

## **BEACON SOLAR ENERGY PROJECT'S REVISIONS TO BIOLOGICAL RESOURCES CONDITIONS OF CERTIFICATION**

### **Changes to the Conditions of Certification for Biological Resources**

#### **DESIGNATED BIOLOGIST SELECTION<sup>1</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, with at least three references and contact information, to the Energy Commission Compliance Project Manager (CPM) for approval in consultation with the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (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. 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 (USFWS 2008) and demonstrate familiarity with protocols and guidelines for the desert tortoise, and be approved by the USFWS; and
5. possess a recovery permit for desert tortoise and a California ESA Memorandum of Understanding pursuant to Section 2081(a) for desert tortoise and Mohave ground squirrel or have adequate experience and qualifications to obtain these authorizations.

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:** The project owner shall submit the specified information at least 90 days prior to the start of any construction-related ground disturbance, grading, boring or trenching-project-related site disturbance activities. No construction-related ground disturbance, grading, boring or

---

<sup>1</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 USFWS that they possess sufficient desert tortoise knowledge and experience to handle and move tortoises appropriately, and have received USFWS approval. Authorized Biologists 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 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.

trenching, or installation of desert tortoise exclusion fencing site or related facility activities 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 for consideration.

Designated Biologists shall complete a USFWS Qualifications Form (USFWS 2008) ([www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)) and submit it to the USFWS and CPM within 60 days prior to ground breaking for review and final approval.

## **DESIGNATED BIOLOGIST DUTIES**

**BIO-2** The project owner shall ensure that the Designated Biologist performs the following during any site mobilization activities, construction-related ground disturbance, grading, boring or trenching activities or installation of desert tortoise exclusion fencing and ~~site (or related facilities) mobilization, ground disturbance, grading, construction,~~ operation, and closure activities. The Designated Biologist may be assisted by the approved Biological Monitor(s) but remains the contact for the project owner and 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 condition 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 and USFWS, 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 submit in the Monthly Compliance Report to the CPM copies of all written reports and summaries that document biological resources compliance activities. 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/her duties cease, as approved by the CPM.

### **BIOLOGICAL MONITOR QUALIFICATIONS**

**BIO-3** The project owner's CPM-approved Designated Biologist shall submit the resume, at least three references, and contact information of the proposed Biological Monitors to the CPM for approval in consultation with CDFG and USFWS. The resume shall demonstrate, to the satisfaction of the CPM, the appropriate education and experience to accomplish the assigned biological resource tasks. Biological Monitors involved in any aspect of desert tortoise surveys or handling must meet the criteria to be considered a USFWS Authorized Biologist (USFWS 2008) and demonstrate familiarity with the most recent protocols and guidelines for the desert tortoise.

Biological Monitor(s) training by the Designated Biologist shall include familiarity with the conditions of certification, BRMIMP, WEAP, 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 all permits.

**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 project-related site disturbance activities or installation of desert tortoise exclusion fencing. 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 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 mobilization, ground disturbance, grading, construction, operation, and closure activities. The Designated Biologist shall remain the contact for the project owner and CPM.

**Verification:** The Designated Biologist shall submit in the Monthly Compliance Report to the CPM copies of all written reports and summaries that document biological resources compliance activities, including those conducted or monitored 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 his/her 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 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, construction 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;
3. Notify the CPM if there is a halt of any activities and advise the CPM of any corrective actions that have been taken or will be instituted as a result of the work stoppage, and
4. 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. The project owner shall notify the CPM of the circumstances and actions being taken to resolve the problem.

Whenever corrective action is taken by the project owner, a determination of success or failure will be made by the CPM within five working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made. Continuation of any work stoppage is not required during this time, provided the Designated Biologist has determined

that activities can resume. For resumption of activities potentially affecting listed species the Designated Biologist shall obtain concurrence from CDFG for state-listed species and USFWS for federally-listed species prior to lifting the work stoppage.

### **WORKER ENVIRONMENTAL AWARENESS PROGRAM (WEAP)**

**BIO-6** The project owner shall develop and implement BSEP-specific Worker Environmental Awareness Program (WEAP) and shall secure approval for the WEAP from USFWS, CDFG, and the CPM. The WEAP shall be administered to all on-site personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. The WEAP shall be implemented during site mobilization, desert tortoise fence installation, ground disturbance~~ground disturbance, grading preconstruction,~~ construction, operation, and closure activities. 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 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;
3. place special emphasis on desert tortoise and Mohave ground squirrel, including information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures;
4. present the meaning of various temporary and permanent habitat protection measures;
5. identify whom to contact if there are further comments and questions about the material discussed in the program; and
6. include a training acknowledgment form to be signed by each worker indicating that he/she 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 60 days prior to the start of any site mobilization and project construction-related site ground disturbance activities, the project owner shall provide to the CPM a copy of the draft WEAP and all supporting written materials and electronic media prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program.

The project owner shall provide in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. At least 10 days prior to site and related facilities mobilization, the project owner shall submit two copies of the CPM-approved final WEAP.

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

Throughout the life of the project, the WEAP worker education program 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 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), ~~shall and~~ submit two copies of the proposed BRMIMP to the CPM (for review and approval) and shall implement the measures identified in the approved BRMIMP. The BRMIMP shall incorporate impact avoidance and minimization measures described in final versions of the Raven Monitoring, Management, and Control Plan, the Desert Tortoise ~~Relocation/~~Translocation Plan, the Mohave Ground Squirrel ~~Relocation/~~Translocation Plan, Burrowing Owl Mitigation and Monitoring Plan, Sensitive Plant Protection Plan, and the Closure Plan.

The BRMIMP shall be prepared in consultation with the Designated Biologist and shall include 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, including the federal incidental take permit;
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. a detailed description of measures that shall be taken to avoid or mitigate temporary disturbances from construction activities;
7. all locations on a map, at an approved scale, of sensitive biological resource areas subject to disturbance and areas requiring temporary protection and avoidance during construction;
8. aerial photographs, at an approved scale, of all areas to be disturbed during project construction activities; include one set prior to any preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching, site or related facilities mobilization disturbance and one set subsequent to completion of project construction. ~~Provide planned timing of aerial photography and a description of why times were chosen.~~ Provide a final



- accounting of the before/after acreages and a determination of whether additional habitat compensation is necessary in the Construction Termination Report;
9. duration for each type of monitoring and a description of monitoring methodologies and frequency;
  10. performance standards to be used to help decide if/when proposed mitigation is or is not successful;
  11. all performance standards and remedial measures to be implemented if performance standards are not met;
  12. a discussion of biological resources-related facility closure measures including a description of funding mechanism(s); and
  13. a process for proposing plan modifications to the CPM and appropriate agencies for review and approval.
  14. 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 (CNDDB) per CDFG requirements.

**Verification:** The project owner shall submit the BRMIMP to the CPM at least 60 days prior to start of any preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching project-related site disturbance activities. The CPM, in consultation with other appropriate agencies, will determine the BRMIMP's acceptability within 45 days of receipt. 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 the CPM's approval of the final BRMIMP.

The project owner shall notify the CPM no less than five working days before implementing any modifications to the approved BRMIMP to obtain CPM approval. Any changes to the approved BRMIMP must also be approved by the CPM in consultation with appropriate agencies to ensure no conflicts exist.

Implementation of BRMIMP measures (construction activities that were monitored, species observed) will 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 site mobilization, ground disturbance, grading, and construction phases; and which mitigation and monitoring items are still outstanding.

The project owner shall submit sightings of any special-status species observed on the project site within five working days of such sightings to the CPM, the regional CDFG office, and to the California Natural Diversity Data Base (CNDDB) (California Department of Fish and Game, Natural Diversity Data Base, 1807 13th Street, Suite 202, Sacramento, CA 95814, (916) 324-3812). Sightings shall be reported using CNDDB forms and survey maps (available online at: [www.dfg.ca.gov/whdab/pdfs/natspec.pdf](http://www.dfg.ca.gov/whdab/pdfs/natspec.pdf)).

## IMPACT AVOIDANCE AND MINIMIZATION MEASURES

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

1. Limit Disturbance Area. 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 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, 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 will do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads (e.g. new spur roads) or the construction zone, the route will 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 BSEP site.
4. Monitor During Construction. ~~In areas that have not been fenced with desert tortoise exclusion fencing and cleared~~ the Designated Biologist ~~or the Designated Biologist directly supervising a~~ Biological Monitor shall be present at the construction site during all project activities that have potential to disturb soil, vegetation, and wildlife. ~~In areas that have not been fenced with tortoise exclusion fencing and cleared, †~~The USFWS-approved Designated Biologist (or Biological Monitor supervised by the Designated Biologist) shall walk immediately ahead of equipment during brushing and grading activities.
5. Minimize Impacts of Transmission/Pipeline Alignments, Roads, 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 2006) 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. ~~Road surfacing and sealants as well as s~~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. Avoid Vehicle Impacts to Desert Tortoise. Parking and storage shall occur within the 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, it will be left to move on its own. If it does not move within 15 minutes, a Biological Monitor may remove and relocate the animal to a safe location if temperatures are within the range described in the ~~USFWS protocol~~ current USFWS guidelines, the *Desert Tortoise Field Manual* (USFWS 2009) ([http://www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)) (~~[www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines) and Desert Tortoise Council 1999~~).
9. Avoid Wildlife Pitfalls. At the end of each work day, the Designated Biologist shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) outside the permanently fenced area 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 tortoise-exclusion fencing. All trenches, bores, and other excavations outside the areas permanently fenced with desert tortoise exclusion fencing shall be inspected periodically throughout and at the end of each workday by the Designated Biologist or a Biological Monitor. Should a tortoise or other wildlife become trapped, the Designated Biologist or Biological Monitor shall remove and relocate the individual to a safe location. Any wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed.
10. Avoid Entrapment of Desert Tortoise. Any construction pipe, culvert, or similar structure with a diameter greater than 3 inches, stored less than 8 inches above ground and within desert tortoise habitat (i.e., outside the permanently fenced area) for one or more days/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 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 attract desert tortoise, common ravens, and other wildlife to the site and shall take appropriate action to reduce water application where necessary.

12. 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.
13. 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.
14. Avoid Spread of Noxious Weeds. The project owner shall implement the following Best Management Practices during construction and operation to prevent the spread and propagation of noxious weeds:
  - a. Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes;
  - b. Prevent spread of non-native plants via vehicular sources by implementing Trackclean™ or other methods of vehicle cleaning for vehicles coming and going from construction sites. Earth-moving equipment shall be cleaned prior to transport to the construction site;
  - c. Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations, and
  - d. Avoid using invasive non-native species in landscaping plans and erosion control.
15. ~~Stockpile Topsoil. To increase chances for revegetation success, topsoil shall be stockpiled from the project site and along project linear features for use in revegetation. Native topsoil from the least disturbed locations and only areas that are relatively free of noxious weeds shall be used as a source of topsoil. Approximately 6-8 inches of topsoil shall be scraped from the borrow sites and stockpiled, with the top 1 inch from the borrow site used as top dressing in revegetation areas. All other elements of topsoil use shall be as described in *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003, pp. 39-40).~~

16. 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) with slopes toward a drainage shall be stabilized to reduce erosion potential.
17. Monitor Ground Disturbing Activities Prior to Pre-Construction Site Mobilization. If pre-construction site mobilization requires ground-disturbing activities ~~are required prior to site mobilization~~, 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.

**Verification:** All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures will 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.

## **DESERT TORTOISE RECLOCATION PLAN, CLEARANCE SURVEYS AND EXCLUSION FENCING**

**BIO-9** The project owner shall undertake appropriate measures to manage construction at the plant site and linear facilities in a manner to avoid or minimize impacts to desert tortoise. Methods for clearance surveys, fence specifications and installation, tortoise handling, artificial burrow construction, egg handling and other procedures shall be consistent with those described in the current USFWS guidelines, the *Desert Tortoise Field Manual* (USFWS 2009) ([http://www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)) Guidelines for Handling Desert Tortoise During Construction Projects (Desert Tortoise Council 1999) or more current guidance provided by CDFG and USFWS. The project owner shall also implement terms and conditions developed as part of the Habitat Conservation Plan process with USFWS. These measures include, but are not limited to, the following:

1. Fence Installation. Prior to construction-related ground disturbance activities, the entire plant site (~~east of the railroad tracks~~) shall be fenced with permanent desert tortoise-exclusion fence. To avoid impacts to desert tortoise during fence construction, the proposed fence alignment shall be flagged and the alignment surveyed within 24 hours prior to fence construction. Surveys shall be conducted by the Designated Biologist using techniques approved by the USFWS and CDFG. Biological Monitors may assist the Designated Biologist under his or her supervision. These surveys shall provide 100 percent coverage of all areas to be disturbed during fence construction and an additional transect along both sides of the proposed fence line. This fence line transect shall cover an area approximately 90 feet wide centered on the fence alignment. Transects shall be no greater than

15 feet apart. All desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined to assess occupancy of each burrow by desert tortoises and handled in accordance with USFWS-approved protocol.

- a. Timing, Supervision of Fence Installation. The exclusion fencing shall be installed prior to the onset of site clearing and grubbing. 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. ~~The permanent t~~Tortoise exclusionary fencing shall be installed per guidance in USFWS specifications 1-by 2-inch mesh sunk 12 inches into the ground, and 24 inches above ground (USFWS 2009 ).
  - c. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises, including gates that would exclude public access to the transmission line maintenance road at SR 14. The gates shall remain closed except during vehicle passage and may be electronically activated to open and close immediately after vehicle(s) have entered or exited to prevent extended periods with open gates, which might lead to a tortoise entering. Cattle grating designed to safely exclude desert tortoise shall be installed at the gated entries to discourage tortoises from gaining entry.
  - d. Utility Corridor Fencing. Utility corridors and tower locations shall be temporarily fenced with tortoise exclusion fencing to prevent desert tortoise entry during construction. Alternatively, site mobilization activities, construction-related ground disturbance, grading, boring or trenching activities may occur at unfenced utility corridors and tower locations if the Designated Biologist is present at all times in the immediate vicinity of such activities.
  - e. Fence Inspections. Following installation of the desert tortoise exclusion fencing ~~for both the permanent site fencing~~ and any temporary fencing in the utility corridors, the fencing shall be regularly inspected. Permanent fencing shall be inspected monthly and during/following all major rainfall events. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within two days of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing must be inspected weekly and, where drainages intersect the fencing, during and immediately 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 utility corridor or tower site for tortoise.
2. Desert Tortoise Clearance Surveys. Following construction of the tortoise exclusionary fencing around the Plant Site, all fenced areas shall be cleared of

tortoises by the Designated Biologist, who may be assisted by Biological Monitors under the supervision of the Designated Biologist. A minimum of two clearance surveys, with negative results, must be completed, and these must coincide with heightened desert tortoise activity from late March through May and during October. To facilitate seeing the ground from different angles, a second clearance survey shall be walked at 90 degrees to the orientation of the first clearance. Clearance surveys shall adhere to the current USFWS clearance survey protocols described in the *Desert Tortoise Field Manual* (USFWS 2009).

3. Relocation for Desert Tortoise West of SR 14. If desert tortoises are detected during clearance surveys within the project impact area west of SR 14, the Designated Biologist shall move the tortoise the shortest possible distance, keeping it out of harm's way but still within its home range. Desert tortoise encountered during construction of any of the utility corridors shall be similarly treated in accordance with the Relocation Plan. Any relocation efforts shall be in accordance with techniques described in the *Guidelines for Handling Desert Tortoise during Construction Projects* (Desert Tortoise Council 1999) or more current guidance on the USFWS website.
4. Relocation/Translocation for Desert Tortoise East of SR-14. To address desert tortoise encountered during clearance surveys within the project impact area east of SR 14, the project owner shall develop and implement a desert tortoise Relocation/Translocation Plan. The Relocation/Translocation Plan shall be consistent with current USFWS approved guidelines (USFWS 2009), and shall be approved by Energy Commission staff in consultation with the USFWS and CDFG. The Relocation/Translocation Plan shall designate a translocation site as close as possible to the project impact area east of SR 14 that, and which provides suitable conditions for long-term survival of the relocated /translocated desert tortoise.
5. Burrow Inspection. All potential desert tortoise burrows, including rodent burrows that may host juvenile tortoises, within the fenced area shall be searched for presence. In some cases, a fiber optic scope may be needed to determine presence or absence within a deep burrow. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined. Tortoises excavated from burrows shall be relocated/translocated to unoccupied natural or artificial burrows immediately following excavation in an area approved by the Designated Biologist if environmental conditions warrant immediate relocation. in accordance with procedures outlined in the Relocation/Translocation Plan and consistent with the most current USFWS guidelines (USFWS 2009).
6. Burrow Excavation. Burrows inhabited by tortoises shall be excavated by the Designated Biologist using hand tools, and then collapsed or blocked to prevent re-occupation. If excavated during May through July, the Designated Biologist shall search for desert tortoise nests/eggs. All desert tortoise handling and removal, and burrow excavations, including nests, shall be conducted by the

Designated Biologist in accordance with the USFWS-approved protocol ([USFWS 2009 Desert Tortoise Council 1999](#)) or more current guidance on the USFWS website.

