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California Energy Commission
Docket Unit
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: **GENESIS SOLAR, LLC'S PROPOSED BIOLOGY CONDITIONS OF CERTIFICATION**
DOCKET NO. (09-AFC-8)

Enclosed for filing with the California Energy Commission is the original copy of **GENESIS SOLAR, LLC'S PROPOSED BIOLOGY CONDITIONS OF CERTIFICATION,** for the Genesis Solar Energy Project (09-AFC-8).

Sincerely,

Marie Mills

C.2 - BIOLOGICAL RESOURCES

Recognizing the sensitivity of natural resources in the desert, Genesis Solar, LLC worked diligently to select a location for its proposed solar project that would minimize biological impacts. Genesis Solar, LLC respectfully requests that Staff review the recommended changes and the rationale for the proposed revisions provided below, and reconsider the Conditions of Certification as proposed.

Genesis Solar LLC's requested changes to the Conditions of Certification for Biological Resources are presented below.

C.2.12 PROPOSED CONDITIONS OF CERTIFICATION

The accelerated timing requirements described in these proposed conditions of certification reflect the need for the Genesis Solar Power Project to commence construction before the end of 2010 in order to receive American Recovery and Reinvestment Act of 2009 (ARRA) funding.

DESIGNATED BIOLOGIST SELECTION AND QUALIFICATIONS[1]

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

The Designated Biologist must meet the following minimum qualifications:

1. Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;

[1] USFWS <www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/dt> designates biologists who are approved to handle tortoises as "Authorized Biologists." Such biologists have demonstrated to the USFWS that they possess sufficient desert tortoise knowledge and experience to handle and move tortoises appropriately, and have received USFWS approval. Authorized Biologists are responsible for the implementation of all desert tortoise measures for which a project is approved and are permitted to then approve specific ~~monitors~~ Biological 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~~ Biological Monitors approved by the Authorized Biologist. **Designated Biologists are the equivalent of Authorized Biologists.** Only Designated Biologists and certain Biological Monitors who have been approved by the Designated Biologist would be allowed to handle desert tortoises.

2. Three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society;

3. Have at least one year of field experience with biological resources found in or near the Project area;

4. Meet the current USFWS Authorized Biologist qualifications criteria (www.fws.gov/ventura/speciesinfo/protocols_guidelines), demonstrate familiarity with protocols and guidelines for the desert tortoise, and be approved by the USFWS; and

5. Possess a California ESA Memorandum of Understanding pursuant to Section 2081(a) for desert tortoise.

In lieu of the above requirements, the resume shall demonstrate to the satisfaction of BLM's Authorized Officer and the CPM, in consultation with CDFG and USFWS, that the proposed Designated Biologist or alternate has the appropriate training and background to effectively implement the conditions of certification.

Verification:

No fewer than 30 days prior to the start of any site mobilization or construction-related ground disturbance, the ~~Designated Biologists shall complete a~~ Project owner shall submit the names of the Designated Biologist(s), along with completed USFWS Desert Tortoise Authorized Biologist Request Forms (www.fws.gov/ventura/speciesinfo/protocols_guidelines) to the USFWS, BLM's Authorized Officer, and the CPM for review and final approval.

The Project owner shall submit the CPM and Authorized Officer-approved Designated Biologist no fewer than 30 days prior to the start of any site mobilization or construction-related ground disturbance ~~within 7 days of receiving the Energy Commission Decision~~. No construction-related ground disturbance, grading, boring, or trenching shall commence until an approved Designated Biologist is available to be on site.

If a Designated Biologist needs to be replaced, the specified information of the proposed replacement must be submitted to BLM's Authorized Officer and 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 BLM's Authorized Officer and the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist is proposed to BLM's Authorized Officer and the CPM and for consideration.

DESIGNATED BIOLOGIST DUTIES

BIO-2 The Project owner shall ensure that the Designated Biologist performs the activities described below during any site mobilization

activities, construction-related ground disturbance, grading, boring or trenching activities. The Designated Biologist may be assisted by the approved Biological Monitor(s) but remains the contact for the Project owner, BLM's Authorized Officer and the CPM. The Designated Biologist Duties shall include the following:

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

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

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

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

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

6. Notify the Project owner and BLM's Authorized Officer and the CPM of any non-compliance with any biological resources condition of certification;

7. Respond directly to inquiries of BLM's Authorized Officer and 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>; and

10. Maintain the ability to be in regular, direct communication with representatives of CDFG, USFWS, BLM's Authorized Officer and the CPM, including notifying these agencies of dead or injured listed species and reporting special-status species observations to the California Natural Diversity Data Base.

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

BIOLOGICAL MONITOR SELECTION AND QUALIFICATIONS

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

[e1]Biological Monitor(s) training by the Designated Biologist shall include familiarity with the conditions of certification, BRMIMP, WEAP, and USFWS guidelines on desert tortoise surveys and handling procedures <www.fws.gov/ventura/speciesinfo/protocols_guidelines>.

Verification: The Project owner shall submit the specified information to the BLM's Authorized Officer and the CPM for approval at least 30 days prior to the start of any site mobilization or construction-related ground disturbance, grading, boring and trenching. The Designated Biologist shall submit a written statement to BLM's Authorized Officer and 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 BLM's Authorized Officer and the CPM and for approval at least 10 days prior to their first day of monitoring activities.

BIOLOGICAL MONITOR DUTIES

BIO-4 The Biological Monitors shall assist the Designated Biologist in conducting surveys and in monitoring of site mobilization activities, construction-related ground disturbance, fencing, grading, boring or trenching; and reporting. The Designated Biologist shall remain the contact for the Project owner, BLM's Authorized Officer and the CPM.

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

DESIGNATED BIOLOGIST AND BIOLOGICAL MONITOR AUTHORITY

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

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

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

3. Notify BLM's Authorized Officer and the CPM if there is a halt of any activities and advise them of any corrective actions that have been taken or would be instituted as a result of the work stoppage.

Verification: The Project owner shall ensure that the Designated Biologist or Biological Monitor notifies BLM's Authorized Officer and 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, or operation activities. The Project

owner shall notify BLM's Authorized Officer and 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 BLM's Authorized Officer and the CPM within five working days after receipt of notice that corrective action is completed, or the Project owner would be notified by BLM's Authorized Officer and the CPM that coordination with other agencies would require additional time before a determination can be made.

WORKER ENVIRONMENTAL AWARENESS PROGRAM (WEAP)

BIO-6 The Project owner shall develop and implement a Project-specific Worker Environmental Awareness Program (WEAP) and shall secure approval for the WEAP from BLM's Authorized Officer and the CPM. The WEAP shall be administered to all onsite personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. The WEAP shall be implemented during site preconstruction, construction, operation, and closure. The WEAP shall:

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

2. Discuss the locations and types of sensitive biological resources on the Project site and adjacent areas, and explain the reasons for protecting these resources; provide information to participants that no snakes, reptiles, or other wildlife shall be harmed;

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

4. Include a discussion of fire prevention measures to be implemented by workers during Project activities; request workers dispose of cigarettes and cigars appropriately and not leave them on the ground or buried;

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

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

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

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

Verification: At least 30 days prior to start of construction-related ground disturbance, ~~Within 7 days of docketing of the Energy Commission's Final Decision, or publication of the Record of Decision/ROW Issuance, whichever comes first,~~ the Project owner shall provide to BLM's Authorized Officer and the CPM a copy of the final WEAP and all supporting written materials and electronic media prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program.

The Project owner shall provide in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. At least 10 days prior to construction-related ground disturbance activities the Project owner shall submit two copies of the BLM- and 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 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 BLM's Authorized Officer and the CPM and upon request. Workers shall receive and be required to visibly display a hardhat sticker or certificate that they have completed the training.

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

BIOLOGICAL RESOURCES MITIGATION IMPLEMENTATION AND MONITORING PLAN

BIO-7 The Project owner shall develop a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), and shall submit

two copies of the proposed BRMIMP to the BLM-Authorized Officer and the CPM for review and approval. The Project owner shall implement the measures identified in the approved BRMIMP. The BRMIMP shall incorporate avoidance and minimization measures described in final versions of the Desert Tortoise Relocation Translocation Plan, the Raven Management Plan, the Closure, Conceptual Restoration Plan, the Burrowing Owl Mitigation and Monitoring Plan, ~~and~~ the Weed Management Plan, and all other individual biological mitigation and/or monitoring plans associated with the Project.

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

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

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

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

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

5. All required mitigation measures for each sensitive biological resource;

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

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

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

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

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

11. A process for proposing plan modifications to BLM's Authorized Officer and the CPM and appropriate agencies for review and approval; and

12. A requirement to submit any sightings of any special-status species that are observed on or in proximity to the Project site, or during Project surveys, to the California Natural Diversity Data Base (CNDDB) per CDFG requirements.

Verification: The Project owner shall submit the ~~final~~ draft BRMIMP to BLM's Authorized Officer and the CPM at least 30 days prior to start of any ~~preconstruction site mobilization and~~ construction-related ground disturbance, grading, boring, and trenching. The BRMIMP shall contain all of the required measures included in all biological Conditions of Certification. No construction-related ground disturbance, grading, boring or trenching may occur prior to approval of the final BRMIMP by BLM's Authorized Officer and the CPM.

If any permits have not yet been received when the BRMIMP is first submitted, these permits shall be submitted to BLM's Authorized Officer and the CPM within 5 days of their receipt~~, and~~. As much as is feasible, the BRMIMP shall be revised or supplemented to reflect the permit condition(s) ~~within~~ and resubmitted to BLM's Authorized Officer and the CPM at least 10 days ~~of their receipt by the Project owner. Ten days~~ prior to construction-related ground disturbance site and related facilities mobilization~~. the revised BRMIMP shall be resubmitted to BLM's Authorized Officer and the CPM.~~ Under no circumstances will ground disturbance proceed without implementation of all permit conditions.[e2]

Rationale: To add flexibility to these time lines.

To verify that the extent of construction disturbance does not exceed that described in this analysis, the Project owner shall submit aerial photographs, at an approved scale, taken before and after construction to the CPM and BLM's Authorized Officer. The first set of aerial photographs shall reflect site conditions prior to any preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching, and shall be submitted ~~at least 60 days~~ prior to initiation of such activities. The second set of aerial photographs shall be taken subsequent to completion of construction, and shall be submitted to the CPM and BLM's Authorized Officer no later than 90 days after completion of construction. The Project owner shall also provide a final accounting of the acreages of vegetation communities/cover types present before and after construction.

Any changes to the approved BRMIMP must be approved by BLM's Authorized Officer and the CPM and in consultation with CDFG and USFWS.

Implementation of BRMIMP measures (for example, construction activities that were monitored, species observed) shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of Project

construction, the Project owner shall provide to BLM's Authorized Officer and the CPM, for review and approval, a written construction termination report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the Project's preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching, and which mitigation and monitoring items are still outstanding.

