

State of California
Energy Resources Conservation
and Development Commission

DOCKET

09-AFC-8

DATE SEP 20 2010

RECD. SEP 20 2010

In the Matter of:)
)
Application for Certification of the)
Genesis Solar Energy Project,)
Genesis Solar, LLC)

Docket 09-AFC-08

**Staff's Comments on the Presiding
Members Proposed Decision**

On August 19, 2010, the Committee issued the Presiding Members Proposed Decision, (PMPD). Staff provides the following comments on the PMPD. For the convenience of the Committee, recommended additions to the text are shown in underline while strikethrough represents text that should be deleted. Comments follow the order of the PMPD.

PROJECT DESCRIPTION

PMPD: The Applicant expects project construction to take ~~39~~ 37 months to complete, with an average workforce of ~~650~~ 646 employees and a peak workforce of approximately ~~1,400~~ 1,085 workers in Month 23 of construction. **(PMPD p. 2)**

STAFF COMMENT: Changes based on figures in the record at Ex. 403, p. C.8-7

PMPD: Two, 5 acre evaporation ponds: up to 10 acres total (located within the 1,800-acre site) (July 12, 2010 transcripts p145 Ex. 60.); The generated electrical power from the GSEP switchyard will be transmitted through a new generation-tie (gen-tie) line originating at a GSEP on-site switchyard and terminating at Southern California Edison's (SCE) ~~planned~~ expanded 230/500 kV Colorado River substation approximately ~~25~~ 14 miles to the east. The initial segment of the gen-tie will be 6.5 miles long, running from the GSEP to the Blythe Energy Plant Transmission Line (BEPTL) ~~currently under construction~~ near I-10. The GSEP line will then share poles with the BEPTL, ~~with both lines before connecting to connecting at the~~ expanded Colorado River new substation **(PMPD pp. 2-3)**

STAFF COMMENT: Changes reflect the projects use of dry cooling as well as clarifications regarding the substations as described in the record at Ex. 400 p. B.1-2.

PMPD: ~~Each 125 MW power plant will require Several tanks on site will contain the its own raw water, treated water, and wastewater tanks for operation, including: and will have the following capacity:~~

- Raw Water/Fire Water Storage Tank: 700,000gallons
- ~~Raw Water/Fire Water Storage Tank: 500,000 gallons~~
- RO Feed Tank: 265,000 gallons
- Treated Water Storage Tank: 200,000 gallons
- ~~Treated Water Storage Tank: 1,250,000 gallons~~
- Demineralized Water Storage Tank: 145,000 gallons
- Wastewater Storage Tank: 155,000 gallons

~~These tanks (ten in total) Wastewater storage tank: 250,000 gallons were sized to provide sufficient water to support operation at of each separate 125 MW power the plant during peak (250 MW total) operating conditions for GSEP. Additionally, the tanks were sized to, as well as provide a 12-hour storage capacity to enable continued operations when a failure interrupts water or wastewater treatment capabilities. The tanks also enable allow the plant meet water supply requirements on a constant 24-hour basis and eliminate to accommodate midday demand peaks. (Ex. 400, p. B.1-8.) (PMPD pp. 4- 5)~~

STAFF COMMENT: Changes reflect the project's use of dry cooling.

PMPD: On an annual average, blowdown to the evaporation ponds will be approximately ~~90,000~~ 12,000 gallons per day for each unit, increasing to approximately 140,000 19,000 gallons per day for each unit during peak summer conditions. (PMPD p. 6)

STAFF COMMENT: Changes reflect the project's use of dry cooling.

PMPD: The average pond depth is eight feet and residual precipitated solids will be removed approximately every ~~seven~~ twenty years to maintain a solids depth no greater than approximately three feet for operational and safety purposes. Ponds will have net coverings to prevent bird access. The precipitated solids will be sampled and analyzed to meet the characterization requirements of the receiving disposal facility. (Ex. 400, pp. B.1-11 to B.1-12.) (PMPD p. 6)

STAFF COMMENT: Changes reflect the project's use of dry cooling.

PMPD: Shield wires and lightning arrestors will be included to protect substation equipment and personnel against lightning strikes. ~~The switchyard arrangement is shown in the power block layout general arrangement for unit two.~~

The generated electrical power from the Project switchyard will be transmitted through a generation-tie (gen-tie) line that will be routed in a southeasterly Right-Of-Way (ROW) eventually connecting to the ~~proposed~~ expanded SCE 230/500-kV Colorado River substation via the Blythe Energy Project Transmission Line (BEPTL). (Ex. 400, p. B.1-18.)

~~The GSEP will require an interconnection upgrade at the proposed Colorado River substation, which includes its expansion by 40 acres to accommodate new generation from GSEP and Solar Millennium Blythe. Six additional transmission poles will also be required to connect GSEP electricity from the BEPTL into the expanded Colorado River Substation. These upgrades are described and analyzed in the report published July 2, 2010, entitled: Transmission System Engineering Appendix A, Colorado River Substation Expansion and GSEP Interconnection Actions Impact Analysis. (Ex. 403, pp. D.5-1 to D. 5-63.)~~

~~The GSEP interconnection (along with that of other generators) involves expanding the already approved Expanding the permitted 500-kV SCE switchyard Colorado River substation into a full 230/500-kV substation will require utilizing approximately 90 acres of land. The expansion project would involve site preparation by clearing existing vegetation and grading, and may involve redirecting surface flows around one side of the substation. No final drainage or grading plans have yet been prepared, but it may be necessary to redirect surface water flow around one side of the substation. An approximately 10-acre staging area adjacent to the site may be will also be necessary for the expansion construction activity. Although final, detailed engineering, grading and drainage plans are not yet available, it is estimated that the total area subject to permanent new disturbance from construction of the expanded substation, including the new expansion area, would be approximately 65 acres (45 acres for substation grading, 20 acres for drainage/side slopes, plus temporary disturbance resulting from a 10-acre staging area). (PMPD pp. 9-10)~~

STAFF COMMENT: Changes reflect evidence in the record regarding the transmission system interconnection and the expanded Colorado River substation.

PMPD: **Finding of Fact #5:** The generated electrical power from the GSEP switchyard will be transmitted through a generation-tie (gen-tie) line that will be routed in a southeasterly ROW eventually connecting to the ~~proposed~~ expanded SCE 230/500 kV Colorado River substation via the Blythe Energy Project Transmission Line (BEPTL). The gen-tie's initial segment will be 6.5 miles of new line from the GSEP site to the BEPTL, at which point it will share poles with BEPTL ~~to the connection before connecting~~ with the expanded Colorado River substation. (PMPD p. 13)

STAFF COMMENT: Changes reflect evidence in the record regarding the transmission system interconnection and the expanded Colorado River substation.

ALTERNATIVES

PMPD: The record contains a sufficient analysis of Alternatives and complies with the requirements of the California Environmental Quality Act and the Warren-Alquist Act, ~~and the National Environmental Policy Act.~~ **(PMPD p. 14)**

STAFF COMMENT: The permitting federal agency must comply with NEPA, not the project. The Committee does not need to make findings about whether a federal agency complied with NEPA.

Compliance and Closure: General Conditions

PMPD: Attachment 1: Complaint Report/Resolution Form page 21.

STAFF COMMENT: The word "complainant" is incorrectly spelled four times as "complaintant".

AIR QUALITY

PMPD: The applicant proposed measures for reducing engine emissions during construction of the GSEP are listed below:

Control strategies proposed by the applicant for fugitive dust emissions during construction of the GSEP include: **(PMPD p. 7)**

These mitigation measures, updated and revised in consideration of the construction emissions impact potential of this very large solar energy project, are contained in Conditions of Certification **AQ-SC1** through **AQ-SC5**. We find that the proposed Conditions of Certification will mitigate all construction air quality impacts of the project to less than significant levels. (Ex. 400, p. C.1-25.) **(PMPD p. 9)**

STAFF COMMENT: Clarification as to who proposed the measures being discussed.

PMPD: Ex. 400, p. C.1-26, **Table 11** and Ex. 444, p. C.1-2, Table 11 Addendum **(PMPD p. 10)**

STAFF COMMENT: Additional reference more accurately reflects the evidentiary record.

PMPD: Compliance with all District rules and regulations was demonstrated to the District's satisfaction. The District's FDOC conditions are presented in the Conditions of Certification (**AQ-1** to **AQ-5149**). (Ex. 400, p. C.1-41; Ex. 404). **(PMPD p. 12)**

STAFF COMMENT: The correct number of Conditions of Certification is AQ-1 to AQ-51

PMPD: **FINDINGS OF FACT** #12 ~~The project will result in a cumulative overall reduction in GHG emissions from the state's power plants, will not worsen current conditions, and will thus not result in impacts that are cumulatively significant. (PMPD p. 17)~~

STAFF COMMENT: The PMPD includes a separate section for GHG emissions. Including a GHG finding in the air quality section is both unnecessary and potentially confusing, so it is recommended to be deleted.

PMPD: **AQ-SC3**

- b. All unpaved construction roads and unpaved operation and maintenance site roads, as they are being constructed, shall be stabilized with a non-toxic soil stabilizer or soil weighting agent that can be determined to be both as efficient or more efficient for fugitive dust control as ARB approved soil stabilizers, and shall not increase any other environmental impacts, including loss of vegetation to areas beyond where the soil stabilizers are being applied for dust control. All other disturbed areas in the project and linear construction sites shall be watered as frequently as necessary during grading (consistent with Biology Conditions of Certification that address the minimization of standing water ~~BIO-7~~); and after active construction activities shall be stabilized with a non-toxic soil stabilizer or soil weighting agent, or alternative approved soil stabilizing methods, in order to comply with the dust mitigation objectives of Condition of Certification **AQ-SC4**. The frequency of watering can be reduced or eliminated during periods of precipitation. **(PMPD p. 18)**

STAFF COMMENT: The recommended change to **AQ-SC3** subpart b. are needed to update to the corrected version provided in the Supplemental Staff Assessment (Ex. 444) and ensure that incorrect citations between sections do not occur.

PMPD: The AQCM or Delegate shall implement the following procedures for additional mitigation measures in ~~the event that~~ such visible dust plumes are observed: **(PMPD pp. 20-21)**

STAFF COMMENT: minor edit.

PMPD: **DISTRICT CONDITIONS**
DISTRICT FINAL DETERMINATION OF COMPLIANCE CONDITIONS

Starting on page 25 of the PMPD, remove all the chapter designations. ~~Chapter 2, Chapter 3, Chapter 4, Chapter 5, Chapter 6, Chapter 7.~~

STAFF COMMENT: Chapter headings are not necessary in the PMPD.

PMPD: EQUIPMENT DESCRIPTION:

Two - 1,341 HP diesel fueled emergency generator engines, each driving a generator.
(PMPD p. 35)

STAFF COMMENT: The correct number is 1,341 HP.

GREENHOUSE GAS (GHG) EMISSIONS

PMPD: The generation of electricity using fossil fuels, even in a back-up generator at a thermal solar plant, produces ~~air emissions known~~ as greenhouse gases in addition to the criteria air pollutants that have been traditionally regulated under the federal and state Clean Air Acts. California is actively pursuing policies to reduce GHG emissions; among them is a policy to add ~~that include adding~~ non-GHG emitting renewable generation resources to the system.

The currently regulated greenhouse gases are carbon dioxide (CO₂) nitrous oxide (N₂O), methane (CH₄), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFC), and perfluorocarbons (PFC). CO₂ emissions are far and away the most common of these emissions; as a result, GHG emissions are often expressed in terms of “metric tons of CO₂-equivalent” (MTCO₂E_{2e}) for simplicity. **(PMPD pp. 1-2)**

STAFF COMMENTS: Suggested changes are for clarity and consistency with the record.

PMPD: Since the impact of the GHG emissions from a power plant’s operation has ~~both~~ global, rather than ~~and~~ local, effects, those impacts should be assessed not only by analysis of the plant’s emissions, but also in the context of the operation of the entire electricity system of which the plant is an integrated part. Furthermore, the impact of the GHG emissions from a power plant’s operation should be analyzed in the context of applicable GHG laws and policies, such as AB 32. **(PMPD p. 2)**

STAFF COMMENT: There are no measurable local greenhouse gas impacts from any particular project, impacts are a cumulative global impact. The suggested revision more accurately reflects the record and is consistent with language found in other projects including the Imperial Valley Solar PMPD.

PMPD: Currently, the EPS is the only example of laws, ordinances, regulations or standards (LORS) that has the effect of limiting power plant GHG emissions. GSEP, as a renewable energy generation facility, is determined by rule to comply with the Greenhouse Gas Emission Performance Standard requirements of SB 1368 (Chapter 11, Greenhouse Gases Emission Performance Standard, Article 1, Section 2903 [b][1]).

However, even if it were not determined by rule to comply, the project would be GSEP is exempt from SB 1368 because it would operate at or below a 60 percent capacity factor. **(PMPD pp. 3-4)**

STAFF COMMENT: The SB 1368 compliance finding is inconsistent in this part of the section, so the proceeding edit is suggested for consistency.

PMPD: There is no adopted, enforceable federal or state LORS applicable to GSEP construction emissions of GHG. ~~Nor is there a quantitative threshold over which GHG emissions are considered “significant” under CEQA.~~ Nevertheless, there is guidance from regulatory agencies on how the significance of such emissions should be assessed. For example, the most recent guidance from CARB staff recommends a “best practices” threshold for construction emissions. [CARB, Preliminary Draft Staff Proposal, Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act (Oct. 24, 2008), p. 9]. Such an approach is also recommended on an interim basis, or proposed, by major local air districts. **(PMPD p. 5)**

STAFF COMMENT: The identified ARB method includes a quantitative threshold, where project life amortized construction emissions is added to the operation emissions and compared to an annual emission threshold. However, this draft interim guideline is not specifically applicable to power plants as ARB defers significance criteria to the Energy Commission, but nonetheless this is a quantitative threshold. Additionally, other local entities such as SCAQMD have similar quantitative thresholds and methods to add construction to operation emissions, so the statement that indicates that there are no quantitative thresholds is not accurate.

PMPD: As we have previously noted, GHG emissions have ~~both global and local~~ impacts. While it may be true that in general, when an agency conducts a CEQA analysis of a proposed project, it does not need to analyze how the operation of the proposed project is going to affect the entire system of projects in a large multistate region, analysis of the impacts of GHG emissions from power plants requires consideration of the project’s impacts on the entire electricity system. **(PMPD p. 7)**

STAFF COMMENT: There are no measurable local greenhouse gas impacts from any particular project, impacts are a cumulative global impact. The suggested revision more accurately reflects the record and is consistent with language found in other projects including the Imperial Valley Solar PMPD.

