a daily basis. Assisted BLM with any and all matters pertaining to the lawsuit filed by the Center for Biological Diversity and other environmental organizations against the BLM. Consulted with the USFWS on behalf of the BLM. Performed substantial literature searches and data collections. Prepared case files for court appeals. Established and maintained the legal administrative record. Co-wrote and provided technical assistance with three major documents prepared for the BLM Imperial Sand Dunes Recreation Area including the BA, Recreation Area Management Plan, and EIS. The documents focused on the following special-status

species Peirson's milkvetch, desert tortoise, flat-tailed horned lizard, and Colorado Desert fringe-toed lizard. [10/2001 - 03/2002: CH2M Hill]

**Monument 3D, Seismic Exploration Project, Los Banos, California. Biological Consultant.** Provided part-time biological surveying and monitoring support for the Monument 3D Seismic Project located in Los Banos, CA. Support was a cooperative effort with the ACOE, USFWS, and CDFG. The project traversed 250 square miles and several sensitive biological resource habitats including Volta and Los Banos State Wildlife Areas, San Luis National Wildlife Refuge, Waters of the U.S., San Joaquin kit fox, San Joaquin antelope squirrel, riparian brush rabbit, riparian woodrat, giant garter snake, blunt-nosed leopard lizard, burrowing owl, and numerous special status plant species. Responsibilities included compliance with the ACOE Nationwide 6 Permit, USFWS BO, CDFG Memorandum of Agreement (MOA), seismic plan of operations, and several other protection measures. Coordinated with the third party USFWS/CDFG biological monitor, project biologists, and seismic personnel. Conducted pre-activity surveys, compliance monitoring, and ecological restoration support. Provided verbal summaries and written standardized monitoring reports. Additional responsibilities included recording sensitive species and sign, minimizing project impacts, and reporting noncompliance issues. [03/2002 - 08/2002: Bio Environmental Associates]

**U.S. Army, Fort Irwin, California. Project Manager/Senior Wildlife Biologist.** Provided managerial and technical support to the Fort Irwin Directorate of Public Works to ensure compliance with Federal, State, local, and Army Regulations (ARs) pertaining to natural resources. These regulations included NEPA, ESA, SA, MBTA, FWCA, CWA, and AR 200-3 as well as other ARs. Provided support to other programs within the department such as Air and Water Quality (AWQ), Hazardous Waste (HW), and Cultural Resources. Administrative writing experience included standard operating procedures, statements of work, statements of qualifications, proposals, and cost estimates. Technical writing experience included EIS and EA support, ESA annual reports, resource management plans, biological assessments, damage assessments, mitigation/monitoring plans, compliance monitoring reports, regulatory coordination letters, and standardized field forms. Fieldwork experience included biological research, presence/absence surveys, clearance surveys, zone of influence surveys, line-distance sampling, compliance monitoring, awareness training, radio tagging and tracking, passive integrated transponder (PIT) tagging, wildlife relocations, wildlife damage control, ecological restoration, and floral/faunal inventories. Responsible for managing sensitive species and habitats including desert tortoise, Lane Mountain milkvetch, Mohave ground squirrel, burrowing owl, American badger, LeConte's thrasher, golden eagle, prairie falcon, loggerhead shrike, Mojave fringe-toed lizard, Waters of the US (8 playas and 12 natural springs), Joshua tree woodland, and desert tortoise critical habitat. Permit coordination and authorizations included ESA Section 7 consultation, ESA compliance monitor authorization, line-distance sampling, MBTA depredation, and State scientific collecting permits. Authorized biologist on USFWS biological opinion for the desert tortoise at Fort Irwin. Familiar with various Federal, State, and local protocols and guidelines pertaining to biological field techniques and documentation. Routinely coordinated with Military Police on wildlife damage control issues. Interfaced with client (Army) on a daily basis. Experienced with fiber optic scope, Palm Pilot, GPS, and GIS technology. Participated in numerous educational briefings and community outreach programs. Received DoD defensive driver's and explosive ordnance training. [11/2000 - 10/2001: Charis Corporation]

**Level (3), Fiber Optic Communications Line Installation Project, Mojave Desert/Tehachapi Mountains/San Joaquin Valley, California. Biological Consultant.** Provided environmental compliance support as outlined in the EIR, Biological Evaluation

(BE), and various regulatory permits for the Level (3) Communications Fiber Optic Project. Responsible for the segment located between Cajon Pass and Bakersfield, CA. Support was a cooperative effort with the ACOE, USFWS, CDFG, CPUC, and UPR. This linear project traversed several sensitive biological resource habitats including desert tortoise, Tehachapi slender salamander, yellow-blotched salamander, western spadefoot toad, San Joaquin kit fox, Tipton kangaroo rat, blunt-nosed leopard lizard, Mohave ground squirrel, burrowing owl, elderberry beetle, Joshua tree woodland, oak tree woodland, and Waters of the U.S. Responsibilities included compliance with the ACOE nationwide permit, CDFG streambed alteration agreement, and numerous USFWS, CDFG and County protection measures. Assumed responsibilities of lead field biologist. Coordinated with biologists, archaeologists, environmental inspectors, and construction personnel on a daily basis. Provided awareness trainings, pre-activity surveys, compliance monitoring, and ecological restoration support. Provided daily verbal summaries and written monitoring reports. Also recorded sensitive species and sign, minimized project impacts, and reported noncompliance issues. Received UPR 2000 safety training. [1/2000 - 10/2000: Chambers Group]

**AT&T, Telephone Communications Line Removal Project, Mojave Desert, California. Biological Consultant.** Provided environmental compliance support as outlined in the EIR, BE, and various regulatory permits for the AT&T P140 Coaxial Cable Removal Project located between Baker, CA and Laughlin, NV. Support was a cooperative effort with the ACOE, USFWS, NPS, CDFG, BLM, and CPUC. This linear project traversed several sensitive biological resource habitats including Mojave National Preserve, desert tortoise, desert bighorn sheep, Mohave ground squirrel, burrowing owl, Joshua tree woodland, and Soda dry lake. Responsibilities included compliance with the EIS, ACOE nationwide permit, CDFG streambed alteration agreement, USFWS BO for the desert tortoise, NPS standard use permit, construction plan of operations, and several other protection measures. Authorized biologist to work under the auspices of the USFWS BO issued for this project. Assumed responsibilities of assistant lead biologist. Coordinated with project biologists, NPS, BLM, and construction personnel on a daily basis. Provided awareness trainings, pre-activity surveys, compliance monitoring, and ecological restoration support. Provided daily verbal summaries and several written standardized reports. All desert tortoises within the zone of impact were captured, processed, and relocated. Processing entailed weighing, measuring, marking, sexing, health profiling, diagramming, and photographing each tortoise. Sensitive plants including Joshua trees and cacti were flagged and avoided when possible. Joshua trees directly within the right-of-way were excavated and relocated nearby. Additional responsibilities included recording sensitive species and sign, collecting desert tortoise shell remains, minimizing project impacts, and reporting noncompliance issues. [10/1999 - 11/1999: On-track Consulting]

**U.S. Air Force, Edwards Air Force Base, California. Program Manager.** Directed the conservation program comprising of natural resources, cultural resources, and Environmental Impact and Analysis Process (EIAP) staff in support of AFFTC/EM. Additionally, supported joint efforts with the US Army, Navy, and Marines. Managed an annual 2.5 million dollar budget with a staff consisting of over 40 biologists, archaeologists, and environmental planners. Assumed responsibilities of the Environmental Department Manager in his absence. Department comprised of over 100 staff members and an annual 7 million dollar budget. Responsible for providing technical and administrative support to ensure compliance with Federal, State, local, and Air Force regulations pertaining to natural resources, cultural resources, and EIAP. These regulations included NEPA, ESA, SA, MBTA, FWCA, CWA, National Historic Preservation Act, Archaeological Resources Protection Act, and Native American Graves Protection and