IMPACT AVOIDANCE AND MINIMIZATION MEASURES

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

1. Limit Disturbance Areas. The boundaries of all areas to be disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to construction activities in consultation with the Designated Biologist. Spoils and topsoil shall be stockpiled in disturbed areas lacking native vegetation and which do not provide habitat for special-status species. Parking areas, staging and disposal site locations shall similarly be located in areas without native vegetation or special-status species habitat. All disturbances, Project vehicles and equipment shall be confined to the flagged areas.

2. Minimize Road Impacts. New and existing roads that are planned for construction, widening, or other improvements shall not extend beyond the flagged impact area as described above. All vehicles passing or turning around would do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged and/or staked) prior to the onset of construction.

3. Minimize Traffic Impacts. Vehicular traffic during Project construction and operation shall be confined to existing routes of travel to and from the Project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. ~~The~~ During construction, the speed limit shall not exceed 25 miles per hour within the Project area~~, on maintenance roads for linear facilities,~~ or on access roads to the Project site. During operations, a 25 mph speed limit will be required on all dirt maintenance roads. The access road will be signed with awareness signs for wildlife avoidance.

Rationale: During operations, the access road will be traveled by Project personnel as well as vendors and delivery personnel. The access road will be paved.

4. Monitor During Construction. In areas that have not been fenced with desert tortoise exclusion fencing and cleared, including during fence construction, the Designated Biologist shall be present at the construction site during all Project activities that have potential to disturb soil, vegetation, and wildlife. The Designated Biologist or Biological Monitor shall ~~walk~~ immediately ~~ahead of~~ precede equipment during brushing and grading activities in unfenced habitat.

5. Minimize Impacts of 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.

6. Implement APLIC Guidelines. Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line Interaction Committee's (APLIC's) S*uggested Practices for Avian Protection on Power Lines* (APLIC 2006) and *Mitigating Bird Collisions with Power Lines* (APLIC 1994) to reduce the likelihood of large bird electrocutions and collisions.

7. Avoid Use of Toxic Substances. Soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants.

8. Minimize Lighting Impacts. Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards wildlife habitat. Lighting shall be kept to the minimum level for safety and security needs by using motion or infrared light sensors and switches to keep lights off when not required, and shielding operational lights downward to minimize skyward illumination. No high intensity, steady burning, bright lights such as sodium vapor or spotlights shall be used. FAA visibility lighting shall employ only strobed, strobe-like or blinking incandescent lights, preferably with all lights illuminating simultaneously. Minimum intensity, maximum "off-phased" duel strobes are preferred, and no steady burning lights (e.g., L-810s) shall be used.

9. Minimize Noise Impacts. A continuous low-pressure technique shall be used for steam blows, to the extent possible, in order

to reduce noise levels in sensitive habitat proximate to the Genesis Project. ~~Loud construction activities (i.e., steam blowing, both low and high pressure, and pile driving) shall be avoided from February 15 to April 15, which is the height of the local bighorn sheep lambing and bird breeding season~~ (see **BIO-15** for additional impact avoidance measures for breeding birds).

Rationale: The site will be located far enough away from bighorn sheep habitat that this minimization measure is not needed. BIO-15 will account for impacts to breeding birds.

10. Avoid Vehicle Impacts to Desert Tortoise. Parking and storage shall occur within the area enclosed by desert tortoise exclusion fencing to the extent feasible. No vehicles or construction equipment parked outside the fenced area shall be moved prior to an inspection of the ground beneath the vehicle for the presence of desert tortoise. If a desert tortoise is observed, it shall be left to move on its own. ~~If it does not move within 15 minutes, a~~ A Designated Biologist, ~~or~~ approved Biological Monitor, or Biological Monitor under the Designated Biologist's direct supervision may remove and relocate the animal to a safe location ~~if temperatures are within the range described in the USFWS' 2009 *Desert Tortoise Field Manual* (http://www.fws.gov/ventura/speciesinfo/protocols_guidelines.~~ as described in the Applicant's Desert Tortoise Relocation/Translocation Plan.

Rationale: The Desert Tortoise Relocation/Translocation Plan addresses moving desert tortoises and associated temperature concerns in detail. An ITP will permit relocation of tortoises.

11. Avoid Wildlife Pitfalls: To avoid trapping desert tortoise and other wildlife in trenches, pipes or culverts, the following measures shall be implemented:

    a. Backfill Trenches. At the end of each work day, the Designated Biologist shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) outside the area fenced with desert tortoise exclusion fencing have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with desert tortoise-exclusion fencing. All trenches, bores, and other excavations outside the areas permanently fenced with desert tortoise exclusion fencing shall be inspected

periodically throughout the day~~, and~~ at the end of each workday, and at the beginning of each day by the Designated Biologist or a Biological Monitor. Should a tortoise or other wildlife become trapped, the Designated Biologist or Biological Monitor shall remove and relocate the individual as described in the Desert Tortoise Relocation/Translocation Plan. Any wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed.

b. Avoid Entrapment of Desert Tortoise. Any construction pipe, culvert, or similar structure with a diameter greater than 3 **i**nches, stored less than 8 inches aboveground and within desert tortoise habitat (i.e., outside the permanently fenced area) for one or more nights, shall be inspected for tortoises before the material is moved, buried or capped. As an alternative, all such structures may be capped before being stored outside the fenced area, or placed on elevated pipe racks. These materials would not need to be inspected or capped if they are stored within the permanently fenced area after the clearance surveys have been completed.

12. Minimize Standing Water. Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract desert tortoises and common ravens to construction sites. A Biological Monitor shall patrol these areas to ensure water does not puddle and shall take appropriate action to reduce water application where necessary.

13. Dispose of Road-killed Animals. ~~Road~~ During construction, road killed animals or other carcasses detected by personnel on roads ~~near~~ associated with the Project will be reported immediately to ~~the~~ a Biological Monitor or Designated Biologist, who will remove the roadkill promptly. During operations, the Project Environmental Compliance Monitor will be notified of any roadkills and promptly remove and dispose of any roadkills. For special-status species road-kill, the Biological Monitor shall contact CDFG and USFWS within 1 working day of receipt of the carcass for guidance on disposal or storage of the carcass. The Biological Monitor shall report the special-status species record as described in **BIO-11** below.

14. 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.

15. Worker Guidelines. During construction all trash and food-related waste shall be placed in self-closing containers and removed daily from the site. Workers shall not feed wildlife or bring pets to the Project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons. Vehicular traffic shall be confined to existing routes of travel to and from the Project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit when traveling on dirt access routes within desert tortoise habitat shall not exceed 25 miles per hour.

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 drainages 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 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 shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of Project construction, the Project owner shall provide to BLM's Authorized Officer and the CPM, for review and approval, a

written construction termination report identifying how measures have been completed.

DESERT TORTOISE CLEARANCE SURVEYS AND FENCING

BIO-9 The Project owner shall undertake appropriate measures to manage the construction site and related facilities in a manner to avoid or minimize impacts to desert tortoise. Methods for clearance surveys, fence specification and installation, tortoise handling, artificial burrow construction, egg handling and other procedures shall be consistent with those described in the USFWS' 2009 *Desert Tortoise Field Manual* <http://www.fws.gov/ventura/speciesinfo/protocols_guidelines> or more current guidance provided by CDFG and USFWS. The Project owner shall also implement all terms and conditions described in the Biological Opinion prepared by USFWS. These measures include, but are not limited to, the following:

1. Desert Tortoise Exclusion Fence Installation. Per the Applicant's Desert Tortoise Relocation/Translocation Plan, in order to ~~To~~ avoid impacts to desert tortoises, permanent desert tortoise exclusion fencing shall be installed along the permanent perimeter security fence; along the utility corridors, fencing or monitoring will be used to protect tortoises and temporarily installed along the utility corridors. The proposed alignments for the permanent perimeter fence and utility rights-of-way fencing shall be flagged and surveyed within 24 hours prior to the initiation of fence construction. Clearance surveys of the perimeter fence and utility rights-of-way alignments shall be conducted by the Designated Biologist(s) using techniques outlined in the USFWS' 2009 *Desert Tortoise Field Manual* and may be conducted in any season with USFWS and CDFG approval. Biological Monitors may assist the Designated Biologist under his or her supervision. These fence clearance surveys shall provide 100-percent coverage of all areas to be disturbed and an additional transect along both sides of the fence line. 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 the USFWS' 2009 *Desert Tortoise Field Manual*. Any desert tortoise located during fence clearance surveys shall be handled by the Designated Biologist(s) in accordance with the USFWS' 2009 *Desert Tortoise Field Manual*.

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 tortoise exclusionary fencing shall be constructed in accordance with the USFWS' 2009 *Desert Tortoise Field Manual* (Chapter 8 – Desert Tortoise Exclusion Fence).

c. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises. The gates may be electronically activated to open and close immediately after the vehicle(s) have entered or exited to prevent the gates from being kept open for long periods of time. ~~Cattle grating designed to safely exclude desert tortoise shall be installed at the gated entries to discourage tortoises from gaining entry.~~

Rationale: Cattle grating has not been proven to be effective in discouraging tortoise movement and may create a hazard for desert tortoises. The Applicant is open to cattle grating if data can be provided by the CEC that shows that it is both safe and effective for tortoises.

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

permitted tortoise entry while damaged, the Designated Biologist shall inspect the area for tortoise.

2. Desert Tortoise Clearance Surveys within the Plant Site. Following construction of the permanent perimeter security fence and the attached tortoise exclusion fence, the permanently fenced power plant site shall be cleared of tortoises by the Designated Biologist, who may be assisted by the Biological Monitors. Clearance surveys shall be conducted in accordance with the USFWS' 2009 *Desert Tortoise Field Manual* (Chapter 6 – Clearance Survey Protocol for the Desert Tortoise – Mojave Population) and shall consist of two surveys covering 100 percent of the project area by walking transects no more than 15-feet apart. If a desert tortoise is located on the second survey, a third survey shall be conducted. Each separate survey shall be walked in a different direction, or use off-set transects, to allow ~~opposing~~ alternate angles of observation. Clearance surveys of the power plant site may only be conducted when tortoises are most active (April through May or September through October). Surveys outside of these time periods require approval by USFWS and CDFG. Any tortoise located during clearance surveys of the power plant site shall be relocated and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan.

Rationale: Offset transects are also an effective way to clear the site of tortoises by providing different angles of observation (Karl and Resource Design Technology, Inc., 2006).

   a. Burrow Searches. During clearance surveys all desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined by the Designated Biologist, who may be assisted by the Biological Monitors, to assess occupancy of each burrow by desert tortoises and handled in accordance with the USFWS' 2009 *Desert Tortoise Field Manual*. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined, in accordance with the Desert Tortoise Relocation/Translocation Plan. Tortoises taken from burrows and from elsewhere on the power plant site shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan.

   b. Burrow Excavation/Handling. All potential desert tortoise burrows located during clearance surveys shall be excavated by hand, tortoises removed, and collapsed or blocked to prevent occupation by desert tortoises, in

accordance with the Desert Tortoise Relocation/Translocation Plan. All desert tortoise handling and removal, and burrow excavations, including nests, shall be conducted by the Designated Biologist, who may be assisted by a Biological Monitor in accordance with the USFWS' 2009 *Desert Tortoise Field Manual.*

Rationale: Burrow collapse during clearance may endanger tortoises and other species (e.g., badgers, kit foxes) using the burrows. The Desert Tortoise Relocation/Translocation Plan has provided direction for burrow inspection and excavation.