PMPD: The footnote on page 12 noting that “OTC Humboldt Bay Units 1 and 2 are included in this list...” should be labeled as “a”

PMPD: Findings of Fact #1, the correct designation for consistency is MTCO2E

PMPD: Findings of Fact #2. ~~There is no numerical threshold of significance under CEQA for construction-related GHG emissions.~~ **(PMPD p. 14)**

STAFF COMMENT: Statement is not correct as explained above.

HAZARDOUS MATERIALS MANAGEMENT

PMPD ERRATA: HAZ-2: the following language should be inserted in both the condition and verification:

" . . and, if applicable, a Process Safety Management Plan . . ."

STAFF COMMENT: While the suggested language in the Errata was incorporated into the BEACON project HAZ-2, staff does not support the same language for this case.

Due to the highly remote nature of the Genesis site and the difficulty in accessing it should an emergency response be necessary, staff, the applicant, and the RCFD had to resolve the issue of a secondary access road with a unique and creative solution --- using all-terrain fire trucks --- that will not be used for any other power plant. This location and difficulty of access for emergency response crews also required an emphasis on prevention of hazardous materials spills and fires and thus an added layer of prevention was required in the form of a Process Safety Management Plan regardless if required by LORS.

WASTE MANAGEMENT

PMPD: Intervenor CURE, challenges Condition of Certification **WASTE-5** arguing that it provides insufficient mitigation to reduce impacts from UXO to construction worker safety below significance. (PMPD p. 3)

Applicant argues that there is "no evidence of exercises or weapons used on the actual site." (Ex. 63, p. 5.) Applicant's expert points out that biological and cultural surveys of the area have netted only one spent 0.50 caliber cartridge. **(PMPD p. 3)**

Staff argues that extensive surveys already conducted on the Genesis site have not identified anything related to UXO other than one spent 0.50 caliber bullet cartridge. **(PMPD p. 3)**

STAFF COMMENT: Language changes that better reflect information in the record.

PMPD: The Committee took official notice of the record in the Beacon Solar Energy Project (BSEP) where the identical parties (NextEra, Staff and CURE) litigated the identical issues regarding HTF. In Beacon, CURE entered Exhibit 615 into the record

which was an accumulation of reports of HTF spills at the SEGS facilities (BSEP 3/22/10 RT 76:13-15, 78:2-5, 435:19-23). We note that the majority of spills involved quantities under 100 gallons. ~~As we noted in Beacon, a cubic yard is equal to 202 liquid gallons or 174 dry gallons. Thus, most of the spills at the SEGS facilities over the last 20 years were substantially less than one cubic yard.~~ The worst spill in the operational history of SEGS amounted to 30,000 gallons ~~(about 150 cubic yards)~~ of HTF on July 27, 2007 (Exs. 517; p.2; 520). The second largest spill occurred eight years before that on May 22, 1999 which amounted to 21,000 gallons ~~(about 104 cubic yards)~~. (Ex. 520). The record indicates that these very large spills are the exception, not the rule. (*Id.*) **(PMPD p. 8)**

Staff has assessed the properties of Therminol VP1 and reviewed the record of its use at Solar Electric Generating Stations (SEGS) 8 and 9 at Harper Lake, California. (Ex. 400, p. C. 4-8.) Staff examined past leaks, spills, and fires involving HTF. (*Id.*) Staff accepted Applicant's estimated annual average of 750 cubic yards of ~~spilled HTF-contaminated soil~~ which, we officially note, is equal to 151,500 1515 gallons. (Ex. 400, pp. C.3-14 through C.3-15.) ~~This amount is greater than the sum of all spilled HTF over the lifetime of SEGS, as contained in the reports submitted by CURE.~~ Staff notes that HTF spills typically spread laterally on the bare ground and soak down to a relatively shallow depth. (Staff Assessment C.13-14) This would make recovery of contaminated soil an easier process limiting the need for extensive excavation. Condition of Certification WASTE-11 would ensure that all spills or releases of hazardous substances that are in excess of EPA's reportable quantities (RQ's) are reported and cleaned-up in accordance with all applicable federal, state, and local requirements (Staff Assessment C.13-32)

The applicant is required to recycle and/or dispose hazardous and non-hazardous wastes at facilities licensed or otherwise approved to accept the wastes. Because hazardous wastes would be produced during both project construction and operation, the GSEP project would be required to obtain a hazardous waste generator identification number from U.S. EPA. The GSEP project would also be required to properly store, package, and label all hazardous waste; use only approved transporters; prepare hazardous waste manifests; keep detailed records; and appropriately train employees, in accordance with state and federal hazardous waste management requirements. (Staff Assessment C.13-25 to C.13-26)

Given the size of prior leaks at older SEGS facilities coupled with required preventive measures for this specific project, we find that Staff's analysis based upon an estimated 750 cubic yards of contaminated soil per year is an adequate baseline and reasonable level. We also find that the Conditions of Certification provide for appropriate mitigation in the event a larger HTF release occurs because the Conditions of Certification address the handling of contaminated soil and are not specific to any quantity. (WASTE-9, WASTE-10, WASTE-11) (PMPD p. 9)

STAFF COMMENT: Staff suggests the calculations be removed from the PMPD because they are misleading. The relationship between gallons of liquid HTF spilled and the resulting cubic yards of contaminated soil is not governed by a simple calculation and was no basis for any proposed mitigation. Factors such as temperature, moisture, soil type, ground slope, recovery of free-standing liquid HTF, and time sitting on ground all play a role in determining the quantity of soil contaminated and the concentration of such contamination. Rather than trying to determine the relationship between spilled HTF and cubic yard of contaminated soil, staff created Conditions of Certification to prevent spills in the first place. In the event a spill occurred, conditions are triggered that address the handling of contaminated soil to prevent impacts to human health and the environment. There is no evidence in the record that any HTF spill at any of the SEGS facilities resulted in human injury or significant environmental damage.

PMPD: The evidence shows that the GSEP project waste disposal volumes will combine with the waste volumes from four commercial projects, 15 residential projects, and 16 renewable energy projects along the I-10 Corridor. **(PMPD p. 15)**

STAFF COMMENT: Suggested edit for clarification.

BIOLOGICAL RESOURCES

PMPD: The evidence shows that the Applicant recently proposed some minor modifications to the GSEP that were not discussed in their Application for Certification (AFC) ~~or analyzed in Staff's analysis~~. These modifications include a six-pole transmission line extension at the Colorado River Substation and an electrical distribution/telecommunications line. Construction of six additional poles will result in disturbance to 6.5 acres from construction and laydown areas, conductor pulling areas, and the transmission access. Within this temporary 6.5 -acre impact area 1.2 acres will be permanently affected due to the 6-foot by 6-foot pole construction pad and the 3,700-foot long, 14-foot wide transmission maintenance road. **Staff analyzed the temporary and permanent impacts of these recent minor project modifications to biological resources** (Ex. 403, pp. C.2-5 through C.2-8.) **(PMPD p. 2)**

STAFF COMMENT: In their PMPD Errata submitted on September 9, 2010 the Applicant suggested a deletion of “or analyzed in Staff’s analysis.” Staff has no objection to that deletion, and has further added clarifying language to indicate that the impacts of those recent minor modifications to biological resources were analyzed in the Supplemental RSA (Ex. 403).

PMPD: Desert Tortoise Surveys

Protocol-level surveys of most of the Study area for the desert tortoise were conducted between March 17 – 25 and April 6 – 13, 2009 (Study area except south of I-10) and October 30, 2009 (transmission line south of I-10). The transmission line route changed after spring surveys; **surveys for** the northern alignment **were conducted in** ~~was included in spring surveys, but not to the same level of intensity as the rest of the Study area, and further surveys are scheduled for Spring 2010 (Ex. 58).~~ Survey results of the Project Disturbance Area include 19 mineralized and 9 non-mineralized carcass fragments. Preliminary spring 2010 surveys identified approximately 30 tortoise bone fragments (> 4 years age) along the transmission line and buffer area. (Ex. 400, pp. C.2-36 to C.2-37.) **(PMPD p. 6)**

STAFF COMMENT: The revision below clarifies that Spring 2010 surveys for desert tortoise have already been conducted.

PMPD: The evidence shows that the Project Disturbance Area is currently unoccupied by desert tortoise and the northwestern portion of the GSEP site is suitable or marginally suitable habitat. ~~while the remainder of the site is not habitat for desert tortoise.~~ The Sonoran creosote bush scrub and wash habitat north and west of the GSEP site is higher quality habitat. Energy Commission, BLM, CDFG and USFWS staff agree that the habitat within the Project Disturbance Area is of lower quality closer to the Ford playa and is higher quality toward the upper bajadas, but consider the entire GSEP site to contain suitable habitat for desert tortoise (e.g., Sonoran creosote bush scrub with friable soils for burrowing and appropriate forage plants) and could potentially be occupied by this species in the future. (Ex. 400, p. C.2-37.) **(PMPD page 7, first full paragraph)**

STAFF COMMENT: Staff has suggested the edit below to clarify the PMPD conclusions about the suitability of the Genesis project site for desert tortoise. According to an assessment provided by USFWS and BLM desert tortoise experts (see Staff Biological Resources Rebuttal Testimony docketed on June 29, 2010 [tn 57363], Attachment A, Biological Resources Rebuttal Testimony Attachment A: USFWS Memo – Desert Tortoise Habitat Assessment Genesis Solar Energy Project) even areas on the Genesis project site that the applicant had identified as “not habitat” should be considered potential desert tortoise habitat.

PMPD: Mojave Fringe-Toed Lizard Surveys

The evidence indicates that the Project Disturbance Area contains suitable Mojave fringe-toed lizard habitat wherever stabilized and partially stabilized sand dune habitat (**7.5** ~~28~~ acres) and playa/sand drift over playa habitat (**38** ~~37~~ acres) occur. Mojave fringe-toed lizard habitat preferences are more closely tied to the landform than to the vegetation community, and Sonoran creosote bush scrub habitat with an active sand

layer can also support this species. This species was detected south of I-10 in Sonoran creosote bush scrub because this area supports a layer of wind-blown sand from the adjacent dunes. (Ex. 400, p. C.2-38; **Ex. 403, C.2-8, Table 6**) (**PMPD Page 7, 2nd Paragraph**)

STAFF COMMENT: Staff has revised the impact acreage to be consistent with Exhibit 403 p. C.2-8, Table 6

PMPD: Couch's Spadefoot Toad Surveys

Staff counters that an adequate baseline survey was provided for Couch's spadefoot toad breeding habitat at the Genesis project site, with on-the-ground field surveys conducted by the Applicant and by Staff, and with verification by review of aerial photography. As Staff described (RSA, C.2-38-C.2-39) and as the Applicant's expert testified at the Evidentiary Hearing (7/12/10 RT 78:13-81:14), presence/absence surveys for spadefoot toads are not a prerequisite for an adequate impact analysis or for development of mitigation measures. Staff made the conservative assumption that this species could occur at the GSEP site without surveys confirming their presence because they are such a difficult species to detect. (Staff's Reply Brief 8/2/10, p. 5-6.) (**PMPD pp. 7-8**)

A Lead Agency is not required to obtain every last bit of information to conduct its analysis. An EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project. (*Laurel Heights Improvement Association v Regents of University of California* (1988) 47 Cal.3d 376, 404-405)) but CEQA does not require agencies to "conduct every test and perform all research, study, and experimentation recommended to it by interested parties." (*Society for California Archaeology v. County of Butte* (1977) 65 Cal.App.3d 832, 838.) "Indeed, a project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information," but "[i]t is not for them to design the EIR." (*Laurel Heights Improvement Ass. v. Regents of the Univ. of Calif.* (1988) 47 Cal.3d 376, 415.)

STAFF COMMENT: Staff suggests the additional language to support the PMPD finding that that the assumed presence of Couch's spadefoot toad provides an adequate basis upon which to fashion conditions to mitigate potential impacts, especially where, as here, the applicant will provide further refinement of the data to the CPM after subsequent surveys are complete.

PMPD Page 12, Biological Resources Table 2

STAFF COMMENT: Staff has revised impact acreages to be consistent with Exhibit 403. In addition, staff has revised the discussion in Biological Resources Table 2 to indicate that impacts to groundwater plant communities would be less than significant because the Project will now use dry cooling (Ex. 400, p. C.2-131).