Repatriation Act. Provided support to other programs within the department such as AWQ, HW, Installation Restoration Program, GIS, and Community Relations Program. Responsible for employee hiring, development, evaluation, morale, discipline, and termination. Developed, planned, budgeted, scheduled, tracked, and reported overall support using database, spreadsheet, presentation, and timeline software. Produced statements of work, statements of qualifications, budgets, proposals, cost estimates, and metrics. Established priorities to ensure tasks were completed within time and budget constraints. Procured necessary materials and equipment to perform program tasks. Reviewed, commented, and approved all conservation reports and other government deliverables prior to customer submittal. Interfaced with client (Air Force) on a daily basis. Member of several technical and review committees. Promoted employee development through continued education courses and professional memberships. Participated in employee recognition programs. Promoted community outreach by volunteering for Science Fairs, Job Fairs, Base Open House, Antelope Valley Fair, and classroom/field trip educational events for local schools. [09/1998 - 09/1999: Computer Sciences Corporation]

**U.S. Air Force, Edwards Air Force Base, California. Section Lead.** Supervised and trained several natural resources staff in support of AFFTC/EM. Provided technical and administrative support to ensure compliance with Federal, State, local, and Air Force regulations pertaining to natural resources. These regulations included NEPA, ESA, SA, MBTA, FWCA, and CWA. Responsible for developing, planning, budgeting, scheduling, tracking and reporting using database, spreadsheet, presentation, and timeline software. Provided technical support to other programs within the department such as EIAP, CR, AWQ, HW, Installation Restoration Program, GIS, and Community Relations Program. Administrative writing experience included statements of work, statements of qualifications, standard operating procedures, budgets, proposals, cost estimates, and metrics. Technical writing experience included EIS and EA support, ESA No Affect Letters, ESA Annual Reports, resource management plans, biological assessments, damage assessments, mitigation/monitoring plans, standardized field forms, and compliance monitoring reports. Fieldwork experience included biological research, presence/absence surveys, clearance surveys, pre-activity surveys, compliance monitoring, awareness training, radio telemetry, bird banding/tagging, small mammal trapping, wildlife relocations, wildlife damage control, ecological restoration, and floral/faunal inventories. Responsible for managing sensitive species and habitats including desert tortoise, desert cymopterus, Barstow woolly sunflower, alkali mariposa lily, Mohave ground squirrel, burrowing owl, American badger, LeConte's thrasher, golden eagle, prairie falcon, loggerhead shrike, Waters of the US (3 playas and 1 wetland), Joshua tree woodland, mesquite woodland (Los Angeles Significant Ecological Area), yardangs, and desert tortoise critical habitat. Permit coordination experience included writing 16 BAs in support of ESA Section 7 consultations, ESA compliance monitor authorizations, CWA Section 401/404 permits, MBTA depredation permits, State scientific collection permits, and bird banding permits. Familiar with various Federal, State, and local protocols and guidelines pertaining to biological field techniques and documentation. Established priorities to ensure tasking was completed within time and budget constraints. Reviewed, commented, and approved all natural resources reports and other government deliverables prior to customer submittal. Assisted customer with development of an overall natural resources management strategy for Edwards AFB. Administered the Base desert tortoise adoption, natural resources awareness training, and compliance monitoring programs. Routinely coordinated with Security Police on wildlife damage control issues. Maintained client (Air Force) relationships on a daily basis. Coordinated directly with project proponents to minimize environmental impacts. Developed various mitigation measures. Experienced with GIS and GPS technology. Authorized biologist on over 40 USFWS BOs issued to Edwards AFB. Promoted community outreach by volunteering for numerous

Science Fairs, Job Fairs, Base Open House, Antelope Valley Fair, and classroom/field trip educational events for local schools. Received DoD defensive driver's and explosive ordnance training. Co-recipient of the Regional Award of Merit for Environmental Resources and Conservation by the Kern Council of Governments. [07/1991 - 08/1998: Computer Sciences Corporation]

**BLM, Desert Tortoise Study Plot, Kramer Junction, California. Biological Consultant.** Original research team member of a long-term mark-recapture study designed to monitor the desert tortoise. Established a new 60-day study plot near Kramer Junction, CA. Study was a cooperative effort with the USFWS, BLM, and CEC. Authorized biologist to work under the auspices of the USFWS BO issued for this project. Surveyed, captured, processed, and released desert tortoises. Processing entailed identifying, weighing, measuring, marking, sexing, health profiling, diagramming, photographing, and attaching radio transmitters and PIT tags. Additional responsibilities included daily radio tracking, recapturing and processing tortoises, recording desert tortoise sign, collecting shell remains, and assessing human impacts. Provided thorough documentation using several standardized field forms. Procedures were accomplished in accordance with permits, protocols, and guidelines. [04/1991 - 06/1991: EnviroPlus Consulting]

**KRGT, Kern River Gas Transmission Pipeline, Mojave Desert, California. Biological Consultant.** Provided environmental compliance support as outlined in the EIR, BO, Memorandum of Understanding and various other regulatory permits for the Kern River Gas Transmission Pipeline Responsible for the segment located between Mesquite, NV and Barstow, CA. Support for this linear project was a cooperative effort with the ACOE, USFWS, CDFG, BLM, and FERC. Ensured adherence to established permit conditions, mitigation measures, protocols, and guidelines to minimize environmental impacts. Authorized biologist to work under the auspices of the USFWS BO issued for this project. Responsible for awareness trainings, pre-activity surveys, compliance monitoring, tortoise relocations, ecological restoration, and daily reports. Produced extensive field notes to document desert tortoises and sign, daily construction activities, and any noncompliance issues. Operated fiber optic scope to ensure no tortoise presence within burrows. [03/1991 - 04/1991: Dames and Moore]

**U.S. Air Force, Edwards Air Force Base, California. Biological Consultant.** Provided environmental compliance support with Federal, State, local, and Air Force regulations pertaining to natural resources including NEPA, ESA, MBTA, FWCA, and CWA. Responsibilities included biological assessments, damage assessments, pre-activity and clearance surveys, inventories, compliance monitoring, and awareness trainings. Provided natural resources sections and reviews of environmental assessments. Conducted field surveys and produced biological assessments in support of Section 7 consultations. Authorized biologist to work under the auspices of the USFWS BOs issued to the Air Force. [10/1990 - 06/1991: Computer Sciences Corporation]

**Del Webb/Summerlein Homes, Las Vegas, Nevada. Biological Consultant.** Performed desert tortoise pre-activity surveys and relocations in preparation for proposed golf course and housing development sites in Las Vegas and Henderson, NV. Support was a cooperative effort with USFWS and Nevada Division of Wildlife. Authorized biologist to work under the auspices of the USFWS BO issued for this project. Surveyed, captured, processed, and relocated desert tortoises outside impact zones. Processing entailed identifying, weighing, measuring, marking, sexing, health profiling, drawing blood samples, rehydrating, diagramming, and photographing each tortoise. Additional responsibilities included recording desert tortoise sign, collecting shell remains, and assessing human impacts. Provided thorough documentation using several standardized

field forms. Procedures were accomplished in accordance with the EIR, permits, protocols, and guidelines. [08/1990 - 10/1990: Converse Environmental]

**CDFG, Wild Trout Program, Rancho Cordova, California. Seasonal Biologist.** Crew leader of the Wild Trout Program. Responsible for assessing and monitoring the health of California's wild trout fishery. Supervised several staff members and volunteers. Assigned duties, maintained schedules, coordinated activities, resolved conflicts, and ensured objectives were met. Conducted freshwater fish population censuses by boat and backpack electro-shocking. Captured, identified, weighed, measured, marked, removed scale samples, and released fish at point of capture to assess health of fishery. Performed riparian and stream habitat assessments to determine health of system. Determined water quality and flow to assess health of stream. Photo documented procedures and sites for future reference. Provided thorough documentation using standardized field forms. Duties were performed at various streams throughout California. [07/1990: CDFG]