3. Monitoring Following Clearing. Following the desert tortoise clearance and removal from the power plant site and utility corridors, workers and heavy equipment shall be allowed to enter the Project site to perform clearing, grubbing, leveling, and trenching. A Designated Biologist or Biological Monitor shall be on site during ~~monitor~~ clearing and grading activities to ~~find and~~ move tortoises missed during the initial tortoise clearance survey. Should a tortoise be discovered, it shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan.

4. Reporting. The Designated Biologist shall record the following information for any desert tortoises handled: a) the locations (narrative and maps) and dates of observation; b) general condition and health, including injuries, state of healing and whether desert tortoise voided their bladders; c) location moved from and location moved to (using GPS technology); d) gender, carapace length, and diagnostic markings (i.e., identification numbers or marked lateral scutes); e) ambient temperature when handled and released; and f) digital photograph of each handled desert tortoise. Desert tortoise moved from within Project areas shall be marked and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to BLM's Authorized Officer, the CPM, USFWS, and CDFG describing implementation of each of the mitigation measures listed above. The report shall include the desert tortoise survey results, capture and release locations of any relocated desert tortoises, and any other information needed to demonstrate compliance with the measures described above.

DESERT TORTOISE RELOCATION/TRANSLOCATION PLAN

BIO-10 The Project owner shall develop and implement a final Desert Tortoise Relocation/Translocation Plan (Plan) that is consistent with current USFWS approved guidelines, and meets the approval of BLM's Authorized Officer and the CPM. The goals of the Desert Tortoise Relocation/Translocation Plan shall be to: relocate/translocate all desert tortoises from the project site to nearby suitable habitat; minimize impacts on resident desert tortoises outside the project site; minimize stress, disturbance, and injuries to relocated/translocated tortoises; and assess the success of the relocation~~ed/~~translocat~~ed~~ion effort through monitoring. The final Plan shall be based on the draft Desert Tortoise Relocation/Translocation Plan submitted by the Applicant (TTEC 2010a) and shall include all revisions deemed necessary by BLM, USFWS, CDFG and the Energy Commission staff.

Verification: Within 30 days prior to construction-related ground disturbance, ~~7 days of docketing of the Energy Commission Final Decision or publication of BLM's Record of Decision/ROW Issuance, whichever comes first,~~ the Project owner shall provide BLM's Authorized Officer and the CPM with the final version of a Plan that has been reviewed and approved by BLM's Authorized Officer and the CPM in consultation with USFWS and CDFG. All modifications to the approved Plan shall be made only after approval by BLM's Authorized Officer and the CPM, in consultation with USFWS and CDFG.

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

DESERT TORTOISE COMPLIANCE VERIFICATION

BIO-11 The Project owner shall provide Energy Commission and BLM staff with reasonable access to the Project site and compensation lands under the control of the Project owner and shall otherwise fully cooperate with the Energy Commission's and BLM's efforts to verify the Project owner's compliance with, or the effectiveness of, mitigation measures set forth in the conditions of certification. The Project owner shall hold the Designated Biologist, the Energy Commission, and BLM harmless for any costs the Project owner incurs in complying with the management measures, including stop work orders issued by BLM's Authorized Officer, the CPM, or the Designated Biologist. The Designated Biologist shall do all of the following:

1. Notification. Notify BLM's Authorized Officer and the CPM and at least 14 calendar days before initiating construction-related ground disturbance activities; immediately notify BLM's Authorized Officer and the CPM in writing if the Project owner is not in compliance with any conditions of certification, including but not limited to any actual or anticipated failure to implement mitigation measures within the time periods specified in the conditions of certification;

2. Monitoring During Grubbing and Grading. Remain onsite daily in areas located outside permanent desert tortoise exclusion fencing while vegetation salvage, grubbing, grading and other ground-disturbance construction activities are taking place to avoid or minimize take of listed species, and verify personally or use Biological Monitors to check for compliance with all impact avoidance and minimization measures, ~~and to~~ including checking all exclusion zones to ensure that signs, stakes, and fencing are intact and that human activities are restricted in these protective zones.

3. Monthly Compliance Inspections. Conduct compliance inspections at a minimum of once per month after clearing, grubbing, and grading are completed and submit a monthly compliance report to the CPM, BLM's Authorized Officer, USFWS and CDFG during construction.

4. Notification of Injured or Dead Listed Species. If an injured or dead listed species is detected within or near the Project ~~Disturbance~~ Area the CPM, BLM's Authorized Officer, 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 shall include the following information as relevant:

    a. Injured Desert Tortoise. If a desert tortoise is injured as a result of Project-related activities during construction, the Designated Biologist or approved Biological Monitor shall immediately take it to a CDFG-approved wildlife rehabilitation and/or veterinarian clinic. Any veterinarian bills for such injured animals shall be paid by the Project owner. Following phone notification as required above, the CPM, BLM's Authorized Officer, CDFG, and USFWS shall determine the final disposition of the injured animal, if it

recovers. Written notification shall include, at a minimum, the date, time, location, circumstances of the incident, and the name of the facility where the animal was taken.

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

5. Stop Work Order. The CPM and BLM's Authorized Officer 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 2 days following the above required notification of a sighting, injury, kill, or relocation of a listed species, the Project owner shall deliver to BLM's Authorized Officer, the CPM, CDFG, and USFWS via FAX or electronic communication the written report from the Designated Biologist describing all reported incidents of injury, kill, or relocation of a listed species, identifying who was notified, and explaining when the incidents occurred. In the case of a sighting in an active construction area, the Project owner shall, at the same time, submit a map (e.g., using Geographic Information Systems) depicting both the limits of construction and sighting location to BLM's Authorized Officer, the CPM, CDFG and USFWS.

No later than 45 days after initiation of Project operation the Designated Biologist shall provide the BLM Authorized Officer and the CPM a Final Listed Species Mitigation Report that includes, at a minimum: 1) a copy of the table in the BRMIMP with notes showing when each of the mitigation measures was implemented; 2) all available information about Project-related incidental take of listed species; 3) information about other Project impacts on the listed species; 4) construction dates; 5) an assessment of the effectiveness of conditions of certification in minimizing and compensating for Project impacts; 6) recommendations on how mitigation measures might be changed to more

effectively minimize and mitigate the impacts of future Projects on the listed species; and 7) any other pertinent information, including the level of take of the listed species associated with the Project.

DESERT TORTOISE COMPENSATORY MITIGATION

BIO-12 To fully mitigate for habitat loss and potential take of desert tortoise, the Project owner shall provide compensatory mitigation at a 1:1 ratio for impacts to ~~1,763~~ XX acres (the final acreage of desert tortoise habitat disturbed by the Project ~~Project Disturbance Area~~), and at a 5:1 ratio for 23 acres (or the final ~~Project Disturbance Area~~ acreage of disturbance to desert tortoise critical habitat), within the Chuckwalla Desert Tortoise Critical Habitat Unit. The requirements for acquisition of ~~1,878~~ XX acres of compensation lands (or ~~1,131~~ XX acres for the Reduced Acreage Alternative) shall include the following:

Comment: *Genesis Solar, LLC believes that under NECO the compensatory mitigation for desert tortoise habitat impacts should be zero because the 1,763 acres of habitat impacted by the Project is not "categorized" by BLM, and no sign that desert tortoises use the site was detected during protocol surveys. However, per our* Proposal for Desert Tortoise Mitigation: A Habitat-Based Approach for the Genesis Solar Energy Project*, we are proposing to acquire 914 acres of desert tortoise habitat to compensate for Project impacts to 914 acres of suitable or marginally suitable desert tortoise habitat, plus 23 acres of desert tortoise critical habitat. This comment would apply to any reduced acreage alternative as well.*

1. Selection Criteria for Compensation Lands. The compensation lands selected for acquisition shall:

   a. be within the Colorado Desert Recovery Unit, with potential to contribute to desert tortoise habitat connectivity and build linkages between desert tortoise designated critical habitat, known populations of desert tortoise, and/or other preserve lands;

   b. provide habitat for desert tortoise with capacity to regenerate naturally when disturbances are removed;

   c. be near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;

d. be connected to lands where desert tortoises can be reasonably expected to occur ~~currently occupied by desert tortoise based on habitat or historic occurrences~~, ideally with populations that are stable, recovering, or likely to recover;

Rationale: To avoid conducting surveys of potential compensation lands where adequate information already exists to determine the likelihood of current or potential tortoise occupation.

e. not have a history of intensive recreational use or other disturbance that might make habitat recovery and restoration infeasible;

f. not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration; and

g. not contain hazardous wastes.

2. Review and Approval of Compensation Lands Prior to Acquisition. A minimum of three months prior to acquisition of the property, the Project owner shall submit a formal acquisition proposal to the CPM, BLM's Authorized Officer, 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 in relation to the criteria listed above. Approval from the CPM and CDFG, in consultation with BLM and the USFWS, shall be required for acquisition of all parcels comprising the~~1,878~~ XX acres.

3. Mitigation Security: The Project owner shall provide financial assurances to the CPM and CDFG, with copies of the document(s) to BLM and the USFWS, to guarantee that an adequate level of funding is available to implement the mitigation measures described in this condition. These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM and BLM's Authorized Officer 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-disturbing Project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM and BLM's Authorized Officer, in consultation with CDFG and the USFWS, to ensure sufficient funding. As of the publication of the SA/DEIS, this amount is ~~$4,281,840~~ XX

~~($2,578,680~~ XX if the Reduced Acreage Alternative were adopted). This Security amount may be revised based on land costs or the estimated costs of enhancement and endowment (see subsection C.2.4.2, Desert Tortoise, for a discussion of the assumptions used in calculating the Security, which are based on an estimate of $2,280 per acre to fund acquisition, enhancement, and long-term management). The final amount due will be determined by the PAR analysis conducted pursuant to this condition.