Biological Resources Table 2
Summary of Impacts and Mitigation

| Biological Resource | Impact/Mitigation |
|--|--|
| Sonoran Creosote Bush Scrub & Associated Wildlife | <p>Direct Impacts: Permanent loss of 1,773 1,774 acres; fragmentation of adjacent wildlife habitat and native plant communities</p> <p>Indirect Impacts: Disturbance (noise, lights, dust) to surrounding plant and animal communities; spread of non-native invasive weeds; changes in drainage patterns downslope of Project; erosion and sedimentation of disturbed soils.</p> <p>Cumulative Impacts: Contributes 0.8% to cumulative loss from probable future projects within the NECO planning area</p> <p>Mitigation: Off-site habitat acquisition and enhancement (BIO-12); implement impact avoidance and minimization measures (BIO-8) and Weed Control Plan (BIO-14)</p> |
| Waters of the State & Associated Sensitive Plant Communities | <p>Direct Impacts: Loss of hydrological, geomorphic, and biological functions and values of 69.91^b acres of State waters (53-73 acres permanent loss, 18 acres temporary loss) including 16^b acres of microphyll woodland <u>Permanent loss of 69 acres of state waters, including 16 acres of microphyll woodland. Temporary direct impacts to 18 acres. Loss of important wildlife habitat function and values, and impaired or lost hydrologic and geomorphic functions necessary to sustain the habitat</u></p> <p>Indirect Impacts: Permanent loss of hydrological connectivity downstream of the Project, including 21^c acres unvegetated ephemeral wash; head-cutting on drainages upslope and erosion/sedimentation downslope; *</p> <p>Cumulative Impacts: Contributes 2.9% to cumulative loss from future projects within the NECO planning area; contributes 4.6% to cumulative loss from future projects within the Chuckwalla- Ford Dry Lake watershed.</p> <p>Mitigation: Acquisition and enhancement of 111 432 acres ephemeral desert washes, implementation of avoidance and minimization measures to protect state waters (BIO-22); implement Weed Management Plan (BIO-14)</p> |
| Desert Tortoise | <p>Direct Impacts: Potential take of individuals during operation and construction; permanent loss of 1,774 1,773 acres (including 24 23^d acres of critical habitat) of desert tortoise habitat and fragmentation of surrounding habitat.</p> <p>Indirect Impacts: Increased risk of predation from ravens, coyotes, feral dogs; disturbance from increased noise and lighting; introduction and spread of weeds; increased road kill hazard.</p> <p>Cumulative Impacts: Contributes to cumulative loss of low to moderate value desert tortoise habitat (2.0% to 0.1 habitat value, 2.9% to 0.2 habitat value, 0.1% to 0.3 habitat value) from future projects in the NECO planning area;</p> <p>Mitigation: Implement avoidance and minimization measures (BIO-6 through BIO-11) and acquire 1,870 1,864 acres of desert tortoise habitat (BIO-12).</p> |

| Biological Resource | Impact/Mitigation |
|---------------------------|--|
| Mojave Fringe-Toed Lizard | <p>Direct impacts: Mortality to individuals during construction and permanent loss of 7.5 ±^{a,f} acres of sand dune habitat and 38 ±^{a,f} acres of sand drift over playa; increased road kill hazard from construction traffic; potential accidental direct impacts to adjacent preserved habitat during construction and operation.</p> <p>Indirect impacts: Disruption of sand transport corridor resulting in downwind impacts to 151^e acres; introduction and spread of invasive plants; erosion and sedimentation of disturbed soils; fragmentation and degradation of remaining habitat; increased road kill hazard from construction and operations traffic; harm from accidental spraying/drift of herbicides and dust suppression chemicals.</p> <p>Cumulative Impacts: Contributes 0.2% to cumulative loss from future projects within the NECO planning area; contributes 1.7% to cumulative loss from future projects within the range of the Chuckwalla Valley population.</p> <p>Mitigation: Implement BIO-20, Mojave fringe-toed lizard compensation, and BIO-8, impact avoidance and minimization measures</p> |
| Couch's Spadefoot Toad | <p>Direct Impacts: loss of breeding and upland habitat, mortality of individuals; disturbance to breeding ponds,</p> <p>Indirect Impacts: reduced flow to breeding areas, increased flow to upland habitat, construction noise could trigger emergence when conditions are not favorable.</p> <p>Cumulative Impacts: Contributes 1.6% to cumulative loss of habitat from future projects within the NECO planning area.</p> <p>Mitigation: Conduct surveys and implement impact avoidance and minimization measures, avoidance and protection of breeding habitat BIO-27 (Couch's spadefoot toad impact avoidance and minimization measures).</p> |
| Western Burrowing Owl | <p>Direct Impacts: Permanent loss of foraging habitat; potential loss of eggs and young; degradation and fragmentation of remaining adjacent habitat from edge effects; disturbance of nesting and foraging activities for nesting pairs near the plant site and linear facilities;</p> <p>Indirect Impacts: increased road kill hazard from operations traffic; potential collision with mirrors; increased predation from ravens; disturbance of nesting activities from operations.</p> <p>Cumulative Impacts: Contributes 0.5% to cumulative loss from future projects within the NECO planning area.</p> <p>Mitigation: Implement burrowing owl impact avoidance and mitigation measures, including habitat acquisition if owls are displaced by the Project (BIO 18, Burrowing owl impact avoidance, minimization, and compensation measures)</p> |

| Biological Resource | Impact/Mitigation |
|--|--|
| Golden Eagle | <p>Direct/Indirect Impact: Loss of foraging habitat; potential disturbance to nesting golden eagles during construction if active nests occur within <u>one 40</u> miles of Project boundaries</p> <p>Cumulative Impacts: Contributes 7.4% to cumulative loss of Sonoran creosote bush scrub and 0.2% to loss of dry desert wash woodland, and 0.6% to loss of sand dune foraging habitat from future projects within the NECO planning area within 10 miles of the Project. Contributes 0.8% to cumulative loss of Sonoran creosote bush scrub and 0.03% to loss of dry desert wash woodland, and 0.6% to loss of sand dune foraging habitat from future projects within 10 miles of the nearest mountains.</p> <p>Mitigation: Implementation of Golden Eagle Nest Inventory and Monitoring (BIO-28) and off-site habitat acquisition and enhancement for desert tortoise will protect eagle foraging habitat (BIO-12); additional mitigation may be required pending USFWS guidance.</p> |
| Special-Status Birds & Migratory Birds | <p>Direct Impacts: Permanent loss of breeding and foraging habitat, including loss of 1,774 1,773^{a,f} acres of Sonoran creosote bush scrub and 16^b acres of microphyll woodland; potential loss of eggs and young; disturbance of nesting and foraging activities for populations on and near the plant site and linear facilities; degradation and fragmentation of remaining adjacent habitat from edge effects.</p> <p>Indirect Impacts: increased road kill hazard from operations traffic and collision with mirrors; increased predation from ravens; disturbance from operations.</p> <p>Cumulative Impacts: Contributes 0.6% to cumulative loss of habitat from future projects within NECO planning area.</p> <p>Mitigation: Implement impact avoidance and minimization measures (BIO-8); pre-construction nest surveys (BIO-15); avian protection plan (BIO-16) off-site habitat acquisition and enhancement (BIO-12 and BIO-22)</p> |
| Desert Kit Fox & American Badger | <p>Direct Impacts: Permanent loss of 1,811 ^{a,f} acres of foraging and denning habitat; fragmentation and degradation of remaining habitat, loss of foraging grounds, crushing or entombing of animals during construction; increased risk of road kill hazard from construction traffic.</p> <p>Indirect Impacts: Disturbance from increased noise and lighting; introduction and spread of weeds; increased risk of road kill from operations traffic.</p> <p>Cumulative Impacts: Contributes 0.5% to cumulative loss of habitat from future projects within the NECO planning area.</p> <p>Mitigation: Implementation of impact avoidance and minimization measures (BIO-8), conduct pre-construction clearance surveys (BIO-17); off-site habitat acquisition and enhancement (BIO-12 and BIO-22)</p> |
| Nelson's bighorn sheep | <p>Direct Impacts: None</p> <p>Indirect Impacts: harassment from elevated construction noise</p> <p>Cumulative Impacts: None</p> <p>Mitigation: Implementation of noise-related avoidance and minimization measures (BIO-8).</p> |

| Biological Resource | Impact/Mitigation |
|---|--|
| Bats | Direct/Indirect/Cumulative Impacts: Loss of foraging habitat. Mitigation: off-site habitat acquisition and enhancement (BIO-12 and BIO-22) |
| Special Wildlife Management Areas | Chuckwalla DWMA/Desert Tortoise Critical Habitat: Impacts to 24 ^d acres ACEC: None WHMA: Impacts to 1,811 ^{a,f} acres Mitigation: Mitigate loss of critical habitat with acquisition and preservation of suitable desert tortoise at a 5:1 ratio (BIO-12). |
| Special-status Plants <ul style="list-style-type: none"> ▪ Harwood's eriastrum ▪ Harwood's milk-vetch ▪ Ribbed cryptantha ▪ Desert unicorn plant ▪ Late-season special-status plants | Direct Impacts: Potential impacts to BLM Sensitive Harwood's eriastrum (CNPS 1B) from gen-tie construction near substation; Harwood's milk-vetch (CNPS 2) on linears and solar plant site; desert unicorn plant (CNPS 4) at solar plant site; ribbed cryptantha (CNPS 4) on linears and solar plant site. Potential direct impacts to CNPS 1B, 2, 4 and new taxa detected during late season surveys. Indirect impacts: Fragmentation/isolation and reduced gene flow between isolated fragments of area population; introduction and spread of invasive plants; erosion and sedimentation of disturbed soils; potential disruption of sand transport systems that maintain habitat below the Project; alteration of drainage patterns; herbicide drift; disruption of photosynthesis and other metabolic processes from dust. Construction of SCE substation could cause loss of over 1000 individuals of Harwood's eriastrum. Cumulative Impacts: Contributes to cumulative loss of plants and habitat, and indirect effects to Harwood's eriastrum, Harwood's milk-vetch, desert unicorn plant and ribbed cryptantha from other I-10 corridor projects and throughout range. Contributes 0.7% to cumulative loss of Harwood's milk-vetch habitat from future projects within the NECO Planning Area. Contributes cumulative loss of dune-, playa-, and wash habitat for other special-status species in Chuckwalla Valley: 4.6% desert washes in Chuckwalla Valley; 1.7% dunes and sand fields; 0.2% playa. Mitigation: Implement BIO-19 - avoidance requirements for Harwood's eriastrum; off-site compensation or restoration mitigation for Harwood's milk-vetch; general avoidance and minimization measures for all special-status plants. Implement late-season surveys and mitigate according to triggers and performance standards in BIO-19 . Indirect effects and impacts to habitat also addressed in Weed Management Plan (BIO-14); Best Management Practices (BIO-8); special-status plant impact avoidance and minimization measures and potential habitat compensation (BIO-19), acquisition of sand dune habitat (BIO-20). |

| Biological Resource | Impact/Mitigation |
|---|---|
| Groundwater-Dependent Plant Communities | <p>Direct: None</p> <p>Indirect/Cumulative: <u>None; with dry cooling, impacts to groundwater plant communities would be less than significant.</u></p> <p>Degradation of groundwater-dependent plant communities (e.g., mesquite bosque, bush seep-weed) from water table drawdown</p> <p>Mitigation: <u>None</u> Conduct long-term monitoring of groundwater-dependent vegetation (BIO-25) and implement adaptive management, if necessary (BIO-26).</p> |

Source: (Ex .400, Table 5, pp. C.2-64 to C.2-67.)

PMPD: pg 15, Table 3, and PMPD Page 17, Bottom of Page

Biological Resources Table 3
Acres of Direct and Indirect Impacts to Biological Resources and Recommended Mitigation

| Resource | Acres Impacted | Mitigation Ratio | Recommended Mitigation Acreage |
|--|----------------|------------------|--------------------------------|
| Desert Tortoise Habitat – Direct Impacts | | | |
| Within DWMA/Critical Habitat | 24 | 5:1 | 120 |
| Outside Critical Habitat | 1,750 | 1:1 | 1,750 |
| Total Desert Tortoise Mitigation | | | 1,870 |
| Stabilized/Partially Stabilized Sand Dunes – Direct Impacts | | | |
| Direct Impacts | 7.5 | 3:1 | 22 |
| Playa and Sand Drifts Over Playa | | | |
| Direct Impacts | 38 | 3:1 | 114 |
| Indirect Impacts to MFTL Habitat | 454 | 0.5:1 | 76 |
| Total Mojave Fringe-toed Lizard Mitigation | | | <u>136</u> 212 |
| State Waters* - Direct Impacts | | | |
| Microphyllous Riparian Vegetation | 16 | 3:1 | 48 |
| Unvegetated Ephemeral Dry Wash | 53 | 1:1 | 53 |
| State Waters- Indirect Impacts | | | |
| Unvegetated Ephemeral Dry Wash | 21 | 0.5:1 | 10 |
| Total State Waters Mitigation | | | 111 |

Source: Ex. 403, Table 6, p. C.2-8.

Impacts to Special-status Species

PMPD: Mojave Fringe-toed Lizard. The GSEP will directly impact ~~45.5~~ 38 acres of Mojave fringe-toed lizard habitat (**comprised of** including 7.5 acres of dunes and 38 acres of playa with sand drifts) ~~and indirectly affect 151 acres of habitat downwind of the Project Disturbance Area. The indirect impact results from the Project solar arrays extending into the sand transport corridors, diminishing the input of sand to downwind areas and reducing the active sand layer that is crucial to Mojave fringe-toed lizard habitat.~~ The Mojave fringe-toed lizards in the Chuckwalla Valley are at the southernmost portion of the species range, and the GSEP could increase the risks of local extirpation of an already fragmented and isolated population. Condition of Certification **BIO-20** requires acquisition and protection of habitat supporting core populations of Mojave fringe-toed lizard habitat in the Chuckwalla Valley, which will reduce GSEP impacts to less than significant levels. (Ex. 400, pp. C.2.1 to C.2-2 and pp. C.2-74 to C.2-76.) (PMPD, pg 17)

STAFF COMMENTS: As described in Exhibit 435 and discussed during the July 12, 2010 hearings (transcript pages 224-229) staff revised their conclusion that the Project would have indirect impacts to 151 acres of Mojave fringe-toed lizard habitat. The edits to **Biological Resources Table 3** and the following text indicate that no mitigation is required for indirect impacts to Mojave fringe-toed lizard habitat.

PMPD: To offset the loss of ~~1,774~~ 4,773 acres of desert tortoise habitat, Condition of Certification **BIO-12** recommends habitat compensation at a 1:1 ratio for desert tortoise (i.e., acquisition and preservation of one acre of compensation lands for every acre lost). For Project impacts to ~~24~~ 23 acres of Chuckwalla Desert Critical Habitat Unit, the mitigation ratio will be 5:1. The acquisition of compensatory mitigation lands offsets Project impacts to desert tortoise and other sensitive species by protection of those lands, and by enhancement actions such as fencing, road closure, weed control, and habitat restoration. The protection and enhancement actions increase the carrying capacity of the acquired lands for desert tortoise, which increases their population numbers by enhancing survivorship and reproduction. (Ex. 400, p.C.2-81). This compensatory mitigation is consistent with recommendations from the California Department of Fish and Game (CDFG), the U.S. Fish and Wildlife Service (USFWS), and BLM guidance in the NECO. Condition of Certification **BIO-12** also requires that the land acquisitions be within the Colorado Desert Recovery Unit, and have potential to contribute to desert tortoise habitat connectivity and build linkages between desert tortoise populations and designated critical habitat. These conditions satisfy the CDFG's requirements under Section 2081 of the California Fish and Game Code. (Ex. SA, pp. C.2-79 to C.2-82.) (PMPD, pg 19)

STAFF COMMENT: Consistency with acreage impacts figures from Ex 403. Additional language also provides clarification as to how compensatory mitigation lands provide benefits to the impacted species.