7. Monitoring ~~Following During~~ Clearing. Following desert tortoise clearance removal from the plant site, and relocation/translocation to a new site, heavy equipment shall be allowed to enter the project site to perform earth work such as clearing, grubbing, leveling, and trenching. A **Designated Biologist**, or Biological Monitor **supervised by the Designated Biologist**, shall be on site during initial clearing and grading activities. Should a tortoise be discovered, it shall be relocated/translocated by the Designated Biologist as described above in accordance with the Relocation Plan.
8. 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 tortoise as described in the paragraph below. Desert tortoise moved from within project areas shall be marked for future identification as described in current USFWS guidelines, the *Desert Tortoise Field Manual* (USFWS 2009) ([http://www.fws.gov/ventura/speciesinfo/protocols\\_guidelines](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines))~~Guidelines for Handling Desert Tortoise during Construction Projects (Desert Tortoise Council 1999)~~ or more current guidance on the USFWS website. Digital photographs of the carapace, plastron, and fourth costal scute shall be taken. Scutes shall not be notched for identification.

**Verification:** Within ~~90 60~~ days prior to start of any pre-construction site mobilization activities, the project owner of publication of the Energy Commission Decision the project owner shall submit to Energy Commission Staff, USFWS and CDFG a draft Desert Tortoise Relocation/Translocation Plan. At least 60 days prior to start of any construction project-related ground disturbance activities, the project owner shall provide the CPM with the final version of a Relocation/Translocation Plan that has been approved by Energy Commission staff in consultation with USFWS and CDFG. The CPM will determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Desert Tortoise Relocation/Translocation Plan must be made only after approval by the Energy Commission staff in consultation with USFWS and CDFG. The project owner shall notify the CPM no fewer than 5 working days before implementing any CPM-approved modifications to the Relocation/Translocation Plan.

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



Within 30 days of completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to the CPM, USFWS, and CDFG describing how each of the mitigation measures described above has been satisfied. 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.

## **MOHAVE GROUND SQUIRREL CLEARANCE SURVEYS**

**BIO-10** The project owner shall undertake appropriate measures to manage construction at the plant site and linear facilities in a manner to avoid or minimize impacts to Mohave ground squirrel. These measures include, but are not limited to, the following:

1. Clearance Survey. After the installation of the desert tortoise exclusion fence and prior to any construction-related ground disturbance on the plant site, the Designated Biologist(s) shall examine the area to be disturbed for Mohave ground squirrels and their burrows. The survey shall provide 100 percent coverage of the Project limits. Potentially occupied burrows shall be fully excavated by hand by the Designated Biologist(s).
2. Translocation Plan. The project owner shall develop and implement a Mohave ground squirrel translocation plan to address the handling and disposition of any Mohave ground squirrels encountered during the clearance surveys. The Translocation Plan shall be approved by Energy Commission staff in consultation with CDFG. The Translocation Plan shall designate a translocation site as close as possible to the project, and which provides suitable conditions for long-term survival of the relocated Mohave ground squirrel.
3. Records of Capture. If Mohave ground squirrels are captured via trapping or burrow excavation, the Designated Biologist shall maintain a record of each Mohave ground squirrels handled, including: a) the locations (Global Positioning System [GPS] coordinates and maps) and time of capture and/or observation as well as release; b) sex; c) approximate age (adult/juvenile); d) weight; e) general condition and health, noting all visible conditions including gait and behavior, diarrhea, emaciation, salivation, hair loss, ectoparasites, and injuries; and f) ambient temperature when handled and released.

**Verification:** Within ~~90~~ 60 days prior to start of any pre-construction site mobilization activities, the project owner of publication of the Energy Commission Decision the project owner shall submit to Energy Commission Staff and CDFG a draft Mohave Ground Squirrel Translocation Plan. At least 60 days prior to start of any construction project-related ground disturbance activities, the project owner shall provide the CPM with the final version of a Mohave Ground Squirrel Translocation Plan that has been approved by Energy Commission staff in consultation with CDFG. The CPM will determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Translocation Plan must be made only after approval the Energy Commission staff in consultation with CDFG. The project owner shall notify the CPM no fewer than 5 working days before implementing any CPM-approved modifications to the Translocation Plan.

Within 30 days of completion of Mohave ground squirrel clearance surveys the Designated Biologist shall submit a report to the CPM and CDFG describing how the mitigation measures described above have been satisfied. The report shall include the Mohave ground squirrel survey results, capture and release locations of any relocated squirrels, and any other information needed to demonstrate compliance with the measures described above.

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

## **DESERT TORTOISE AND MOHAVE GROUND SQUIRREL HABITAT COMPENSATORY MITIGATION**

**BIO-11** To fully mitigate for habitat loss and potential take of desert tortoise and Mohave ground squirrel, the project owner shall acquire, in fee or in easement, no less than 115 acres of land suitable for these species 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 Mojave Desert habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. If habitat disturbance exceeds that described in this analysis, the project owner shall be responsible for acquisition and management of additional compensation lands or additional funds required to compensate for any additional habitat disturbances. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. The acquisition and management of compensation lands shall include the following elements:

1. Selection Criteria for Compensation Lands. The compensation lands selected for acquisition shall:
  - a. be in the western Mojave Desert;
  - b. provide moderate to good quality habitat for Mohave ground squirrel and desert tortoise with capacity to improve in quality and value for these species;
  - c. be a contiguous block of land (preferably) or located so they result in a contiguous block of protected habitat;
  - d. be adjacent to, or in close proximity to, larger blocks of lands that are already protected such that there is connectivity between the acquired lands and the protected lands;

- e. be connected to, or in close proximity to, lands for which there is reasonable evidence (for example, recent (<15 years) CNDDDB occurrences on or immediately adjacent to the proposed lands) suggesting current occupation by desert tortoise and Mohave ground squirrel, ideally with populations that are stable, recovering, or likely to recover;
  - f. not have a history of intensive recreational use, grazing, or other disturbance that might make habitat recovery and restoration infeasible;
  - g. 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; and
  - h. not be encumbered by easements, subsurface rights, or uses that would preclude fencing of the site or preclude or unacceptably constrain management of the site for the primary benefit of the species and their habitat for which compensation mitigation lands were secured.
2. Review and Approval of Compensation Lands Prior to Acquisition. A minimum of three months prior to acquisition of the property, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a formal acquisition proposal to the CPM, CDFG, and USFWS 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 and Mohave ground squirrel in relation to the criteria listed above. Approval from the CPM, in consultation with USFWS and CDFG, shall be required for acquisition of all parcels comprising the 115.0 acres in advance of purchase.
3. Mitigation Security for Compensation Lands and Avoidance/Minimization Measures. The project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating construction-related ground disturbance ~~-disturbing~~ project activities. If Security is provided, the project owner, or an approved third party, shall complete the proposed compensation lands acquisition within 12 months of the start of ~~project~~ construction-related ground disturbance ~~-disturbing~~ activities. The project owner shall also provide financial assurances to the CPM, with copies of the document(s) to CDFG and USFWS, to guarantee that an adequate level of funding is available to implement all impact avoidance, minimization, and compensation measures described in Conditions of Certification BIO-9 through BIO-12. Financial assurance shall be provided to the CPM in the form of an irrevocable letter of credit or another form of security (“Security”) approved by the CPM, prior to initiating construction-related ground disturbance ~~-disturbing~~ ~~project~~ activities. If necessary to draw on these funds, such funds shall be used solely for implementation of the measures associated with the project.

Prior to initiation of ground disturbance, the Security shall be provided by the project owner and approved by the CPM, in consultation with CDFG, to ensure funding in the amount of \$529,000.00. These Security amounts were calculated as follows and may be revised upon completion of a Property Analysis Record (PAR) or PAR-like analysis of the proposed compensation lands:

- a. land acquisition costs for compensation lands, calculated at \$3,000/acre for 115 acres: \$345,000.00;
  - b. costs of enhancing compensation lands, calculated at \$250/acre for 115 acres: \$28,750; and
  - c. costs of establishing an endowment for long-term management of compensation lands, calculated at \$1,350/acre for 115 acres: \$155,250.
4. Compensation Lands Acquisition Conditions. The project owner shall comply with the following conditions relating to acquisition of compensation lands after the CPM, in consultation with CDFG and USFWS, has approved the proposed compensation lands and received Security, if any, as described above.
- 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 documents for the proposed 115 acres. All documents conveying or conserving compensation lands and all conditions of title/easement are subject to a field review and approval by the CPM, in consultation with CDFG and USFWS, California Department of General Services and, if applicable, the Fish and Game Commission and/or the Wildlife Conservation Board.
  - b. Title/Conveyance: The project owner shall transfer fee title or a conservation easement to the 115 acres of compensation lands to CDFG under terms approved by CDFG. Alternatively, a non-profit organization qualified to manage compensation lands (pursuant to California Government Code section 65965) and approved by CDFG and the CPM may hold fee title or a conservation easement over the ~~habitat compensation mitigation~~ lands. If the approved non-profit organization holds title, a conservation easement shall be recorded in favor of CDFG in a form approved by CDFG. If the approved non-profit holds a conservation easement, CDFG shall be named a third party beneficiary. If a Security is provided, the project owner or an approved third party shall complete the proposed compensation lands acquisition within 12 months of the start of ~~project construction-related~~ ground ~~disturbance - disturbing~~ activities.
  - c. Enhancement Fund. The project owner shall fund the initial protection and enhancement of the 115 acres by providing the enhancement funds to the CDFG. Alternatively, a non-profit organization may hold the enhancement

funds if they are qualified to manage the compensation lands (pursuant to California Government Code section 65965) and if they meet the approval of CDFG and the CPM. If CDFG takes fee title to the compensation lands, the enhancement fund must go to CDFG where it will be held in the special deposit fund established pursuant to California Government Code section 16370.

- d. Endowment Fund. Prior to construction-related ground disturbance ~~disturbing project~~ activities, the project owner shall provide to CDFG a capital endowment in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis that will be conducted for the 115 acres of compensation lands. Alternatively, a non-profit organization may hold the endowment fees if they are qualified to manage the compensation lands (pursuant to California Government Code section 65965) and if they meet the approval of CDFG and the CPM. If CDFG takes fee title to the compensation lands, the endowment must go to CDFG, where it will be held in the special deposit fund established pursuant to California Government Code section 16370. If the special deposit fund is not used to manage the endowment, the California Wildlife Foundation shall manage the endowment for CDFG and with CDFG guidance.
  - a. The project owner and the CPM shall ensure that an agreement is in place with the endowment holder/manager to ensure the following conditions:
    - Interest. Interest generated from the initial capital endowment 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 designed to protect or improve the habitat values of the compensation lands.
    - Withdrawal of Principal. The endowment principal shall not be drawn upon unless such withdrawal is deemed necessary by the CDFG or the approved third-party endowment manager to ensure the continued viability of the species on the 115 acres. 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 pursuant to Government Code section 16370. If the special deposit fund is not used to manage the endowment, the California Wildlife Foundation will manage the endowment for CDFG with CDFG guidance.
    - Pooling Endowment Funds. CDFG, or a CPM- and CDFG-approved non-profit organization qualified to hold endowments pursuant to California Government Code section 65965, may pool the endowment with other endowments for the operation, management, and protection

of the 115 acres for local populations of desert tortoise and Mohave ground squirrel. However, for reporting purposes, the endowment fund must be tracked and reported individually.

- e. Reimbursement Fund: The project owner shall provide reimbursement to the CDFG or approved third party for reasonable expenses incurred during title, easement, and documentation review; expenses incurred from other state agency reviews; and overhead related to providing compensation lands.

The project owner is responsible for all compensation lands acquisition/easement costs, including but not limited to, title and document review costs, as well as expenses incurred from other state agency reviews and overhead related to providing compensation lands to CDFG the department or an approved third party; escrow fees or costs; environmental contaminants clearance; and other site clean up measures.

**Verification:** No less than 90 days prior to acquisition of the property, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a formal acquisition proposal to the CPM, CDFG, and USFWS describing the parcel(s) intended for purchase.

Draft agreements to delegate compensation lands acquisition to CDFG or an approved third party and agreements to manage compensation lands shall be submitted to Energy Commission staff for review and approval (in consultation with CDFG) prior to compensation lands acquisition. Such agreements shall be mutually approved and executed at least 60 days prior to start of any construction project-related ground disturbance activities. The project owner shall provide written verification to the CPM that the compensation lands and/or conservation easements have been acquired and recorded in favor of the approved recipient(s). Alternatively, before beginning project ground-disturbing activities, the project owner shall provide Security in accordance with this condition. Within 90 days after the compensation lands 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 CDFG, for the compensation lands and associated funds.

Within 90 days after completion of project construction, the project owner shall provide to the CPM verification that disturbance to Mojave creosote scrub habitat west of State Route 14 did not exceed 5.0 acres, and that construction activities at the plant site and along the gas pipeline alignment did not result in impacts to Mojave creosote scrub habitat adjacent to work areas. ~~If habitat disturbance exceeded that described in this analysis, the CPM shall notify the project owner of any additional funds required or lands that must be purchased to compensate for any additional habitat disturbances at the adjusted market value at the time of construction to acquire and manage habitat.~~

## **DESERT TORTOISE AND MOHAVE GROUND SQUIRREL COMPLIANCE VERIFICATION**

**BIO-12** The project owner shall provide staff, CDFG, and USFWS with reasonable access to the project site and compensation mitigation lands 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 project owner shall hold harmless the Designated Biologist, the Energy Commission and staff, and any other agencies with regulatory requirements addressed by the Energy Commission's sole permitting authority for any costs the project owner incurs in complying with the management measures, including stop work orders issued by the CPM or the Designated Biologist. The Designated Biologist shall do or supervise all of the following:

1. Notification. Notify the CPM, CDFG, and USFWS at least 14 calendar days before initiating construction-related ground-~~disturbing~~ disturbance activities. Immediately notify the CPM, CDFG, and USFWS 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. CDFG shall be notified at their Central Region Headquarters Office, 1234 E. Shaw Avenue, Fresno, CA 93710; (559) 243-4005. USFWS shall be notified at their Ventura office at 2493 Portola Road, Suite B, Ventura, CA 93003; (805) 644-1766
2. Monitoring During Grading. Remain on site daily while grubbing and grading are taking place to avoid or minimize take of listed species, to check for compliance with all impact avoidance and minimization measures, and to check all exclusion zones to ensure that signs, stakes, and fencing are intact and that human activities are restricted in these protected zones.
3. Fence Monitoring. During construction maintain and check desert tortoise exclusion fences on a daily basis to ensure the integrity of the fence is maintained. The Designated Biologist shall be present on site to monitor construction and determine fence placement during fence installation. During operation of the project fence inspections shall occur at least once per month throughout the life of the project, and more frequently after storms or other events that might affect the integrity and function of desert tortoise exclusion fences. Fence repairs shall occur within two days (48 hours) of detecting problems that affect the functioning of the desert tortoise exclusion fencing.
4. 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 CPM, USFWS and CDFG during construction, as required under COMPLIANCE-6. All observations of listed species and their sign shall be reported to the Designated Biologist for inclusion in the monthly compliance report as required under COMPLIANCE-6.
5. ~~Annual Listed Species Status Report. Every year the BSEP facility remains in operation, provide the CPM, USFWS and CDFG an annual Listed Species Status Report, which shall include, at a minimum: 1) a general description of the status of the project site and construction/operation activities, including actual or projected completion dates, if known; 2) a copy of the table in the BRMIMP with~~

~~notes showing the current implementation status of each mitigation measure; 3) an assessment of the effectiveness of each completed or partially completed mitigation measure in minimizing and compensating for project impacts, and 4) recommendations on how effectiveness of mitigation measures might be improved.~~

6. Final Listed Species Mitigation Report. No later than 45 days after initiation of project operation provide the CPM a Final Listed Species Mitigation Report that shall include, 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.
7. Notification of Injured, Dead, or Relocated Listed Species. In the event of a sighting in an active construction area (e.g., with equipment, vehicles, or workers), injury, kill, or relocation of any listed species, the CPM, CDFG, and 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 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/Mohave Ground Squirrel Fatality. If a desert tortoise or Mohave ground squirrel is killed by project-related activities during construction or operation, or if a desert tortoise or Mohave ground squirrel is otherwise found dead, submit a written report 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). 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.