4. Compensation Lands Acquisition Conditions: The Project owner shall comply with the following conditions relating to acquisition of the compensation lands after the CPM and BLM's Authorized Officer, in consultation with CDFG and USFWS, have approved the proposed compensation lands and received Security as applicable and 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 ~~1,878~~ XX 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 and BLM's Authorized Officer, in consultation with CDFG and the 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 ~~1,878~~ XX acres of compensation lands to CDFG under terms approved by the CPM and 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 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 18 months of the start of Project ground-disturbing activities.

c. Initial Habitat Improvement Fund. The Project owner shall fund the initial protection and habitat improvement of the 1,878 acres. Alternatively, a non-profit organization may hold the habitat improvement 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 habitat improvement fund must go to CDFG.

d. Conduct a Property Analysis Record. Upon identification of the mitigation lands the project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate endowment to fund the in-perpetuity management of the acquired mitigation lands.

e. Long-term Management Endowment Fund. Prior to ground-disturbing Project activities, the Project owner shall provide to CDFG a non-wasting capital endowment in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis that would be conducted for the ~~1,878~~ XX acres. 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 would 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 or similarly approved entity identified by CDFG shall manage the endowment for CDFG and with CDFG supervision.

f. Interest, Principal, and Pooling of Funds. The Project owner, CDFG and the CPM shall ensure that an agreement is in place with the endowment holder/manager to ensure the following conditions:

   i. 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 approved

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

ii. 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 ~~1,878~~ XX 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 or similarly approved entity identified by CDFG would manage the endowment for CDFG with CDFG supervision.

iii. 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 ~~1,878~~ XX acres for local populations of desert tortoise. However, for reporting purposes, the endowment fund must be tracked and reported individually to the CDFG and CPM.

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

g. Payment Of In Lieu Fee: Applicant may choose to satisfy its mitigation obligations by paying an in lieu fee instead of acquiring compensation lands, pursuant to California Senate Bill 34 (enacting CESA § 2069) or any applicable BLM in lieu fee provision, to the extent the chosen provision is applicable to satisfy the Applicant's mitigation obligations.

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 the department or approved third party;

escrow fees or costs; environmental contaminants clearance; and other site cleanup measures.

Verification: At least ~~No later than~~ 30 days prior to the start of construction-related ground disturbance ~~beginning Project ground-disturbing~~ activities, the Project owner shall provide written verification of Security in accordance with this condition of certification. The Project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition, or the payment of any in lieu fees, within 18 months of the start of construction-related ~~Project~~ ground disturbance ~~-disturbing~~ activities.

No less than 90 days prior to acquisition of the property, the Project owner shall submit for review and approval a formal acquisition proposal to BLM's Authorized Officer, the CPM, CDFG, and USFWS describing the parcels intended for purchase. At the same time the project owner shall submit a PAR or PAR-like analysis for the parcels for review and approval by the CPM, BLM's Authorized Officer, CDFG and USFWS.

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

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

The Project owner shall provide written verification to BLM's Authorized Officer, the CPM, USFWS and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient no later than 18 months from the start of construction-related ground disturbance activities. ~~docketing of the Final Energy Commission Decision for the Genesis Solar Energy Project.~~

RAVEN MANAGEMENT PLAN

BIO-13 The Project owner shall implement a raven monitoring and control plan that is consistent with the most current USFWS-approved raven management guidelines, and which meets the approval of BLM's Authorized Officer and the CMP, in consultation with USFWS and CDFG. The draft Common Raven Monitoring, Management, and Control Plan (Raven Plan) submitted by the Applicant (TTEC 2010r) shall provide the basis for the final plan, subject to review and revisions and approval from BLM's Authorized Officer, the CPM, CDFG and USFWS. The Raven Plan

shall include but not be limited to a program to monitor increased raven presence in the Project vicinity and to implement raven control measures as needed based on that monitoring.

Verification: No less than ~~10~~ 30 days prior to ~~start of~~ any construction ~~Project~~-related ground disturbance activities, the Project owner shall provide BLM's Authorized Officer, the CPM, USFWS, and CDFG with the final version of a Raven Plan. All modifications to the approved Raven Plan shall be made only with approval of BLM's Authorized Officer and CPM in consultation with USFWS and CDFG.

Within 30 days after completion of Project construction, the Project owner shall provide to the CPM for review and approval, a written report identifying which items of the 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.

On January 31st of each year following construction the Designated Biologist shall provide a report to the CPM and BLM's Authorized Officer that includes: a summary of the results of raven management and control activities for the year; a discussion of whether raven control and management goals for the year were met; and recommendations for raven management activities for the upcoming year.

Rationale: As this plan will be incorporated into the BRMIMP, the timeline was changed to be consistent with that of the BRMIMP.

WEED MANAGEMENT PLAN

BIO-14 The Project owner shall implement a Weed Management Plan that meets the approval of BLM's Authorized Officer and the CPM. The Weed Management Plan shall prescribe methods to monitor for weeds, prevent weed introduction, and control the spread of weeds during construction and operation of the Project. The draft Weed Management Plan submitted by the Applicant (TTEC 2009g) shall provide the basis for the final plan, subject to review and revisions from BLM's Authorized Officer and the CPM.

Verification: No less than ~~10~~ 30 days prior to ~~start of~~ any construction ~~Project~~-related ground disturbance activities, the Project owner shall provide BLM's Authorized Officer and the CPM with the final version of a Weed Management Plan that has been reviewed and approved by BLM, and Energy Commission staff, USFWS, and CDFG. Modifications to the approved Weed Control Plan shall be made only after consultation with the Energy Commission staff, BLM, USFWS, and CDFG.

Within 30 days after completion of Project construction, the Project owner shall provide to BLM's Authorized Officer and the CPM for review and approval, a

written report identifying which items of the Weed Management Plan have been completed, a summary of all modifications to mitigation measures made during the Project's construction phase, and which items are still outstanding.

On January 31st of each year following construction the Designated Biologist shall provide a report to the CPM and BLM's Authorized Officer that includes: a summary of the results of noxious weeds surveys and management activities for the year; a discussion of whether weed management goals for the year were met; and recommendations for weed management activities for the upcoming year.

Rationale: As this plan will be incorporated into the BRMIMP, the timeline was changed to be consistent with that of the BRMIMP.

PRE-CONSTRUCTION NEST SURVEYS

BIO-15 Pre-construction nest surveys shall be conducted if construction activities would occur at any time during the period of February 1 through August 31. The Designated Biologist or Biological Monitor conducting the surveys shall be experienced bird surveyors familiar with standard nest-locating techniques and shall perform surveys in accordance with the following guidelines:

1. Surveys shall cover all potential nesting habitat in the Project site or within 500 feet of the boundaries of the site (including linear facilities);

2. ~~At least two~~ One pre-construction survey~~s~~ shall be conducted~~, separated by a minimum 10-day interval. One of the surveys shall 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, an interval during which birds may establish a nesting territory and initiate egg laying and incubation;

Rationale: If one survey is within 14 days of pre-construction, then it will find all of the current nests. A second survey 10 days prior would be too early.

3. If active nests are detected during the survey, a buffer zone (protected area surrounding the nest, the size of which is to be determined by the Designated Biologist in consultation with CDFG) and monitoring plan shall be developed. Nest locations shall be mapped and submitted, along with a report stating the survey results, to the CPM; and

4. The Designated Biologist or Biological Monitor 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(s) that would be avoided during project construction.

AVIAN PROTECTION PLAN

BIO-16 The project owner shall prepare and implement an Avian Protection Plan to monitor death and injury of birds from collisions with facility features such as reflective mirror-like surfaces and from heat, and bright light from concentrating sunlight, and to implement adaptive management measures to minimize such impacts. The Avian Protection Plan shall be approved by BLM's Authorized Officer and the CPM in consultation with CDFG and USFWS, and shall be incorporated into the project's BRMIMP and implemented. ~~The Avian Protection Plan shall include detailed specifications on data and carcass collection protocol and a rationale justifying the proposed schedule of carcass searches. The study shall also include seasonal trials to assess bias from carcass removal by scavengers as well as searcher bias.~~

Verification: No less than ~~10~~ 30 days prior to the start of construction-related ground disturbance activities, ~~following docketing of the Energy Commission Final Decision or publication of BLM's Record of Decision/ROW Issuance, whichever comes first,~~ the project owner shall submit to the CPM, BLM's Authorized Officer, USFWS and CDFG a final Avian Protection Plan. Modifications to the Avian Protection Plan shall be made only after approval from BLM's Authorized Officer and the CPM.

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

No later than January 31st of every year the Annual Report shall be provided to the CPM, BLM's Authorized Officer, CDFG, and USFWS. Quarterly reporting shall continue until BLM's Authorized Officer and the CPM, in consultation with CDFG and USFWS determine whether more years of monitoring are needed, and whether mitigation and adaptive management measures are necessary. After two years of data collection the project owner or contractor shall prepare a report that describes the study design and monitoring results ~~of the Avian Protection Plan to be submitted to a peer-reviewed scientific journal.~~ Proof of submittal shall be provided to BLM's Authorized Officer and the CPM no later than the third year after onset of Project operation.

Rationale: The Avian Protection Plan will be a comprehensive monitoring plan that will incorporate sufficient scientific rigor to adequately monitor and identify avian mortalities by Project features. There is no justification for submitting a publishable manuscript to a peer-reviewed journal, which would require substantial effort beyond that necessary to report monitoring results and provide recommendations. The plan will be approved by the agencies.

AMERICAN BADGER AND DESERT KIT FOX IMPACT AVOIDANCE AND MINIMIZATION MEASURES

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

Biological Monitors shall perform pre-construction surveys for badger and kit fox dens in the Project area, including areas within 90 feet of the perimeter fence, utility corridors, and access roads. Surveys may be concurrent with desert tortoise, burrowing owl and/or nesting bird surveys. 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, and especially if high or low ambient temperatures could potentially result in harm to kit fox or badger from burrow exclusion, various passive hazing methods may be used to discourage the ~~den shall be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance)~~ occupants ~~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. Badgers or foxes may also be trapped in Havahart or other live traps and removed. BLM approval may be required prior to release of badgers on public lands.

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

BURROWING OWL IMPACT AVOIDANCE, MINIMIZATION, AND COMPENSATION MEASURES

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

1. Pre-Construction Surveys. The Designated Biologist or Biological Monitor shall conduct pre-construction surveys for burrowing owls in accordance with CDFG guidelines (California Burrowing Owl Consortium 1993). The survey area shall include the Project ~~Disturbance~~ Area and surrounding 500 foot survey buffer.

2. Implement Avoidance Measures. If an active burrowing owl burrow is detected within 500 feet from the Project Disturbance Area the following avoidance and minimization measures shall be implemented:

   a. Establish Non-Disturbance Buffer. Fencing shall be installed at a 250-foot radius from the occupied burrow to create a non-disturbance buffer around the burrow. The non-disturbance buffer and fence line may be reduced to 160 feet if all Project-related activities that might disturb burrowing owls would be conducted during the non-breeding season (September 1st through January 31st). Signs shall be posted in English and Spanish at the fence line indicating no entry or disturbance is permitted within the fenced buffer.

   b. Monitoring: If construction activities would occur within 500 feet of the occupied burrow during the nesting season (February 1 – August 31st) the Designated Biologist or Biological Monitor shall monitor to determine if these activities have potential to adversely affect nesting efforts, and shall implement measures to minimize or avoid such disturbance.