**Honda Motor Corporation, California City Test Track, Los Angeles, California. Biological Consultant.** Performed desert tortoise pre-activity surveys and relocations in preparation for the construction of the Honda Corporation automobile test track located in Cantil, CA. Cooperative effort with the USFWS, CDFG, BLM, and University of California Los Angeles. Authorized biologist to work under the auspices of the USFWS BO issued for this project. Surveyed, captured, processed, and relocated desert tortoises outside the impact zone. Processing entailed identifying, weighing, measuring, marking, sexing, health profiling, nasal flushing, drawing blood samples, diagramming, photographing, and radio transmitter attachment. Cared for over 20 tortoises that were placed in temporary holding pens to monitor their health. Additional responsibilities included radio tracking, adaptive behavioral studies of relocated tortoises, recording desert tortoise sign, collecting shell remains, and assessing project impacts. Provided thorough documentation using several standardized field forms. Procedures were accomplished in accordance with the EIR, permits, protocols, and guidelines. [02/1990 - 06/1990: SAIC]

**CDFG, Game Bird Hunting Program, Oroville, California. Seasonal Biologist.** Operated hunter check stations at Colusa, Delevan, Sutter, and Sacramento National Wildlife Refuges. Cooperative effort with USFWS. Escorted hunters throughout refuges. Assigned waterfowl hunter blinds. Monitored hunter activity. Identified and recorded bagged waterfowl and upland game birds. Ensured compliance with hunting regulations. Reported all offenses to the game warden. [11/1989 - 01/1990: CDFG]

**CDFG, Wild Trout Program, Rancho Cordova, California. Seasonal Biologist.** Assistant crew leader for the Wild Trout Program. Responsible for monitoring and assessing the health of California's wild trout fishery. Supervised several staff members and volunteers in absence of crew leader. Conducted freshwater fish population censuses by boat and backpack electro-shocking. Captured, identified, weighed, measured, marked, removed scale samples, and released fish at point of capture to assess health of fishery. Performed riparian and stream habitat assessments to determine health of system. Determined water quality and flow to assess health of stream. Photo documented procedures and sites for future reference. Provided thorough documentation using standardized field forms. Duties were performed at various streams throughout California. [07/1989 - 11/1989: CDFG]

## Honors and Awards

Co-recipient of the Kern Council of Governments *Regional Award of Merit for Environmental Resources and Conservation*. Computer Sciences Corporation. 1998.

## Publications and Presentations

*Migratory Birds Indirectly Benefiting from Dust Control at Owens Lake, CA*. The Wildlife Society Annual Conference. Poster Presentation. Burlington, VT. 2003

*Administering a United States Fish and Wildlife Service Approved Desert Tortoise Awareness Briefing*. Desert Tortoise Council Workshop. Paper Presentation. Ridgecrest, CA. 2000 – 2006.

*Desert Tortoise Education Program at Edwards Air Force Base*. National Military Fish and Wildlife Association Conference. Paper Presentation. Orlando, FL. 1998.

*Freshwater Shrimp of Edwards Air Force Base, CA*. National Military Fish and Wildlife Association Conference. Poster Presentation. Orlando, FL. 1998.

## Contact Information

999 Town & Country Road  
4th Floor  
Orange, CA 92868  
714.567.2786  
Raymond.Romero@aecom.com

## **Ray Romero References**

USFWS Ventura  
Ray Bransfield  
Tel: 805.644.1766  
Email: ray\_bransfield@fws.gov

CDFG San Bernardino  
Becky Jones  
Tel: 661.285.5867  
Email: dfgpalm@roadrunner.com

BLM Palm Springs  
Mark Massar  
Tel: 760.833.7100  
Email: mark\_massar@ca.blm.gov

County of San Bernardino  
Milo Rivera  
Tel: 951.310.8325  
Email: sierraazuel@sbcglobal.net

Edwards AFB  
Mark Hagan  
Tel: 661.277.1401  
Email: mark.hagan@edwards.af.mil

Kiva Biological  
Peter Woodman  
Tel: 760.861.3961  
Email: kivabio@aol.com

EnviroPlus Consulting  
Gilbert Goodlett  
Tel: 760.954.4265  
Email: torthunter@aol.com

## DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

This form should be used to provide your qualifications to agency officials if you wish to undertake the duties of an authorized biologist with regard to desert tortoises during construction or other projects authorized under Sections 7 (Biological Opinions) or 10(a)(1) (B) (i.e. Habitat Conservation Plans) of the Endangered Species Act.

(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

**1. Contact Information:**

|                              |                              |
|------------------------------|------------------------------|
| <b>Name</b>                  | Ray Romero                   |
| <b>Address</b>               | 40 Palatine #109             |
| <b>City, State, Zip Code</b> | Irvine, CA 92612             |
| <b>Phone Number(s)</b>       | 8057987656                   |
| <b>Email Address</b>         | romero_raymond@sbcglobal.net |

**2. Date:** MAY 14, 2010

**3. Areas in which authorization is requested (check all that apply):**

- San Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)
- Riverside, San Diego, and Imperial Counties, California (Carlsbad office)
- Nevada     Utah     Arizona

**4. Please provide information on the project:**

|  |                            |              |
|--|----------------------------|--------------|
| <b>USFWS Biological Opinion or HCP No. When Applicable</b> |                            | <b>Date:</b> |
| <b>Project Name</b>  | Blythe Solar Power Project |              |
| <b>Federal Agency (If Applicable)</b>                      | Bureau of Land Management  |              |
| <b>Proponent or Contractor</b>                             | Palo Verde Solar I         |              |

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

| Species | Dates | State (specify) or Federal Permit Number | Authorized Activities |
|---------|-------|--|-----------------------|
|         |       |  |                       |
|         |       |  |                       |
|         |       |  |                       |

6. Education: Provide up to three schools, listing most recent first:

| Institution               | Dates attended | Major/Minor                                  | Degree received |
|---------------------------|----------------|--|-----------------|
| HUMBOLDT STATE UNIVERSITY | 9/84-5/90      | WILDLIFE MANAGEMENT<br>MAJOR FISHERIES MINOR | MAY 1990        |
| VENTURA COLLEGE           | 9/81-6/84      | LIBERAL ARTS AND SCIENCES                    | JUNE 1984       |
|                           |                |  |                 |

7. Desert Tortoise Training.

| Name/Type of Training                      | Dates (From/To) | Location       | Instructor/Sponsor |
|--|-----------------|----------------|--------------------|
| 1. Classes<br>DTC WORKSHOP                 | 2000-2006       | RIDGECREST, CA | RAY ROMERO         |
| 2. Field Training<br>SAIC                  | 1990            | CANTIL, CA     | PETER WOODMAN      |
| 3. Translocation<br>CONVERSE ENVIRONMENTAL | 1990            | LAS VEGAS, NV  | GILBERT GOODLETT   |
| 4.   |                 |                |                    |

8. Experience - Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary. Please use numbers in each column; do not use "X's" to indicate participation in the activity. If your experience is limited to **less than three desert tortoise positions**, please include additional job experience and references in the section below (pg. 5).

**Experience by project and activity:**

| Please include:<br>Project Name<br>Job Title<br>Dates of Employment   | Supervisor / Project Contact<br>Name<br>Phone<br>Email address     | Conduct<br>Clearance<br>Surveys<br>(Hrs/Days) | Excavate<br>DT<br>burrows<br>(No.) | Locate DT<br>No.<br>< 100mm<br>≥ 100mm | Handled for<br>Relocation<br>DTs (No.) | Excavate,<br>and<br>relocate<br>DT nests<br>(No.) |
|---|--|---|------------------------------------|--|--|---|
| 1. DOD, RENEWABLE ENERGY, UTILITIES,<br>PRISON, LANDFILL<br>SENIOR BIOLOGIST<br>OCT 2001 - OCT 2007                             | TONY DEJULIO<br>9493336631<br>TDEJULIO@JSANET.COM                  | 1030 HRS                                      | 0                                  | 5 & 32                                 | 0                                      | 0   |
| 2. FORT IRWIN<br>SENIOR BIOLOGIST<br>NOV 2000 - OCT 2001  | MICKEY QUILLMAN<br>7602526000<br>MQUILLMAN@CA.BLM.GOV              | 120 HRS                                       | 0                                  | 0 & 6                                  | 0                                      | 0   |
| 3. LEVEL (3) COMMUNICATIONS<br>SENIOR BIOLOGIST<br>JAN 2000 - OCT 2000  | LARRY FREEBERG<br>9492615414<br>LFREEBERG@CHAMBERSGROUPINC.<br>COM | 850 HRS                                       | 20                                 | 3 & 10                                 | 5                                      | 0   |
| 4. AT&T COMMUNICATIONS<br>SENIOR BIOLOGIST<br>OCT 1999 - NOV 1999   | GLENN GOODLETT<br>7603713592<br>TORTHUNTER@AOL.COM                 | 280 HRS                                       | 48                                 | 5 & 30                                 | 30                                     | 0   |
| 5. EDWARDS AIR FORCE BASE<br>SENIOR BIOLOGIST<br>JUL 1991 - SEPT 1999   | MARK HAGAN<br>6612771401<br>MARK.HAGAN@EDWARDS.AF.MIL              | 4850 HRS                                      | 300                                | 50 & 250                               | 30                                     | 0   |
| 6. BLM<br>BIOLOGIST<br>APR 1991 - JUN 1991  | GILBERT GOODLETT<br>7603713592<br>TORTHUNTER@AOL.COM               | 260 HRS                                       | 0                                  | 4 & 28                                 | 32                                     | 0   |
| 7. KERN RIVER GAS TRANSMISION<br>BIOLOGIST MAR 1991 - APR 1991<br>LAS VEGAS HOUSING DEVELOPERS<br>BIOLOGIST AUG 1990 - OCT 1990 | TOM OLSON<br><br>CRAIG KNOWLES                                     | 700 HRS                                       | 150                                | 15 & 75                                | 65                                     | 3   |