8. 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 calendar days following the above-required notification of a sighting, kill, injury, 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 the sighting, 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 January 31st of each year the BSEP facility is under construction or remains in operation the Designated Biologist shall provide the CPM, CDFG and USFWS an annual Listed Species Status Report Summary, and a summary of desert tortoise exclusion fence inspections and repairs conducted in the course of the year.- The Listed Species Status Report shall include, at a minimum: 1) a general description of the status of the project site and construction/operation activities, including actual or projected completion dates, if known; 2) a copy of the table in the BRMIMP with notes showing the current implementation status of each mitigation measure; 3) an assessment of the effectiveness of each completed or partially completed mitigation measure in minimizing and compensating for project impacts, and 4) recommendations on how effectiveness of mitigation measures might be improved. The annual Listed Species Status Report shall be

## **RAVEN MONITORING, MANAGEMENT, AND CONTROL PLAN**

**BIO-13** The project owner shall design and implement a Raven Monitoring, Management, and Control Plan (Raven Plan) that is consistent with the most current USFWS-approved raven management guidelines and that meets the approval of the USFWS, CDFG, and the Energy Commission. The Raven Plan shall: identify conditions associated with the project that might provide raven subsidies or attractants; describe management practices to avoid or minimize conditions that might increase raven numbers and predatory activities; describe control practices for ravens; address monitoring during construction and for the life of the project; and discuss reporting requirements. For the first year of reporting the project owner shall provide quarterly reports describing implementation of the Raven Plan. Thereafter the reports shall be submitted annually for the life of the project. The Raven Plan shall also include a requirement for payment of an in-lieu fee to a third-party account established by the

USFWS to support a regional raven monitoring and management plan (USFWS 2009).

**Verification:** At least 60 days prior to start of any construction project-related ground disturbance activities, the project owner shall provide the CPM, USFWS, and CDFG with the final version of the Raven Plan that has been reviewed and approved by USFWS and CDFG. The CPM shall determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Raven Plan must be made only after consultation with the Energy Commission staff, USFWS, and CDFG. The project owner shall notify the CPM no less than five working days before implementing any CPM-approved modifications to the Raven Plan.

Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval a 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.

## **EVAPORATION POND NETTING AND MONITORING**

**BIO-14** 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 will never contact the water. Monitoring of the evaporation ponds shall include the following:

- The Designated Biologist or Biological Monitor ~~or Environmental Compliance Manager~~ 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, **and to determine** if the nets pose an entrapment hazard to birds and wildlife, **and to assess the structural integrity of the nets.** Surveys shall be of sufficient duration and intensity 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 BSEP 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.
- 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.

- If after 12 consecutive monthly site visits no bird or wildlife deaths or entanglements are detected by or reported to the Designated Biologist, monitoring can be reduced to quarterly visits.
- 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 can be conducted by the Environmental Compliance Manager and the site visits can be reduced to two surveys per year, during spring and fall migration.

**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. The annual report shall be submitted to the CPM, CDFG, and USFWS no later than January 31st of every year for the life of the project.

## **PRE-CONSTRUCTION NEST SURVEYS AND IMPACT AVOIDANCE MEASURES FOR MIGRATORY BIRDS**

**BIO-15** Pre-construction nest surveys shall be conducted if construction activities will occur from February 1 through August 1. The Designated Biologist or Biological Monitor conducting the surveys shall be experienced bird surveyors and familiar with standard nest-locating techniques such as those described in Martin and Guepel (1993). Surveys shall be conducted in accordance with the following guidelines:

1. Surveys shall cover all potential nesting habitat in the project site and within 500 feet of the boundaries of the plant site and linear facilities;
2. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys needs to be conducted within the 14-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation;
3. If active nests are detected during the survey, a no-disturbance buffer zone (protected area surrounding the nest, the size of which is to be determined by the Designated Biologist in consultation with CDFG and USFWS) and monitoring plan shall be developed. Nest locations shall be mapped using GPS technology

and submitted, along with a weekly 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 ~~construction 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 nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest and shall depict the boundaries of the no-disturbance buffer zone around the nest.

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

**BIO-16** 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:

Biological Monitors shall perform pre-construction surveys for badger and kit fox dens in the project area, including areas within 250 feet of all project facilities, utility corridors, and access roads. If dens are detected each den shall be classified as inactive, potentially active, or definitely active.

Inactive dens that would be directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by badgers or kit fox. 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. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand. If tracks are observed, the 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.

**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, ~~avoidance and minimization mitigation~~ measures implemented, and the results of ~~those measures the mitigation~~.



## BURROWING OWL IMPACT AVOIDANCE, MINIMIZATION, AND COMPENSATION MEASURES

**BIO-17** The project owner shall implement the following measures to avoid and offset impacts to burrowing owls:

1. Pre-Construction Surveys. ~~Concurrent with desert tortoise clearance surveys,~~ The Designated Biologist shall conduct pre-construction surveys for burrowing owls within the project site and along all linear facilities in accordance with CDFG guidelines (~~CDFG California Burrowing Owl Consortium 1993~~). If burrowing owls are detected within the impact area or within 500 feet of any proposed construction activities, the Designated Biologist shall prepare a Burrowing Owl Monitoring and Mitigation Plan in consultation with CDFG, USFWS, and Energy Commission staff. This plan shall include detailed measures to avoid and minimize impacts to burrowing owls in and near the construction areas and shall be consistent with CDFG guidance (CDFG 1995).
2. Artificial Burrow Installation. Prior to any ground-disturbing activities, the project owner shall install no less than four artificial burrows, or at least two burrows for each owl displaced by the project, in the proposed relocation area immediately north of the project site, a 6-acre area within the 14.39-acre parcel owned by Beacon Solar, LLC, (APN 469-14-011). Design of the artificial burrows shall be consistent with CDFG guidelines (CDFG 1995). The Designated Biologist shall survey the site selected for artificial burrow construction to verify that such construction will not affect desert tortoise or Mohave ground squirrel. The design of the burrows shall be approved by the CPM in consultation with CDFG and USFWS.
3. Surveys of Relocation Area. The Designated Biologist shall survey the relocation area during the nesting season to assess use of the artificial burrows by owls using methods consistent with Phase II and Phase III Burrowing Owl Consortium Guideline protocols (CBOC 1993). Surveys shall start upon completion of artificial burrow construction and shall continue for a period of five years. If survey results indicate burrowing owls are not nesting on the relocation area, remedial actions shall be developed and implemented in consultation with the CPM, CDFG and USFWS to correct conditions at the site that might be preventing owls from nesting there. ~~A report describing survey results and remedial actions taken shall be submitted to the CPM, CDFG and USFWS no later than January 31st of each year for five years.~~
4. Protect and Manage 6-Acre Relocation Area. The project owner shall provide a mechanism to protect 6 acres of the 14.39-acre relocation area in perpetuity as habitat for burrowing owls, either in fee title, or as a permanent deed restriction. The project owners shall prepare a draft Burrowing Owl Relocation Area Management Plan for review and approval by the CPM in consultation with CDFG. The overall objective of the plan shall be to manage the 6-acre relocation parcel for the benefit of burrowing owls, with the specific goals of:

- a. Maintaining the functionality of at least four artificial or natural burrows; and
- b. Minimizing the occurrence of weeds (species considered “moderate” or “high” threat to California wildlands as defined by CAL-IPC [2006] and noxious weeds rated “A” or “B” by the California Department of Food and Agriculture and any federal-rated pest plants [CDFA 2009]) at less than 10 percent cover of the shrub and herb layers.

The Burrowing Owl Relocation Area Management Plan shall include monitoring and maintenance requirements, details on methods for measuring compliance goals and remedial actions to be taken if management goals are not met. ~~A report describing results of monitoring and management of the relocation area shall be submitted to the CPM, CDFG and USFWS no later than January 31<sup>st</sup> of each year for the life of the project.~~

- 5. Acquire 20 Acres of Burrowing Owl Habitat. In addition to protecting the 6 acre relocation area north of the project site, the project owner shall acquire, in fee or in easement, 20 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 Mojave Desert 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. Agreements to delegate land acquisition to CDFG or an approved third party and to manage compensation lands shall be implemented within 12 months of the Energy Commission’s License Decision.

  - a. Burrowing Owl Compensation Lands Mitigation Criteria. The terms and conditions of this acquisition or easement shall be as described in BIO-11, with the additional criteria to include: 1) the 20 acres of mitigation land must provide suitable habitat for burrowing owls, and 2) the acquisition lands must be either currently support burrowing owls or be no farther than 5 miles from an active burrowing owl nesting territory. The 20 acres of burrowing owl compensation mitigation lands may be included with the 115 acres of desert tortoise and Mohave ground squirrel compensation mitigation lands ONLY if these two burrowing owl criteria are met.
  - b. Security. If the 20 acres of burrowing owl compensation mitigation land is separate from the 115 acres required for desert tortoise and Mohave ground squirrel compensation lands the project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating construction-related ground disturbance ~~–disturbing project~~ activities.

Alternatively, 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 construction-related ground disturbance -disturbing-project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with CDFG, to ensure funding in an amount determined by a Property Analysis Record (PAR) or PAR-like analysis of the proposed compensation lands.

**Verification:** Within 60 days prior to start of any construction project-related ground disturbance activities of publication of the Energy Commission Decision, the project owner shall submit to the CPM, CDFG and USFWS a draft Burrowing Owl Relocation Area Management Plan. Within 30 days pPrior to any construction-related ground disturbance -disturbing activities on the project site the project owner shall submit to the CPM a final Burrowing Owl Relocation Area Management Plan that reflects review and approval by Energy Commission staff in consultation with CDFG and USFWS.

If pre-construction surveys detect burrowing owls within 500 feet of proposed construction activities, the Designated Biologist shall provide to CDFG, USFWS, and the CPM a Burrowing Owl Monitoring and Mitigation Plan at least 30 days prior to the start of any project-related site disturbance activities. The project owner shall report monthly to CDFG, USFWS, and the CPM for the duration of construction on the implementation of burrowing owl avoidance and minimization measures described in the Burrowing Owl Monitoring and Mitigation Plan. Within 30 days after completion of construction the project owner shall provide to the CDFG and CPM a written construction termination report identifying how mitigation measures described in the plan have been completed.

No less than 90 days prior to acquisition of compensation lands the property, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a formal acquisition proposal to the CPM, and CDFG, and USFWS describing the 20-acre parcel intended for purchase. Prior to start of any construction project-related ground disturbance activities the project owner shall provide written verification to the CPM that the 20 acres of compensation lands and/or conservation easements have been acquired and recorded in favor of the approved easement holder(s). Alternatively, before beginning construction-related project ground disturbance -disturbing activities, the project owner shall provide Security to the CPM in accordance with this condition. Within 90 days of the compensation 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 CDFG, for the compensation lands and associated funds.

If the 20 acres of burrowing owl compensation mitigation land is separate from the 115 acres required for desert tortoise and Mohave ground squirrel compensation lands, the project owner shall fulfill the requirements described in BIO-11, including submittal of a formal acquisition proposal no less than 90 days prior to acquisition, and a management plan within 30 days after the compensation land purchase.

No later than January 31<sup>st</sup> of each year, commencing with the first year of construction and ending at the fifth year following initiation of construction, the Designated Biologist shall submit a report to the CPM, CDFG and USFWS describing survey results and remedial actions taken at the 6-acre burrowing owl relocation area. Thereafter no later than January 31st of each year the project is in operation the Designated Biologist shall provide to the CPM, CDFG and USFWS a report describing the results of monitoring and management of the 6-acre burrowing owl relocation area.

## **STREAMBED IMPACT MINIMIZATION AND COMPENSATION MEASURES**

**BIO-18** The project owner shall compensate for permanent impacts to waters of the state by constructing a new channel that replicates the hydrological and biological functions of the impacted drainages, and shall establish a channel maintenance program. The channel created by the applicant shall: be designed to be geomorphologically equivalent to a typical desert wash system; maintain existing hydrological connections and levels of sediment transport; provide conditions that would support recruitment and maintenance of native vegetation, provide wildlife habitat, and maintain the biological functions and values of a natural desert wash ecosystem; be designed, constructed and maintained such that it would not create a movement barrier or hazard for desert tortoise or other wildlife, or be a source of invasive weeds. The project owner shall also implement Best Management Practices and other measures described below to protect jurisdictional waters of the State occurring along linear alignments. The project owner shall implement the following measures to compensate for impacts to waters of the state:

1. Submit Channel Design for Review: No later than 60 days prior to start of site mobilization, the project owner shall submit channel design and construction drawings for review and approval by the CPM in consultation with CDFG, as described in Soil&Water-5. The channel shall be designed such that it would remain accessible to desert tortoise and other wildlife at all times (i.e., all side slopes 3:1 or more gradual, with textured soil cement that would enhance traction for tortoise), and would promote a slightly aggradational (depositional) pattern of sediment deposition to allow for natural geomorphic processes;
2. Prepare a Desert Wash Revegetation Plan that follows the outline provided for rehabilitation plans described in Newton and Claassen (2003), *Appendix C: Sample Outline for a Rehabilitation Plan*. The Desert Wash Revegetation Plan shall meet the following criteria at the end of the 10-year revegetation period<sup>2</sup>:
  - a. Establishment of at least 15 percent native desert wash shrub cover within the channel bottom (6.2 acres total within the 41.5-acre channel bottom, and under no circumstances less than 4.8 acres);

---

<sup>2</sup> The 10-year revegetation period begins upon completion of construction of the new channel.

- b. Establishment of at least 7 percent native desert wash shrub cover on each of the 11 channel reaches between drop structures;
  - c. Maintain percent cover of noxious weeds (defined as non-native species that pose a “moderate” or “high” threat to California wildlands as defined by CAL-IPC (2006) within the channel) below 2 percent within the channel bottom (less than 0.8 total within the 41.5-acre channel bottom);
- ~~3. Review and Submittal of Plan and Cost Estimate: Within 60 days of publication of the Energy Commission Decision, the project owner shall submit to the CPM and CDFG a draft Desert Wash Revegetation Plan and a draft estimate of costs to fully implement the plan. Prior to any ground-disturbing activities within waters of the State, the project owner shall submit to the CPM a final Desert Wash Revegetation Plan and a final cost estimate for implementation that reflects review and approval by Energy Commission staff in consultation with CDFG.~~
4. Acquire Off-Site Desert Wash: If at the end of the 10-year revegetation period the success criteria defined in the Desert Wash Revegetation Plan have not been achieved, the project owner shall acquire, in fee or in easement, land that includes at least 16 acres of desert wash state jurisdictional waters and their immediate watershed ~~and floodplain~~. Prior to acquisition the applicant shall prepare an acquisition proposal for review and approval by Energy Commission staff and CDFG describing the 16 acres of state waters and the surrounding watershed ~~and floodplain~~, and shall ensure that the acquired parcel(s) include sufficient area to manage the 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-profit organization dedicated to Mojave Desert habitat conservation, subject to approval by the CPM, in consultation with CDFG and RWQCB 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. The terms and conditions of this acquisition or easement shall be as described in **BIO-11**, with the additional criteria that the desert wash mitigation lands: 1) include at least 16 acres of state jurisdictional waters; 2) be characterized by similar soil permeability and hydrological and biological functions as the impacted wash; and 3) be within the same watershed as the impacted wash.
5. Review and Approval of Compensation Lands Prior to Acquisition. A minimum of three months prior to acquisition of the ~~compensation lands property~~, the project owner, or a third-party approved by the CPM, in consultation with CDFG, shall submit a formal acquisition proposal to the CPM and CDFG describing the parcel(s) intended for purchase. This acquisition proposal shall include a description and delineation of waters of the state within the parcel(s), shall describe the floodplain and immediate watershed in the vicinity of the drainage; and shall identify the area of lands surrounding the drainage needed to adequately manage the waters of the state to protect and enhance their biological functions and values. Approval from the CPM, in consultation with CDFG, shall be required for acquisition of all parcels comprising the compensation lands in advance of purchase.