PMPD: The evidence indicates that GSEP construction activities could potentially injure or disturb golden eagles if nests were established sufficiently close to the GSEP boundaries to be affected by the sights and sounds of construction. ~~Because these potential impacts are unlikely, but if active golden eagle were established within 10 miles of the GSEP boundaries,~~ disturbance to nesting activities will be avoided with implementation of Condition of Certification **BIO-28** (Golden Eagle Inventory and Monitoring) **for those nests found within one mile of construction activities.** This condition requires that during construction, golden eagle nest surveys be conducted in accordance with USFWS guidelines to verify the status of golden eagle nesting territories within **one mile** ~~40 miles~~ of the project boundaries. If active nests are detected, **BIO-28** requires monitoring guidelines, performance standards, and adaptive management measures to avoid adverse impacts to golden eagles from GSEP construction. Implementation of **BIO-28** will reduce potential impacts of GSEP construction on nesting golden eagles to less than significant levels. (Ex. 400, p. C.2-89.) (PMPD Page 21, Paragraph 3)

STAFF COMMENT: The Applicant suggested the following edits in their Errata to the PMPD. Staff agrees with these edits because they are consistent with staff's discussion at workshops and with the revisions to the golden eagle condition as described in Exhibit 435.

PMPD: Migratory/Special-status Bird Species. Several special-status species, such as black-tailed gnatcatchers, yellow warblers, and crissal thrashers, breed in the region, but will not breed on the site due to lack of suitable habitat. This region does not provide breeding habitat for Swainson's hawks, northern harriers, short-eared owls, ferruginous hawks, or Brewer's sparrows but may provide overwintering habitat or the species may be present during migration. The GSEP impacts to Sonoran creosote bush scrub and microphyll woodland will contribute to loss of foraging habitat, cover, and roost sites for these species on their migratory or wintering grounds, but will not contribute to loss of breeding habitat. The GSEP will have more substantial adverse effects to the resident breeding birds at the site, which include loggerhead shrike, California horned lark, and Le Conte's thrasher among others. These species will be adversely affected by the loss of 16 acres of microphyll woodland and **1,774** ~~1,773~~ acres of Sonoran creosote bush scrub. Le Conte's thrasher, loggerhead shrikes and other wash-dependent species will in particular be affected by the loss of the cover, foraging and nesting opportunities provided by the structurally diverse and relatively lush dry washes and microphyll woodland. Dry washes contain less than five percent of the Sonoran Desert's area, but are estimated to support ninety percent of Sonoran Desert birdlife. As discussed in the cumulative impact subsection, the evidence shows that the GSEP will be a substantial contributor to the cumulative loss of the NECO Planning Area's biological resources, including habitat for these special-status birds. Condition of Certification **BIO-12**, the desert tortoise compensatory mitigation plan and **BIO-22**, mitigation for impacts to state waters, will offset the **Project's direct impacts and its contribution to** cumulative loss of habitat for these species. (Ex. 400, pp. C.2-90 to C.2-91.) (PMPD, pg 22)

STAFF COMMENT: Staff has made minor corrections to impact acreages, consistent with Exhibit 403. Staff has also clarified that the direct impacts of the Project to migratory birds, as well as the cumulative impacts, would be mitigated by the conditions of certification cited below.

PMPD: The RSA analyzes GSEP impacts to the special-status plant species found during two years of spring surveys, and analyzed the impacts of the project to late-season plants with potential to occur (if present) based on known occurrences within a 50-mile region and the presence of suitable habitat. (Ex.400, pp C.2-99 to 116.) **(PMPD p. 25)**

The special-status plant surveys at the project site were extensive, highly professional, covered multiple years, and are legally sufficient for a CEQA analysis. With this survey data, as well as expert opinion, multiple site visits by staff, an exhaustive review of databases and literature, and a review of GIS data on ownership and threats to occurrences from other projects, staff conducted a thorough analysis of impacts to late season plants potentially occurring in the Project area. The information was adequate for staff to conclude that the Genesis Project's impacts to late season special-status plants, if present, are significant, and that avoidance, minimization, and compensation measures—with detailed and measurable performance standards—are required. Staff commits the Project to conducting the late season surveys prior to construction, and provides thresholds for significance and triggers for mitigation for any such plants detected, based on status, rarity, extinction risk, and the portion of the local population affected. (Staff Assessment C.2-2, C.2-3, C.2-7)

STAFF COMMENT: The suggested language clarifies that while presence may have been assumed, staff did perform a rigorous analysis based on investigation and research to determine the potential for presence and the types of appropriate mitigation. Assuming presence was not the result of short cuts but prudent logical decision making.

PMPD: We see nothing wrong with Staff's conservative approach of assuming the worst case scenario ~~as a baseline~~ for impacts analysis and mitigation, then verifying the results in subsequent surveys. **(PMPD p. 26)**

STAFF COMMENT: The sentence misuses the term "baseline," which under CEQA means the environmental or current physical setting with which the project's potential impacts are compared to assess their significance.

PMPD: Lighting During Operations

Switched lighting will be provided for areas where continuous lighting is not required for normal operation, safety, or security. These features have been incorporated into Condition of Certification **VIS-2** **VIS-4** (Temporary and Permanent Exterior Lighting) and

BIO-8. With implementation of these measures, lighting at the GSEP will have no adverse effects on wildlife. (Ex. SA, p. C.2-92.) **(PMPD p. 31)**

Avian Collision Hazards

As described above, operation of the GSEP will require onsite nighttime lighting for safety and security at the site. The transmission line support structures will not be lit and no red incandescent lighting is proposed. With implementation of Conditions of Certification **VIS-2** ~~**VIS-3**~~ and **BIO-8** pertaining to minimization of night lighting, lighted GSEP facilities will not pose a significant collision hazard at night. (Ex. 400, p. C.2-96.) **(PMPD p. 31)**

STAFF COMMENTS: Staff has made two corrections above to replace the reference to **VIS-4** (Reflective Glare) with **VIS-2** (Temporary and Permanent Exterior Lighting).

PMPD: ~~The Considerable uncertainty remains as to **about** the potential extent of the GSEP's impacts to groundwater and the potential adverse effects to groundwater dependent sensitive plant communities and to wildlife~~ **has been resolved because** the applicant has reduced his proposed water use significantly when switching from wet cooling to dry cooling. **Staff has concluded that with dry cooling impacts to groundwater-dependent vegetation would not be significant, and therefore the monitoring and mitigation specified in Conditions of Certification BIO-25 and BIO-26 are not needed.** ~~To ensure that the Project's proposed use of groundwater does not lower groundwater levels in the basin so that biological resources are significantly and adversely affected, the Applicant will develop a vegetation monitoring program and identify what changes are occurring in basin water levels and in groundwater-dependent vegetation. Substantial changes in the vigor of groundwater-dependent vegetation will be monitored and documented under the Vegetation Monitoring and Reporting Plan outlined in Condition of Certification **BIO-25**. Condition of Certification **BIO-26** specifies remedial action to be taken if adverse effects are detected. These measures will be sufficient to ensure that the groundwater pumping for the GSEP will not result in significant adverse impacts to groundwater-dependent ecosystems in the Chuckwalla Basin.~~ (Ex. 400, p. C.2-3 and C.2-117 to C.9-122; **C.2-131.**) **(PMPD pg 34, Top of Page)**

STAFF COMMENTS: Staff has accepted the following revisions suggested by the Applicant; staff analysis in subsection C.2.6 of the RSA (Dry Cooling Alternative) concluded that impacts to groundwater dependent vegetation with the dry cooling alternative would be less than significant and would not require mitigation (Ex 400, p. C.2-131)

PMPD: The record supports the conclusion that the odds of these two events occurring simultaneously are infinitesimally **small**. Further, the biological impacts that would be attributable to the all-terrain fire trucks driving to this event, should it ever happen, are

speculative at best. We also note that the action of purchasing emergency vehicles does not, in itself, create any significant impact on biological resources. (PMPD p. 35)

STAFF COMMENT. Staff suggests the minor clarification.

PMPD: These workers will have completed the Workers Environmental Awareness Program as required by Condition of Certification **BIO-6** and will be sensitized to the fragile vulnerability of the desert environment. The project owner is highly motivated to protect biological resources in the vicinity of the project. **In addition, CUL-16 requires a guard or construction of a security gate at the south end of the access road to prevent unauthorized access, a measure that would further protect sensitive biological resources from illegal off-road use.** Thus, the evidence supports a more reasonable inference that unauthorized off-road vehicle use in the vicinity of the GSEP will decrease because the increased presence of people will deter illegal off-road use due to the higher probability of detection. We find Conditions of Certification **BIO-6** and **BIO-8** mitigates the impacts from the new paved road below significance. (PMPD Page 37, Last Paragraph)

STAFF COMMENT: As discussed at the Committee Conference on September 8, 2010, staff had added language referring to the suggested requirement in **CUL-16** indicating that gating or guards at the south end of the access road would help minimize impacts to biological resources that might result from unauthorized use of that road.

PMPD: State LORS

Incidental Take Permit: California Endangered Species Act (Fish and Game Code §§ 2050 et seq.) The California Endangered Species Act (CESA) prohibits the “take” (defined as “to hunt, pursue, catch, capture, or kill”) of state-listed species except as otherwise provided in state law. Construction and operation of the Project could result in the “take” of desert tortoise, listed as threatened under CESA. Condition of Certification **BIO-12** specifies compensatory mitigation for desert tortoise habitat loss at a 1:1 ratio. **Avoidance and minimization measures described in conditions of certification BIO-6 through BIO-11 and BIO-13 would also mitigate for potential impacts to desert tortoise.** The evidence suggests that this funding and mitigation approach would ensure compliance with CESA. (PMPD pg 43)

STAFF COMMENT: Staff wanted to clarify here that compliance with CESA requires implementation of avoidance and minimization measures, in addition to compensatory mitigation.

PMPD: **Streambed Alteration Agreement: California Fish and Game Code §§ 1600 1607.** Pursuant to these sections, CDFG typically regulates all changes to the natural flow, bed, or bank, of any river, stream, or lake that supports fish or wildlife resources. Construction and operation of the Project would result in direct impacts to **69** 94 acres

of waters of the state and 21 acres of indirect impacts. Condition of Certification **BIO-22** would minimize and offset direct and indirect impacts to state waters and would assure compliance with CDFG codes that provide protection to these waters. (Ex. 400, pp. C.2-176 to C.2-177.) **(PMPD p. 43)**

STAFF COMMENT: Staff has revised the impact acreage to be consistent with Exhibit 403, p. C.2-8, Table 6.

PMPD: **Critical Habitat** consists of specific areas defined by the USFWS as areas essential for the conservation of the listed species, which support physical and biological features essential for survival and that may require special management considerations or protection. Critical habitat for the desert tortoise was designated in 1994, largely based on proposed DWMAs in the draft Recovery Plan. The linear facilities overlap with 24 ~~23~~ acres of the Chuckwalla Desert Tortoise Critical Habitat Unit. **(PMPD pg 44, paragraph 4)**

STAFF COMMENT: Staff has revised the impact acreage to be consistent with Exhibit 403 p. C.2-8, Table 6.

PMPD: **Endangered Species Act (ESA; 16 USC Section 1531 et seq.)** Potential take of the desert tortoise, listed as threatened by the USFWS, requires compliance with the federal Endangered Species Act (ESA) (16 USC §§ 1531 et seq.). “Take” of a federally-listed species is prohibited without an Incidental Take Permit, which would be obtained through a Section 7 consultation between BLM and the USFWS. The Applicant ~~will~~ **has** submitted a Draft Biological Assessment (BA) for the Project to BLM, and ~~when~~ BLM has **initiated formal Section 7 consultation with the USFWS.** ~~reviewed and made appropriate revisions to the draft BA it will be submitted to the USFWS so that the formal Section 7 consultation process can be initiated.~~ **(PMPD p. 45)**

STAFF COMMENT: Staff has made revisions to the language below reflecting the updated status of the Biological Assessment and the Section 7 consultation.

PMPD Page 46, Findings of Fact #4

#4. No live desert tortoises were found within the plant site boundary during the 2009 **and 2010** protocol level surveys and ~~preliminary 2010 surveys.~~

STAFF COMMENT: The Applicant conducted Protocol level surveys in 2010 (see Exhibit 58)

PMPD Page 47, Findings of Fact #8

#8. The study area contains suitable Mojave fringe-toed lizard habitat wherever stabilized and partially stabilized sand dune habitat (7.5 28 acres) and playa/sand drift over playa habitat (37 38 acres) occur.

STAFF COMMENT: Staff's edits are for consistency with impact acreages in Ex. 403, p. C.2-8, Table 6.

PMPD Page 47, Findings of Fact #10

#10 Habitat fragmentation impacts will be mitigated to less than significant levels with Condition of Certification **BIO-12 and BIO-20**.

STAFF COMMENT: Condition of Certification **BIO-12**, which requires acquisition of habitat in areas that will promote connectivity for desert tortoise populations, will also mitigate the effects of habitat fragmentation.

PMPD Page 47, Findings of Fact #21

#21 Condition of Certification **BIO-12** requires the Applicant to acquire and enhance at least 1,870 1,864 acres of suitable habitat for desert tortoise to offset anticipated habitat loss associated with construction of the GSEP.

STAFF COMMENT: Staff's edits are for consistency with impact acreages in Ex. 403.

PMPD Page 48, Findings of Fact #25

#25. With implementation of Condition of Certification **BIO-22**, impacts to 90 94 acres of state waters and loss of the hydrological and biological functions of the project site desert washes will be mitigated to less-than-significant levels.

STAFF COMMENT: Staff's edits are for consistency with impact acreages in Ex. 403.

PMPD Page 49, Findings of Fact #40

#40 Conditions of Certification **VIS-2** ~~VIS-3~~ and **BIO-8** ensure that construction lighting at the GSEP will have no adverse effects on wildlife.

STAFF COMMENT: Staff's corrected an error in the reference to the visual condition.

PMPD Page 49, Findings of Fact #47

47 With implementation of dry cooling rather than wet cooling, Conditions of Certification ~~BIO-25~~ and ~~BIO-26~~, the groundwater pumping for the GSEP will not result in significant impacts to groundwater-dependent ecosystems in the Chuckwalla Basin.

STAFF COMMENTS: Staff's analysis in Section C.2.6 of the RSA (Dry Cooling Alternative) concluded that impacts to groundwater dependent vegetation with the dry cooling alternative would be less than significant (Ex 400, p. C.2-131).