**Experience by project and activity (continued):** Each project number should correspond with the project listed on the previous page

| Project Name<br>(Number should correspond to previous page) | Construct<br>Artificial<br>Burrows<br>(No.) | Monitor project<br>equipment and<br>activities (Hrs/Days) | Oversee project<br>compliance (Hrs/<br>Days) | Supervise DT<br>field staff<br>(Hrs/Days) and<br>No. staff<br>supervised | DT fence<br>Installation<br>and<br>inspection<br>(Hrs/Days) | Present DT<br>Awareness<br>Training<br>(No.) |
|---|---|---|--|--|---|--|
| 1. DOD, RENEWABLE ENERGY, UTILITIES,<br>PRISON, LANDFILL    | 0   | 2,400   | 2,400  | 2,800  | 100   | 8  |
| 2. FORT IRWIN   | 0   | 40  | 100  | 140  | 0   | 2  |
| 3. LEVEL (3)  | 0   | 1,200   | 2,400  | 2,400  | 120   | 16   |
| 4. AT&T   | 20  | 200   | 480  | 480  | 100   | 4  |
| 5. EDWARDS AIR FORCE BASE                                   | 20  | 5,000   | 10,000                                       | 10,000   | 1,800   | 100  |
| 6. BLM  | 0   | 0   | 0  | 0  | 0   | 0  |
| 7. KERN RIVER<br>LAS VEGAS                                  | 5   | 350   | 350  | 0  | 40  | 5  |

**Summary of experience:**

Total time spent for all desert tortoise-related field activities (referenced above):

Specify total number of hours:

OR total number of 8-hour days: APPROX. 20,000 HRS

Total number of miles/kilometers walked conducting survey transects:

Total number of wild, free-ranging desert tortoises you personally handled:

<100 mm: 20

≥100 mm: 142

Additional supervisory experience other than with desert tortoise work

| Project               | Hours | Staff (No.) |
|-----------------------|-------|-------------|
| WIND AND SOLAR ENERGY | 4,000 | 40          |
|                       |       |             |
|                       |       |             |
|                       |       |             |

Additional references for individuals whom have held **less than three** positions working with desert tortoise

| Project Name<br>Job Title<br>Dates of employment | Supervisor / Project Contact<br>Name<br>Phone<br>Email address |
|--|--|
|  |  |
|  |  |
|  |  |

I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.

I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec. 1001.

Signed: *[Signature]*

Date: 14 May 2010

**Shelly Dayman Resume, References and Authorized  
Biologist Request Form**

**Shelly Dayman****Wildlife Biologist**

1420 Kettner Blvd, Suite 500

San Diego, CA, 92101

Office: 619 684 6931 Cell: 619 820 0768

**Education**

BS, Biology, Ecology Major, University of Calgary, 1994

**Certifications**

FERC Environmental Compliance

Desert Tortoise Handling Workshop

Mohave Ground Squirrel Workshop

Shelly Dayman has 9 years of experience conducting biological surveys including vegetation mapping; construction monitoring; and wildlife surveys for desert tortoise, western burrowing owl, and small mammals in southwestern United States. Ms. Dayman is familiar with Biological Opinions, Streambed Alteration Agreements, Biological Resources Reports, Environmental Assessment/Initial Studies, Mitigated Negative Declarations, the biological sections of Environmental Impact Reports and Statements as well as the western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

Ms. Dayman has experience in the identification of flora and fauna in the Mohave, Sonoran, and Chihuahuan Deserts, with experience in sage scrub habitat, riparian areas, chaparral, playas and vernal pools, and woodlands and disturbed habitat in the southern United States. She has conducted small mammal trapping in the Sonoran and Chihuahuan Deserts, with some trapping experience in sage scrub and chaparral habitat in Riverside County. She has performed protocol level surveys for burrowing owl and Mohave Desert tortoise. Ms. Dayman has over 2,500 hours of experience conducting desert tortoise surveys and has observed and conducted visual health assessments on 19 desert tortoises during the course of surveys.

## **Project Experience**

### **Solar Millenium Power Projects, Kern and Riverside Counties, CA**

Conducted focused Mohave Desert tortoise and burrowing owl protocol focused surveys for a solar array project. Responsible for project planning, survey coordination, and writing of technical documents.

### **Los Angeles Department of Water & Power Niland Solar Energy Survey, Niland, CA**

Conducted protocol burrowing owl surveys in Imperial County. Biological resources were assessed and appropriate mitigation measures for resources observed were recommended.

### **Cal Energy Black Rock Survey, Calipatria, CA**

Conducted a burrowing owl survey in Imperial County. Described biological resources on-site and appropriate mitigation measures.

### **Sloan Canyon Trail Project, Henderson, NV**

Conducted focused Desert tortoise surveys for a trail project on Bureau of Land Management land for a proposed trail.

### **Mojave Solar Power Project, San Bernardino County, CA**

Conducted focused Mohave Desert tortoise and burrowing owl protocol focused surveys for a solar array project.

### **Beacon Solar Power Project, Kern County, CA**

Conducted focused Desert tortoise protocol surveys. Mapped sign of other special status wildlife species.

### **Confidential Project**

Conducted biological reconnaissance surveys throughout the Mojave desert (Kern County and San Bernardino County) to determine suitability of habitat for sensitive and/or listed species. Assisted client in assessing sites for suitability for development.

### **SANDAG and Caltrans District 7 SR76 Tracking and Road Kill Surveys, Oceanside, CA**

Assisted in a movement study to determine wildlife corridors. Identified wildlife tracks and road kill.

### **Bureau of Land Management Sloan Canyon Biological Survey, Henderson, NV**

Conducted a biological survey on BLM land within this area of the Mohave desert. The survey used USFWS protocols for Mohave Desert tortoise and other federal, state, and BLM protected species.

### **City of Murrieta Guava Street Natural Environment Study, Murrieta, CA**

Conducted a focused burrowing owl survey for a project involving the removal and replacement of an existing bridge. Assisted in the preparation of an NES with compliance with the western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

### **City of Murrieta Main Street Natural Environment Study, Temecula, CA**

Conducted a focused burrowing owl survey for a project involving the removal and replacement of an existing bridge. Assisted in the preparation of an NES with compliance with the western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

### **County of Riverside Proposed Projects, Riverside, CA**

Reviewed proposed projects to determine if they were consistent with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Attempted to establish an "active relocation" program for burrowing owls in Western Riverside County. Reviewed environmental documents, including EIRs, biological surveys, and archaeological surveys. Work was performed prior to joining this firm.

### **Kern River Pipeline Project, Barstow, CA**

Conducted right-of-way and buffer surveys for special-status species (primarily the threatened desert tortoise). Documented daily construction and biological activities. Worked with the construction contractor,

environmental inspectors, the lead biologist, and other biological monitors to identify and eliminate potential environmental issues. Complied with the U.S. Fish and Wildlife Federal Biological Opinion, the California Department of Fish and Game 2081 Permit, the Memorandum of Understanding and FERC requirements and guidelines. Work was performed prior to joining this firm.