6. Security for Implementation of Mitigation: A security in the form of an irrevocable letter of credit, pledged savings account, or certificate of deposit for the amount of all mitigation measures pursuant to this condition of certification shall be submitted to, and approved by, the CPM, in consultation with CDFG, prior to commencing project activities within waters of the state. The security shall be approved by the CPM, in consultation with CDFG's legal advisors, prior to its execution, and shall allow the CPM at its discretion to recover funds immediately if the CPM, in consultation with CDFG, determines there has been a default. Security shall include an amount equal to the final cost estimate for implementation of the Desert Wash Revegetation Plan, as described above in item 2. In addition, security shall include the ~~include~~ costs of purchasing ~~sufficient land with at least~~ to ensure acquisition and management of a minimum of 16 acres of desert wash state jurisdictional waters ~~plus the immediate watershed and floodplain~~.

Prior to initiation of ground disturbance, the security shall be approved by the CPM, in consultation with CDFG, to ensure funding in the amount of \$230,000 plus the final estimated cost of implementing the Desert Wash Revegetation Plan over a ten year period. The security amounts shall include the costs of implementing the Desert Wash Revegetation Plan over a ten-year period, and the costs of acquisition of ~~50 acres that includes at least~~ sufficient acreage to ensure acquisition and management of 16 acres of desert wash ~~plus the immediate watershed and floodplain~~ state jurisdictional waters. ~~The required acreage may be less than 50 acres, and will depend on the area of adjacent watershed and floodplain needed to adequately protect and manage the 16 acres of waters of the state.~~ The security amount is based on 50 acres, an estimated amount of acreage needed for acquisition of 16 acres of state jurisdictional waters. Security costs for land acquisition were calculated as follows and may be revised upon completion of a Property Analysis Record (PAR) or PAR-like analysis of the proposed compensation lands:

- land acquisition costs for compensation lands, calculated at \$3,000/acre for ~~16-50~~ acres: ~~\$48,000~~150,000;
  - costs of enhancing compensation lands, calculated at \$250/acre for ~~16-50~~ acres: ~~\$4,000~~ 12,500; and
  - costs of establishing an endowment for long-term management of compensation lands, calculated at \$1,350/acre for ~~16-50~~ acres: ~~\$21,600~~\$67,500.
7. Long-Term Biological Monitoring and Management. Long-term **biological** monitoring and management of the channel shall begin at the end of the 10-year revegetation period and shall continue for the life of the project as described in SOIL&WATER-8, and shall occur regardless of the success or failure of the revegetation effort. The goals of the long-term monitoring shall be to:
- a. Maintain percent cover of noxious weeds (defined as non-native species that pose a “moderate” or “high” threat to California wildlands as defined by CAL-IPC (2006) within the channel) below 2 percent within the channel bottom (less than 0.8 total within the 41.5-acre channel bottom).



- b. Maintain the channel as safe for desert tortoise and other wildlife. At no time shall the channel pose an entrapment hazard to desert tortoise and other wildlife. An entrapment hazard is defined as a depression, pit or trench with a depth of one foot or greater and a slope steeper than 3:1.

Inspections to assess percent weed cover within the channel shall be conducted by the Designated Biologist no less than once per year and only within the peak growing season for weedy annual herbs (February 1 through April 30th). Inspections to assess entrapment hazards for desert tortoise and other wildlife shall occur within 1 day of major storm events. The same remedial actions for managing weeds and entrapment hazards described in the Desert Wash Revegetation Plan shall be employed during the long-term monitoring. Entrapment hazards shall be corrected immediately upon detection. ~~The Designated Biologist shall prepare an annual report describing the methods and results of the inspections, as well as any remedial actions taken and shall submit these annual reports to the CPM and CDFG no later than January 31st.~~

8. Equipment Laydown Plan: The project owner shall develop a Storm Water Pollution Prevention Plan for construction activities that includes an engineered plan for the proposed equipment laydown area within the existing wash, as described in Soil&Water 3. This engineered plan shall describe protective structures, procedures for moving equipment, fuels and materials, and plan for conveyance of stormflows, during a rainfall event. Prior to initiation of any project activities in jurisdictional areas and no later than 60 days after publication of the Energy Commission Decision, the project owner shall submit this plan for review and approval by the CPM in consultation with CDFG.
9. Right of Access and Review for Compliance Monitoring: The CPM reserves the right to enter the project site and/or allow CDFG to enter the project site at any time to ensure compliance with these conditions. The project owner herein grants to the CPM and to CDFG employees and/or their representatives the right to enter the project site at any time, to ensure compliance with the terms and conditions and/or to determine the impacts of storm events, maintenance activities, or other actions that might affect the restoration and revegetation efforts. The CPM and CDFG may, at the CPM's discretion, review relevant documents maintained by the operator, interview the operator's employees and agents, inspect the work site, and take other actions to assess compliance with or effectiveness of mitigation measures.
- ~~10. Reporting of Special-Status Species: If any special-status species are observed on or in proximity to the project site, or during project surveys, the project owner shall submit California Natural Diversity Data Base (CNDDDB) forms and maps to the CNDDDB within five working days of the sightings and provide the regional CDFG office with copies of the CNDDDB forms and survey maps. The CNDDDB form is available online at: [www.dfg.ca.gov/whdab/pdfs/natspec.pdf](http://www.dfg.ca.gov/whdab/pdfs/natspec.pdf). This information shall be mailed within five days to: California Department of Fish and Game, Natural Diversity Data Base, 1807 13th Street, Suite 202, Sacramento, CA 95814, (916) 324-~~

~~3812. A copy of this information shall also be mailed within five days to CDFG and the CPM.~~

~~11. Notification: The project owner shall notify the CPM and CDFG, in writing, at least five days prior to initiation of project activities in jurisdictional areas as noted 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, the jurisdictional impacts, or the mitigation efforts, if the conditions at the site of a proposed project change in a manner which changes risk to biological resources that may be substantially adversely affected by the proposed project. 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.~~

~~a. 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.~~

~~b. 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 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.~~

~~c. 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.~~

12. Code of Regulations: The project owner shall provide a copy of the Energy Commission License 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 or personnel from another agency 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 and 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;
  - c. The project or project activities as described in the Final Staff Assessment have changed; or
  - d. The conditions affecting biological resources changed or the CPM, in consultation with CDFG, determines that project activities will result in a substantial adverse effect on the environment.
13. Construction Schedule: Pine Tree Creek and the unnamed desert wash shall not be altered until the new channel is constructed and deemed by the CPM ready to accept stormwater flows.
14. Best Management Practices: The applicant shall also comply with the following conditions:
- a. The project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter a lake or flowing stream or be placed in locations that may be subjected to high storm flows.
  - b. 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 operator to ensure compliance.
  - c. Spoil sites shall not be located within a drainage or locations that may be subjected to high storm flows, where spoil shall be washed back into a drainage or lake.
  - d. 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 or lake, by project owner or any party working under contract or with the permission of the project owner shall be removed immediately.
  - e. 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.

- f. 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.
- g. No equipment maintenance shall occur within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas under any flow.

**Verification:** Within ~~90~~ 60 days ~~prior to any construction-related ground disturbance activities of publication of the Energy Commission Decision~~, the project owner shall submit to the CPM and CDFG a draft Desert Wash Revegetation Plan and a draft estimate of costs to fully implement the plan. ~~Within 30 days p~~Prior to any ~~construction-related ground disturbance - disturbing~~ activities within waters of the State, the project owner shall submit to the CPM a final Desert Wash Revegetation Plan and a final cost estimate for implementation of revegetation monitoring and management activities that reflects review and approval by Energy Commission staff in consultation with CDFG.

No later than ~~90~~ 60 days prior to ~~any construction-related ground disturbance activities start of site mobilization~~, the project owner shall submit channel design and construction drawings for review and approval by the CPM in consultation with CDFG, as described in **Soil&Water-5**.

No fewer than 30 days prior to the start of any ~~construction-related ground disturbance site or related facilities mobilization~~ activities, the project owner shall implement the mitigation measures described above. No fewer than 30 days prior to the start of work potentially affecting jurisdictional 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 and provide a discussion of work in jurisdictional waters of the state in Compliance Reports for the duration of the project. Compliance reports shall be monthly for the first five years following completion of construction of the channel, and thereafter shall be submitted ~~every six months~~ annually per COMPLIANCE-7.

No less than 90 days prior to acquisition of the desert wash compensation acreage the project owner, or a third-party approved by the CPM, in consultation with CDFG, shall submit a formal acquisition proposal to the CPM and CDFG describing the parcel(s) intended for purchase.

The project owner shall notify the CPM and CDFG, in writing, at least five days prior to initiation of project activities in jurisdictional waters as noted 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, the jurisdictional waters impacts, or the mitigation efforts, if the conditions at the site of a proposed project change in a manner which changes risk to biological resources that may be substantially adversely affected by the proposed project. 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.

- a. 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.
- b. 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 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.
- c. 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.

After completion of the 10-year monitoring period for the Desert Wash Revegetation Plan, the project owner shall thereafter submit an annual report to the CPM and CDFG. The report shall describe the methods and results of the long term **biological** monitoring inspections for weed and entrapment hazards within the channel. The report also shall include a discussion of **any** remedial actions taken, if any, and shall be submitted no later than January 31st of every year for the life of the project. If any entrapped animals/carcasses are detected CDFG and USFWS shall be notified in writing within 48 hours.

## **CLOSURE PLAN MEASURES**

**BIO-19** The project owner shall implement and incorporate into the facility closure plan measures to address the local biological resources related to facility closure. A funding mechanism shall be developed in consultation with the Energy Commission staff to ensure sufficient funds are available for revegetation, reclamation, and decommissioning. The facility closure plan shall address biological resources-related mitigation measures. In addition to these measures, the plan must include the following:

1. removal of transmission conductors when they are no longer used and useful;
2. removal of all above-ground and subsurface power plant site facilities and related facilities;
3. methods for restoring wildlife habitat and promoting the re-establishment of native plant and wildlife species;
4. revegetation of the project site and other disturbed areas utilizing appropriate methods for establishing native vegetation;

5. a cost estimate to complete closure-related activities.

In addition, the project owner shall secure funding to ensure implementation of the plan and provide to the CPM written evidence of the dedicated funding mechanism(s).

**Verification:** Prior to initiating construction-related ground disturbance ~~-disturbing project~~ activities the project owner shall provide financial assurances to the CPM to guarantee that an adequate level of funding will be available to implement decommissioning and closure activities described above. The financial assurances may be in the form of an irrevocable letter of credit, a performance bond, a pledged savings account, or another equivalent form of security, as approved by the CPM.

At least 12 months prior to commencement of planned closure activities, the project owner shall address all biological resources-related issues associated with facility closure, and provide final measures, in a Biological Resources Element. The draft planned permanent or unplanned closure measures shall be submitted to the CPM for comment by staff, CDFG, and USFWS. After revision, final measures shall comprise the Biological Resources Element, which shall include the items listed above as well as written evidence of the dedicated funding mechanism(s) for these measures. The final Biological Resources Element shall become part of the facility closure plan, which is submitted to the CPM within 90 days of the permanent closure or another period of time agreed to by the CPM.

In the event of an unplanned permanent closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan (see **Compliance** Conditions of Certification).

Upon facility closure, the project owner shall implement measures in the Biological Resources Element and provide written status updates on all closure activities to the CPM at a frequency determined by the CPM.

## **SPECIAL-STATUS PLANT SURVEYS/PROTECTION PLAN**

**BIO-20** To avoid impacts to special-status plant species (state-plants, or California Native Plant Society List 1A, 1B, 2, or 3 plants) that might occur along the proposed northern emergency access road or the Rosamond Alternative water pipeline alignment, pre-construction surveys shall be conducted in these areas in the sSpring 2010 prior to anticipated construction. The surveys on the Rosamond Alternative water pipeline alignment would need to be conducted only if the Energy Commission elects to adopt this alternative. If special-status plant species are detected within 50 feet of the project footprint of the proposed northern emergency access road or the Rosamond Alternative alignment, the qualified botanist shall prepare a Sensitive Plant Protection Plan to avoid direct and indirect impacts. The project owner shall implement the following measures:

1. Pre-Construction Floristic Surveys. A qualified botanist shall conduct floristic surveys along the northern emergency access route and along the southern 23



miles of the Rosamond Alternative pipeline alignment. Surveys shall be conducted at the appropriate time of year and according to guidelines from the California Department of Fish and Game (CDFG 2000) and the California Native Plant Society (CNPS 2001).

2. Agency Notification: If state or federal listed plant species are detected during the pre-construction floristic surveys, the CPM and CDFG shall be notified in writing no more than 15 days from detection of the plants. The notification shall be prepared according to agency guidelines, and shall include submission of the GIS shape files and metadata for the plant occurrences. Concurrent with notification of the appropriate permitting agencies, the project engineer shall also be contacted to ensure adequate time for adjusting the alignment within the right-of-way or narrowing a reach of the project footprint to avoid direct and indirect impacts to the plant occurrence.
3. Sensitive Plant Protection Plan. If special status plant species are detected during pre-construction surveys a qualified botanist shall prepare a Sensitive Plant Protection Plan (Plan). The Plan shall include measures for avoiding direct impacts and accidental impacts during construction by establishing the plant occurrence and an appropriately-sized buffer as an Environmentally Sensitive Area, as described in BIO-21. The Plan would also include measures to avoid indirect impacts including: sedimentation from adjacent disturbed soils; alterations of the site hydrology from changes in the drainage patterns; dust deposition; displacement or degradation of the habitat from the introduction and spread of noxious weeds. The plan shall also include a discussion of monitoring and reporting requirements during and after construction.
4. Review and Submittal of Plan: The project owner shall submit to the CPM and CDFG a draft Sensitive Species Protection Plan. Prior to any ground-disturbing activities within 50 feet of the sensitive plant occurrences detected during the pre-construction floristic surveys, the project owner shall submit to the CPM a final Plan that reflects review and approval by Energy Commission staff in consultation with CDFG.

**Verification**: No later than July 31, 2010 following spring surveys the project owner shall submit a report describing the results of floristic surveys conducted along the proposed northern emergency access road and the southern 23 miles of the Rosamond Alternative pipeline alignment. The report shall be submitted to the CPM and CDFG and shall describe qualifications of the surveyor, survey methods including dates and times, a discussion of visits to reference sites, figures depicting the area(s) surveyed, and a list of plant species detected.

If special-status plant species were detected during the 2010 spring surveys the project owner shall submit to the CPM and CDFG a Sensitive Species Protection Plan (Plan) at least 60 days prior to the start of any ground-disturbing activities within 500 feet of the Rosamond Alternative alignment or the northern emergency access road. The CPM will determine the Plan's acceptability in consultation with CDFG and USFWS within 15 days of receipt of the Plan. Any modifications to the approved Plan shall be made only after approval by Energy Commission

staff in consultation with CDFG. The project owner shall notify the CPM no fewer than 5 working days before implementing any CPM-approved modifications to the Plan.

Within 30 days after completion of construction of the Rosamond Alternative pipeline and the northern emergency access road the project owner shall provide to the CPM and CDFG a construction termination report discussing how mitigation measures described in the Plan were implemented.