CONDITIONS OF CERTIFICATION

PMPD page 54, BIO-5

DESIGNATED BIOLOGIST AND BIOLOGICAL MONITOR AUTHORITY

- BIO-5** The Project owner's construction/operation manager shall act on the advice of the Designated Biologist and Biological Monitor(s) to ensure conformance with the biological resources conditions of certification. The Project owner shall provide Energy Commission staff with reasonable access to the Project site under the control of the Project owner and shall otherwise fully cooperate with the Energy Commission's efforts to verify the Project owner's compliance with, or the effectiveness of, mitigation measures set forth in the conditions of certification. The Designated Biologist shall have the authority to immediately stop any activity that is not in compliance with these conditions and/or order any reasonable measure to avoid take of an individual of a listed species. If required by the Designated Biologist and Biological Monitor(s) the Project owner's construction/operation manager shall halt all site mobilization, ground disturbance, grading, boring, trenching and operation activities in areas specified by the Designated Biologist. The Designated Biologist shall:
1. Require a halt to all activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued;
 2. Inform the Project owner and the construction/operation manager when to resume activities; and
 3. Notify the CPM **and BLM** if there is a halt of any activities and advise them of any corrective actions that have been taken or would be instituted as a result of the work stoppage. **If the work stoppage relates to desert tortoise or any other federal- or state-listed species, the Carlsbad Office of USFWS and the Ontario Office of CDFG shall also be notified.**

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

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

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

STAFF COMMENT: The USFWS suggested the new language below to ensure consistency with the Biological Opinion that is currently being prepared for the GSEP. Staff also made minor revisions to address comments from BLM and CDFG indicating that these agencies should also be notified of work stoppages relating to listed species. In addition, staff has provided more specificity as to which CDFG and USFWS offices would need to be contacted if a work stoppage occurred that related to listed species.

PMPD page 55 BIO-6

WORKER ENVIRONMENTAL AWARENESS PROGRAM (WEAP)

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

Verification: At least 30 days prior to start of construction-related ground disturbance the Project owner shall provide to the CPM **for review and approval, and**

to the USFWS and CDFG for review, 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.

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

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

STAFF COMMENT: The USFWS suggested the additional new language to ensure consistency with the Biological Opinion that is currently being prepared for the GSEP. This language also addresses comments from BLM and CDFG indicating that these agencies should also be provided an opportunity to review the WEAP.

PMPD page 56 BIO-7

BIOLOGICAL RESOURCES MITIGATION IMPLEMENTATION AND MONITORING PLAN

BIO-7 The Project owner shall develop a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), and shall submit two copies of the proposed BRMIMP to the CPM for review and approval. The Project owner shall implement the measures identified in the approved BRMIMP. The BRMIMP shall incorporate avoidance and minimization measures described in final versions of the Desert Tortoise 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 Project owner shall provide to BLM, CDFG, and USFWS a copy of all portions of the BRMIMP relating to desert tortoise and any other federal or state-listed species for review and comment.**

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

potential impacts of climate change in the implementation and monitoring of biological resource mitigation measures, the Project owner shall make use of available climatological data when analyzing project effects or resource trends. The BRMIMP shall include complete and detailed descriptions of the following:

Verification: The Project owner shall submit the draft BRMIMP to the CPM at least 30 days prior to start of any preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching. **At the same time, the Project owner shall provide to BLM, USFWS, and CDFG a copy of all portions of the draft BRMIMP relating to desert tortoise and any other federal or state-listed species. The Project owner shall provide** and the final BRMIMP **to the CPM, BLM, USFWS and CDFG** at least 7 days prior to start of any 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 the CPM.

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, **BLM, USFWS and CDFG**. The first set of aerial photographs shall reflect site conditions prior to any preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching, and shall be submitted prior to initiation of such activities. The second set of aerial photographs shall be taken subsequent to completion of construction, and shall be submitted to the CPM, **BLM, USFWS and CDFG** no later than 90 days after completion of construction. The Project owner shall also provide a final accounting of the acreages of vegetation communities/cover types present before and after construction.

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

STAFF COMMENT: The USFWS suggested the revisions to ensure consistency with the Biological Opinion that is currently being prepared for the GSEP. The revisions also address comments from BLM and CDFG indicating that these agencies should also be provided an opportunity to review the BRMIMP. In addition, staff has suggested additional language to Condition of Certification **BIO-7** to achieve consistency with BLM's Final Environmental Impact Statement. As discussed on pages 4.17-25 and 4.21-22 of the FEIS, the BLM added a mitigation measure, BLM BIO-7A, to make sure that the effects of climate change are considered in the implementation of mitigation measures.

IMPACT AVOIDANCE AND MINIMIZATION MEASURES

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

#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. ~~A Designated Biologist or Biological Monitor under the Designated Biologist's direct supervision may remove and relocate the animal to a safe location as described in the Applicant's Desert Tortoise Translocation Plan.~~ **If it does not move within 15 minutes, a Designated Biologist or Biological Monitor under the Designated Biologist's direct supervision may move it out of harm's way of the disturbed area as described in the USFWS Desert Tortoise Field Manual (USFWS 2009).**

#13 Dispose of Road-killed Animals. During construction, road killed animals or other carcasses detected by personnel on roads associated with the Project area will be reported immediately to a Biological Monitor or Designated Biologists, who will remove the roadkill promptly **for disposal (e.g., removal to a landfill or disposal at the Project site)**. 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 roadkill, the Biological Monitor shall contact **the Ontario Office of** CDFG and **the Carlsbad Office of** USFWS within 1 working day of **receipt detection** 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.

Verification: If loud construction activities are proposed between February 15 to April 15 which would result in noise levels over 65 dBA in nesting habitat, the Project owner shall submit nest survey results (as described in 9a) to the CPM no more than 7 days before initiating such construction. If an active nest is detected within this survey area the Project owner shall submit a Nesting Bird Monitoring and Management Plan to the CPM for review and approval no more than 7 days before initiating noisy construction.

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 the CPM, for review and approval, a written construction termination report identifying how measures have been completed. **As part of the Annual Compliance Report each year following construction, the Designated Biologist shall provide a report to the CPM and BLM that describes compliance with avoidance and minimization measures to be implemented during construction, operation, and maintenance (for example a summary of the incidence of roadkilled animals during the year, implementation of measures to avoid toxic spills, erosion and sedimentation, efforts to enforce worker guidelines, etc.).**

STAFF COMMENT: The USFWS suggested a one-word revision in the first paragraph of this condition to clarify that many of the avoidance and minimization measures described here are applicable during operations and maintenance as well as construction. This change prompted the addition of one sentence in the verification to make sure avoidance and minimization measures that are in place during operation are also subject to review by the CPM. In addition, the USFWS added clarification that if desert tortoises are found during construction monitoring then procedures described in the USFWS 2009 Field Manual would be followed, and have minor changes to provide guidance on procedures for handling road-killed special status animals. These proposed changes would make this condition more consistent with the Biological Opinion that is currently being prepared for the GSEP. Staff has also provided more specificity as to which CDFG and USFWS offices would need to be contacted if special-status animals were found as roadkill at the Project site.

PMPD page 64 BIO-9

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 Translocation Plan, in order to avoid impacts to desert tortoises,

permanent desert tortoise exclusion fencing shall be installed along the permanent perimeter security fence; along the utility corridors, **temporary desert tortoise exclusion fencing or monitoring will be used to protect desert tortoises during construction.** ~~fencing or monitoring will be used to protect desert 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.

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

STAFF COMMENT: Staff has added a minor revision on desert tortoise exclusion fencing that was included in Exhibit 435 but omitted from the PMPD.

PMPD page. 68 BIO-11

DESERT TORTOISE COMPLIANCE VERIFICATION

BIO-11 The Project owner shall provide Energy Commission, **BLM, USFWS and CDFG** 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 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 and the Energy Commission harmless for any costs the Project owner incurs in complying with the management measures, including stop work orders issued by the CPM or the Designated Biologist. The Designated Biologist shall do all of the following:

#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, **the Ontario Office of** CDFG, and **the Carlsbad Office of** USFWS shall be notified immediately by phone. Notification shall occur no later than noon on the business day following the event if it occurs outside normal business hours so that the agencies can determine if further actions are required to protect listed species. Written follow-up notification via FAX or electronic communication shall be submitted to these agencies

within two calendar days of the incident and shall include the following information as relevant:

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

STAFF COMMENT: In response to requests from USFWS, BLM and CDFG, Staff has suggested adding that these agencies would be allowed access to the site to verify compliance with desert tortoise avoidance and minimization measures. Staff has also added a requirement to provide a report describing monthly compliance inspections during construction to these agencies. These proposed changes would make this condition more consistent with the Biological Opinion that is currently being prepared for the GSEP. Staff has also provided more specificity as to which CDFG and USFWS offices would need to be contacted if dead or injured desert tortoise were found at the Project site.

PMPD Page 70, BIO-12,

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 ~~4,749~~ **1,750** acres, and at a 5:1 ratio for impacts to ~~23~~ **24** acres of critical habitat, adjusted to reflect the final Project footprint. For purposes of this condition, the Project footprint means all lands disturbed in the construction and operation of the Genesis Project, including all linears, as well as undeveloped areas inside the Project's boundaries that will no longer provide viable long-term habitat for the desert tortoise. To satisfy this condition, the Project owner shall acquire, protect and transfer no fewer than ~~4,864~~ **1,870** acres of desert tortoise habitat lands (adjusted to reflect the final Project footprint), and shall also provide funding for the initial improvement and long-term maintenance and management of the acquired lands, and comply with other related requirements in this condition. Costs of these requirements are estimated to be ~~\$5,774,560~~ ~~\$4,249,920~~ based on the acquisition of ~~4,864~~ **1,870** acres and estimated per-acre costs of \$500 for acquisition, \$330 for initial habitat improvement, and \$1,450 for long-term management **based on the most current guidance from the REAT**

agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010) This estimate may be revised with updated information from the REAT agencies. The actual costs to comply with this condition will vary depending on the final footprint of the Project, the actual costs of acquiring compensation habitat, the costs of initially improving the habitat, and the actual costs of long-term management as determined by a PAR report. The ~~4,864~~ **1,870**-acre habitat requirement, and associated funding requirements based on that acreage, will be adjusted up or down if there are changes in the final footprint of the Project.

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

Long-term Maintenance and Management Funding. The Project owner shall provide money to establish an account with non-wasting capital that will be used to fund the long-term maintenance and management of the compensation lands. The amount of money to be paid will be determined through an approved PAR or PAR-like analysis conducted for the compensation lands. The amount of required funding is initially estimated to be \$1,450 for every acre of compensation lands based on the Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010, or more current guidance from the REAT agencies. If compensation lands will not be identified and a PAR or PAR-like analysis completed within the time period specified for this payment (see the verification section at the end of this condition), the Project owner shall either provide initial payment of **\$2,711,500** ~~\$2,702,800~~ (calculated at \$1,450 an acre for **1,870** ~~4,864~~ acres) or the Project owner shall include **\$2,711,500** ~~\$2,702,800~~ to reflect this amount in the security that is provided to the Energy Commission under section 3.h. of this condition. The Project owner shall ensure that an agreement is in place with the long-term maintenance and management fund holder/manager to ensure the following requirements are met:

4. Security shall be provided in the amount of **\$5,774,560** ~~\$4,249,920~~ based on the acquisition of ~~4,864~~ **1,870** acres and estimated ~~based on the most current guidance from the REAT agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010) This estimate may be revised with updated information from the REAT agencies.~~, calculated as follows but adjusted as specified below:

- ~~2. i. land acquisition costs for compensation land, calculated at \$500/acre = \$932,000.~~
- ~~ii. initial protection and habitat improvement activities on the compensation land, calculated at \$330/acre = \$615,120.~~
- ~~3. iii. long term maintenance and management on the compensation land calculated at \$1,450/acre = \$2,702,800.~~

STAFF COMMENTS: Staff introduced the new Renewable Energy Action Team (REAT) table for calculating compensatory mitigation security costs at the Evidentiary Hearing on July 21, 2010 as Exhibit 439. The suggested edits reflect application of an updated REAT table released on July 23, 2010 to generate new security. In addition, staff has made some minor adjustments to the impact and mitigation acreages to be consistent with that described in Exhibit 403. Staff has also added the numbering that was missing in the PMPD formatting.

PMPD page 79, BIO-13.

RAVEN MANAGEMENT PLAN

BIO-13

Verification: No less than 30 days prior to any construction-related ground disturbance activities, the Project owner shall provide 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 the 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 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.

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

STAFF COMMENTS: Staff added verification for payment of the raven fee at the request of USFWS.

PMPD Page 80, BIO-14:

WEED MANAGEMENT PLAN

BIO-14 The Project owner shall implement a Weed Management Plan that meets the approval of the CPM. The objective of the Weed Management Plan shall be to prevent the introduction of any new weeds and the spread of existing weeds as a result of Project construction, operation, and decommissioning. The draft Weed Management Plan submitted by the Applicant (TTEC 2009g) shall provide the basis for the final plan, subject to review and revisions from the CPM. The Final Weed Management Plan shall include at a minimum the following information: specific weed management objectives and measures for each target non-native weed species; baseline conditions; a map of the Weed Management Areas; weed risk assessment and measures to prevent the introduction and spread of weeds; monitoring and surveying methods; and reporting requirements.

To ensure that weed management does not have unintended adverse effects on special-status species, the final Weed Management Plan shall be revised to be consistent with guidelines for safe use of herbicides in natural areas provided by The Nature Conservancy's The Global Invasive Species Team: <http://www.invasive.org/gist/products/library/herbsafe.pdf>.

The final Plan shall include detailed specifications for avoiding herbicide and soil stabilizer drift, and shall include a list of herbicides and soil stabilizers that will be used on the Project with manufacturer's guidance on appropriate use. The Plan shall indicate where the herbicides will be used, and what techniques will be used to avoid chemical drift or residual toxicity to special-status species and their pollinators, and consistent with the Nature Conservancy guidelines and the criteria under #2, below.

The final plan shall only include weed control measures for target weeds with a demonstrated record of success, based on the best available information from sources such as: The Nature Conservancy's The Global Invasive Species Team, Cooperative Extension, California Invasive Plant Council: http://www.cal-ipc.org/ip/management/plant_profiles/index.php , and the California Department of Food & Agriculture Encyclopedica

http://www.cdfa.ca.gov/phpps/ipc/encycloweedia/encycloweedia_hp.htm

The methods shall meet the following criteria:

Team, California Invasive Plant Council:

http://www.cal-ipc.org/ip/management/plant_profiles/index.php , and the California Department of Food & Agriculture Encycloweedia:

http://www.cdfa.ca.gov/phpps/ipc/encycloweedia/encycloweedia_hp.htm

The methods shall meet the following criteria:

STAFF COMMENT: Staff has added several paragraphs that were omitted from the text of the condition per Staff's Exhibit 400, which was only slightly modified by Exhibit 435. These additions were also suggested in the Applicant's Errata to the PMPD.