**The University of Arizona, Research Studies, Tucson, AZ**

Evaluated biological communities including plant, invertebrate and small mammal communities. Determined percent cover, biomass and plant species diversity. Captured and processed small mammals, made species identifications, and recorded body measurements. Identified pitfall trapped invertebrates to functional taxonomic groups. Used radio-telemetry to determine the effects of roads on mortality in western box turtles. Work was performed prior to joining this firm.

**References**

Arthur Davenport  
Lead Biologist - Greystone Transmission Line  
Davenport Biological Services (formerly with USFWS)  
P.O. Box 1692  
Barstow, CA 92312  
Telephone: 619-729-4242  
artdavenpo@aol.com

Charles German  
Lead Biologist - Kern River Pipeline  
P.O. Box 3351  
Wrightwood, CA 92397  
Telephone: 805-895-9842  
eric\_german@yahoo.com

Milo Rivera  
Wildlife Biologist County of San Bernadino  
2405 Falling Oak Dr.  
Riverside, CA 92506  
Telephone: 951-310-8325  
sierraazuel@sbcglobal.net

## DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

This form should be used to provide your qualifications to agency officials if you wish to undertake the duties of an authorized biologist with regard to desert tortoises during construction or other projects authorized under Sections 7 (Biological Opinions) or 10(a)(1) (B) (i.e. Habitat Conservation Plans) of the Endangered Species Act.

(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

### 1. Contact Information:

|                              |  |
|------------------------------|--|
| <b>Name</b>                  | Shelly Dayman                              |
| <b>Address</b>               | 1420 Kettner Blvd., Suite 500              |
| <b>City, State, Zip Code</b> | San Diego, CA 92101                        |
| <b>Phone Number(s)</b>       | 619-233-1454 (office), 619-820-0768 (cell) |
| <b>Email Address</b>         | shelly.dayman@aecom.com                    |

### 2. Date:

### 3. Areas in which authorization is requested (check all that apply):

- San Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)  
 Riverside, San Diego, and Imperial Counties, California (Carlsbad office)  
 Nevada     Utah     Arizona

### 4. Please provide information on the project:

|  |                            |              |
|--|----------------------------|--------------|
| <b>USFWS Biological Opinion or HCP No. When Applicable</b> |                            | <b>Date:</b> |
| <b>Project Name</b>  | Blythe Solar Power Project |              |
| <b>Federal Agency (If Applicable)</b>                      | USFWS                      |              |
| <b>Proponent or Contractor</b>                             | Palo Verde Solar I, LLC    |              |

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

| Species | Dates | State (specify) or Federal Permit Number | Authorized Activities |
|---------|-------|--|-----------------------|
|         |       |  |                       |
|         |       |  |                       |
|         |       |  |                       |

6. Education: Provide up to three schools, listing most recent first:

| Institution                            | Dates attended | Major/Minor | Degree received |
|--|----------------|-------------|-----------------|
| University of Calgary, Calgary, Canada | 1990-1994      | Ecology     | B.S.            |
|  |                |             |                 |
|  |                |             |                 |

7. Desert Tortoise Training.

| Name/Type of Training                            | Dates (From/To) | Location       | Instructor/Sponsor      |
|--|-----------------|----------------|-------------------------|
| 1. Classes<br>DT Surveying, Monitoring, Handling | 11/2009         | Ridgecrest, CA | Desert Tortoise Council |
| 2. Field Training                                |                 |                |                         |
| 3. Translocation                                 |                 |                |                         |
| 4.<br>DT Surveying, Monitoring, Handling         | 11/2004         | Ridgecrest, CA | Desert Tortoise Council |

8. Experience - Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary. Please use numbers in each column; do not use "X's" to indicate participation in the activity. If your experience is limited to **less than three desert tortoise positions**, please include additional job experience and references in the section below (pg. 5).

**Experience by project and activity (continued):** Each project number should correspond with the project listed on the previous page

| Project Name<br>(Number should correspond to previous page) | Construct Artificial Burrows (No.) | Monitor project equipment and activities (Hrs/Days) | Oversee project compliance (Hrs/Days) | Supervise DT field staff (Hrs/Days) and No. staff supervised | DT fence Installation and inspection (Hrs/Days) | Present DT Awareness Training (No.) |
|---|------------------------------------|---|---------------------------------------|--|---|-------------------------------------|
| 1. Solar Millennium (Palo Verde Solar)                      | 0                                  | 0   | 0                                     | 300 Hrs<br>18 staff  | 0   | 6                                   |
| 2. Solar Millennium (Palo Verde Solar)                      | 0                                  | 5 Hrs   | 60 Hrs                                | 550 Hrs<br>28 staff  | 0   | 7                                   |
| 3. Edison Mission Energy                                    | 0                                  | 0   | 0                                     | 0  | 0   | 1                                   |
| 4. Sloan Canyon Trail Project                               | 0                                  | 0   | 0                                     | 60<br>2 staff  | 0   | 0                                   |
| 5. Beacon Solar Project                                     | 0                                  | 0   | 0                                     | 0  | 0   | 0                                   |
| 6. Mojave Solar One Project                                 | 0                                  | 0   | 0                                     | 0  | 0   | 0                                   |
| 7. Greystone Environmental                                  | 0                                  | 0   | 0                                     | 0  | 0   | 0                                   |

**Experience by project and activity (continued):** Each project number should correspond with the project listed on the previous page

| Project Name<br>(Number should correspond to previous page) | Construct Artificial Burrows (No.) | Monitor project equipment and activities (Hrs/Days) | Oversee project compliance (Hrs/Days) | Supervise DT field staff (Hrs/Days) and No. staff supervised | DT fence Installation and inspection (Hrs/Days) | Present DT Awareness Training (No.) |
|---|------------------------------------|---|---------------------------------------|--|---|-------------------------------------|
| 8<br><del>1.</del> Kern River Pipeline                      | 0                                  | 720 Hrs   | 720 Hrs                               | 0  | 40 Hrs  | 4                                   |
| <del>2.</del>   |                                    |   |                                       |  |   |                                     |
| <del>3.</del>   |                                    |   |                                       |  |   |                                     |
| <del>4.</del>   |                                    |   |                                       |  |   |                                     |
| <del>5.</del>   |                                    |   |                                       |  |   |                                     |
| <del>6.</del>   |                                    |   |                                       |  |   |                                     |
| <del>7.</del>   |                                    |   |                                       |  |   |                                     |

**Experience by project and activity:**

| Please include:<br>Project Name<br>Job Title<br>Dates of Employment                     | Supervisor / Project Contact<br>Name<br>Phone<br>Email address  | Conduct<br>Clearance<br>Surveys<br>(Hrs/Days) | Excavate<br>DT<br>burrows<br>(No.) | Locate DT<br>No.<br>< 100mm<br>≥ 100mm | Handled for<br>Relocation<br>DTs (No.) | Excavate,<br>and<br>relocate<br>DT nests<br>(No.) |
|---|---|---|------------------------------------|--|--|---|
| 1. Solar Millennium (Palo Verde Solar)<br>Lead Field Biologist<br>March 2010 - May 2010 | Julie Ogilvie, AECOM<br>619-764-6822<br>julie.ogilvie@aecom.com | 0   | 0                                  | 2                                      | 0                                      | 0   |
| 2. Solar Millennium (Palo Verde Solar)<br>Lead Field Biologist<br>March 2009 - May 2009 | Erin Riley, AECOM<br>619-764-6889<br>erin.riley@aecom.com       | 0   | 0                                  | 3                                      | 0                                      | 0   |
| 3. Edison Mission Energy<br>Biologist<br>August 2008                                    | Lyndon Quon, AECOM<br>619-233-1454<br>lyndon.quon@aecom.com     | 0   | 0                                  | 1                                      | 0                                      | 0   |
| 4. Sloan Canyon Trail Project<br>Biologist<br>June and July 2008                        | John Ko, AECOM<br>970-484-6073<br>john.ko@aecom.com             | 0   | 0                                  | 3                                      | 0                                      | 0   |
| 5. Beacon Solar Project<br>Biologist<br>May 2008  | Lyndon Quon, AECOM<br>619-233-1454<br>lyndon.quon@aecom.com     | 0   | 0                                  | 1                                      | 0                                      | 0   |
| 6. Mojave Solar One Project<br>Biologist<br>April and May 2008                          | Lyndon Quon, AECOM<br>619-233-1454<br>lyndon.quon@aecom.com     | 0   | 0                                  | 5                                      | 0                                      | 0   |
| 7. Greystone Environmental<br>Biological Monitor<br>December 2002 to April 2003         | Arthur Davenport<br>619-729-4242<br>artdavenpo@aol.com          | 0   | 0                                  | 1                                      | 0                                      | 0   |