## **ROSAMOND PIPELINE MITIGATION**

**BIO-21** The following condition would need to be implemented only if the Energy Commission elects to adopt the Rosamond Alternative. To avoid, minimize, and mitigate potential impacts to biological resources associated with construction of the Rosamond Alternative water pipeline, the project owner shall implement the following measures:

1. Establish Environmentally Sensitive Areas: Prior to any ground disturbing activities the Designated Biologist shall flag the Joshua trees depicted in Figure A-4 and the desert washes/drainages shown in Figures A-2a, and b as Environmentally Sensitive Areas (ESAs). Work shall not begin until the ESAs are delineated on the ground with orange safety netting established under supervision of the Designated Biologist. The ESAs for desert washes shall be delineated to protect all the drainages outside of permitted construction (i.e., at the edge of pavement or edge of ROW, depending on the segment), with fencing extending 20 feet out from the drainage along the edge of the construction footprint on both sides of the stream. The ESA fences for Joshua trees shall be installed 20 feet out from the base of the trunk, except where they occur on road edges; on this boundary, the fencing shall be installed at the edge of pavement. The ESA fences shall remain in place for the entire duration of construction. No earth-moving activities, vegetation removal, vehicles, heavy equipment, or other construction shall be permitted within the ESAs.
2. Identify and Avoid Noxious Weed Occurrences. The Designated Biologist shall identify and fence noxious weed occurrences within the construction footprint to prevent their spread into uninfested areas from contaminated tires and undercarriages, or by using the contaminated soil for backfill in other areas. Noxious weeds ranked as having a “high” threat to California wildlands as defined by CAL-IPC (2006), noxious weeds rated “A” by the California Department of Food and Agriculture, and any federal-rated pest plants (CDFA 2009) shall be fenced wherever they occur within the construction footprint; fencing shall be installed at the perimeter of the occurrence. If the occurrence cannot be avoided, the area shall be scraped of its upper 12 inches of soil and the contaminated soil disposed of at an appropriate landfill under the guidance or approval of the County Agricultural Commissioner.
3. Minimize Soil Compaction: Soil compaction shall be minimized in areas that support native vegetation, except on slopes greater than 5 percent and as

necessary to prevent slope failure. In areas that would support natural revegetation the upper 6-12 inches of soil shall be loosened.

4. Revegetate Disturbed Areas: Upon completion of construction, all areas not previously disturbed areas shall be revegetated, excluding the road and roadbed. The following measures shall be implemented for the revegetation effort:
  - a. Stockpile Native Topsoil: Topsoil shall be stockpiled from the project site for use in revegetation of the disturbed soils of the trench. The upper 1 inch of topsoil which contains the seedbank shall be scraped and stockpiled for use as the top-dressing for the revegetation area. An additional 6 to 8 inches of soil below the top 1 inch of soil shall also be scraped and separately stockpiled for use in revegetation areas. All other elements of soil stockpiling shall be described on pages 39-40 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003),
  - b. Revegetate With Native Species: Only seed from locally occurring species from shall be used for revegetation. Seeds shall contain a mix of short-lived early pioneer species such as native annuals and perennials and subshrubs (for example, squirreltail, cheesebush, matchweed, peppergrass, rabbitbrush, creosote bush, burro-weed, wolfberry, Nevada tea, needlegrass, rice grass, goldenhead). Seeding shall be conducted as described in Chapter 5 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003). A list of plant species suitable for Mojave Desert region revegetation projects, including recommended seed treatments, are included in Appendix A-8 of the same report. The list of plants observed during the ~~2010~~ special-status plant surveys of the Rosamond Alternative can also be used as a guide to site-specific plant selection for revegetation.
5. Acquire Habitat: To fully mitigate for habitat loss and potential take of desert tortoise and Mohave ground squirrel, the project owner shall acquire, in fee or in easement, no less than 33.6 acres of land suitable for these species and shall provide funding for the enhancement and long-term management of these compensation lands. The project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating ground-disturbing project activities. If Security is provided, the project owner, or an approved third party, shall complete the proposed compensation lands acquisition within 12 months of the start of project ground-disturbing activities. 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-profit organization dedicated to Mojave Desert habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. ~~If habitat disturbance exceeds that described in this analysis, the project owner shall be responsible for acquisition and management of additional compensation lands or additional funds required to compensate for any additional habitat disturbances. Additional funds shall be based on the adjusted market value of compensation lands at the time of~~

~~construction to acquire and manage habitat.~~ The acquisition and management of compensation lands, including selection criteria, review and approval of lands prior to acquisition, and acquisition conditions shall be as described in staff's proposed Condition of Certification **BIO-11**.

**Verification:** Within 90 days after completion of project construction, the project owner shall provide to the CPM verification that disturbance to Mojave creosote scrub habitat did not result in impacts to Mojave creosote scrub habitat adjacent to work areas. If habitat disturbance exceeded that described in this analysis, the CPM shall notify the project owner of any additional funds required or compensation acreage that must be purchased to compensate for any additional habitat disturbances at the adjusted market value at the time of construction to acquire and manage habitat .

No less than 90 days prior to acquisition of the compensation lands property, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a formal acquisition proposal to the CPM, CDFG, and USFWS describing the parcel(s) intended for purchase.

Draft agreements to delegate land acquisition to CDFG or an approved third party and agreements to manage compensation lands shall be submitted to Energy Commission staff for review and approval (in consultation with CDFG) prior to land acquisition. Such agreements shall be mutually approved and executed at least 60 days prior to start of any project-related ground disturbance activities within 500 feet of the Rosamond Alternative alignment or the northern emergency access road. The project owner shall provide written verification to the CPM that the compensation lands and/or conservation easements have been acquired and recorded in favor of the approved recipient(s). Alternatively, before beginning project ground-disturbing activities within 500 feet of the Rosamond Alternative alignment or the northern emergency access road or any other activities that could result in take in those areas, the project owner shall provide Security in accordance with this condition. Within 90 days after the compensation land and/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 CDFG, for the compensation lands and associated funds.

## **SUPPLEMENTAL CONDITIONS OF CERTIFICATION FOR CULTURAL RESOURCES**

### **CULTURAL RESOURCES PERSONNEL**

**CUL-1** Prior to the start of ground disturbance (includes “preconstruction site mobilization,” “construction ground disturbance,” and “construction grading, boring and trenching,” as defined in the General Conditions for this project) the project owner shall obtain the services of a Cultural Resources Specialist (CRS) and one or more alternate CRSs, if alternates are needed. The CRS shall manage all monitoring, mitigation, curation, and reporting activities required in accordance with the Conditions of Certification (Conditions). The CRS may elect to obtain the services of Cultural Resources Monitors (CRMs) and other technical specialists, if needed, to assist in monitoring, mitigation, and curation activities. The project owner shall ensure that the CRS makes recommendations regarding the eligibility for listing in the California Register of Historical Resources (CRHR) of any cultural resources that are newly discovered or that may be affected in an unanticipated manner. No ground disturbance shall occur prior to Compliance Project Manager (CPM) approval of the CRS and alternates, unless such activities are specifically approved by the CPM. Approval of a CRS may be denied or revoked for non-compliance on this or other projects.

### **CULTURAL RESOURCES SPECIALIST**

The resumes for the CRS and alternate(s) shall include information demonstrating to the satisfaction of the CPM that their training and backgrounds conform to the U.S. Secretary of Interior’s Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 CFR Part 61). In addition, the CRS shall have the following qualifications:

1. The CRS’s qualifications shall be appropriate to the needs of the project and shall include a background in anthropology, archaeology, history, architectural history, or a related field;
2. At least three years of archaeological or historical, as appropriate (per nature of predominant cultural resources on the project site), resource mitigation and field experience in California; and

3. At least one year of experience in a decision-making capacity on cultural resources projects in California and the appropriate training and experience to knowledgeably make recommendations regarding the significance of cultural resources.

The resumes of the CRS and alternate CRS shall include the names and telephone numbers of contacts familiar with the work of the CRS/alternate CRS on referenced projects and demonstrate to the satisfaction of the CPM that the CRS/alternate CRS has the appropriate training and experience to implement effectively the Conditions.

### **CULTURAL RESOURCES MONITORS**

CRMs shall have the following qualifications:

1. a B.S. or B.A. degree in anthropology, archaeology, historical archaeology or a related field and one year experience monitoring in California; or
2. an A.S. or A.A. degree in anthropology, archaeology, historical archaeology or a related field, and four years experience monitoring in California; or
3. enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historical archaeology or a related field, and two years of monitoring experience in California.

### **CULTURAL RESOURCES TECHNICAL SPECIALISTS**

The resume(s) of any additional technical specialist(s), e.g., historical archaeologist, historian, architectural historian, and/or physical anthropologist, shall be submitted to the CPM for approval.

**Verification:** At least 112 days prior to the start of construction-related ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, or at least 352 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, whichever portion of the project area is to be subject to construction-related ground disturbance first, the project owner shall submit the resume for the CRS, and alternate(s) if desired, to the CPM for review and approval.



At least 10 days prior to a termination or release of the CRS, or within 10 days after the resignation of a CRS, the project owner shall submit the resume of the proposed new CRS to the CPM for review and approval. At the same time, the project owner shall also provide to the proposed new CRS the AFC and all cultural resources documents, field notes, photographs, and other cultural resources materials generated by the project. If there is no alternate CRS in place to conduct the duties of the CRS, a previously approved monitor may serve in place of a CRS so that ~~construction project~~-related ground disturbance may continue up to a maximum of 3 days without a CRS. If cultural resources are discovered then ground disturbance will remain halted until there is a CRS or alternate CRS to make a recommendation regarding significance.

At least 20 days prior to any construction-related ground disturbance, the CRS shall provide a letter naming anticipated CRMs for the project and stating that the identified CRMs meet the minimum qualifications for cultural resources monitoring required by this Condition.

At least 5 days prior to additional CRMs beginning on-site duties during the project, the CRS shall provide additional letters to the CPM identifying the CRMs and attesting to their qualifications. If additional CRMs are obtained during the project, the CRS shall provide additional letters to the CPM identifying the CRMs and attesting to the qualifications of the CRMs, at least 5 days prior to the CRMs beginning on-site duties.

At least 10 days prior to any technical specialists beginning tasks, the resume(s) of the specialists shall be provided to the CPM for review and approval.

At least 7 days prior to the start of the preparation of the Historical Resources Management Plan (HRMP) (CUL-4), the project owner shall confirm in writing to the CPM that the approved CRS will be available for and is prepared to implement the cultural resources conditions.

## **PROJECT DOCUMENTATION FOR CULTURAL RESOURCES PERSONNEL**

**CUL-2** Prior to the start of ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, if the CRS has not previously worked on the project, the project owner shall provide the CRS with copies of the AFC, data responses, confidential cultural resources reports, all supplements, and the Energy Commission's Final Staff Assessment (FSA) for the project. The project owner shall also provide the CRS and the CPM with maps and drawings showing the footprints of the power plant, all linear facility routes, all access roads, and all laydown areas. Maps shall include the appropriate USGS quadrangles and a map at an appropriate scale (e.g., 1:2000 or 1" = 200') for plotting cultural features or materials. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM. The CPM shall review map submittals and, in consultation with the CRS, approve those that are appropriate for

use in cultural resources planning activities. No ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site shall occur prior to CPM approval of maps and drawings, unless such activities are specifically approved by the CPM.

If construction of the project would proceed in phases, maps and drawings not previously provided shall be submitted prior to the start of each construction phase. Written notification identifying the proposed schedule of each project phase shall be provided to the CRS and CPM.

Weekly, until ground disturbance is completed, the project construction manager shall provide to the CRS and CPM a schedule of project activities for the following week, including the identification of area(s) where ground disturbance will occur during that week.

The project owner shall notify the CRS and CPM of any changes to the scheduling of the construction phases.

**Verification:** At least 97 days prior to the start of construction-related ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, or at least 337 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, whichever portion of the project area is to be subject to construction-related ground disturbance first, the project owner shall provide the AFC, data responses, confidential cultural resources documents, all supplements, and the Energy Commission's Final Staff Assessment (FSA) to the CRS, if needed, and the subject maps and drawings to the CRS and CPM. The CPM will review submittals in consultation with the CRS and approve maps and drawings suitable for cultural resources planning activities.

At least 15 days prior to the start of ground disturbance, if there are changes to any project-related footprint, the project owner shall provide revised maps and drawings for the changes to the CRS and CPM.

At least 15 days prior to the start of each phase of a phased project, the project owner shall submit the appropriate maps and drawings, if not previously provided, to the CRS and CPM.

Weekly, during ground disturbance, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, e-mail, or fax.

Within 5 days of changing the scheduling of phases of a phased project, the project owner shall provide written notice of the changes to the CRS and CPM.

### **ALTERATION OF PROJECT AREA**

**CUL-3** Changes to the proposed project or to the character of its construction, operation, and maintenance that may become necessary subsequent to the approval of the project, were such approval to occur, may in turn require the re-consideration of the extent of the original project area. Where such changes indicate the need to alter the original project area to include additional lands that were not elements of analysis during the certification process, the effects of any proposed changes on historical resources that may be on such lands would need to be taken into account. Changes in the character of the construction, operation, and maintenance of the proposed project may include such actions as decisions to use non-commercial borrow sites or disposal sites.

Upon the recognition that proposed changes to the project would require the use of lands that were not a part of the original project area, the project owner shall ensure that the CRS surveys any such lands for cultural resources and record each newly found resource on DPR 523 forms. Exceptions would be made to this protocol in cases where cultural resources surveys no greater than five years in age are documented for the entirety of the subject lands and approved by the CPM. Where new cultural resources surveys are warranted, the project owner shall convey the results of such surveys, along with the CRS's recommendations for further action, to the CPM, who will determine whether further action is necessary. If the CPM determines that historical resources may be present and that any such resource may be subject to a substantial adverse change in its significance, the project owner shall ensure that the CRS provides the CPM with substantiated recommendations on whether each such resource is eligible for listing in the CRHR and recommendations for the resolution of any such significant effects. The CRS, the project owner, and the CPM shall then confer on said recommendations, and, upon the concurrence of the CPM with those recommendations, the project owner shall ensure that the CRS proceeds to implement them, and reports on the methods and the results of any such work in the final Cultural Resources Report (CRR) (**CUL-10**).

**Verification:** Upon the recognition that proposed changes to the project or to the character of the construction, operation, and maintenance of the project would require the use of lands that were

not a part of the original project area, the project owner shall notify the CRS and CPM. The project owner shall then provide, for CPM review and approval, documentation of any cultural resources surveys five years or less in age that exist for the additional lands.

At least 75 days prior to the use of the new additional project area lands, in the absence of any such cultural resources surveys or when the extant cultural resources surveys do not cover the entirety of the lands to be added to the project area, the project owner shall ensure that the CRS surveys the additional lands for cultural resources, notifies the project owner and the CPM of the results of the new cultural resources survey, and recommends further action.

No more than 15 days subsequent to the receipt of the information in verification 2, CUL-3, above, the CPM shall determine whether historical resources may be present and whether any such resources may be subject to substantial adverse changes in significance.

At least 60 days prior to the use of the new additional project area lands, if the CPM determines that historical resources may be subject to substantial adverse changes in significance, the project owner shall ensure that the CRS provides the CPM with substantiated evaluations, based on archival and field research, on whether each such resource is eligible for listing in the CRHR and recommendations for the resolution of any potential significant effects.

For no longer than 15 days, the project owner, the CRS, and the CPM shall confer about the above evaluations and recommendations, and, upon the concurrence of the CPM with those evaluations and recommendations, the project owner shall ensure that the CRS proceeds to resolve any significant effects pursuant to the above recommendations prior to the use of the new additional project area lands.

The project owner shall ensure that the CRS reports on the methods and the results of all such work in the CRR (CUL-10).

## **HISTORICAL RESOURCES MANAGEMENT PLAN**

**CUL-4** The Historical Resources Management Plan (HRMP) shall govern the implementation of the overarching program to reduce the effects of the proposed project on historical resources to less than significant. The preparation and implementation of the different elements of the historical resources management program, by the project owner, shall be the result of a number of protocols and consultations set out in this condition of certification and others (CUL-5 through CUL-10) below.