PMPD Page 81, BIO-15

PRE-CONSTRUCTION NEST SURVEYS AND AVOIDANCE MEASURES

BIO-15 Pre-construction nest surveys for bird species other than burrowing owls shall be conducted if construction activities would occur at any time during the period of February 1 through July 31. Burrowing owl nest surveys are addressed in BIO-18. **The Designated Biologist or Biological Monitor conducting the surveys shall be experienced bird surveyors familiar with standard nest-locating techniques such as those described in Martin and Guepel (1993). The goal of the nesting surveys shall be to identify the general location of the nest sites, sufficient to establish a protective buffer zone around the potential nest site, and need not include identification of the precise nest locations. Surveyors performing nest surveys shall not concurrently be conducting desert tortoise surveys. The bird surveyors shall perform surveys in accordance with the following guidelines:**

- 1. Surveys shall cover all potential nesting habitat in the Project site or within 500 feet of the boundaries of the site (including linear facilities);**
- 2. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys shall be conducted within the 7-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks, an interval during which birds may establish a nesting territory and initiate egg laying and incubation;**

3. If active nests are detected during the survey, a buffer zone and monitoring plan shall be developed. The size of the buffer zone shall be developed in consultation with CDFG and shall be determined based on the species specific alert distance and flush initiation distance¹. 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: Prior to the start of any Project-related ground disturbance activities, the Project owner shall provide the CPM a letter-report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor (s); and a list of species observed. If active 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.

No later than January 31st of every year following construction a follow-up report shall be provided to the CPM, CDFG, and USFWS describing the success of the buffer zones in preventing disturbance to nesting activity and a brief description of the outcome of the nesting effort (for example, whether young were successfully fledged from the nest or if the nest failed).

STAFF COMMENT: Staff has added several paragraphs that were omitted from the text of the condition per Staff's Exhibit 400. These additions were also suggested in the Applicant's Errata to the PMPD.

PMPD Page 82, BIO-16

AVIAN PROTECTION PLAN

BIO-16 The Project owner shall prepare and implement an Avian Protection Plan to monitor the death and injury of birds from collisions with facility features such as transmission lines, reflective mirror-like surfaces and from heat, and bright light from concentrating sunlight. **The Project owner shall use the monitoring data to inform and develop an adaptive management program that would avoid and minimize Project-related avian impacts. Project-related bird deaths or injuries shall be reported to the CPM, CDFG, and USFWS. The CPM, in consultation with CDFG and USFWS, shall determine if the Project-related bird deaths or injuries warrant implementation of adaptive management measures contained in the Avian Protection Plan. The study design for the Avian Protection Plan shall be approved by the CPM in consultation with CDFG and USFWS, and, once approved, shall be incorporated into the project's BRMIMP and implemented.**

STAFF COMMENT: Staff has added several paragraphs that were omitted from the text of the condition per Staff's Exhibit 400. These additions were also suggested in the Applicant's Errata to the PMPD.

PMPD Page 82, BIO-17

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 all Project facilities, utility corridors, and access roads. **Surveys may be concurrent with desert tortoise 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 occupants from continued use.

STAFF COMMENT: Staff has added several paragraphs that were omitted from the text of the condition per Staff's Exhibit 400. These additions were also suggested in the Applicant's Errata to the PMPD.

PMPD Page 83, BIO-18:

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:

#3 Passive Relocation of Burrowing Owls. If pre-construction surveys indicate the presence of burrowing owls within the Project Disturbance Area (the Project Disturbance Area means all lands disturbed in the construction and operation of the Genesis Project), the Project owner shall prepare and implement a Burrowing Owl Relocation and Mitigation Plan, in addition to the avoidance measures described above.

- i. maintaining the functionality of the burrows **for two years**
- a. **Criteria for Burrowing Owl Mitigation Lands.** The terms and conditions of this acquisition or easement shall be as described in Paragraph 1 of **BIO-12** [Desert Tortoise Compensatory Mitigation], with the additional criteria to include: 1) the 39 acres of mitigation land must provide suitable habitat for burrowing owls, and 2) the acquisition lands must either currently support burrowing owls or be within dispersal distance from **areas occupied by burrowing owls** ~~an active burrowing owl nesting territory~~ (generally approximately 5 miles).
- b. **Security.** The Security measures described below is based on the assumption that two owls would be impacted by construction of the Project, and would therefore require 39 acres of compensatory mitigation land. If the 39 acres of burrowing owl mitigation land is separate from the acreage required for desert tortoise compensation lands the Project owner or an approved third party

shall complete acquisition of the proposed compensation lands prior to initiating ground-disturbing Project activities. Alternatively, financial assurance can be provided by the Project owner to the CPM with copies of the document(s) to CDFG, 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 in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") prior to initiating ground-disturbing Project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with CDFG, BLM and the USFWS to ensure funding. As of the publication of the RSA, this amount is ~~\$143,045~~ ~~\$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 the most current guidance from the REAT agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010) This estimate may be revised with updated information from the REAT agencies, ~~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**.

STAFF COMMENT: Staff has added a few words that should have been included from Exhibit 435, such as adding the word "Passive" in subsection 3 title and the sub-part "d" and other clarifications. The Applicant made the same suggested edits in their Errata. In addition, staff has made revisions to the security estimate for acquisition of 39 acres of burrowing owl compensatory mitigation lands based on the REAT mitigation cost estimate table described in the comments on **BIO-12**.

PMPD Page 87, BIO-19

SPECIAL-STATUS PLANT IMPACT AVOIDANCE, MINIMIZATION AND COMPENSATION

BIO-19

The Project owner shall comply with other related requirements in this condition:

Page 98: Initial Protection and Habitat Improvement. The Project owner shall fund activities that the CPM requires for the initial protection and

habitat improvement of the compensation lands. These activities will vary depending on the condition and location of the land acquired, but may include trash removal, construction and repair of fences, invasive plant removal, and similar measures to protect habitat and improve habitat quality on the compensation lands. The costs of these activities are estimated **based on the most current guidance from the REAT agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010)** This estimate may be revised with updated information from the REAT agencies. ~~to be \$330 per acre,~~ **The cost estimate shall use** using the estimated cost per acre for Desert Tortoise mitigation as a best available proxy, at the ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, but actual costs will vary depending on the measures that are required for the compensation lands. A non-profit organization, CDFG or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFG, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.

Page 100: Mitigation Security. The Project owner shall provide financial assurances to the CPM to guarantee that an adequate level of funding is available to implement any of the mitigation measures required by this condition that are not completed prior to the start of ground-disturbing Project activities. Financial assurances shall be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") approved by the CPM. The amount of the Security shall be **based on the most current guidance from the REAT agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010)** This estimate may be revised with updated information from the REAT agencies. **The cost estimate shall use** ~~\$2,280 per acre,~~ using the estimated cost per acre for Desert Tortoise mitigation as a best available proxy, at a ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, for every acre of habitat supporting the target special-status plant species which is significantly impacted by the project. The actual costs to comply with this condition will vary depending on the actual costs of acquiring compensation

habitat, the costs of initially improving the habitat, and the actual costs of long-term management as determined by a PAR report.

Page 102: If the Project owner elects to undertake a habitat enhancement project for mitigation, they shall submit a Habitat Enhancement/Restoration Plan to the CPM for review and approval, and shall provide sufficient funding for implementation and monitoring of the Plan. The amount of the Security shall be **based on the most current guidance from the REAT agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010)** This estimate may be revised with updated information from the REAT agencies. The cost estimate shall use \$2,280 per acre, using the estimated cost per acre for Desert Tortoise mitigation as a best available proxy, at the ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, for every acre of habitat supporting the target special-status plant species which is directly or indirectly impacted by the project. The amount of the security may be adjusted based on the actual costs of implementing the enhancement, restoration and monitoring.

STAFF COMMENTS: Staff has made revisions in Section D for the security estimate for acquisition of compensatory mitigation lands based on the REAT mitigation cost estimate table described in the comments on **BIO-12**.

PMPD Page 108, BIO-20

SAND DUNES/MOJAVE FRINGE-TOED LIZARD MITIGATION

~~NOTE: In the Supplemental Revised Staff Assessment (RSA) published on July 2, 2010 staff revised the mitigation obligation in **BIO-20** to reflect increased direct impacts to sand dune habitat as described in the Applicant's June 18, 2010 submittal (*Tetra Tech/T. Bornhardt [tn:57263] Supplemental Information for the GSEP, June 18 2010, 42 p*). The document discussed the impacts of a newly proposed six pole transmission line extension to tie into the proposed Colorado River Substation and other minor changes to the Project. Table 2 summarizes the basis for the sand dune mitigation requirement described in the Supplemental RSA.~~

Table 2. Direct and Indirect Impacts to Mojave Fringe-toed Lizard Habitat and Recommended Mitigation (from the Supplemental RSA)

| Resource | Acres Impacted | Ratio | Recommended Mitigation Acreage |
|--|----------------|-------|--------------------------------|
| Stabilized/Partially Stabilized Sand Dunes — Direct Impacts | | | |
| Direct Impacts | 7.5 | 3:1 | 22 |

| Resource | Acres Impacted | Ratio | Recommended Mitigation Acreage |
|---|----------------|-------|--------------------------------|
| Playa and Sand Drifts Over Playa | | | |
| Direct Impacts | 38 | 3:1 | 114 |
| Indirect Impacts to MFTL Habitat | 151 | 0.5:1 | 76 |
| Total Mojave Fringe-toed Lizard Mitigation | | | 212 |

The changes below are revised from the text for **BIO-20** that was in the Supplemental RSA, and reflect subtraction of the 76 acres of mitigation for indirect impacts to Mojave fringe-toed lizard habitat.

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 136 acres of Mojave fringe-toed lizard habitat. The Project owner shall provide funding for the acquisition, initial habitat improvements and long-term management of the compensation lands. The 136 -acre acquisition requirement, and associated funding requirements based on that acreage will be adjusted if there are changes in the final footprint of the Project. In lieu of acquiring lands itself, the Project owner may satisfy the requirements of this condition by depositing funds into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as described in Section 3.i. of Condition of Certification BIO-12. Condition of Certification BIO-29 may provide the Project owner with another option for satisfying some or all of the requirements in this condition.

2. Security for Implementation of Mitigation: The Project owner shall provide financial assurances to the CPM to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of Mojave fringe-toed lizard habitat as described in this condition. These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM 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, in consultation with CDFG and the USFWS, to ensure sufficient funding. As of the publication of the RSA, this amount is \$422,668. 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 \$1,450 per acre to fund acquisition, enhancement and long-term management).

- 3** Preparation of Management Plan: The Project owner shall submit to the CPM, CDFG and USFWS a draft Management Plan that 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.

STAFF COMMENTS: The PMPD and Exhibit 435 insert a prefatory paragraph and table before the **BIO-20** condition. The Applicant has noted in their Errata, and staff agrees, that this paragraph and table should not be part of this condition. This information is already provided in Biological Resources Table 3 of the PMPD, so staff recommends Table 2 be deleted from this condition. The Applicant's errata also suggested, and staff agrees, adding sub-sections "2" and "3" per Exhibit's 400. In addition, staff has revised the security estimate for acquisition of compensatory mitigation lands based on the REAT mitigation table, as described in staff's comments on BIO-12.

PMPD Page 112, BIO-22

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 **111** ~~432~~ acres of state jurisdictional waters, or the area of state waters directly or indirectly impacted by the final Project footprint. The Project footprint means all lands disturbed by construction and operation of the Genesis Project, including all Project linears. The parcel or parcels comprising the **111** ~~432~~ 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**, #2 and #3. Mitigation for impacts to state waters

shall occur within the Chuckwalla-Ford Dry Lake or surrounding watersheds, as close to the Project site as possible. The ~~111~~ 132-acre acquisition of state waters may be integrated with the desert tortoise mitigation acquisition if the criteria described in this condition are met.

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 activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with CDFG and the USFWS, to ensure sufficient funding. As of the publication of the RSA, this amount is ~~\$300,960~~ **\$342,768** **based on the most current guidance from the REAT agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010)** **This estimate may be revised with updated information from the REAT agencies.** ~~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 an updated appraisals and the PAR analysis conducted as described in BIO-12.~~

STAFF COMMENTS: Staff has corrected the mitigation acreage per Exhibit 403, and has also revised the security estimate for compensatory mitigation lands per the REAT mitigation table, as described in **BIO-12**.

PMPD Page 119, BIO-25

GROUNDWATER DEPENDENT VEGETATION MONITORING

BIO-25 ~~**Deleted.** If the Project uses wet cooling, the Applicant shall prepare and implement a Draft Groundwater-Dependent Vegetation Monitoring Plan (Vegetation Monitoring Plan).~~

STAFF COMMENTS: Staff's analysis in Section C.2.6 of the RSA (Dry Cooling Alternative) concluded that impacts to groundwater dependent vegetation with the dry cooling alternative would be less than significant (Ex 400, p. C.2-131). Staff therefore suggests deleting this condition.