3. Implement Burrowing Owl Mitigation Plan. If pre-construction surveys indicate the presence of burrowing owls within the Project Disturbance Area, the project owner shall prepare and implement a Burrowing Owl Mitigation Plan, in addition to the avoidance measures described above. The final Burrowing Owl Mitigation Plan shall be approved by BLM's Authorized Officer and the CPM, in consultation with USFWS and CDFG, and shall:

    a. Identify and describe suitable relocation sites within 1 mile of the Project Disturbance Area, and describe measures to ensure that burrow installation or improvements would not affect sensitive species habitat or existing burrowing owl colonies in the relocation area;

    b. Provide guidelines for creation or enhancement of at least two natural or artificial burrows per relocated owl, including a discussion of timing of burrow improvements, specific location of burrow installation, and burrow design. Design of the artificial burrows shall be consistent with CDFG guidelines (CDFG 1995) and shall be approved by the CPM in consultation with CDFG;

    c. Provide detailed methods and guidance for passive relocation of burrowing owls occurring within the Project Disturbance Area; and

    d. Describe monitoring and management of the relocated burrowing owl site, and provide a reporting plan.

4. Acquire Compensatory Mitigation Lands for Burrowing Owls. The following measures for compensatory mitigation shall apply only if burrowing owls are detected within the Project Disturbance Area which need to be relocated. The Project owner shall acquire, in fee or in easement, ~~39~~ 19.5 acres of land for each pair of nesting owls that is displaced by construction of the Project. The project owner shall provide funding for the enhancement and long-term management of these compensation lands. The acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat.

Rationale: CBOC guidelines suggest a maximum compensation ratio of 19.5 acres per pair or single bird.

a. Criteria for Burrowing Owl Mitigation Lands. The terms and conditions of this acquisition or easement shall be as described in **BIO-12** [Desert Tortoise Compensatory Mitigation], with the additional criteria to include: 1) the ~~39~~ 19.5 acres of mitigation land per pair or single bird must provide suitable habitat for burrowing owls and 2) may not be isolated from other suitable burrowing owl habitat. ~~and 2) the acquisition lands must either currently support burrowing owls or be no farther than 5 miles from an active burrowing owl nesting territory.~~ The ~~39~~ 19.5 acres of burrowing owl mitigation lands may be included with the ~~1,878~~ XX acres of desert tortoise mitigation lands ONLY if the burrowing owl criteria ~~are~~ is met. If the ~~39~~ 19.5 acres of burrowing owl mitigation land is separate from the ~~1,878~~ XX acres required for desert tortoise compensation lands, the Project owner shall fulfill the requirements described below in this condition.

Rationale: To avoid intensive field surveys of potential compensation lands where there is adequate existing information to determine the likelihood of current or potential burrowing owl occupation or habitat. The compensation acreage of 19.5 acres per pair of owls is based on not being able to identify that the compensation lands are occupied by burrowing owls.

b. Security. The Security measures described below is based on the assumption that one pair of nesting owls would be impacted by construction of the Project, and would therefore require ~~39~~ 19.5 acres of compensatory mitigation land. If the ~~39~~ 19.5 acres of burrowing owl mitigation land is separate from the acreage required for desert tortoise compensation lands the Project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating ground-disturbing Project activities. Alternatively, financial assurance can be provided by the Project owner to the CPM and CDFG with copies of the document(s) to BLM and the USFWS, to guarantee that an adequate level of funding is available to implement the mitigation measure described in this condition. These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM and the BLM's Authorized Officer in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") prior to initiating ground-disturbing Project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM and BLM's Authorized

Officer, in consultation with CDFG and the USFWS to ensure funding. As of the publication of the SA/DEIS, this amount is $44,460 but this amount may change based on land costs or the estimated costs of enhancement and endowment (see subsection C.2.4.2, Desert Tortoise, for a discussion of the assumptions used in calculating the Security, which are based on an estimate of $2,280 per acre to fund acquisition, enhancement, and long-term management). The final amount due will be determined by the PAR analysis conducted pursuant to **BIO-12**.

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

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

a. Within 30 days of completion of the burrowing owl pre-construction surveys, submit to BLM's Authorized Officer, the CPM, CDFG and USFWS a Burrowing Owl Mitigation Plan.

b. No less than 90 days prior to acquisition of the burrowing owl compensation lands, the Project owner, or an approved third party, shall submit a formal acquisition proposal to the CPM, BLM's Authorized Officer, CDFG, and USFWS describing the ~~39~~ 19.5-acre parcel intended for purchase. At the same time the project owner shall submit a PAR or PAR-like analysis for the parcels for review and approval by the CPM, BLM's Authorized Officer, CDFG and USFWS.

c. Within 90 days of the land or easement purchase, as determined by the date on the title, the Project owner shall provide the CPM and BLM's Authorized Officer with a management plan for review and approval, in consultation with CDFG and USFWS, for the compensation lands and associated funds.

d. No later than 30 days prior to the start of construction-related ~~beginning Project~~ ground-disturbing activities, the project owner shall provide written verification of Security in accordance with this condition of certification.

e. No later than 18 months ~~from~~ after the start of construction-related ground disturbance activities, ~~Energy Commission Final Decision or publication of BLM's Record of Decision/ROW Issuance, whichever comes first,~~ the Project owner shall provide written verification to the BLM's Authorized Officer, the CPM and CDFG that the ~~39~~ 19.5 acres of compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient.

f. On January 31st of each year following construction for a period of five years, the Designated Biologist shall provide a report to the CPM, BLM's Authorized Officer, USFWS and CDFG that describes the results of monitoring and management of the burrowing owl relocation area.

SPECIAL-STATUS PLANT IMPACT AVOIDANCE AND MINIMIZATION PLAN

BIO-19 The Project owner will provide protection measures in the BRMIMP that will: ~~shall prepare a Special-Status Plant Mitigation Plan ("Plan") that meets the approval of BLM's Authorized Officer and the CPM. The objective of the Plan is to:~~

1. Protect ~~preserved~~ avoided plants near the Project Disturbance Area from direct and indirect effects of construction and operation,

2. Ensure that any special-status plants that may have been missed during the 2009 surveys are detected, and

3. Provide detailed specifications and performance standards to compensate for unavoidable impacts to special-status plants.

1. Preconstruction Surveys: ~~The project owner shall retain a qualified botanist to conduct pre-construction surveys in 2010 within the Project site and a 100-foot buffer around the solar power plant site and linears.~~ The project owner shall retain a qualified botanist to conduct Spring 2010 surveys of the previously unsurveyed portions of the Project. The surveys shall include the following species (in addition to those contained on the target list for the 2009 surveys [GSEP 2009a]): winged Cryptantha, angel trumpets, white-margined penstemon, Palmer's jackass clover, small-flowered Androstephium, argus blazing star, bitter Hymenoxys, spiny abrojo, pink velvet mallow, and desert portulaca.

   Rationale: Comprehensive field surveys were conducted in Spring 2009 for the entire Project Site and in Spring 2010 for portions of the linear route that were not previously surveyed. Additional pre-construction surveys, with the exception of the summer-fall surveys discussed below, are not necessary.

   Additional summer-fall surveys shall be conducted of the ~~entire~~ portions of the Project Area that can be reasonably expected to host fall-blooming special-

status species ~~Project Disturbance Area~~, and shall target the following late-season special-status plant species: ~~glandular ditaxis,~~ Abram's spurge, lobed ground cherry, angel trumpets, flat-seeded spurge, pink velvet mallow, and desert portulaca (CEC 2009d). The surveys should be timed to follow summer ~~a 'significant'~~ rains. ~~event of at least 12-18 mm (Andre pers comm). If results of surveys are inconclusive due to inadequate rainfall, then compensatory mitigation shall be required on the basis of habitat loss.~~

A botanical survey report and map detailing the results of the spring and summer/fall 2010 surveys shall be submitted to the CPM and BLM's Authorized Officer no later than December 31, 2010. The map shall clearly depict the occurrences and the Project features and indicate which occurrences shall be preserved, and include a description of each occurrence (population size, associated species, any distinctive characteristics, reproduction, etc).

Rationale: The Applicant does not believe that all of the plant species named above occur within the entire Project Area. The weather is not within the Applicant's control, and therefore the Applicant should not be required to compensate for these species if there is insufficient rainfall to support conclusive survey results. Glandular ditaxis is reported to be a spring-flowering species by species experts.

2. Avoidance and Minimization Measures: The BRMIMP ~~Plan~~ shall include avoidance and minimization measures for Harwood's milk-vetch, desert unicorn plant, ribbed cryptantha, and any other special-status plant species detected during the 2010 surveys. The Project Owner shall implement avoidance and minimization measures contained in the Data Request Responses – Set 1A (Pages BR-55-56) for all special-status plant occurrences to be avoided ~~preserved~~. These include:

   - Worker training;
   - Designating special-status plants to be avoided as Environmentally Sensitive Areas;
   - Designate spoil areas and storage areas at least 100 feet from any avoided ~~preserved~~ occurrence;
   - Minimize ground-disturbing activities;
   - Use existing roads wherever possible;
   - Enforce vehicle speed limits;
   - Construction monitoring and reporting;
   - Weed management and control of chemical drift;
   - Dust control;
   - Spill containment kits;

- Locating wash areas a minimum of 100 feet away from avoided ~~preserved~~ occurrences.

Additionally, the Project Owner shall revise the layout of the discharge points of the engineered channel to ensure that any special-status plants occurring downstream are adequately protected or impacts are mitigated as necessary.

3. Preserve and Manage Compensatory Habitat and Criteria for Abram's spurge, ~~glandular ditaxis~~, flat-seeded spurge, and lobed ground cherry:

   To compensate for potential impacts to Abram's spurge, ~~glandular ditaxis,~~ flat-seeded spurge, and lobed ground cherry, the project owner shall acquire compensatory mitigation land as follows:

   - Abram's spurge: playa (38 acres); dunes (28 acres); desert washes (91 acres).
   - ~~Glandular ditaxis: desert washes (91 acres).~~
   - Flat-seeded spurge: playa (38 acres); dunes (28 acres).
   - Lobed ground cherry: playa (38 acres).

   The criteria need to be met on a species by species bases; the acreages totals for these special-status species are 38 ~~114~~ acres of playa and sand drift over playa habitat, 28 ~~56~~ acres of dune habitat, and 91 ~~182~~ acres of desert wash habitat (including at least 16 acres of microphyll woodland – see BIO-22 in this subsections for more details). Habitat acquisition for these species may also be integrated with habitat compensation for other species if the criteria listed below are met.

   Rationale: If Staff assumes that the species could be expected to be at the Project Area, then acreage for one species in a specific habitat type would meet the criteria for other species in that habitat type, assuming it was in the range of both species. In that case, species do not have to be considered separately.