Prior to the start of any project -related ground disturbance (includes “preconstruction site mobilization,” “construction ground disturbance,” and “construction grading, boring and trenching,” as defined in the General Conditions for this project), the project owner shall submit the HRMP, as prepared by or under the direction of the CRS, to the CPM for review and approval. The HRMP shall follow the content and organization of a similar document, the Cultural Resources Monitoring and Mitigation Plan, a draft model version of which will be provided by the CPM, as general guidance. The authors’ name(s) shall appear on the title page of the HRMP. The HRMP shall also incorporate the final results of the January 2009 geoarchaeology study for the proposed project into the appropriate elements of the HRMP. Implementation of the HRMP shall be the responsibility of the CRS and the project owner. Copies of the HRMP shall reside with the CRS, alternate CRS, each CRM, and the project owner’s on-site construction manager. No ground disturbance shall occur prior to CPM approval of the HRMP, unless such activities are specifically approved by the CPM.

The HRMP shall include, but not be limited to, the following elements:

*Primacy of the Conditions of Certification*

1. The statement in the introduction to the HRMP that “any discussion, summary, or paraphrasing of the Conditions of Certification in this HRMP is intended as general guidance and as an aid to the user in understanding the conditions and their implementation. The conditions, as written in the Commission Decision, shall supersede any summarization, description, or interpretation of the conditions in the HRMP. The Cultural Resources Conditions of Certification from the Commission Decision are contained in Appendix A.”

*Implementation of the Historical Resources Management Program*

2. Specification of the implementation sequence and the estimated time frames needed to accomplish all historical resources management program tasks prior to and during construction -related ground disturbance, and during those analysis phases of the management program that may occur subsequent to construction-related ground disturbance.
3. Identification of the person(s) expected to perform each of the historical resources management program tasks, their responsibilities, and the reporting relationships between project construction management and the treatment and monitoring teams.

4. A statement from the project owner that the CRS shall have, for the duration of construction-related ground disturbance, access to equipment and supplies necessary for site mapping, photography, and recovery of any cultural resource materials that are found during such ground disturbance, where such materials cannot be treated prescriptively.

#### *Historical Resources Management Program Research Design*

5. A project area-specific research design that includes a discussion of archaeological research questions and testable hypotheses appropriate to the archaeological data sets known for the project area. The research design shall provide the broader context for and facilitate tiering down to the research design that the project owner shall prepare, pursuant to **CUL6**, for Archaeological Zone 1. The project area research design shall clearly articulate why it is in the public interest to address the research questions that it poses. That research design shall also develop a discussion of artifact and ecofact collection, retention, and disposal policies as related to the research questions in the research design.

#### *Documentation and Curation Standards*

6. A statement that all found cultural resources over 50 years old shall be recorded on Department of Parks and Recreation (DPR) 523 Series forms, and mapped and photographed. In addition, all artifacts and ecofacts retained as a result of the archaeological investigations (survey, testing, and data recovery) shall be curated in accordance with the California State Historical Resources Commission's *Guidelines for the Curation of Archaeological Collections*, into a retrievable storage collection in a public repository or museum.
7. A statement that the project owner shall pay all curation fees for artifacts and ecofacts recovered and for related documentation produced during cultural resources investigations conducted for the project. The project owner shall identify three possible curation facilities that could accept cultural resources materials resulting from project activities.
8. A description of the contents, the format, and the review and approval process for the CRR (**CUL-10**), which shall be prepared according to ARMR guidelines (COHP 1990).

#### *Native American Participation*

9. A description of the roles which Native American observers or monitors shall play in the implementation of the HRMP, including the procedures that shall



govern the selection of such observers and monitors, and the authority and responsibility of each role.

*Treatment and Management of Historical Resources*

10. A protocol that articulates, pursuant to **CUL-5**, the avoidance measures that the project owner shall implement to preserve archaeological site Site 17. **CUL-5** sets out the structure and the details of the avoidance measures. If the applicant determines that it is not feasible to avoid Site 17, the applicant shall notify the CPM of that determination and prepare a treatment plan for the site that will be subject to the review and approval of the CPM. The purpose of the treatment plan will be to reduce the effects of the proposed project on the historical resource to less than significant through a program of data recovery, in addition to, as appropriate, other treatments such as resource registration, or public outreach.
11. A treatment plan for Archaeological Zone 1, pursuant to **CUL-6**, the purpose of which is to reduce the effects of the proposed project on the historical resource to less than significant through a program of data recovery, resource registration, and public outreach. The structure and the details of the program are set out in **CUL-6**.

*Construction Monitoring and Discovery*

12. A Worker Environmental Awareness Program (WEAP) to guide the orientation of every new worker in the project area to cultural resources statutes and regulations, to the effects of the proposed project on cultural resources, to the management program that has been negotiated to address those effects, to the role of the workers in the management program, to the types of cultural resources in the project area and how to recognize them, and to the protocols that workers are to follow upon the discovery of different types of cultural resources. The structure and the details of the WEAP program are set out in **CUL-7**.
13. A description of the structure, and the review and approval process for the Monitoring and Discovery Plan (**CUL-8** and **CUL-9**).
14. Prescriptive treatment plans, where appropriate, for cultural resources that represent marginal data sets (**CUL-9**).

**Verification** Prior to the preparation of the HRMP, the project owner shall submit the final technical report for the January 2009 geoarchaeology study for the proposed project to the CPM for review and approval.

Upon approval of the CRS proposed by the project owner, the CPM shall provide to the project owner, as general guidance, an electronic copy of the draft model Cultural Resources Monitoring and Mitigation Plan for the use of the CRS.

At least 30 days prior to the start of construction-related ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, or at least 270 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, whichever portion of the project area is to be subject to construction-related ground disturbance first, the project owner shall submit the HRMP to the CPM for review and approval.

At least 30 days prior to the start of construction-related ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, or at least 270 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, whichever portion of the project area is to be subject to construction-related ground disturbance first, a letter shall be provided to the CPM indicating that the project owner agrees to pay curation fees for any materials collected as a result of the archaeological investigations (survey, monitoring, testing, data recovery).

## **HISTORICAL RESOURCE AVOIDANCE MEASURES, SITE 17**

**CUL-5** The project owner shall direct the CRS to actively implement a sequence of avoidance measures to ensure that there would be no physical damage to Site 17 as a result of the construction, operation, or maintenance of the project. Prior to the onset of any construction-related ground disturbance in the southwestern portion of the project site, the CRS shall re-establish the known boundary of Site 17, add a 10-meter wide buffer around the periphery of that boundary, and flag the boundary around the site and the buffer in a conspicuous manner. The CRS, alternate CRS, or a CRM would subsequently enforce the avoidance of the flagged area during project construction.

The CRS would, subsequent to the construction of the project, permanently mark the boundary around Site 17 and the above buffer, and then set the bounded area

aside as an environmentally sensitive area that would not be subject to disturbance during the life of the project. The character of the permanent marking shall be decided on the basis of consultation and consensus among the property owner, the CRS, and the CPM. If avoidance of Site 17 is not feasible, a treatment plan for Site 17 will be prepared in accordance with subpart 10 of CUL-4.

**Verification:** At least 30 days prior to the onset of construction-related ground disturbance in the SE 1/4 of section 8, T. 31 S., R. 37 E., the CRS shall re-establish the known boundary of Site 17, add a 10-meter wide buffer around the periphery of that boundary, and flag the boundary around the site and the buffer in a conspicuous manner.

The CRS, alternate CRS, or a CRM shall enforce the avoidance of the above flagged area for the duration of construction-related ground disturbance.

No longer than 30 days subsequent to the conclusion of construction-related ground disturbance in the SE 1/4 of section 8, T. 31 S., R. 37 E., the CRS shall permanently mark the boundary around Site 17 and the above buffer. The area so marked shall then be an environmentally sensitive area that shall not be subject to any disturbance during the life of the project. The CRS shall continue to enforce the avoidance of the originally flagged area until the area has been permanently marked.

The CRS shall ensure that the measures and verifications of this condition of certification are, pursuant to subpart 10, **CUL-4**, completely incorporated as a protocol in the HRMP.

#### **ARCHAEOLOGICAL ZONE 1 HISTORICAL RESOURCE TREATMENT PLAN**

**CUL-6** The project owner shall prepare and implement a treatment plan the purpose of which is to reduce the effects of the proposed project on Archaeological Zone 1 to less than significant. The treatment plan shall accomplish the reduction of effects through a program of data recovery, resource registration, and public outreach. Prior to the onset of any construction-related ground disturbance within 30 meters of the provisional boundary for Archaeological Zone 1, the project owner shall prepare, secure the approval of the CPM for, and conclude the field investigation portions of the Archaeological Zone 1 Historical Resource Treatment Plan (HRTTP). The HRTTP shall, at a minimum, include and set out the details of each of the following elements:

1. *Research Design.* A research design specific to Archaeological Zone 1 that tiers off of the research design for the project area in the HRMP (Subpart 5, **CUL-4**) and that clearly articulates why it is in the public interest to address the research questions that it poses. The research design

shall evidence consideration of archaeological themes that relate to the identity and the lifeways of Native American groups in the prehistoric and historic periods.

2. *Data Recovery Program.* Thorough descriptions of the overall goals of the data recovery program, how the data sets that are anticipated for Archaeological Zone 1 will contribute to our knowledge of the prehistoric and historic period Native American themes of the research design and answer particular research questions, of the purposes and the methods of the different field phases of the data recovery program, and of the purposes and methods of the material analyses that will also occur. The descriptions of the field and laboratory efforts for the data recovery program shall include, at a minimum, and more thoroughly articulate the following phases:
  - a. *Inventory, Phase 1 (Geophysical Test).* The initial component of the data recovery program shall be a discontinuous 1-acre test of the efficacy of the use of magnetometry to derive a representative sample of the predominant type of archaeological deposits that are now thought to make up Archaeological Zone 1, fire features or hearths that occur both as feature clusters and as isolate features and that may or may not occur in association with fire-affected rock. The test shall include a small magnetometer survey through and in the near vicinity of (approximately 30 meters beyond) known archaeological sites in Archaeological Zone 1, and the subsequent ground truthing of a representative sample of the magnetic anomalies found in the survey areas for the test. The ground truthing sample shall, at a minimum, be the lesser of 25 percent of the anomalies or 12 individual anomalies. The excavation of the anomalies may, at the discretion of the CRS, be by hand or mechanical means. The CRS shall ensure that the field notes and the forms for the survey areas and for the ground truthing are sufficient to completely document the geophysical test.
  - b. *Inventory, Phase 2a (Geophysical Survey).* If the CRS and CPM agree, after consultation, that the geophysical test demonstrates that the use of magnetometry appears to be reasonably reliable, the project owner shall ensure that the CRS proceeds to a broader magnetometry sample survey of Archaeological Zone 1 and of the area 30 meters to the southwest of the provisional district boundary (Cultural Resources

Figure 2). The CRS and CPM shall first derive and agree upon, in consultation with one another, the precise location of the provisional district boundary on the surface of the project site. The project owner shall then ensure that the CRS develops a single stratified random sample for Archaeological Zone 1 and the adjacent area 30 meters to the southwest of the provisional district boundary that would result in a magnetometry survey of a minimum of 10 percent of that total area. The CRS and the CPM shall, in consultation, derive and agree upon criteria that shall form the basis for the stratification of the survey sample. The criteria shall reflect the spatial variability in the physical and material character and in the chronology of Archaeological Zone 1, as such variability is presently known from the field investigations in the project area. The results of the broader magnetometry survey would also be subject to the ground truthing of a representative sample of the magnetic anomalies found in the survey areas to more precisely establish the range of error of the survey results. The ground truthing sample shall, at a minimum, be the lesser of 10 percent of the anomalies or 48 individual anomalies. The excavation of the anomalies may, at the discretion of the CRS, be by hand or mechanical means. The project owner shall ensure that the CRS's field notes and the forms for the survey areas and for the ground truthing are sufficient to completely document the geophysical survey to the satisfaction of the CPM.

- c. *Inventory, Phase 2b (Mechanical Subsurface Survey)*. Should the results of the initial geophysical test demonstrate that the use of magnetometry is not reasonably well able to locate the types of archaeological deposits that make up Archaeological Zone 1, the applicant would conduct a broader subsurface sample survey of the Zone using construction equipment such as a road grader or a backhoe rather than proceeding with the broader geophysical survey. This mechanical subsurface survey would employ transects, the proposed width and length of which the CPM would approve, and would involve the excavation of the transects in thin (no thicker than approximately 5 centimeters) layers to carefully expose and facilitate the accurate preliminary documentation of target archaeological deposits. The project owner shall ensure that the CRS, with CPM concurrence, derives criteria to form the basis for the stratification of the survey sample and develops a single stratified random sample for

the Zone and the adjacent area to the southwest that would result in the mechanical subsurface survey of ~~a minimum~~ no more than of 2.5 percent of that total area. The criteria shall reflect the spatial variability in the physical and material character and in the chronology of Archaeological Zone 1, as such variability is presently known from the field investigations in the project area. The project owner shall submit, for CPM review and approval, the CRS's methodology for the mechanical subsurface survey. The methodology would prescribe how archaeological deposits found during the survey would be preserved intact until the conclusion of the survey so that the CRS could structure a representative data recovery sample of the found deposits. The methodology would also take into account how the CRS would recover a sample of the buried land surfaces that may surround individual hearths or groups of hearths and document the material culture assemblages that may be found on such surfaces when the act of the mechanical exposure of the hearths may often truncate the surface from which they were constructed and used. The project owner shall ensure that the CRS's field notes and the forms for the survey areas are sufficient to completely document the mechanical subsurface survey to the satisfaction of the CPM.

- d. *Inventory, Phase 3 (Refinement of Provisional District Boundary).* The project owner shall ensure that the CRS, on the basis of the results of either phase 2a or phase 2b of the data recovery program, drafts a refined provisional boundary for Archaeological Zone 1 that shall become an integral part of the implementation of, among other conditions of certification, **CUL-8 and** subparts 2e and 2f of this condition, **CUL-6**.
  
- e. *Data Recovery, Phase 1 (Hearth Excavations).* One component of the actual data recovery phase of the data recovery program would be to excavate small (approximately 1–3 meters square) exposures to uncover and document a sample of the individual hearths that are one constituent of the Zone. The purpose of this documentation would be to gather data to describe the physical variability of the features, to identify and inventory the artifacts and ecofacts that are found in them, and to interpret the methods of construction and the potential uses of the features. The excavation of the hearths shall proceed by hand to, where feasible, remove the archaeological deposits in

anthropogenic layers. Where appropriate, the project owner shall ensure that the CRS retain samples of each layer sufficient to submit for radiocarbon assays, and macrobotanical, palynological, geochemical, or other analyses. The balance of each layer shall be screened through hardware cloth of no greater than 1/8-inch mesh. The project owner shall ensure that the CRS excavates a ~~minimum~~ maximum of 12 such small exposures. In consultation, the CRS and the CPM shall develop and agree upon a sample of the hearths found as a result of the entire cumulative effort to inventory the archaeological deposits of Archaeological Zone 1 to subject to data recovery excavation. The sample shall reflect the apparent physical, material, and chronological variability of the found features. The project owner shall ensure that the CRS's field notes and the forms for the excavation of the hearths are sufficient to acquire the thorough complement of data necessary to the description of each feature, and the interpretation of the construction and use of each feature to the satisfaction of the CPM.