PMPD Page 119, BIO-26

REMEDIAL ACTION FOR ADVERSE EFFECTS TO GROUNDWATER-DEPENDENT BIOLOGICAL RESOURCES

BIO-26 ~~**Deleted.** The Project owner shall implement remedial action if the monitoring described in **BIO-25** detects project-related 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 Project owner shall submit a detailed proposal for remedial action to be approved by the CPM. Remedial measures must include one of the following measures to meet the performance standard of restoring the spring groundwater tables to baseline levels: 1) Relocating the Project pumping well to another location farther from the groundwater-dependent vegetation (and where the dependent vegetation is no longer within the drawdown cone of depression), or alternatively constructing a new well farther away and reducing water usage in the well closest to the dependent plant communities; 2) Reducing the Project water usage through water conservation methods or new technologies.~~

~~The proposal shall clearly demonstrate that the proposed remedial action would restore the spring groundwater tables to baseline levels to sustain healthy ecological functioning in the affected plant communities. The Project owner may choose the most feasible method of restoring baseline spring water table levels providing it meets this performance standard.~~

~~The Project owner must implement remedial action, as approved by the CPM.~~

~~**Verification:** Within 90 days following submission of the data summary described in **BIO-25** that triggers remedial action according to the threshold described in **BIO-25**, the Project owner shall submit to the CPM a draft, or conceptual plan for remedial action. The draft plan shall summarize the data and observations describing the adverse effect, including all calculations and assumptions made in development of the report data and~~

~~interpretations. The draft plan must include, but not limited to, one of the remedial measures described above to meet the performance standard of restoring the spring groundwater table to baseline levels. A final plan shall be submitted to the CPM within 60 days of receipt of the CPM's comments.~~

~~No later than one year following approval of the remedial action plan, the Project owner shall provide to the CPM 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 agrees, monitoring measurements and frequencies may be revised or eliminated.~~

STAFF COMMENTS: Staff's analysis in Section C.2.6 of the RSA (Dry Cooling Alternative) concluded that impacts to groundwater dependent vegetation with the dry cooling alternative would be less than significant (Ex 400, p. C.2-131). Staff therefore suggests deleting this condition

PMPD page 123, BIO-29

IN-LIEU FEE MITIGATION OPTION

BIO-29 The Project owner may choose to satisfy its mitigation obligations identified in this Decision by paying an in lieu fee instead of acquiring compensation lands, pursuant to Fish and Game code sections 2069 and 2099 or any other applicable in-lieu fee provision, ~~to the extent~~ **provided that the Project's** the in-lieu fee provision **proposal** is found by the Commission to be in compliance with CEQA and CESA requirements. **If the in-lieu fee proposal is found by the Commission to be in compliance, and the Project Owner chooses to satisfy its mitigation obligations through the in-lieu fee, the Project Owner shall provide proof of the in-lieu fee payment to the CPM prior to construction related ground disturbance.**

Verification: If electing to use this provision, the Project owner shall notify the Commission **and all parties to the proceeding** that it would like a determination that the Project's in-lieu fee proposal meets CEQA and CESA requirements. **Prior to construction related ground disturbance the Project Owner shall provide proof of the in lieu fee payment to the CPM.**

STAFF COMMENT: As discussed at the Committee Conference on September 8, 2010, staff has suggested that **BIO-29** be revised to be more consistent with the language that was developed and approved for the Beacon Solar Energy Project.

SOIL AND WATER RESOURCES

PMPD: This section addresses the soil and water resources associated with the Genesis Solar ~~Power~~ Energy Project (GSEP), including the Project's potential to induce erosion and sedimentation, modify drainage and flooding conditions, adversely affect groundwater supplies, and degrade water quality. (PMPD p. 1)

After reviewing the record, we are convinced that the mitigation measures which include proven Best Management Practices are designed to abate windborne dust and that the measures are adequate and effective. (PMPD p. 5)

For potential soil loss associated with water erosion, it was assumed that 100 percent of the project site would be graded. (PMPD p. 6)

STAFF COMMENT: Various clerical corrections.

PMPD: The described potential impacts to groundwater basin balance would be addressed through Condition of Certification **SOIL & WATER-15**. Specifically, this Condition requires the project owner to implement a Water Supply Plan to mitigate project impacts to ~~Colorado River flows~~ PVMGB, including efforts such as ~~zero liquid discharge (ZLD) wastewater systems~~, funding of irrigation improvements, payment for conversion of cultivation of crops with lower crop water demand in the PVID, ~~purchasing water rights~~, and/or tamarisk removal. (Ex. 400, pp. C.9-46 to C.9-49.) Condition of Certification **SOIL & WATER-19** refines the quantity of water depleted from the PVMGB associated with project groundwater extraction (i.e., to estimate the amount of water that must be replaced pursuant to Condition of Certification **SOIL & WATER-15**). (Ex. 400, p. C.9-49.) With the implementation of these Conditions, we find that the GSEP will have a less than significant impact on the ~~Chuckwalla Valley Groundwater Basin~~ PVMGB. (PMPD p. 10)

STAFF COMMENT: Changes reflect evidence in the record and Conditions of Certification.

PMPD: ~~More to the point, there is nothing in the record that actually applies the methodology to the quantity of groundwater that GSEP will use or that the GSEP "would cause the static groundwater table to drop below the theoretical accounting surface" as argued by Applicant, supra.~~ In fact, the only evidence in the record was presented by the Applicant (Exhibit 62, Page 19 of the Soil & Water Resources Testimony) is that the GSEP's use of groundwater even under the overestimate of wet cooling scenario would not result in the static groundwater level dropping below the "theoretical Accounting Surface". No contrary evidence was presented. CURE simply has not provided sufficient evidence to convince us to make a finding that the groundwater pumped at the GSEP site in the Chuckwalla Valley Groundwater Basin is water drawn from the mainstream of the Colorado River [Tit. 20, Cal. Code of Regs, § 1748(e)]. ~~Given the scant record~~

~~before us regarding this issue, we simply do not have enough~~ Therefore, there is no evidence that would legally justify imposing a condition requiring the GSEP to obtain a Colorado River entitlement. **(PMPD p. 12)**

STAFF COMMENT: The proposed changes more clearly reflect evidence in the record regarding the issue of Colorado River entitlement.

PMPD: Each of the proposed 125 MW units will have one, approximately ~~542~~-acre, evaporation pond to dispose of wastewater from sources including reverse osmosis (RO) reject water and the air-cooled condenser (ACC), with a total pond area of ~~1024~~ acres for the entire project site. **(PMPD p. 15)**

STAFF COMMENT: Pond size changes reflect updated evidence in the record from the applicant due to the change from wet cooling to dry cooling.

PMPD: A DESCP would be required (see Conditions of Certification **SOIL&WATER-1**) prior to onsite operations and will reduce the potential for increased sediment loads to less than significant. **(PMPD p. 25)** Implementation of Condition of Certification **SOIL&WATER-1** and ~~**SOIL&WATER-13**~~ and **HAZ-1** and **HAZ-2** (described in detail in the **Hazardous Materials Management** of this Decision), will reduce impacts to surface water quality to below the level of significance associated with construction and operation of the Project. **(PMPD p. 25)**

The proposed project will be expected to contribute only a small amount to these possible long term operational cumulative impacts because potential Project-related soil erosion and increased sedimentation resulting from storm water runoff are expected to be reduced to a level of insignificance through implementation of the Conditions of Certification **SOIL&WATER-1, -2, -8, -9, -10, -11 and -13. (PMPD p. 26)**

In addition, the evidence shows that the cumulative impact analysis conducted by the project suggested that during the course of operations for all reasonably foreseeable projects, the subsurface outflow from the CVGB into the PVMGB will decline from approximately ~~400 988~~ AFY to approximately ~~348 936~~ AFY in 2043. This could have an indirect impact on the Palo Verde Mesa Groundwater Basin by ~~inducing~~ reducing underflow ~~from to the Colorado River to the~~ Palo Verde Mesa Groundwater Basin. (Ex. 400, p. C.9-74.) Nevertheless, the impact related to outflow will be fully mitigated, such that the project will not contribute to cumulative impacts with implementation of **SOIL&WATER-15** and **SOIL&WATER-19. (PMPD p. 28)**

STAFF COMMENT: The applicant reported during the evidentiary hearing this new number for underflow, 988 and 936. CEC staff has not accepted this number and continues to use the previous number reported in the Revised Staff Assessment.

PMPD: Construction and operation of the proposed project will result in both temporary and permanent changes at the project site. A number of past, present and future foreseeable projects (cumulative projects) were identified for the assessment of potential cumulative impacts, including the proposed GSEP Project. A summary of potential cumulative impacts to soil and water resources from past, present and future foreseeable projects is provided below. **(PMPD p. 26)**

These projects are defined within a geographic area that has been identified by the Energy Commission and BLM as covering an area large enough to provide a reasonable basis for evaluating cumulative impacts for all resource elements or environmental parameters (Staff Assessment C.9-68) The evidence indicates that the following projects were considered in the cumulative analysis relating to Soil and Water Resources: Chuckwalla Solar I, Eagle Mountain Soleil, Desert Lily Soleil, Desert Sunlight Solar Farm, Eagle Mountain Pump Storage, Mule Mountain Solar Project, Mule Mountain Soleil, Palen Solar Power. (Staff Assessment Exhibit 400 Table 20 p. C.9-70)

STAFF COMMENT: Suggested language supplements the PMPD by identifying the specific projects used in the cumulative impacts analysis for Soil and Water Resources.

PMPD: Based on uncertainties identified in the assessment of water level declines, related impacts cannot currently be accurately quantified and associated potential impacts to water levels in existing wells are considered cumulatively significant. Implementation of Conditions of Certification **SOIL&WATER-23** through **SOIL&WATER-5** is anticipated to reduce project-related impacts to groundwater levels below a level of significance. While mitigation for similar impacts from the cumulative projects cannot be determined at this time, it is considered likely that such impacts will be subject to similar measures as the GSEP. In any case, impacts to groundwater levels in the ~~PVMGB-CVGB~~ from the proposed project will not be cumulatively considerable, based on the noted Conditions of Certification. **(PMPD p. 28)**

It is expected that all of the projects would be required to implement BMPs for managing potentially harmful storm water and protect water quality. Implementation of the Conditions of Certification **SOIL&WATER-1,-2, -8, -9, -10, -11 and -13** will reduce the project specific impacts below the level of significance. **(PMPD p. 29)**

The proposed project is expected to contribute only a small amount to the possible short-term cumulative impacts related to surface water quality with implementation of the Conditions of Certification **SOIL&WATER-1,-2, -8, -9, -10, -11 and -13** and will reduce the project specific impacts below the level of significance. **(PMPD pp. 29-30)**

Water demand is described, and was thoroughly debated regarding the use of wet-cooling versus dry-cooling technology. (Ex. 402, p. C.9-7.) Lastly, Conditions **SOIL&WATER-2,-4 -15 and -19** fully mitigate the GSEP's water demands and impacts, including any latent impacts after the project's closure. **(PMPD p. 31)**

STAFF COMMENT: Changes reflect more accurately the Conditions of Certification mitigating the impacts being discussed well as identify the correct ground water basin.

PMPD: Adherence to the procedures in the Condition of Certification **SOIL&WATER-1** (including the construction DESCP) ~~and related CWA/NPDES permit requirements~~ will avoid significant soil erosion and subsequent sedimentation during construction, conserve soil resources, maintain water quality, and prevent accelerated soil loss. **(PMPD p. 31)**

STAFF COMMENT: Solar projects do not fall under the CWA/NPDES permit requirements.

PMPD: The proposed project could potentially impact local groundwater levels, ~~potentially including effects related to local wells, springs, phreatophyte vegetation, or~~ subsidence. **(PMPD p. 32)**

STAFF COMMENT: Suggested changes reflect the evidence in the record regarding the potential for subsidence.

PMPD: Implementation of Conditions of Certification **SOIL&WATER-3-6**, through **SOIL&WATER-7**, **SOIL&WATER-12**, and **SOIL&WATER-20** would reduce long-term impacts related to groundwater quality below a level of significance. **(PMPD p. 32)**

Implementation of Condition of Certification **SOIL&WATER-1**, **SOIL&WATER-6**, and **SOIL&WATER-13** and **HAZ-1** and **HAZ-2** (described in detail in the **HAZARDOUS MATERIALS MANAGEMENT** of this Decision), will reduce impacts to surface water quality to below the level of significance associated with construction and operation of the Project. **(PMPD p. 34)**

STAFF COMMENT: Suggested changes properly identify the Conditions associated with the impacts being discussed.

PMPD: **GROUNDWATER LEVEL MONITORING, MITIGATION, AND REPORTING PLAN** (PMPD p. 37 Heading above Soil&Water-2)

PMPD: **Soil&Water-15**

The Project owner shall undertake one or more of the activities identified below to mitigate project impacts that result in depletion of the PVMGB groundwater budget. The amount of PVMGB depletion requiring mitigation shall be determined based on an analysis of the Project's effect on the PVMGB groundwater budget, including an estimate of the decrease in underflow from the CVGB to the PVMGB. The analysis shall be conducted as described in SOIL&WATER-19.

~~to flows in the Colorado River. These activities shall result in replacement of 8,500 acre feet or (~202 acre-feet annually) for a dry cooling Project in the Colorado River Basin over the life of the project.~~

~~Additional measures of w~~Water conservation projects should that may be considered as mitigation include the following: ~~in the following order of priority: Zero Liquid Discharge systems, increase cycles of concentration in the evaporative cooling process, hybrid cooling,;~~ payment for irrigation improvements in Palo Verde Irrigation District (PVID), ~~purchase of water allotments within the Colorado River Basin that will be held in reserve~~payment for conversion of cultivation of crops with lower crop water demand in the PVID, use of tertiary treated water, implementation of water conservation programs in the CVGB, PVMGB or Colorado River flood plain communities, and/or participation in BLM's Tamarisk Removal Program. ~~If the Project owner has filed an application to the Colorado River Board or the Bureau of Reclamation to obtain an allocation of water from the Colorado River, these allocations can be used to satisfy some or all of the water offsets needed to comply with this condition on an acre foot per acre foot basis. Use of any other options will require t~~The Project owner shall ~~to demonstrate to the satisfaction of the CPM that the appropriate amounts of water will be conserved.~~

The activities proposed for mitigation will be outlined in a Water Supply Plan that will be provided to the CPM for review and approval. The Water Supply Plan shall include the following at a minimum:

- A. Identification of the activity and water source that will replace ~~or 8,500 acre feet (~202 acre-feet annually) for a dry cooled Project diverted from the Colorado River over the life of the project~~ the decreased underflow to the PVMGB determined under **SOIL&WATER-19**;
- B. Demonstration of the Project owner's legal entitlement to the water or ability to conduct the activity;
- C. ~~Include a discussion of any needed governmental approval of the identified activities, including a discussion of whether that approval that requires ;~~
- D. Discuss whether any governmental approval of the identified activities will be needed, and, if so, whether additional that approval will require compliance with CEQA or NEPA;
- E. Demonstration of how water diverted from the ~~Colorado River~~PVMGB will be replaced for each of the activities;
- F. An estimated schedule for completion of the activities;

- G. Performance measures that would be used to evaluate the amount of water replaced by the activities; and
- H. Monitoring and Reporting Plan outlining the steps necessary and proposed frequency of reporting to show the activities are achieving the intended benefits and replacing Colorado River diversions; and.
- ~~I. If the application for allocation from the Colorado River is accepted by the USBR, the Project owner shall submit to the CPM for their approval, a copy of a water allocation from the Colorado River issued by the appropriate agency for the Projects diversion of Colorado River water.~~

The Project owner shall implement the activities reviewed and approved in the Water Supply Plan in accordance with the agreed upon schedule in the Water Supply Plan. If agreement on identification or implementation of mitigation activities cannot be achieved the Project owner shall immediately halt construction or operation until assurance that the agreed upon activities can be identified and implemented.