**Experience by project and activity:**

| Please include:<br>Project Name<br>Job Title<br>Dates of Employment                       | Supervisor / Project Contact<br>Name<br>Phone<br>Email address | Conduct<br>Clearance<br>Surveys<br>(Hrs/Days) | Excavate<br>DT<br>burrows<br>(No.) | Locate DT<br>No.<br>< 100mm<br>≥ 100mm | Handled for<br>Relocation<br>DTs (No.) | Excavate,<br>and<br>relocate<br>DT nests<br>(No.) |
|---|--|---|------------------------------------|--|--|---|
| 8. <del>1.</del> Kern River Pipeline<br>Biological Monitor<br>December 2002 to April 2003 | Charles German<br>805-895-9842<br>eric_german@yahoo.com        | 0   | 0                                  | 3                                      | 0                                      | 0   |
| <del>2.</del>   |  |   |                                    |  |  |   |
| <del>3.</del>   |  |   |                                    |  |  |   |
| <del>4.</del>   |  |   |                                    |  |  |   |
| <del>5.</del>   |  |   |                                    |  |  |   |
| <del>6.</del>   |  |   |                                    |  |  |   |
| <del>7.</del>   |  |   |                                    |  |  |   |

**Summary of experience:**

Total time spent for all desert tortoise-related field activities (referenced above):

Specify total number of hours:

OR total number of 8-hour days: 250 days

Total number of miles/kilometers walked conducting survey transects:

1,900 miles

Total number of wild, free-ranging desert tortoises you personally handled:

<100 mm: 0

≥100 mm: 1

Additional supervisory experience other than with desert tortoise work

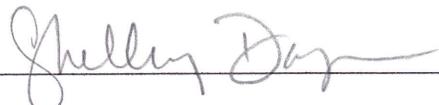
| Project                         | Hours | Staff (No.) |
|---------------------------------|-------|-------------|
| Salt Creek Burrowing Owl Survey | 100   | 10          |
|                                 |       |             |
|                                 |       |             |
|                                 |       |             |

Additional references for individuals whom have held **less than three** positions working with desert tortoise

| Project Name<br>Job Title<br>Dates of employment | Supervisor / Project Contact<br>Name<br>Phone<br>Email address |
|--|--|
|  |  |
|  |  |
|  |  |

I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.

I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec. 1001.

Signed:  Date: Sept 10, 2010

**Katie Hall****Biologist**

1420 Kettner Blvd, Suite 500  
San Diego, CA, 92101  
Office: 619 764 6826 Cell: 619 666 4031

**Education**

BA, Geography, Environmental Sciences concentration; minor  
Geology, University of Tennessee, Knoxville, TN, 1999.  
Graduated with Honors; Gamma Theta Upsilon. Emphasis on  
physical geography, biodiversity, ecology, biogeography, and  
geographic information systems.

**Certifications**

U.S. Army Corps of Engineers Wetland Delineator  
Certification Training Program 2003 & ARM Supplement 2007  
NEPA Documentation Certification Training Program, Shipley  
Group, 2002

**TxDOT Precertifications:**

Wetland Delineation  
USACE Permits - Nationwide Permits  
USACE Permits - Section 404 Permits  
Protected Species Determination (Habitat)  
Hazardous Materials Assessment  
Environmental Document Preparation  
Avian Focused Protocol Surveys  
Vernal Pool Fairy Shrimp  
Authorized Desert Tortoise Biologist  
Scientific Collection Permit  
Aborist Certification  
Desert Tortoise Handling Workshop  
Mohave Ground Squirrel Workshop  
California GnatCatcher Permit  
Wetland Delineation Training, Wetland Training Institute  
Wetland Delineation Arid West Supplement Training, Wetland  
Training Institute  
Beginner, Intermediate, and Advanced Tracker Naturalist  
Class, San Diego Tracking Team  
Wilderness First Responder, Wilderness Medical Associates

Katie Hall has more than 9 years of multidisciplinary experience serving as environmental scientist, ecologist, research assistant, and assistant manager on various projects related to environmental compliance, ecological assessment, and scheduling. Ms. Hall has 4 years of focused experience conducting biological surveys; vegetation mapping; construction monitoring; and wildlife surveys for desert tortoise, western burrowing owl, and has experience in the identification of flora and fauna in the Mohave, Sonoran, and Chihuahuan Deserts, with experience in sage scrub habitat, riparian areas, chaparral, playas and vernal pools, and woodlands and disturbed habitat in the southern United States.

Ms. Hall's relevant experience includes biological analysis and performing GPS-surveying on various NEPA-compliant projects for the Texas Department of Transportation (TxDOT) and the Federal Highway Administration (FHWA). Past experience includes projects for federal clients, such as the United States Army Corps of Engineers (USACE), U.S. Environmental Protection Agency (EPA), U.S. Army, and Department of Defense (DoD). State and local government contacts and clients include TxDOT; Texas Parks and Wildlife (TPWD); Texas Council on Environmental Quality (TCEQ); Texas Water Development Board (TWDB); and various municipalities throughout southern, central, and northern Texas. Additional experience on projects in Virginia and California with NEPA/CEQA compliance with local, state, and federal regulations.

Ms. Hall has worked on projects for private landowners, government agencies, and industrial companies. She has conducted surveys for state and federally listed plant and wildlife species. She has experience in performing protocol-level surveys for federally and state-listed threatened and endangered species including Desert tortoise, burrowing owl, Quino checkerspot butterfly, least Bell's vireo, and arroyo toad. She holds a State scientific collecting permit and a Federal Endangered Species Act 10(a)(1)(A) independent permit to perform fairy shrimp surveys, Desert Tortoise certification, and CA Arborist Certification. Ms. Hall has over 3,000 hours of experience conducting desert tortoise surveys, including clearance surveys, and has observed and conducted visual health assessments on 35 desert tortoises during the course of surveys. She has handled and relocated one desert tortoise during this time.

#### **Project Experience**

##### **Solar Millenium Power Projects, Kern and Riverside Counties, CA**

Conducted focused Mohave Desert tortoise and burrowing owl protocol focused surveys for a solar array project.

##### **Los Angeles Department of Water & Power Niland Solar Energy Survey, Niland, CA**

Conducted protocol burrowing owl surveys in Imperial County. Biological resources were assessed and appropriate mitigation measures for resources observed were recommended.

##### **Sanitation Districts of Los Angeles County Mesquite Regional Landfill Biological Compliance, Imperial County, CA**

Was the Authorized Biologist for desert tortoise. Responsible for project planning, coordination of construction and biological monitoring, mitigation compliance, and

implementing the biological monitoring during project construction.

##### **Cal Energy Black Rock Survey, Calipatria, CA**

Conducted a burrowing owl survey in Imperial County. Described biological resources on-site and appropriate mitigation measures.

##### **City of Murrieta Main Street Natural Environment Study, Temecula, CA**

Conducted a focused burrowing owl survey for a project involving the removal and replacement of an existing bridge. Assisted in the preparation of an NES with compliance with the western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

##### **Caltrans SR 76 Biological Assessment, San Diego, CA**

As a biologist, conducting preconstruction wildlife movement study for SR 76 biological assessment using tracking station, tracking transect, and roadkill surveys. Responsible for data summary and assisting with the summary monitoring report.