   The compensatory lands acquired for each of these species must meet at least one of the following criteria:

   a. Contain occupied habitat for an occurrence anywhere in the species' range in California;

   b. Contain unoccupied habitat that is in the immediate watershed of an extant occurrence in California and considered to have a high potential for occurrence, or;

   c. Provide watershed protection to extant and protected occurrences on federal land regardless of the habitat the acquired lands support.

4. The compensatory lands shall meet the following additional criteria 1) provide habitat for the special-status plant species that is of similar or better quality than that impacted; OR 2) contain OR abut land that contains occurrences that are stable, recovering, or likely to recover; and 3) be adequately sized and buffered to support self-sustaining special-status plant populations. These mitigation lands may be included with the desert tortoise mitigation lands, dunes/Mojave fringe-toed lizard mitigation lands, and desert wash mitigation lands ONLY if the above criteria are met.

   The compensatory mitigation would not be required if ~~2010~~ botanical surveys definitively rule out potential presence of these species (i.e., surveys were conducted at the appropriate time of year ~~and under appropriate environmental conditions~~. Habitat acquisition for special status plants may also be integrated with compensatory mitigation described in Conditions of Certification BIO-12, BIO-20, and BIO-22 if the criteria listed above are met.

   Rationale: Point 4 (2) requires extensive surveys beyond that required for a listed species (e.g., the desert tortoise).

5. Security. The Project owner shall provide financial assurances to the CPM and BLM to guarantee that an adequate level of funding is available to implement the mitigation measures described in this condition. These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM and BLM's Authorized Officer in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") prior to initiating ground-disturbing Project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM and BLM's Authorized Officer, in consultation with CDFG and the USFWS, to ensure sufficient funding. As of the publication of the SA/DEIS, this amount is ~~$802,560~~ $357,960. This amount may change based on land costs or the estimated costs of enhancement and endowment (see subsection C.2.4.2, Desert Tortoise, for a discussion of the assumptions used in calculating the Security, which are based on an estimate of $2,280 per acre to fund acquisition, enhancement and long-term management).

Verification: Within 30 days prior to the start of construction-related ground disturbance, ~~10 days of publication of the Energy Commission License Decision or the Record of Decision/ROW Issuance, whichever comes first,~~ the Project owner shall submit to BLM's Authorized Officer, the CPM and CDFG, an agency-approved BRMIMP ~~final Special-status Plant Impact Avoidance and Minimization Plan~~, which includes the plant protection measures.

A botanical survey report and map detailing the results of the spring and summer/fall 2010 surveys shall be submitted to the CPM and BLM's Authorized Officer no later than December 31, 2010. The map shall clearly depict the occurrences and the Project features and indicate which occurrences shall be avoided ~~preserved~~, and include a description of each occurrence (population size, associated species, any distinctive characteristics, reproduction, etc).

A qualified botanist shall delineate the boundaries of these special-status plant occurrences that will be avoided at least 30 days prior to the initiation of construction-related ground disturbing activities.

Within 30 days after completion of Project construction, the Project owner shall provide to BLM's Authorized Officer and the CPM for review and approval, a written report identifying which items of the ~~Special-Status Plant Species Avoidance, and Mitigation Plan~~ BRMIMP have been completed, a summary of all modifications to mitigation measures made during the Project's construction phase, and which items are still outstanding.

No later than 30 days prior to beginning construction-related ~~Project~~ ground-disturbing activities, the Project owner shall provide written verification of Security in accordance with this condition of certification for compensatory is provided, the Project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of construction-related ~~Project~~ ground-disturbing activities.

No less than 90 days prior to acquisition of the property, the Project owner shall submit a formal acquisition proposal to BLM's Authorized Officer, the CPM and CDFG describing the parcels intended for purchase. The Project owner, or an approved third party, shall provide BLM's Authorized Officer, the CPM and CDFG with a management plan for the compensation lands and associated funds within 180 days of the land or easement purchase, as determined by the date on the title. BLM's Authorized Officer and the CPM shall review and approve the management plan, in consultation with CDFG.

On January 31st of each year following construction for a period of five years, the Designated Biologist shall provide a report to the CPM, BLM's Authorized Officer and CDFG that describes the results of monitoring and management of the habitat compensation lands for Abram's spurge, glandular ditaxis, flat-seeded spurge, and lobed ground cherry.

SAND DUNES/MOJAVE FRINGE-TOED LIZARD MITIGATION

Comment: The Applicant agrees with the 84 acres of 3:1 compensation for direct Project impacts, but disagrees with any additional mitigation requirements.

BIO-20 The project owner shall mitigate for direct and indirect impacts to stabilized and partially stabilized sand dunes and other Mojave fringe-toed lizard habitat by acquisition of ~~424 acres of Mojave fringe-toed lizard habitat, at least~~ 84 acres of which shall be stabilized or partially stabilized desert dune. The project owner shall provide funding for the acquisition, initial habitat improvements and long-term management endowment of the compensation lands.

1. Criteria for Compensation Lands: The compensation lands selected for acquisition shall:

a. Provide suitable habitat for Mojave fringe-toed lizards, and may include stabilized and partially stabilized desert dunes or sand drifts over playas or Sonoran creosote bush scrub;

b. As much as possible, be within the Chuckwalla Valley with potential to contribute to Mojave fringe-toed lizard habitat connectivity and build linkages between known populations of Mojave fringe-toed lizards and preserve lands with suitable habitat (although sufficient private land meeting this criterion may not be available in Chuckwalla Valley);

c. Be connected to lands that are either currently occupied or have high potential to be occupied by Mojave fringe-toed lizard based on patch size and habitat quality;

d. Be near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;

e. Not have a history of intensive recreational use or other disturbance that might make habitat recovery and restoration infeasible;

f. Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;

g. Not contain hazardous wastes;

h. Not be subject to property constraints (i.e. mineral leases, cultural resources); and

i. Be on land for which long-term management is feasible.

2. Security for Implementation of Mitigation: The project owner shall provide financial assurances to the CPM and BLM's Authorized Officer to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of Mojave fringe-toed lizard habitat as described in this condition. These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM and BLM's Authorized Officer in the form of an irrevocable letter of credit, a pledged savings account or Security prior to initiating ground-disturbing project activities. The Security shall be approved by

the CPM and BLM's Authorized Officer, in consultation with CDFG and the USFWS, to ensure sufficient funding. As of the publication of the SA/DEIS, this amount is $~~966,720~~ $191,520 ($310,080 If the Reduced Acreage Alternative were adopted). This amount may change based on land costs or the estimated costs of enhancement and endowment (see subsection C.2.4.2, Desert Tortoise, for a discussion of the assumptions used in calculating the Security, which are based on an estimate of $2,280 per acre to fund acquisition, enhancement and long-term management).

3. Preparation of Management Plan: The project owner shall submit to the CPM, BLM's Authorized Officer, CDFG and USFWS a draft Management Plan that reflects site-specific enhancement measures for the Mojave fringe-toed lizard habitat on the acquired compensation lands. The objective of the Management Plan shall be to enhance the value of the compensation lands for Mojave fringe-toed lizards, and may include enhancement actions such as weed control, fencing to exclude livestock, erosion control, or protection of sand sources or sand transport corridors.

Verification: No later than 30 days prior to beginning construction-related ~~Project~~ ground-disturbing activities, the Project owner shall provide written verification of Security in accordance with this condition of certification. The Project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of construction-related ~~Project~~ ground-disturbing activities.

No less than 90 days prior to acquisition of the property, the Project owner shall submit a formal acquisition proposal to BLM's Authorized Officer, the CPM, CDFG, and USFWS describing the parcels intended for purchase. At the same time the project owner shall submit a PAR or PAR-like analysis for the parcels for review and approval by the CPM, BLM's Authorized Officer, CDFG and USFWS.

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

Within 90 days after completion of Project construction, the Project owner shall provide to the CPM and CDFG an analysis with the final accounting of the amount of Mojave fringe-toed lizard habitat disturbed during Project construction.

The Project owner shall provide written verification to BLM's Authorized Officer, the CPM, USFWS and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient no later than 18 months after the initiation of construction-related ground disturbance activities ~~from docketing of the Final Energy Commission Decision for the Genesis Solar Energy Project.~~

EVAPORATION POND ~~NETTING AND~~ MONITORING AND CONTROL MEASURES

Comment: The Applicant requests that a variety of deterrent methods, including but not limited to netting, be considered in this Condition of Certification to allow for flexibility.

BIO-21[e3] The Project owner ~~shall~~ may cover the evaporation ponds prior to any discharge with 1.5-inch mesh netting designed to exclude birds and other wildlife from drinking or landing on the water of the ponds. Netting with mesh sizes other than 1.5-inches may be installed if approved by the CPM in consultation with CDFG and USFWS. The netted ponds shall be monitored regularly to verify that the netting remains intact, is fulfilling its function in excluding birds and other wildlife from the ponds, and does not pose an entanglement threat to birds and other wildlife. The ponds shall include a visual deterrent in addition to the netting, and the pond shall be designed such that the netting shall never contact the water. Monitoring of the evaporation ponds shall include the following:

1. Monthly Monitoring. The Designated Biologist or Biological Monitor shall regularly survey the ponds at least once per month starting with the first month of operation of the evaporation ponds. The purpose of the surveys shall be to determine if the netted ponds are effective in excluding birds, if the nets pose an entrapment hazard to birds and wildlife, and to assess the structural integrity of the nets. 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 Project site shall also report finding any dead birds or other wildlife at the evaporation ponds to the Designated Biologist within one day of the detection of the carcass. The Designated Biologists shall report any bird or other wildlife deaths or entanglements within two days of the discovery to the CPM, CDFG, and USFWS.

2. Dead or Entangled Birds. If dead or entangled birds are detected, the Designated Biologist shall take immediate action

to assess the situation and to correct the source of mortality or entanglement if appropriate. The Designated Biologist shall make immediate efforts to contact and consult the CPM, CDFG, and USFWS by phone and electronic communications prior to taking remedial action upon detection of the problem, but the inability to reach these parties shall not delay taking action that would, in the judgment of the Designated Biologist, prevent further mortality of birds or other wildlife at the evaporation ponds.

3. Quarterly Monitoring. If after 12 consecutive monthly site visits no bird or wildlife deaths or entanglements are detected at the evaporation pond by or reported to the Designated Biologist, monitoring can be reduced to quarterly visits.

4. Biannual Monitoring. If after 12 consecutive quarterly site visits no bird or wildlife deaths or entanglements are detected by or reported to the Designated Biologist, and with approval from the CPM, USFWS and CDFG, future surveys may be reduced to two surveys per years, during the spring nesting season and during fall migration. If approved by the CPM, USFWS and CDFG, monitoring outside the nesting season may be conducted by the Environmental Compliance Manager.

5. Modification of Monitoring Program. Without respect to the above requirements, the project owner, CDFG or USFWS may submit to the CPM a request for modifications to the evaporation pond monitoring program based on information acquired during monitoring, and may also suggest adaptive management measures to remedy any problems that are detected during monitoring or modifications if bird impacts are not observed. Modifications to the evaporation pond monitoring described above and implementation of adaptive management measures shall be made only after approval from the CPM, in consultation with USFWS and CDFG.