- f. *Data Recovery, Phase 2 (Excavation of Former Land Surfaces)*. The other component of the actual data recovery phase of the data recovery program would be to excavate larger (5 meters square) block exposures to attempt to uncover a sample of the buried land surfaces that may surround individual hearths or groups of them, and to document the material culture assemblages that may be found on such surfaces. The excavation of the surfaces shall proceed by hand to, where feasible, remove the archaeological deposits in anthropogenic layers. Where appropriate, the project owner shall ensure that the CRS retain samples of each layer sufficient to submit for radiocarbon assays, and macrobotanical, palynological, geochemical, or other analyses. The balance of each layer shall be screened through hardware cloth of no greater than 1/8-inch mesh. The CRS shall try to excavate each block exposure as a single excavation unit rather than as ~~25~~ separate one meter square excavation units. The project owner shall ensure that the CRS excavate a ~~minimum~~ maximum of 4 block exposures or excavation blocks, where intact buried land surfaces are found in each excavation block. The CRS shall excavate a maximum of 8 block exposures, where intact buried land surfaces are not found in at least four of the blocks excavated. In consultation, the CRS and the CPM



shall develop and agree upon a sample of the buried surfaces that would be subject to excavation. The sample shall reflect the apparent physical, material, and chronological variability of the hearth features around which the buried surfaces may be found. The project owner shall ensure that the CRS's field notes and the forms for the excavation of the surfaces are sufficient to acquire the thorough complement of data necessary to the description of the distributions of artifacts and ecofacts across each surface, and the interpretation of the use of each surface, to the satisfaction of the CPM.

g. *Material Analyses.* The project owner shall ensure that the H RTP articulates the anticipated scope of the analyses of the cumulative artifact and ecofact collections that have been and will be the result of the investigations of Archaeological Zone 1, articulates the analytic methods to be used, and articulates how the data sets that such analyses will produce are relevant to the themes and questions in the research design for the Zone.

h. *Report Preparation.* The project owner shall ensure that the H RTP states that a conclusory report is one of the requirements of the data recovery program, and also articulates the outline of, and the production schedule and approval process for the subject report.

3. *California Register of Historical Resources Registration.* The project owner shall prepare a California Register of Historical Resources nomination for Archaeological Zone 1 and submit the nomination to the State Historic Resources Commission for formal consideration. The project owner shall ensure that the CRS, as a part of the registration effort, derives a permanent district name for the Zone to replace the temporary designation of "Archaeological Zone 1." The CRS shall also ensure that the nomination reflects a final formal boundary for the district, a boundary that the CRS shall derive on the basis of the results of the data recovery program and present in the conclusory report for that program.

4. *Outreach Initiatives*

a. *Professional Outreach.* The project owner shall prepare a research paper and present it at a professional conference, or prepare and publish a peer-reviewed journal article to inform the professional archaeological community about Archaeological Zone 1 and to interpret its implications for our understanding of the prehistory and early history of Native American life in the region.

- b. *Public Outreach.* The project owner shall prepare and present materials that interpret Archaeological Zone 1 for the public. Potential public interpretation efforts may include the preparation of an instructional module for use in local school districts, or the preparation of a display for existing public interpretation venues such as Red Rock Canyon State Park.

**Verification:** At least 210 prior to the onset of construction-related ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, the project owner shall ensure that the CRS completes the geophysical test referred to in subpart 2a, **CUL-6**, above, and as set out in the H RTP component of the HRMP (**CUL-4**), and submit, for the review and approval of the CPM, a formal assessment of the reliability of the use of magnetometry to locate buried hearths in the Zone. If the geophysical test demonstrates that the use of magnetometry appears to be reasonably reliable in this regard, then the project owner shall also submit, for the review and approval of the CPM, the precise geographic coordinates of the provisional boundary of Archaeological Zone 1 and a stratified random sample for a broader magnetometry survey of 10 percent of Archaeological Zone 1 and of the area 30 meters to the southwest of the provisional district boundary. If the geophysical test demonstrates that the use of magnetometry does not appear to be reasonably reliable, then the project owner shall submit, for the review and approval of the CPM, a stratified random sample for a mechanical subsurface survey of 2.5 percent of Archaeological Zone 1 and of the area 30 meters to the southwest of the provisional district boundary.

At least 105 days prior to the onset of construction-related ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, the project owner shall ensure that the CRS completes the formal inventory of that area under, as appropriate, subparts 2b or 2c, **CUL-6** and submits, for the review and approval of the CPM, a preliminary report, prepared by or under the direction of the CRS, of the results of the formal inventory, the precise geographic coordinates of the refined provisional district boundary (subpart 2d, **CUL6**), and separate samples for the data recovery excavation of a finite number of the hearths found in Archaeological Zone 1 (subpart 2e, **CUL-6**) and of a finite number of block exposures to reveal intact buried land surfaces there (subpart 2f, **CUL-6**). The project owner shall ensure that the preliminary report is a concise document that provides descriptions of the schedule and methods of the inventory field effort, a preliminary tally of the numbers and, where feasible, the types of archaeological deposits that were found, a discussion of the potential range of error in that tally, and a map of the locations of the found archaeological deposits that has topographic contours and the project site landform designations as overlays. The results of the formal inventory, as set out in the preliminary report, shall be the basis for the refinement of the provisional district boundary. The project

owner shall ensure that the CRS then derives the samples for the hearths and the buried land surface block exposures relative to the refined provisional district boundary.

At least 30 days prior to the onset of construction-related ground disturbance anywhere to the northeast of the refined provisional boundary for Archaeological Zone 1, subsequent to the CPM's approval of said boundary, the project owner shall ensure that the CRS completes the data recovery phases of the data recovery program (subparts 2e and 2f, **CUL-6**) and submits, for the review and approval of the CPM, a preliminary report of the results of those phases. The preliminary report shall be a concise document that provides descriptions of the schedule and methods of the data recovery effort, technical descriptions of excavated archaeological features and buried land surfaces that, while draft in format, present the highest resolution of technical data that can be derived from the data recovery field notes, plan and, as appropriate, profile drawings and photographs of excavated archaeological features and buried land surfaces, and technical descriptions and appropriate graphics of the stratigraphic contexts of excavated archaeological features and buried land surfaces. No construction-related ground disturbance shall occur to the northeast of the refined provisional boundary for Archaeological Zone 1 prior to the project owner's receipt, in writing, of the CPM's approval of the preliminary data recovery report.

No longer than 180 days subsequent to the CPM's approval of the preliminary data recovery report, the project owner shall ensure that the CRS completes the requisite material analyses for, prepare, and submits, for the approval of the CPM, the conclusory report for the data recovery program (subpart 2h, **CUL-6**).

No longer than 240 days subsequent to the CPM's approval of the preliminary data recovery report, the project owner shall ensure that the CRS completes the preparation of the California Register of Historical Resources nomination for Archaeological Zone 1 and submits the nomination to the State Historic Resources Commission for formal consideration (subpart 3, **CUL-6**). The nomination shall reflect the formal district boundary that shall be one result of the implementation of the data recovery program, as presented in the conclusory report for that program.

No longer than 240 days subsequent to the CPM's approval of the preliminary data recovery report, the project owner shall ensure that the CRS completes requirements of subpart 4a, **CUL-6** and provides the CPM with three copies of the final product of that effort, and prepares, and submits for the approval of the CPM, a product that fulfills the requirements of subpart 4b, **CUL-6**. Upon the CPM's approval of the latter product, the project owner shall ensure, as appropriate, the product's installation, implementation, or display.

## **WORKER ENVIRONMENTAL AWARENESS PROGRAM (WEAP)**

**CUL-7** Prior to and for the duration of construction-related ground disturbance, the project owner shall provide Worker Environmental Awareness Program (WEAP) training to all new workers within their first week of employment at the project site, laydown area, and along the linear facilities routes. The training shall be prepared by the CRS, may be conducted by any member of the archaeological team, and may be presented in the form of a video. The CRS shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance is completed or suspended, but must be resumed when ground disturbance, such as landscaping, resumes. The training shall include:

1. A discussion of applicable cultural resources statutes, regulations, and related enforcement provisions;
2. A summary of the effects of the proposed project on cultural resources;
3. A summary of the historical resources management program that has been negotiated to address the effects of the proposed project on cultural resources;
4. A discussion of the role of the workers in the historical resources management program;
5. Samples or visuals of artifacts that might be found in the project area;
6. A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed;
7. A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, the range of variation in the appearance of such deposits across the project area, and, more especially, the known range of variation in the archaeological deposits of Archaeological Zone 1;
8. Instruction that the CRS, alternate CRS, and CRMs have the authority to halt construction-related ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the CRS;

9. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery, particularly in Archaeological Zone 1 for prehistoric archaeological deposits that are inconsistent with the known range of variation in the archaeological deposits there, and shall contact their supervisor and the CRS or CRM, and that redirection of work would be determined by the construction supervisor and the CRS;
10. An informational brochure that identifies the reporting procedures for Archaeological Zone 1 and non-Archaeological Zone 1 areas in the event of a discovery;
11. An acknowledgement form signed by each worker indicating that they have received the training; and
12. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

No ground disturbance shall occur prior to implementation of the WEAP program, unless such activities are specifically approved by the CPM.

**Verification:** ~~At least 30 days prior to the start of ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, and at least 270 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone,~~ the CRS shall provide, as a stand-alone document or as an element of the HRMP, the training program draft text and graphics and the informational brochure to the CPM for review and approval.

At least 30 days prior to the start of ground disturbance anywhere on the project site, the CPM will provide to the project owner a WEAP Training Acknowledgement form for each WEAP-trained worker to sign.

Monthly, until all construction-related ground disturbance is complete, the project owner shall provide in the Monthly Compliance Report (MCR) the WEAP Training Acknowledgement forms of workers at the project site and on the linear facilities who have completed the training in the prior month and a running total of all persons who have completed training to date.

## CONSTRUCTION MONITORING PROGRAM

**CUL-8** The Monitoring and Discovery Plan (subpart 13, **CUL-4**) shall include separate protocols for construction monitoring, and for the discovery and treatment of new cultural resources that are found or when unanticipated effects to known cultural resources become evident during construction-related ground disturbance. The construction monitoring protocol shall specify the different procedures below that the project owner shall follow during construction-related ground disturbance in different parts of the project area and on different landforms in the project area, where the lateral extent and the character of project area landforms are known. As the source of the water that would be necessary to operate the proposed project remains an active focus of discussion, staff includes specifications here for the monitoring procedures that the project owner would need to follow in the event that the project owner ultimately chooses to construct either the Rosamond Community Service District or the City of California City treated wastewater pipeline alternative. Other alterations of the project area under **CUL-3** shall require the project owner to append the Monitoring and Discovery Plan to include monitoring procedures for the actions that would occur in any lands added to the original project area. The appended procedures shall be consistent with the landform-specific monitoring protocols below.

The project owner shall ensure that the CRS, alternate CRS, or CRMs actively monitor, full time, all construction-related ground disturbance in the project area, in accordance with the landform-specific protocols below, to ensure that there are no impacts to undiscovered resources and to ensure that known resources are not impacted in an unanticipated manner. Additionally, the project owner shall ensure that construction personnel, trained to recognize what archaeological site types are and are not known for Archaeological Zone 1, passively monitor construction-related ground disturbance in the project area, also in accordance with the landform-specific protocols below.

*Landform-specific Monitoring Protocols.* The construction monitoring protocols specific to the different landform contexts in the project area variously have active and passive components. The active components relate to the construction monitoring protocols that are required for landform contexts that are outside of Archaeological Zone 1, and the passive components relate to the protocols for such contexts that are in Archaeological Zone 1. The efficacy of the whole series of construction monitoring protocols below depends on the project owner, prior to the initiation of construction-related ground disturbance, physically staking out the boundary of each landform and the refined provisional district boundary for Archaeological Zone 1, and ensuring that the primary author of the January 2009 geoarchaeology study for the proposed project

conduct field orientations for the CRS, the alternate CRS, and each CRM so that they are able to recognize the project area landforms and key subsurface sedimentary features such as paleosols and sedimentary contacts. The boundary lines on the surface of the project site are the referents that direct the differential implementation of the active and passive components of the protocols, and the subsurface paleosols and sedimentary contacts are the referents that vertically bound the requisite construction monitoring areas.

#### *Monitoring Protocol for Landform Hf1*

*Active component.* The active component of the monitoring protocol for the Hf1 landform requires the project owner to have the CRS, alternate CRS, or CRMs actively monitor all construction-related ground disturbance down to the upper boundary of the paleosol that is buried in the landform. That boundary, which is the upper boundary of a preserved A horizon, is approximately 2 meters below the present surface of the landform.

*Passive component.* The owner shall have construction personnel on the project passively monitor for and halt construction upon the discovery of buried archaeological deposits in the portion of Archaeological Zone 1 on the Hf1 landform that appear to represent archaeological site types not previously known for the Zone. Any such discovery shall be subject to the discovery protocol of **CUL-9**. Construction personnel shall be given training, as part of the training program of **CUL-7**, which would facilitate the field recognition of archaeological site types that are and are not known for the district.

#### *Applicability*

*Project Site.* Active monitoring to the southwest of the refined provisional district boundary, and passive monitoring to the northeast of the refined provisional district boundary.

*Transmission Line Infrastructure.* Not applicable.

*Emergency Access Road.* Not applicable.

*Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives.* Passive monitoring to the northeast of the refined provisional district boundary.



### *Monitoring Protocol for Landform Hf1d*

*Active component.* The active component of the monitoring protocol for the Hf1d landform requires the project owner to have the CRS, alternate CRS, or CRMs actively monitor all construction-related ground disturbance down approximately 2 meters from the present surface of the landform to the upper contact of what are presently thought to be Pleistocene-age deposits of pebbles and cobbles.

*Passive component.* No passive monitoring on the Hf1d landform.

### ***Applicability***

*Project Site.* Active monitoring across the whole extent of the landform on the project site.

*Transmission Line Infrastructure.* Active monitoring across the whole extent of the landform in the portion of the project area that encompasses the construction area for the transmission line infrastructure. To implement the protocol for the Hf1d landform in the construction area for the transmission line infrastructure, the project owner shall project out the boundary between the Hf1d and Hf3 landforms, which appears to be coincident with the Cantil Valley fault, to the southwest of the project site, and implement the protocol for the Hf1d landform to the southeast of that projected boundary.

*Emergency Access Road.* Not applicable.

*Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives.* Not applicable.

### *Monitoring Protocol for Landform Hf2*

*Active component.* The active component of the monitoring protocol for the Hf2 landform requires the project owner to have the CRS, alternate CRS, or CRMs actively monitor all construction-related ground disturbance to the maximum depth of such disturbance.

*Passive component.* The project owner shall have construction personnel on the project passively monitor for and halt construction upon the discovery of buried archaeological deposits in the portion of Archaeological Zone 1 on the Hf2 landform that appear to represent archaeological site types not previously known for the Zone. Any such

discovery shall be subject to the discovery protocol of **CUL-9**. Construction personnel shall be given training, as part of the training program of **CUL-7**, which would facilitate the field recognition of archaeological site types that are and are not known for the district.

***Applicability***

*Project Site.* Active monitoring to the southwest of the refined provisional district boundary, and passive monitoring to the northeast of the refined provisional district boundary.

*Transmission Line Infrastructure.* Not applicable.

*Emergency Access Road.* Not applicable.

*Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives.* Passive monitoring to the northeast of the refined provisional district boundary.

*Monitoring Protocol for Landform Hf3*

*Active component.* No active monitoring on the Hf3 landform.

*Passive component.* No passive monitoring on the Hf3 landform.

***Applicability***

*Project Site.* Not applicable.

*Transmission Line Infrastructure.* Not applicable.

*Emergency Access Road.* Not applicable.

*Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives.* Not applicable.

*Monitoring Protocol for Landform Hf4*

*Active component.* The active component of the monitoring protocol for the Hf4 landform requires the project owner to have the CRS, alternate CRS, or CRMs actively

monitor all construction-related ground disturbance to the maximum depth of 4 meters such disturbance.

*Passive component.* The owner shall have construction personnel on the project passively monitor for and halt construction upon the discovery of buried archaeological deposits in the portion of Archaeological Zone 1 on the Hf4 landform that appear to represent archaeological site types not previously known for the Zone. Any such discovery shall be subject to the discovery protocol of **CUL-9**. Construction personnel shall be given training, as part of the training program of **CUL-7**, which would facilitate the field recognition of archaeological site types that are and are not known for the district.

***Applicability***

*Project Site.* Active monitoring to the southwest of the refined provisional district boundary, and passive monitoring to the northeast of the refined provisional district boundary.

*Transmission Line Infrastructure.* Not applicable.

*Emergency Access Road.* Not applicable.

*Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives.* Active monitoring to the southwest of the refined provisional district boundary, and passive monitoring to the northeast of the refined provisional district boundary.

***Monitoring Protocol for Unknown Landforms***

*Active component.* The active component of the monitoring protocol for unknown landforms requires the project owner to have the CRS, alternate CRS, or CRMs actively monitor all construction-related ground disturbance to the maximum depth of any such disturbance.