##### **Caltrans State Route 76 Realignment and Widening Project, San Diego County, CA**

As a biologist, performed formal USACE wetland and jurisdictional delineation for a 16-mile segment of the San Luis Rey River. Determined federal and state jurisdictional extents of a semi-arid riverine system, which contains rare and sensitive habitat for listed and special status plant and animal species. Assisted in obtaining agency concurrence on field methodology, and conducted and supervised delineation field teams during the formal USACE wetland delineation. Assisted in preparation of wetland delineation report sections and alternatives analysis.

##### **Pine Tree Wind Development Project, Kern County, CA**

Assisted in creating and presenting an educational program for the Pine Tree Wind Development Project focusing on species awareness and protecting the federal and state

listed Mojave desert tortoise. The education program was presented to the District's employees as mandated by the USFWS prior to working in areas potentially occupied by the tortoise. Assisted with presence/absence surveys for the federally threatened Mojave desert tortoise. Responsible for project planning, coordination of construction and biological monitoring, mitigation compliance, and implementing the biological monitoring during project construction.

**Pine Tree Wind Development Project, Kern County, CA**

Assisted in conducting focused surveys for the Mojave desert tortoise, following a modified protocol, approved by the local BLM office. Also assisted in reviewing sections of the environmental documentation for the project.

**Confidential Project**

As a wildlife biologist, assisted in conducting focused surveys for the western burrowing owl. Project area consisted of over 300 acres. Also assisted in reviewing sections of the environmental documentation for the project.

**Confidential Project**

Led the 2007-2008 desert tortoise and western burrowing owl field effort during a focused absence/presence survey of species that had the potential to occur within the impact area of a planned solar energy project located in the western Mojave desert. More than 2,000 acres of land was surveyed for the target species, in addition to a 1-mile buffer zone. Vegetation mapping and an inventory of any special status wildlife was also conducted. Responsible for planning and implementing all stages of the survey effort. Also responsible for data management and preparation of the desert tortoise survey report.

**MCB Camp Pendleton Basewide Vernal Pool Floral and Faunal Surveys, San Diego County, CA**

As a biologist, assisting in the field collection of vernal pool branchiopod species in various training areas on base. Assisting

in laboratory identification of *Branchinecta lindahli*, *Branchinecta sandiegonensis*, and *Streptocephalus woottoni*. Also helping to update and maintain data collected during these surveys in the database.

**Caltrans District 11 State Route 52 San Diego Ambrosia Transplantation Project, San Diego County, CA**

The terminus of State Route 52 will be extended eastward from its current location in Santee, California. A small population of San Diego ambrosia (*Ambrosia pumila*; federally listed as endangered) growing in the project footprint required transplantation to a nearby mitigation site. As the project restoration ecologist and field manager, Ms. Hall was responsible for planning, implementing, monitoring, and reporting on the project.

**MCB Camp Pendleton Focused Survey and Inventory of Pendleton Button-Celery, San Diego County, CA**

Ms. Hall was one of the main biologists that performed focused rare plant surveys for Pendleton button-celery (*Eryngium pendletonense*) on MCB Camp Pendleton. A total of 850 acres was surveyed for this rare plant to document new populations and obtain complete mapping and associated data for existing and new occurrences. Submeter GIS equipment and cutting-edge database technology were utilized during the survey process.

**Caltrans SR-76 Biological Assessment, San Diego, CA**

Conducting preconstruction wildlife movement study for SR 76 using tracking stations, tracking transects, and roadkill surveys. Also assisting in data collection and entry into the database. Previously performed rare plant surveys, southwestern arroyo toad surveys, least Bell's vireo surveys, and wetland delineation as part of the overall biological assessment.

**Los Angeles Department of Public Works Mesquite Habitat Monitoring Plan, Glamis, CA**

Assisted in creation and finalization of revised habitat monitoring plan to incorporate sampling of small mammals, birds, and vegetation as indicators for and in concert with desert tortoise monitoring.

**REFERENCES**

Lyndon Quon  
Senior Biologist  
AECOM  
1420 Kettner Blvd., Ste. 500  
San Diego, CA 92101  
619-233-1454  
lyndon.quon@aecom.com

Jacqueline Finck  
Wildlife Biologist  
Garcia & Associates  
435 Lincoln Way  
Auburn, CA 95603  
530-823-3151  
jfinck@garciaandassociates.com

Peggy Wood  
Wildlife Biologist  
1133 N. Cedarview Drive  
Bozeman, MT 59715  
435-881-6444  
pegwood@mtwest.net

## DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

This form should be used to provide your qualifications to agency officials if you wish to undertake the duties of an authorized biologist with regard to desert tortoises during construction or other projects authorized under Sections 7 (Biological Opinions) or 10(a)(1) (B) (i.e. Habitat Conservation Plans) of the Endangered Species Act.

(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

**1. Contact Information:**

|                              |                               |
|------------------------------|-------------------------------|
| <b>Name</b>                  | Katie Hall                    |
| <b>Address</b>               | 1420 Kettner Blvd., Suite 500 |
| <b>City, State, Zip Code</b> | San Diego, CA 92101           |
| <b>Phone Number(s)</b>       | 619-233-1454                  |
| <b>Email Address</b>         | katie.hall@aecom.com          |

**2. Date:** 9/10/10

**3. Areas in which authorization is requested (check all that apply):**

- San Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)  
 Riverside, San Diego, and Imperial Counties, California (Carlsbad office)  
 Nevada     Utah     Arizona

**4. Please provide information on the project:**

|  |                            |              |
|--|----------------------------|--------------|
| <b>USFWS Biological Opinion or HCP No. When Applicable</b> |                            | <b>Date:</b> |
| <b>Project Name</b>  | Blythe Solar Power Project |              |
| <b>Federal Agency (If Applicable)</b>                      | USFWS                      |              |
| <b>Proponent or Contractor</b>                             | Palo Verde Solar I, LLC    |              |

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

| Species | Dates | State (specify) or Federal Permit Number | Authorized Activities |
|---------|-------|--|-----------------------|
|         |       |  |                       |
|         |       |  |                       |
|         |       |  |                       |

6. **Education:** Provide up to three schools, listing most recent first:

| Institution                   | Dates attended | Major/Minor                        | Degree received |
|-------------------------------|----------------|------------------------------------|-----------------|
| University of Tennessee (UTK) | 1994-1999      | Geography/Geology<br>Minor Ecology | BA/BS           |
|                               |                |                                    |                 |
|                               |                |                                    |                 |

7. **Desert Tortoise Training.**

| Name/Type of Training                            | Dates (From/To) | Location       | Instructor/Sponsor      |
|--|-----------------|----------------|-------------------------|
| 1. Classes<br>DT Surveying, Monitoring, Handling | 11/2007         | Ridgecrest, CA | Desert Tortoise Council |
| 2. Field Training                                |                 |                |                         |
| 3. Translocation                                 |                 |                |                         |
| 4.   |                 |                |                         |

8. **Experience** - Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary. Please use numbers in each column; do not use "X's" to indicate participation in the activity. If your experience is limited to **less than three desert tortoise positions**, please include additional job experience and references in the section below (pg. 5).