Rationale: The proposed changes reflect flexibility in protection measures for birds in light of maintaining evaporative functioning of the ponds.

The Project owner preserves the right to make future changes to this condition if the sizes of the evaporation ponds decrease.

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.

If the CEC, BLM, USFWS, and CDFG agree that alternatives to netting may be acceptable, the Project owner shall submit alternatives to the netting program to the CPM, BLM's Authorized Officer, USFWS, and CDFG for approval at least 60 days prior to construction-related ground disturbance activities. A final approved, alternative design and monitoring plan will be submitted to the CPM, BLM's Authorized Officer, USFWS and CDFG 30 days prior to construction-related ground disturbance activities.

MITIGATION FOR IMPACTS TO STATE WATERS

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

1. Acquire Off-Site State Waters: The project owner shall acquire, in fee or in easement, a parcel or parcels of land that includes at least 132 acres of state jurisdictional waters. The parcel or parcels comprising the 132 acres of ephemeral washes shall include at least 48 acres of microphyll woodland. If the Reduced Acreage Alternative were constructed the mitigation requirements for impacts to state waters would be a minimum of 109 acres that included at least 48 acres of microphyll woodland. The terms and conditions of this acquisition or easement shall be as described in Condition of Certification **BIO-12**. Mitigation for impacts to state waters shall occur within the Chuckwalla-Palen or surrounding watersheds, as close to the Project site as possible.

2. Security for Implementation of Mitigation: The project owner shall provide financial assurances to the CPM and CDFG to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of state waters as described in this condition. These funds shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM and CDFG in the form of an irrevocable letter of credit, a pledged savings account or Security prior to initiating construction-related ground-disturbing ~~project~~ activities. Prior to submittal to the CPM, the Security shall be approved by the CPM and BLM's Authorized Officer, in consultation with CDFG and the USFWS,

to ensure sufficient funding. As of the publication of the SA/DEIS, this amount is $300,960 ($248,520 if the Reduced Acreage Alternative were adopted). These amounts may change based on changes in land costs or the estimated costs of enhancement and endowment (see subsection C.2.4.2, Desert Tortoise, for a discussion of the assumptions used in calculating the Security, which are based on an estimate of $2,280 per acre to fund acquisition, enhancement and long-term management). The final amount due shall be determined by the PAR analysis conducted pursuant to **BIO-12**.

3. Preparation of Management Plan: The project owner shall submit to the CPM and CDFG a draft Management Plan that reflects site-specific enhancement measures for the drainages on the acquired compensation lands. The objective of the Management Plan shall be to enhance the wildlife value of the drainages, and may include enhancement actions such as weed control, fencing to exclude livestock, or erosion control.

4. Code of Regulations: The Project owner shall provide a copy of this condition (Condition of Certification **BIO-22)** from the Energy Commission Final Decision to all contractors, subcontractors, and other on-site personnel. Copies shall be readily available at work sites at all times during periods of active work and must be presented to any CDFG personnel upon demand. The CPM reserves the right to issue a stop work order or allow CDFG to issue a stop work order after giving notice to the Project owner 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 impacts to waters of the state is incomplete or inaccurate;
   b. New information becomes available that was not known to staff in preparing the terms and conditions; or
   c. The Project or Project activities as described in the Staff Assessment have changed.

5. Best Management Practices: The Project owner shall also comply with the following conditions to protect drainages within the approved impact areas as defined in the approved construction documents ~~near the Project Disturbance Area:~~

   a. The Project owner shall minimize road building, construction activities and vegetation clearing within ephemeral drainages to the extent feasible.

b. The Project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows.

c. The Project owner shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws, and it shall be the responsibility of the Project owner to ensure compliance.

d. Spoil sites shall be located at least 30 feet from the boundaries and drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.

e. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from Project-related activities, shall be prevented from contaminating the soil and/or entering waters of the state. These materials, placed within or where they may enter a drainage, shall be removed immediately.

f. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into waters of the state.

g. When operations are completed, any excess materials or debris shall be removed from the work area.

h. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.

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

No less than 30 days prior to beginning of construction-related ~~Project~~ ground-disturbing activities, the Project owner shall provide written verification of Security

in accordance with this condition of certification. The Project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of construction-related ~~Project~~ ground-disturbing activities.

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

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

The Project owner shall provide written verification to BLM's Authorized Officer, the CPM, USFWS and CDFG that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient no later than 18 months after the start of construction-related ground-disturbing activities. ~~from docketing of the Final Energy Commission Decision for the Genesis Solar Energy Project).~~

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

> Biological Conditions: a change in biological conditions includes, but is not limited to, the following: 1) the presence of biological resources within or adjacent to the Project area, whether native or non-native, not previously known to occur in the area; or 2) the presence of biological resources within or adjacent to the Project area, whether native or non-native, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.
>
> Physical Conditions: a change in physical conditions includes, but is not limited to, the following: 1) a change in the morphology of a river, stream, or lake, such as the lowering of a bed or scouring of a bank, or substantial

changes in stream form and configuration caused by storm events; 2) the movement of a river or stream channel to a different location; 3) a reduction of or other change in vegetation on the bed, channel, or bank of a drainage, or 4) changes to the hydrologic regime such as fluctuations in the timing or volume of water flows in a river or stream.

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

DECOMMISSIONING AND CLOSURE PLAN

BIO-23 Upon Project closure the Project owner shall implement a final Decommissioning and Closure Plan to remove the engineered diversion channels from the Project site. The goal of the plan shall be to restore the site's topography and hydrology to a relatively natural condition and to establish native plant communities within the Project Disturbance Area. The Decommissioning and Closure Plan shall include a cost estimate for implementing the proposed decommissioning and reclamation activities, and shall be consistent with the guidelines in BLM's 43 CFR 3809.550 et seq., subject to review and revisions from BLM's Authorized Officer and the CPM in consultation with USFWS and CDFG.

Verification: No less than 30 days prior to initiating construction-related ground disturbance activities, ~~from docketing of the Energy Commission Final Decision for the Genesis Solar Energy Project or publication of BLM's Record of Decision/ROW Issuance, whichever comes first,~~ the Project owner shall provide to BLM's Authorized Officer and the CPM an agency-approved final Decommissioning and Closure Plan. Modifications to the approved Decommissioning and Closure Plan shall be made only after approval from BLM's Authorized Officer and the CPM, in consultation with USFWS, and CDFG.

No less than 10 days prior to initiating construction ~~Project~~-related ground disturbance activities the Project owner shall provide financial assurances to BLM's Authorized Officer and the CPM to guarantee that an adequate level of funding would be available to implement measures described in the Decommissioning and Closure Plan.

REVEGETATION OF TEMPORARILY DISTURBED AREAS

BIO-24 The Project owner shall prepare and implement a Revegetation Plan to restore all areas subject to temporary disturbance. The final Revegetation Plan shall be based on the draft Revegetation Plan submitted by the Applicant (TTEC 2010i) and shall include all revisions deemed necessary by BLM, USFWS, CDFG and the

Energy Commission staff. The objectives of the Revegetation Plan shall be to stabilize disturbed soils, minimize erosion and sedimentation impacts to soil and water resources, prevent colonization by noxious weeds and other non-native plants, salvage native plantings and seed from Project Disturbance Areas, and to achieve restoration of disturbed areas to functioning, established early-successional native plant communities. Target performance standards at the end of the monitoring period shall be as follows:

a. total absolute cover of all plants shall equal at least 30 percent;

b. survivorship of salvaged and transplanted cacti and other native plantings shall equal 30% percent

c. at least 90 percent (relative cover) of the perennial species observed within the temporarily disturbed areas shall be locally native species that naturally occur in the adjacent desert scrub habitats; and

d. relative cover of perennial plant species shall equal at least 40 ~~60~~ percent of the total vegetative cover.

Rationale: The native perennial cover is approximately 8-10 percent currently. The Applicant is willing to agree to 40 percent, which is 12 percent cover (versus 60 percent which translates into 18 percent cover).

Verification: No less than 30 days prior to construction-related ground disturbance activities ~~following the docketing of the Energy Commission Final Decision or publication of BLM's Record of Decision/ROW Issuance, whichever comes first,~~ the project owner shall submit to the CPM and BLM's Authorized Officer a final agency-approved Revegetation Plan that has been reviewed and approved by BLM's Authorized Officer and the CPM. All modifications to the Revegetation Plan shall be made only after approval from BLM's Authorized Officer and the CPM.

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 Revegetation Plan have been completed, a summary of all modifications to revegetation measures made during the project's construction phase, and which items are still outstanding.

~~On January 31st of each year following construction until the completion of the revegetation monitoring specified in the Revegetation Plan, t~~ The Designated Biologist shall provide ~~a~~ reports to the CPM and BLM's Authorized Officer according to the reporting schedule in the Revegetation Plan that includes: a summary of revegetation activities for the year, a discussion of whether revegetation performance standards for the year were met; and

recommendations for revegetation remedial action, if warranted, planned for the upcoming year. Reports will be submitted on January 31st following the relevant reporting year.

GROUNDWATER DEPENDENT VEGETATION MONITORING

Comment: The Applicant has demonstrated that there are no groundwater dependent communities or vegetation within the Project area or vicinity, including Ford Dry Lake. Additionally, the Applicant has provided current and historic information on the closest potentially groundwater dependent community (northwest of Palen Lake, west of the Project) and concluded that there will not be significant impacts to these communities as a result of the Project. Nonetheless, the Applicant is willing to conduct monitoring of potential groundwater dependent communities using a less formal level of study.

Using aerial photography to view changes in the mesquite community at northwestern Palen Lake over time, Worley Parsons (2010: Figure 28) demonstrated that the community did not change from 1977 to 2002. Groundwater pumping for agriculture in Chuckwalla Valley during the late 1970s and early 1980s lowered the water table ~39 m near Desert Center, west of Palen Lake, between 1980 and 1985; during this same period a well north of Palen Lake (Well 49) showed a groundwater decline of ~1.5 m (Worley Parsons 2010: Page 21 and Figure 18). The mesquite community at northwestern Palen Lake did not change during this period of maximum recorded historical water level drawdown in the basin, and cumulative drawdown associated with the future pumping in the basin is expected to be less than this amount. In summary, no Project effects are anticipated at Palen Lake, and the cumulative drawdown associated with future pumping in the basin is less than the historical maximum drawdown and would not affect the identified honey mesquite community.