*Passive component.* No passive monitoring on unknown landforms.

***Applicability***

*Project Site.* Not applicable.

*Transmission Line Infrastructure.* Not applicable.

*Emergency Access Road.* Active monitoring for the whole length of the proposed emergency access road, which is outside and projects east of the project site to Neuralia Road.

*Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives.* Active monitoring for the whole length of either pipeline route alternative, both of which are outside and to the east and south of the project site.

Full-time archaeological monitoring for this project shall be the archaeological monitoring of all construction-related ground disturbance in the project area, in accordance with the Landform-specific Monitoring Protocols, above. Where excavation equipment is actively removing dirt and hauling the excavated material farther than fifty feet from the location of active excavation, full-time archaeological monitoring shall require at least two monitors per excavation area. In this circumstance, one monitor shall observe the location of active excavation and a second monitor shall inspect the dumped material. For excavation areas where the excavated material is dumped no further than fifty feet from the location of active excavation, one monitor shall both observe the location of active excavation and inspect the dumped material.

In the event that the CRS believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

The research design in the HRMP shall govern the collection, treatment, retention/disposal, and curation of any archaeological materials encountered.

A Native American monitor shall be obtained to monitor ground disturbance in areas where Native American artifacts may be discovered. Contact lists of interested Native Americans and guidelines for monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that shall be monitored. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM. The CPM will either identify potential monitors or will allow ground disturbance to proceed without a Native American monitor.

On forms provided by the CPM, CRMs shall keep a daily log of any monitoring and other cultural resources activities and any instances of noncompliance with the

Conditions and/or applicable LORS. Copies of the daily monitoring logs shall be provided by the CRS to the CPM, if requested by the CPM. From these logs, the CRS shall compile a monthly monitoring summary report to be included in the MCR. If there are no monitoring activities, the summary report shall specify why monitoring has been suspended.

The CRS or alternate CRS shall report daily to the CPM on the status of the project's cultural resources-related activities, unless reducing or ending daily reporting is requested by the CRS and approved by the CPM.

In the event that the CRS believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

The CRS, at his or her discretion, or at the request of the CPM, may informally discuss cultural resources monitoring and mitigation activities with Energy Commission technical staff.

Cultural resources monitoring activities are the responsibility of the CRS. Any interference with monitoring activities, removal of a monitor from duties assigned by the CRS, or direction to a monitor to relocate monitoring activities by anyone other than the CRS shall be considered non-compliance with these Conditions.

Upon becoming aware of any incidents of non-compliance with the Conditions and/or applicable LORS, the CRS and/or the project owner shall notify the CPM by telephone or e-mail within 24 hours. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the Conditions. When the issue is resolved, the CRS shall write a report describing the issue, the resolution of the issue, and the effectiveness of the resolution measures. This report shall be provided in the next MCR for the review of the CPM.

**Verification:** At least 30 days prior to the start of ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, and at least 270 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, the project owner shall submit the Monitoring and Discovery Plan to the CPM for review and approval.

At least 30 days prior to the start of construction-related ground disturbance, the CPM will provide to the CRS an electronic copy of a form to be used as a daily monitoring log.

Monthly, while monitoring is on-going, the project owner shall include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS and shall attach any new DPR 523A forms completed for finds treated prescriptively, as specified in the HRMP.

At least ~~30~~10 days prior to the start of construction-related ground disturbance, the project owner shall physically stake out a minimum of every 200 feet along the surface of the ground and in a conspicuous manner, either the provisional boundary of Archaeological Zone 1, or, if it has been given the approval of the CPM, the refined provisional district boundary for the Zone, and the known boundary of each landform on the project site as each such boundary is reported in the February 6, 2009 preliminary field report for the geoarchaeology study (Young 2009b). The project owner shall engage the author of that preliminary report to assist in the location of each landform boundary on the ground.

At least 30 days prior to the start of construction-related ground disturbance, the project owner shall engage the author of the February 6, 2009 preliminary field report for the geoarchaeology study (Young 2009b) to conduct field orientations for the CRS, the alternate CRS, and each CRM so that they are each able to recognize the project area landforms and key subsurface sedimentary features in the landform-specific monitoring protocols such as paleosols and sedimentary contacts. The replacement of the CRS, the alternate CRS, or CRMs shall necessitate new field orientations to train new personnel.

At least 30 days prior to the start of construction-related ground disturbance in any portion of the project area added under **CUL-3**, the project owner shall submit a numbered appendix to the Monitoring and Discovery Plan to the CPM for review and approval. Each such appendix shall include monitoring procedures for the actions that would occur in lands added to the original project area. The appended procedures shall be consistent with the landform-specific monitoring protocols of **CUL-8**.

Daily, as long as no cultural resources are found, the CRS shall provide a statement that “no cultural resources over 50 years of age were discovered” to the CPM as an email, or in some other form acceptable to the CPM.

At least 24 hours prior to reducing or ending daily reporting, the project owner shall submit to the CPM, for review and approval, a letter or e-mail (or some other form of communication

acceptable to the CPM) detailing the CRS's justification for reducing or ending daily reporting.

At least 24 hours prior to implementing a proposed change in monitoring level, documentation justifying the change shall be submitted to the CPM for review and approval.

No later than 30 days following the discovery of any Native American cultural materials, the project owner shall submit to the CPM copies of the information transmittal letters sent to the Chairpersons of the Native American tribes or groups who requested the information.

Within 15 days of receiving them, the project owner shall submit to the CPM copies of any comments or information provided by Native Americans in response to the project owner's transmittals of information.

### **DISCOVERY AND DISCOVERY TREATMENT PROTOCOLS**

**CUL-9** The Monitoring and Discovery Plan (subpart 13, **CUL-4**) shall include separate protocols for construction monitoring, and for the discovery and treatment of new cultural resources that are found outside of the refined provisional boundary for Archaeological Zone 1, when archaeological site types not previously known for the Zone are found inside said boundary, or when unanticipated effects to known cultural resources become evident during construction-related ground disturbance. The Discovery Protocol shall specify the procedures that the project owner shall follow upon the discovery of a new resource outside of Archaeological Zone 1, of a new archaeological site type in Archaeological Zone 1, or upon the recognition of an unanticipated effect. The project owner shall, in any such instance, grant authority to halt construction-related ground disturbance to the CRS, alternate CRS, and the CRMs. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

In the event that cultural resources that may be over 50 years of age are found, or, if younger, determined exceptionally significant by the CPM, or archaeological site types not previously known for Archaeological Zone 1 are found in it, or impacts to such resources can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts. Monitoring and daily reporting as provided in **CUL-8** shall continue during all ground-disturbing activities elsewhere on the project site. The halting or redirection of ground disturbance shall remain in effect until the CRS has visited the discovery, and all of the following have occurred:



1. The CRS has notified the project owner, and the CPM has been notified within 24 hours of the discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning, including a description of the discovery (or changes in character or attributes), the action taken (i.e., work stoppage or redirection), a recommendation of CRHR eligibility, and recommendations for mitigation of any cultural resources discoveries, whether or not a determination of CRHR eligibility has been made.
2. If the discovery would be of interest to Native Americans, the CRS has notified all Native American groups that expressed a desire to be notified in the event of such a discovery.
3. The CRS has completed field notes, measurements, and photography for a DPR 523A “Primary Record” form. Unless the find can be treated prescriptively, as specified in the HRMP, the “Description” entry of the DPR 523A “Primary Record” form shall include a recommendation on the CRHR eligibility of the discovery. The project owner shall submit completed forms to the CPM.
4. The CRS, the project owner, and the CPM have conferred, and the CPM has concurred with the recommended eligibility of the discovery and approved the CRS’s proposed data recovery, if any, including the curation of the artifacts, or other appropriate mitigation; and any necessary data recovery and mitigation have been completed.

The discovery and discovery treatment protocols in the Monitoring and Discovery Plan shall specify that the preferred treatment strategy for any buried archaeological deposits found during the course of the construction, operation, and maintenance of the proposed project is avoidance. A mitigation plan shall be prepared for any CRHR-eligible (as determined by the CPM) resource, impacts to which cannot be avoided, except for archaeological site types in Archaeological Zone 1 that are already known to be characteristic of that district.

Prescriptive treatment plans may be included, where appropriate, in the HRMP for cultural resources that represent marginal data sets.

**Verification:** At least 30 days prior to the start of ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, and at least 270 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the

southwest of the provisional boundary for the Zone, the project owner shall submit the Monitoring and Discovery Plan to the CPM for review and approval.

At least 30 days prior to the start of ground disturbance, the project owner shall provide the CPM and CRS with a letter confirming that the CRS, alternate CRS, and CRMs have the authority to halt construction-related ground disturbance in the vicinity of a cultural resources discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning.

Within 48 hours of the discovery of a resource of interest to Native Americans, the project owner shall ensure that the CRS notifies all Native American groups that expressed a desire to be notified in the event of such a discovery.

Unless the discovery can be treated prescriptively, as specified in the HRMP, completed DPR 523 Series forms for resources newly discovered during ground disturbance shall be submitted to the CPM for review and approval no later than 24 hours following the notification of the CPM, or 48 hours following the completion of data recordation/recovery, whichever the CRS decides is more appropriate for the subject cultural resource.

### **CULTURAL RESOURCES REPORT (CRR)**

**CUL-10** The project owner shall submit the final CRR to the CPM for approval. The final CRR shall be written by or under the direction of the CRS and shall be provided in the ARMR format (COHP 1990). The final CRR shall report on all field activities including dates, times and locations, findings, samplings, and analyses. All survey reports, DPR 523 Series forms, data recovery reports, and any additional research reports not previously submitted to the California Historical Resource Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as appendices to the final CRR.

If the project owner requests a suspension of construction-related ground disturbance and/or construction activities, then a draft CRR that covers all cultural resources activities associated with the project shall be prepared by the CRS and submitted to the CPM for review and approval on the same day as the suspension/extension request. The draft CRR shall be retained at the project site in a secure facility until ground disturbance and/or construction resumes or the project is withdrawn. If the project is withdrawn, then a final CRR shall be submitted to the CPM for review and approval at the same time as the withdrawal request.

**Verification:** Within 90 days after completion of all construction-related ground disturbance (including landscaping), the project owner shall submit the final CRR to the CPM for review and approval. If any reports have previously been sent to the CHRIS, then receipt letters from the CHRIS or other verification of receipt shall be included in an appendix.

Within 90 days after completion of all construction-related ground disturbance (including landscaping), if cultural materials requiring curation were collected, the project owner shall provide to the CPM a copy of an agreement with, or other written commitment from, a curation facility that meets the standards stated in the California State Historical Resources Commission's *Guidelines for the Curation of Archaeological Collections*, to accept cultural materials, if any, from this project. Any agreements concerning curation will be retained and available for audit for the life of the project.

Within 10 days after CPM approval, the project owner shall provide documentation to the CPM confirming that copies of the final CRR have been provided to the SHPO, the CHRIS, the curating institution, if archaeological materials were collected, and to the Tribal Chairpersons of any Native American groups requesting copies of project-related reports.

Within 30 days after requesting a suspension of construction activities, the project owner shall submit a draft CRR to the CPM for review and approval.



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
COMMISSION OF THE STATE OF CALIFORNIA  
1516 NINTH STREET, SACRAMENTO, CA 95814  
1-800-822-6228 – WWW.ENERGY.CA.GOV**

APPLICATION FOR CERTIFICATION  
For the *BEACON SOLAR ENERGY  
PROJECT*

Docket No. 08-AFC-2

PROOF OF SERVICE

(Revised 2/8/10)

**APPLICANT**

Scott Busa  
Kenneth Stein, J.D.,  
Meg Russell  
Duane McCloud  
Guillermo Narvaez, P.E.  
Nextera Energy Resources, LLC  
700 Universe Blvd.  
Juno Beach, FL 33408  
[Scott.Busa@Nexteraenergy.com](mailto:Scott.Busa@Nexteraenergy.com)  
[Kenneth.Stein@Nexteraenergy.com](mailto:Kenneth.Stein@Nexteraenergy.com)  
[Meg.Russell@Nexteraenergy.com](mailto:Meg.Russell@Nexteraenergy.com)  
[Duane.McCloud@Nexteraenergy.com](mailto:Duane.McCloud@Nexteraenergy.com)  
[Guillermo.Narvaez@Nexteraenergy.com](mailto:Guillermo.Narvaez@Nexteraenergy.com)

Diane Fellman  
Director West Region  
NextEra Energy Resources  
234 Van Ness Avenue  
San Francisco, CA 94102  
[diane.fellman@nexteraenergy.com](mailto:diane.fellman@nexteraenergy.com)

**APPLICANT'S CONSULTANTS**

Sara Head, Vice President  
AECOM Environment  
1220 Avenida Acaso  
Camarillo, CA 93012  
[sara.head@aecom.com](mailto:sara.head@aecom.com)

Bill Pietrucha, Project Manager  
Jared Foster, P.E.,  
Mechanical Engineer  
Worley Parsons  
2330 E. Bidwell Street, Suite 150  
Folsom, CA 95630  
[Bill.Pietrucha@worleyparsons.com](mailto:Bill.Pietrucha@worleyparsons.com)  
[Jared.Foster@worleyparsons.com](mailto:Jared.Foster@worleyparsons.com)

\*indicates change

**COUNSEL FOR APPLICANT**

Jane Luckhardt, Attorney at Law  
Downey Brand Attorneys LLP  
621 Capital Mall, 18<sup>th</sup> Floor  
Sacramento, CA 95814  
[jluckhardt@downeybrand.com](mailto:jluckhardt@downeybrand.com)

**INTERESTED AGENCIES**

California ISO  
[e-recipient@caiso.com](mailto:e-recipient@caiso.com)

**INTERVENORS**

Californian Unions for Reliable  
Energy (CURE)  
Tanya A. Gulesserian  
Marc D. Joseph  
Adams Broadwell  
Joseph & Cardozo  
601 Gateway Boulevard,  
Suite 1000  
South San Francisco, CA 94080  
e-mail service preferred  
[tgulesserian@adamsbroadwell.com](mailto:tgulesserian@adamsbroadwell.com)

**ENERGY COMMISSION**

KAREN DOUGLAS  
Chairman and Presiding Member  
[KLdougl@energy.state.ca.us](mailto:KLdougl@energy.state.ca.us)

JEFFREY D. BYRON  
Commissioner and Associate  
Member  
[Jbyron@energy.state.ca.us](mailto:Jbyron@energy.state.ca.us)

Kenneth Celli  
Hearing Officer  
[kcelli@energy.state.ca.us](mailto:kcelli@energy.state.ca.us)

Kristy Chew  
Adviser to Commissioner Byron  
[kchew@energy.state.ca.us](mailto:kchew@energy.state.ca.us)

Eric Solorio  
Project Manager  
[esolorio@energy.state.ca.us](mailto:esolorio@energy.state.ca.us)

Jared Babula  
Staff Counsel  
[jbabula@energy.state.ca.us](mailto:jbabula@energy.state.ca.us)

\*Jennifer Jennings  
Public Adviser's Office  
[publicadviser@energy.state.ca.us](mailto:publicadviser@energy.state.ca.us)

DECLARATION OF SERVICE

I, Janet Preis, declare that on February 9, 2010, I served and filed copies of the attached, Beacon Solar Energy Project's Revisions to Biological Resources Conditions of Certification and Supplemental Conditions of Certification for Cultural Resources. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [\[http://www.energy.ca.gov/sitingcases/beacon/index.html\]](http://www.energy.ca.gov/sitingcases/beacon/index.html).

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

*(Check all that Apply)*

FOR SERVICE TO ALL OTHER PARTIES:

  x   sent electronically to all email addresses on the Proof of Service list;

  x   by personal delivery or by depositing in the United States mail at Sacramento for February 10, 2010 pick-up with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

**AND**

FOR FILING WITH THE ENERGY COMMISSION:

  x   sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (*preferred method*);

**OR**

       depositing in the mail an original and 12 paper copies, as follows:

**CALIFORNIA ENERGY COMMISSION**  
Attn: Docket No. 08-AFC-2  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512  
[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

I declare under penalty of perjury that the foregoing is true and correct.

\_\_\_\_\_  
*/s/ Janet Preis*  
Janet Preis