**Experience by project and activity:**

| Please include:<br>Project Name<br>Job Title<br>Dates of Employment  | Supervisor / Project Contact<br>Name<br>Phone<br>Email address            | Conduct<br>Clearance<br>Surveys<br>(Hrs/Days) | Excavate<br>DT<br>burrows<br>(No.) | Locate DT<br>No.<br>< 100mm<br>≥ 100mm | Handled for<br>Relocation<br>DTs (No.) | Excavate,<br>and<br>relocate<br>DT nests<br>(No.) |
|--|---|---|------------------------------------|--|--|---|
| 1. Solar Millennium Projects, Kern and Riverside Counties<br>Desert Tortoise Biologist<br>March - May 2009                             | Erin Riley, AECOM<br>619-233-1454<br>erin.riley@aecom.com                 |   |                                    | 5                                      |  |   |
| 2. Mesquite Regional Landfill Project<br>Desert Tortoise Biologist/Monitor<br>Spring 2008  | Jennifer Guigliano, AECOM<br>619-233-1454<br>jennifer.guigliano@aecom.com | 500   |                                    | 7, 7                                   |  |   |
| 3. Pine Tree Wind Development Project<br>Desert Tortoise Biologist<br>2007 and 2008  | Lyndon Quon, AECOM<br>619-233-1454<br>lyndon.quon@aecom.com               | 500   | 1                                  | 0, 5                                   | 1                                      |   |
| 4. The Beacon Project<br>Desert Tortoise Biologist<br>April - May 2007   | Lyndon Quon, AECOM<br>619-233-1454<br>lyndon.quon@aecom.com               | 500   |                                    | 0, 5                                   |  |   |
| 5. Harper Lake Solar Project<br>Desert Tortoise Biologist<br>May - June 2007   | Lyndon Quon, AECOM<br>619-233-1454<br>lyndon.quon@aecom.com               | 500   |                                    | 1, 1                                   |  |   |
| 6. Union Pacific Railroad Glamis Derailment Project<br>Desert Tortoise Biologist/Monitor<br>February 2006                              | Lyndon Quon, AECOM<br>619-233-1454<br>lyndon.quon@aecom.com               |   |                                    | 0, 2                                   |  |   |
| 7. Pine Tree Wind Development Project - Barren Ridge Switching Station<br>Desert Tortoise Biologist/Monitor<br>August - September 2006 | Lyndon Quon, AECOM<br>619-233-1454<br>lyndon.quon@aecom.com               |   |                                    | 0, 2                                   |  |   |

**Experience by project and activity (continued):** Each project number should correspond with the project listed on the previous page

| Project Name<br>(Number should correspond to previous page)            | Construct Artificial Burrows (No.) | Monitor project equipment and activities (Hrs/Days) | Oversee project compliance (Hrs/Days) | Supervise DT field staff (Hrs/Days) and No. staff supervised | DT fence Installation and inspection (Hrs/Days) | Present DT Awareness Training (No.) |
|--|------------------------------------|---|---------------------------------------|--|---|-------------------------------------|
| 1. Solar Millennium Projects   |                                    | 12  |                                       | 500, 3-5   |   | 5                                   |
| 2. Mequite Regional Landfill Project                                   |                                    | 150   | 150                                   |  |   | 5                                   |
| 3. Pine Tree Wind Development Project                                  | 1                                  | 1,000   | 1,000                                 |  |   | 5                                   |
| 4. The Beacon Project  |                                    |   |                                       |  |   | 5                                   |
| 5. Harper Lake Solar Project   |                                    | 500   | 500                                   | 500, 3   |   | 5                                   |
| 6. Union Pacific Railroad Glamis Derailment Project                    |                                    | 240   | 240                                   |  | 240   | 2                                   |
| 7. Pine Tree Wind Development Project - Barren Ridge Switching Station |                                    | 240   | 240                                   |  | 240   | 5                                   |

**Summary of experience:**

Total time spent for all desert tortoise-related field activities (referenced above):

Specify total number of hours:

OR total number of 8-hour days: > 3,000 hours

Total number of miles/kilometers walked conducting survey transects:

> 2,000 miles

Total number of wild, free-ranging desert tortoises you personally handled:

<100 mm: 0

≥100 mm: 1

Additional supervisory experience other than with desert tortoise work

| Project             | Hours | Staff (No.) |
|---------------------|-------|-------------|
| Beacon Project-WBO  | 500   | 3           |
| Harper Lake Project | 500   | 3           |
|                     |       |             |
|                     |       |             |

Additional references for individuals whom have held less than three positions working with desert tortoise

| Project Name<br>Job Title<br>Dates of employment | Supervisor / Project Contact<br>Name<br>Phone<br>Email address |
|--|--|
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I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.

I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec. 1001.

Signed: Katie A. Hall Date: 9/10/10

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**APPENDIX D**

**USFWS BIOLOGICAL OPINION**

forthcoming

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**APPENDIX E**

**SAMPLE FORMS**

Change Evaluation

Notification

Non-compliance

Non-compliance Resolution Report

# CHANGE EVALUATION FORM

PALO VERDE SOLAR I, LLC

## BLYTHE SOLAR POWER PROJECT

Evaluation Number:  Date: \_\_\_\_\_ Phone: \_\_\_\_\_

Inspector: \_\_\_\_\_ Time: \_\_\_\_\_

Station Numbers: \_\_\_\_\_ to \_\_\_\_\_ Structure Number: \_\_\_\_\_

Milepost: \_\_\_\_\_ Map Number: \_\_\_\_\_

Evaluation Type:  Minor Change  Major Change (Requires Approval)

Land Ownership:  Private  Federal

Describe Change/Purpose: \_\_\_\_\_

Type of Resources: \_\_\_\_\_

Summary of Impacts: \_\_\_\_\_

Proposed Mitigation Measures: \_\_\_\_\_

Change From:

EIS Mitigation \_\_\_\_\_

COC \_\_\_\_\_

Project Description \_\_\_\_\_

Permit Conditions (list permit number and condition/requires permitting agency approval): \_\_\_\_\_

Reviewed by: \_\_\_\_\_ (SIGNATURE) \_\_\_\_\_ (NAME—PLEASE PRINT) \_\_\_\_\_ (DATE)

# NOTIFICATION FORM

PALO VERDE SOLAR I, LLC

## BLYTHE SOLAR POWER PROJECT

Notification Number:  Date: \_\_\_\_\_ Issued to: \_\_\_\_\_

Monitor: \_\_\_\_\_ Time: \_\_\_\_\_

Station Numbers: \_\_\_\_\_ to \_\_\_\_\_ Structure Number: \_\_\_\_\_

Milepost: \_\_\_\_\_ Map Number: \_\_\_\_\_

**BE AWARE THAT THE FOLLOWING PROJECT CONDITIONS (e.g., COCs, EIS, Local, State or Federal Permits) ARE NOT BEING MET:**

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**TO FIX OR CORRECT THE CONDITION YOU MUST:**

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If this condition is not resolved satisfactorily by \_\_\_\_\_, a non-compliance report will be issued.

Your prompt attention to this matter is appreciated.

**Notification Resolved:**

\_\_\_\_\_  
(SIGNATURE)

\_\_\_\_\_  
(NAME—PLEASE PRINT)

\_\_\_\_\_  
(DATE)

# NON-COMPLIANCE REPORT

PALO VERDE SOLAR I, LLC

## BLYTHE SOLAR POWER PROJECT

NCR Number:  Date: \_\_\_\_\_ Other Parties at Site: \_\_\_\_\_

Monitor: \_\_\_\_\_ Time: \_\_\_\_\_

Station Numbers: \_\_\_\_\_ to \_\_\_\_\_ Structure Number: \_\_\_\_\_

Milepost: \_\_\_\_\_ Map Number: \_\_\_\_\_

Non-Compliance Level:  Non-Compliance  Stop Task Order

Land Ownership:  Private  Federal

In Non-Compliance With:  EIS  COCs  State Permit  Federal Permit

Mitigation Measure Number/Permit and Condition Number: \_\_\_\_\_

Describe Resource Impact (Include Resource Number): \_\_\_\_\_

Describe Activity That Resulted in Non-Compliance: \_\_\_\_\_

Documentation:  Photo  Video  Drawing  Lab Sample  Other \_\_\_\_\_

Communication:  PVSI \_\_\_\_\_  CEC \_\_\_\_\_  BLM \_\_\_\_\_

Contractor /Operator \_\_\_\_\_  Other \_\_\_\_\_

Requirements for Resolution: \_\_\_\_\_

Resolved by: \_\_\_\_\_  
(SIGNATURE) (NAME—PLEASE PRINT) (DATE)

**NON-COMPLIANCE  
RESOLUTION REPORT**

PALO VERDE SOLAR I, LLC

**BLYTHE SOLAR POWER PROJECT**

NCR Number:  Date: \_\_\_\_\_ NCRR Number:

Monitor: \_\_\_\_\_ Time: \_\_\_\_\_

**Describe Affected Resources:** \_\_\_\_\_

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**Summary of Corrective Actions:** \_\_\_\_\_

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**Conditions of Approval:** \_\_\_\_\_

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**Approval:** \_\_\_\_\_  
(SIGNATURE) (NAME—PLEASE PRINT) (DATE)

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