BIO-25 The Applicant shall prepare and implement a Draft Groundwater-Dependent Vegetation Monitoring Plan (Vegetation Monitoring Plan). The objectives of the Vegetation Monitoring Plan shall be to monitor the Project effects of groundwater pumping on groundwater-dependent vegetation (phreatophytes) and, in conjunction with **BIO-26**, to ensure that the Project has a less than significant effect on groundwater-dependent ecosystems. The Vegetation Monitoring Plan shall be consistent with guidance for designing vegetation monitoring plans and conducting statistical analysis in *Measuring and Monitoring Plant Populations* (Elzinga et al. 1998). Monitoring shall focus on areas containing obligate or facultative phreatophytes (mesquite, ironwood, bush seep-weed, palo verde, cat's claw, smoke tree, and tamarisk) in areas that clearly are not influenced by surface water. Monitoring sites shall include:

1. Reference Monitoring Sites: sites outside of the zone of Project influence that can be compared to sites influenced by Project pumping and used to distinguish Project effects from the effects of climate change or normal drought cycles.

2. Project Monitoring Sites: sites within the predicted worst-case scenario drawdown cone around the Project pumping well (Figure 3 of the Groundwater Resources Cumulative Impacts Analysis [Worley-Parsons 2009]), an area within a radius of approximately 10 miles from the Project pumping well. Ford Dry Lake is included within this zone.

3. Distant Monitoring Sites: sites located around Palen Dry Lake where near-surface groundwater has been detected and where plant communities dominated by phreatophytes occur.

Baseline data shall be collected at all sites prior to the start of pumping, and annual monitoring for the life of the Project shall be required at Project, Distant, and Reference Monitoring sites. A statistician shall be retained to use the first year of baseline data to conduct a "prior power analysis" and evaluate the adequacy of the sampling design.

The Vegetation Monitoring Plan shall:

1. Be prepared by a qualified plant ecologist with a demonstrated understanding of desert plant ecology and physiology. The plant ecologist overseeing the monitoring and preparing the annual reports shall be approved by the CPM and BLM's Authorized Officer.

2. Identify Project Monitoring Sites within the zone of potential Project effect depicted in Figure 3 of the Groundwater Resources Cumulative Impacts Analysis (Worley-Parsons 2009). Monitoring shall focus on areas containing obligate or facultative phreatophytes in areas that are clearly not influenced by surface water (e.g., around Ford Dry Lake and not along defined channels, or across the bajada between channels).

3. Identify Distant Monitoring sites around Palen Dry Lake where near-surface groundwater and plant communities dominated by phreatophytes occur, including mesquite stands, bush seepweed-dominant sink scrubs, and dune scrubs in areas of near-surface groundwater.

4. Identify Reference Monitoring Sites within the Sonoran or Colorado desert regions of California that contain examples of the target groundwater-dependent plant communities represented at the Project and Distant Monitoring Sites. Reference sites shall be characterized by surface and groundwater hydrology unaltered by anthropogenic influences such as groundwater pumping or other diversions

5. Provide a detailed description of sampling protocol for collecting a minimum of three years of baseline data from the Reference, Project, and Distant Monitoring Sites. The sampling protocol shall include a requirement that monitoring data be collected from all three monitoring sites at the same time of year at the start of the growing season (for example, March 15).

6. Provide a detailed description of the long-term data collection approach including: sampling objectives (target/threshold, change/trend-based) attributes measured, field techniques, minimum standards for monitoring personnel, data management, statistical analysis, monitoring schedule, reporting requirements, and responsible parties.

7. Include appropriate field techniques for measuring drought response, including (at a minimum): percent dieback; live crown density; percent cover of live (versus dead or residual) vegetation, and any other vigor indicators that detect subtle changes over time; percent cover/frequency of associated species, changes over time in percent composition of native versus non-native species, and facultative wetland plants present. A detailed description of monitoring protocol shall also be included (for example, photo monitoring at permanent photo stations, among other monitoring techniques).

8. Include a description of the biological and ecological characteristics of groundwater-dependent species and natural communities, such as whether species are obligate vs. facultative; root growth and water acquisition; morphological adaptations to the desert environment; reproduction and germination; general and micro-habitat preferences; salt tolerance; role in the morphology of dunes; wildlife uses, etc.

9. Describe annual reporting requirements, which shall include (at a minimum): summaries of the results of the Groundwater Well Monitoring **(Soil&Water-5)** and a comparison of predicted versus actual water table declines during the early spring monitoring period, summary of the Vegetation Monitoring data, sampling and monitoring techniques used, field measurements employed, names and contact information for the monitoring personnel and responsible parties, description of data management, statistical analysis, photos, and conclusions.

If shallow water table declines or adverse effects to groundwater-dependent vegetation are detected, the project owner shall implement remedial action as described in **BIO-26.**

Verification: No less than 30 days prior to initiation of construction-related ground disturbance ~~following the docketing of the Energy Commission Final Decision or publication of BLM's Record of Decision/ROW Issuance, whichever comes first,~~ the project owner shall submit to the CPM and BLM's Authorized Officer a final Vegetation Monitoring Plan that has been reviewed and approved by BLM's Authorized Officer and the CPM. All modifications to the Vegetation

Monitoring Plan shall be made only after approval from BLM's Authorized Officer and the CPM.

Monitoring shall begin no later than April 1st following the start of construction-related ground disturbance activities. ~~docketing of the Energy Commission Final Decision or publication of BLM's Record of Decision/ROW Issuance, whichever comes first.~~

The results of the first year baseline data, prior power analysis, and recommended changes shall be submitted for approval to the CPM and BLM's Authorized Officer by January 31st of the first baseline year.

On January 31st of each year following construction, the Designated Biologist shall provide a report prepared by the qualified botanist to the CPM and BLM's Authorized Officer that describes monitoring activities and results, including recommendations for remedial action. If monitoring reveals adverse effects that reach the threshold triggering remedial action, as described above, the Designated Biologist shall prepare submit a report describing the recommended remedial action within 30 days of completion of that monitoring. If shallow water table declines or adverse effects to groundwater-dependent vegetation attributable to the project are detected, the project owner shall implement remedial action as described in BIO-26.

REMEDIAL ACTION FOR ADVERSE EFFECTS TO GROUNDWATER-DEPENDENT BIOLOGICAL RESOURCES

BIO-26 The project owner shall implement remedial action if the monitoring described in **BIO-25** detects declining spring water tables—in any amount greater than the normal year-to-year variability—combined with a decline in plant vigor in groundwater dependent vegetation at the Project Monitoring Sites compared to the Reference Monitoring Sites. The baseline spring water table depth, as measured in groundwater monitoring conducted pursuant to **Soil & Water-4 and 5**, shall be established based on the normal range of variability in area shallow water tables in spring (March 15-April 1). The Applicant shall submit a detailed proposal for remedial action to be approved by the CPM and BLM's Authorized Officer. ~~The proposal shall clearly demonstrate how the proposed remedial action would restore the spring groundwater tables to a level necessary to sustain healthy ecological functioning in the affected plant communities, as defined by the trigger described above, and informed by data on Project water usage.~~ The Applicant may choose the most feasible method of restoring healthy ecological functioning. ~~providing it meets the criterion above.~~

Rationale: Remedial action should include restoring the groundwater tables to the baseline level, if at all.

Verification: Within 30 days of detection of an adverse effect to groundwater dependent vegetation, as defined in **BIO-25**, the project owner shall submit to the CPM and BLM's Authorized Officer a report describing the adverse effect and a draft conceptual plan for remedial action. The report shall summarize the data and observations describing the adverse effect, including all calculations and assumptions made in development of the report data and interpretations.

Within 60 days of detection of an adverse effect, the project owner shall submit to the CPM and BLM's Authorized Officer for review and approval a remedial action plan for avoiding the adverse effects of the Project groundwater pumping on groundwater dependent vegetation.

No later than one year following approval of the remedial action plan, the Project owner shall provide to the CPM and BLM's Authorized Officer for review and approval, documentation of completed remedial action.

If, after review of the annual monitoring data described in **BIO-25** and in **Soil & Water-5**, the CPM and BLM's Authorized Officer agree, monitoring measurements and frequencies may be revised or eliminated.

COUCH'S SPADEFOOT TOAD IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-27 The project owner shall prepare and implement a Couch's Spadefoot Toad Protection and Mitigation Plan (Protection and Mitigation Plan) to avoid, minimize or mitigate impacts to Couch's spadefoot toads and their breeding habitat during construction and operation of the Project. The Protection and Mitigation Plan shall be approved by BLM's Authorized Officer and the CPM in consultation with CDFG, and shall be incorporated into the Project's BRMIMP and implemented. It is expected that, as currently proposed, the Project could avoid the known breeding pond south of I-10 near Wiley Well Road and minimize impacts to the surrounding upland buffer. The Protection and Mitigation Plan shall address methods to achieve this avoidance and minimization, and shall include avoidance, minimization, and mitigation measures that would be required if additional habitat is found during habitat surveys. The Protection and Mitigation Plan shall include, at a minimum:

1. Habitat Survey Results:
    a. Survey methodology;
    b. Survey results, including a detailed discussion of potential breeding sites, and a description of areas determined not to include breeding habitat; and

c. Figures showing the areas surveyed and the location of potential breeding habitat in relation to proposed Project features.

2. Impacts Assessment from:

   a. Habitat disturbance from construction;

   b. Noise from construction, operations, and potential ORV traffic;

   c. Increased access for vehicles from road construction or improvements;

   d. Changes in breeding habitat due to changes in flow levels and flow patterns to breeding ponds;

   e. Increased traffic from construction and operations;

   f. Increased risk of predation.

3. Avoidance and Minimization Measures:

   a. Description of measures that would be implemented to avoid impacts to potential breeding ponds, such as design strategies; protective fencing or other barriers, worker's education, minimizing construction traffic within the vicinity of breeding ponds, and biological monitoring;

   b. Designation of a Management Area around breeding ponds that includes an appropriate upland buffer, and a description of measures used to minimize impacts t within this buffer.

4. Mitigation: If complete avoidance of the pond south of I-10 or other breeding sites identified during surveys is not possible, the plan shall include plans to create additional breeding habitats (ephemeral pond) at least equal in area to the acreage of ponds being impacted.

Verification: No less than 30 days prior to construction-related ground disturbance, ~~10 days following docketing of the Energy Commission Final Decision or publication of BLM's Record of Decision/ROW Issuance, whichever comes first,~~ the project owner shall submit to the CPM, BLM's Authorized Officer, and CDFG a final Protection and Mitigation Plan. Modifications to the Protection and Mitigation Plan shall be made only after approval from BLM's Authorized Officer and the CPM, in consultation with CDFG.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
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APPLICATION FOR CERTIFICATION FOR THE *GENESIS SOLAR ENERGY PROJECT*

Docket No. 09-AFC-8

PROOF OF SERVICE
(Revised 3/10/10)

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DECLARATION OF SERVICE

I, Marie Mills, declare that on April 29, 2010, I served and filed copies of the attached GENESIS SOLAR, LLC'S PROPOSED BIOLOGY CONDITIONS OF CERTIFICATION. 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://ww.energy.ca.gov/sitingcases/genesis_solar].

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;

_____ by personal delivery;

__X__ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date 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. 09-AFC-8
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

// Original Signed //

Marie Mills