~~The Project owner can choose to refine the estimate of the quantity of water attributed to flow from the Colorado River by implementing **SOIL&WATER-19**. If a lesser volume of water is determined to be diverted from the Colorado River as a result of project pumping pursuant to **SOIL&WATER-19**, that lesser volume shall be replaced in accordance with this Condition. (PMPD pp. 56-58)~~

STAFF COMMENTS: The recommended changes to COC-15 reflects an agreement with the applicant discussed at the Evidentiary Hearing that Project Owner would mitigate for the change in groundwater flow from the Chuckwalla Valley Groundwater Basin to the Palos Verde Mesa Groundwater Basin.

PMPD: Condition of Certification Soil&Water 18 should be deleted. (PMPD p. 60)

STAFF COMMENTS: The project's use of dry cooling eliminates the need for a water policy Condition of Certification.

SOIL AND WATER RESOURCES APPENDIX B

PMPD: These WDRs regulate the Facility's ~~six~~ two evaporation ponds and the LTU. The evaporation ponds are designated as Class II Surface Impoundments Waste Management Units (WMU) and must meet the requirements of the California Code of Regulations (CCRs), Title 27, CCR §20200 et seq. The boundaries of the Genesis Solar Power Project are shown on **Figure 2**, as incorporated here in and made a part of these WDRs. (PMPD p. 68)

PMPD: **SOIL AND WATER RESOURCES – APPENDIX B** Reference to “Wet” cooling on page 69, #8 f should be changed to “Dry” cooling. All references to evaporating ponds being 24 acres or totaling 48 acres need to be corrected to the dry cooling size of 5 acres each totaling 10 acres. **(PMPD p70 #8h)**

STAFF COMMENT: Staff notes that most of the changes to Appendix B result from the project using dry cooling.

PMPD: The Discharger proposes to use a ~~wet~~ dry cooling tower for power plant cooling. Water for ~~cooling tower makeup~~ process water makeup, and other industrial uses such as mirror washing will be supplied from on-site groundwater wells, which also will be used to supply water for employee use (e.g., drinking, showers, sinks, and toilets). A package water treatment system will be used to treat the water to meet potable standards. A sanitary septic system and on-site leach field will be used to dispose of sanitary wastewater. **(PMPD p. 70)**

STAFF COMMENT: Changes reflect the applicant’s use of dry cooling.

PMPD: Project ~~cooling water blow down from each unit~~ wastewater (excluding sanitary waste) will be piped to lined, on-site evaporation ponds, which are designated as Class II Surface Impoundments. ~~There One~~ One evaporation ponds ~~are~~ is allocated to each ~~unit~~ power block for a total of ~~six~~ two evaporation ponds. For safety and operational purposes, accumulated precipitated solids will be removed from the base of the evaporation ponds when they reach a depth of 3 feet. It is estimated that 3 feet of solids will accumulate approximately every ~~7~~ 20 years when using groundwater containing 5,000 mg/l of total dissolved solids (TDS) as a water supply. Dewatered residues from the ponds will be sent to an appropriate off-site landfill for disposal. No off-site ~~backup cooling~~ water supply is planned at this time; the use of multiple on-site water supply wells and redundancy in the well equipment will provide an inherent backup in the event of outages affecting one of the on-site supply wells. **(PMPD p. 70)**

STAFF COMMENT: The suggested changes reflect the applicant's use of dry cooling over the original proposed use of wet cooling.

PMPD: The average total annual water usage for each 125 MW unit is estimated to be about ~~822~~ 101 acre-feet per year (afpy), or ~~4644~~ 202 afpy for the Project, which corresponds to an average daily flow rate of about ~~4000~~ 125 gallons per minute (gpm). Usage rates will vary during the year and will be higher in the summer months ~~when the peak maximum flow rate (instantaneous daytime maximum rate) could be as high as about 2,013 gpm for each 125 MW power plant, or 4,026 gpm for The Project. Equipment sizing will be consistent with peak daily rates to ensure adequate design margin.~~ **(PMPD p. 79)**

The ~~six~~ two 5-acre evaporation ponds (one ~~three~~ per unit) have a proposed average design depth of 8 feet across each pond which incorporates: **(PMPD p. 79)**

STAFF COMMENT: The suggested changes reflect the applicant's use of dry cooling over the original proposed use of wet cooling.

PMPD: The following sections of the PMPD from **SOIL AND WATER RESOURCES Appendix B** apply to wet cooling and are either no longer applicable to this dry cooled project or will be replaced with updated data that reflect information based on dry cooling engineering. Staff recommends removing these sections from the PMPD:

~~These WDRs regulate the Facility's three evaporation ponds and the LTU. The evaporation ponds are designated as Class II Surface Impoundments Waste Management Units (WMU) (PMPD p.68)~~

~~Project cooling water blow down from each unit will be piped to lined, on-site evaporation ponds, which are designated as Class II Surface Impoundments. There evaporation ponds are allocated to each unit for a total of six evaporation ponds. For safety and operational purposes, accumulated precipitated solids will be removed from the base of the evaporation ponds when they reach a depth of 3 feet. It is estimated that 3 feet of solids will accumulate approximately every 7 years when using groundwater containing 5,000 mg/l of total dissolved solids (TDS) as a water supply. Dewatered residues from the ponds will be sent to an appropriate off-site landfill for disposal. No off-site backup cooling water supply is planned at this time; the use of multiple on-site water supply wells and redundancy in the well equipment will provide an inherent backup in the event of outages affecting one of the on-site supply wells. (PMPD p. 70)~~

~~...could be as high as about 2,013 gpm for each 125 MW power plant, or 4,026 gpm for The Project. Equipment sizing will be consistent with peak daily rates to ensure adequate design margin. (PMPD p. 79)~~

Evaporation Ponds (Design and Installation Sequence)

~~The six 8-acre evaporation ponds (three per unit) have a proposed average design depth of 8 feet across each pond which incorporates: (PMPD p. 79)~~

- ~~a. 3 feet of sludge buildup;~~
- ~~b. 3 feet of operational depth; and~~
- ~~c. 2 feet of freeboard.~~

~~Based on an 8 acre pond, each evaporation pond would have an ALR of 2,200 gallons per day. (PMPD p. 81)~~

~~A large hole in the geomembrane may cause a rapid large leakage rate (RLLR) of approximately 9,500 gallons per acre per day. This would equate to a RLLR of 76,000 gallons per day per pond. The RLLR is provided herein for informational purposes only. (PMPD p. 82)~~

~~Wastewater from several processes within each 125MW Unit will be piped to three 8-acre evaporation ponds (total combined pond top area of 24 acres) for disposal. Therefore there is a total of 48 acres (top pond area) of evaporation ponds on the Project site. Discharge into the evaporation ponds is derived from three primary and one occasional source:~~

- ~~a. Pre-cooling tower water treatment multi media filter (MMF) waste stream;~~
- ~~b. Post-cooling tower water treatment MMF waste stream;~~
- ~~c. Post-cooling tower water treatment 2nd Stage reverse osmosis (RO) waste stream; and~~
- ~~d. Occasionally, stormwater accumulated in the proposed LTU that will be used to treat soil affected by spills of HTF.~~

~~Raw water and pre-treated water are used to supply various plant needs, including cooling tower circulating water, solar steam generator makeup water, and various plant service needs. All these water streams eventually discharge into the evaporation ponds. (PMPD p. 82)~~

Action Leakage Rate

The estimated ALR for the evaporation ponds is 2,750 gallons per acre per day. This is based on one standard hole per acre, a drainage layer geonet with hydraulic conductivity of 0.06 m/s and a 50 percent safety factor. The assumption underlying this ALR calculation will be verified in the actual constructed ponds. Based on a 8.5 acre pond, each evaporation pond would have an estimated ALR of 2,200 1,375 gallons per day. However, the ALR will need to have field verification as this rate will vary depending on actual drainage material used and its hydraulic conductivity. A final ALR will be submitted to the Regional Board within six months of the effective date of these WDRs based on field analysis. **(PMPD p. 82)**

A large hole in the geomembrane may cause a rapid large leakage rate (RLLR) of approximately 9,500 gallons per acre per day. This would equate to a RLLR of 76,000 47,500 gallons per day per pond. The RLLR is provided herein for informational purposes only. **(PMPD p. 82)**

Waste Classification

Wastewater from several processes within each 125MW Unit will be piped to ~~three~~ one 58-acre evaporation pond (~~total combined pond top area of 24 acres~~) for disposal. Therefore there is a total of ~~48~~ 10 acres (top pond area) of evaporation ponds on the Project site. Discharge into the evaporation ponds is derived from three primary and one occasional source. (PMPD p. 82)

Wastewater Discharge

The combined estimated rate of wastewater discharge into the evaporation ponds is ~~214 gpm~~ 19,000 gallons per day (gpd) for peak conditions and ~~182 gpm~~ 12,000 gpd under annual average conditions. The peak flow rates occur in the summer months, between May and August, when solar energy production is at a peak. (PMPD p. 82)

~~The modeled water chemistry of the blowdown from the cooling tower after 15 COG indicates that chloride, sodium and sulfate will be the primary species, along with smaller concentrations of scale forming species (i.e., calcium, magnesium and silica) that were not removed during pre-treatment. Therefore post-treatment is needed to recover most of the wastewater for reuse to minimize the quantity of makeup water required, and to minimize the size of the waste management units (evaporation ponds). Post-treatment will consist of an MMF and Reverse Osmosis (RO) unit, where similar to the pre-treatment process, the MMF will remove solids from the cooling tower blowdown that may damage or reduce the efficiency of the RO membranes. Treated water through the RO units will be returned to the cooling tower for recycling, and the waste stream from the MMF and second RO unit will be discharged into onsite evaporation ponds. (PMPD p. 83)~~

~~The estimated rate of wastewater discharge into the evaporation ponds from the post treatment MMF unit is 13 gpm for peak conditions and 11 gpm under annual average conditions. Similar to the pre-treatment MMF system, this discharge will occur only when the MMF system is backwashed to remove the build up of residue. (PMPD p. 83)~~

~~The estimated rate of wastewater discharge into the evaporation ponds from the post-treatment RO unit is 161 gpm for peak conditions and 137 gpm under annual average conditions. (PMPD p. 83)~~

Evaporation Residue

During the 30-year operating life of the Facility, it is estimated that up to ~~43~~ 4.5 ft of sludge may accumulate in the bottoms of the evaporation ponds that consists of precipitated solids from the evaporated wastewater. For operational and safety purposes, the ponds will be cleaned when 3 feet of precipitated solids are accumulated

in the base of the ponds, which is estimated to be every ~~7~~ 20 years when using groundwater with a TDS of 5,000 mg/L. Approximately ~~7,150~~ 8,000 tons of evaporative residues will be accumulated yearly, which equates to approximately 50,000 tons of evaporative residue being removed during each cleanout. ~~The total amount of accumulated sludge is estimated to be approximately 215,000 tons over 30 years removed every twenty years or approximately 12,000 tons during the 30 year project life.~~ (PMPD p. 83)

STAFF COMMENT: The suggested changes reflect the applicant's use of dry cooling over the original proposed use of wet cooling.

CULTURAL RESOURCES

PMPD: Summary, There are presently ~~24~~ 27 further resources in the proposed GSEP site footprint and linear facilities corridor that are eligible for listing in the CRHR for the purpose of the present siting case. These resources include ~~9-12~~ prehistoric sites, 14 historical archaeological sites, and the historic-period component of 1 multi-component site. (PMPD p. 11)

STAFF COMMENT: Correction of a typographical error.

PMPD: We support Staff's conservative approach of assuming the worst case scenario ~~as a baseline~~ for impacts analysis and mitigation, then verifying the results in subsequent surveys as required by conditions of certification (7/21/10 RT 196:14- 20). (See *Riverwatch v. County of San Diego* (1999) 76 Cal.App.4th 1428, 1453). (PMPD p. 12)

STAFF COMMENT: The sentence misuses the term "baseline," which under CEQA means the environmental or current physical setting with which the project's potential impacts are compared to assess their significance.

PMPD: Summary, The mitigation planned for the 27 directly impacted cultural resources is ~~data recovery. a combination of data recovery and other mitigation depending on the nature of each resource.~~ Six of these 27 resources are potential contributors to the PTNCL, and as such staff considers them to be ethnographic resources (Ex. 403, p. C.3-129). Staff designed CUL-1 specifically for all ethnographic resources. (PMPD p. 19)

STAFF COMMENT: Suggested changes reflect a more accurate summary of staff's proposed mitigation. In addition, the proposed changes make this paragraph consistent with other parts of the PMPD, particularly pp. 17-18.

PMPD: Conclusion Re: Direct Impacts ~~We are left with the following observations: archaeological recovery is inherently destructive, so avoidance is the preferred way to mitigate impacts to known cultural resources. (7/21/10 RT 180:12-15; 210:12-14.) The GSEP has been redesigned to avoid 55 known cultural resources, but its construction will still directly impact 27 known cultural resources. (7/21/10 RT 147:21-148:12; 208:2-~~

~~9.) The mitigation planned for the 27 directly impacted cultural resources is data recovery. (7/21/10 RT 193:12-20; 196:14-20.) Data recovery mitigates impacts to scientific values but not ethnographic or cultural (spiritual) values. (7/21/10 RT 147:21-148:12.)~~

~~It appears that Staff omitted ethnographic values in their calculation of the worst case scenario. In the worst case scenario, at least some of the significant cultural resources assumed to be present at the site should also be assumed to contain ethnographic values. The only way to mitigate ethnographic values is avoidance.~~

~~(7/21/10 RT 147:21-148:12.) Since data recovery of the cultural resources directly impacted by the GSEP would not mitigate the ethnographic values, the proposed mitigation (data recovery) would not fully mitigate direct impacts. Therefore, it is difficult to conclude that the direct impacts to cultural resources imbued with ethnographic values can be mitigated to insignificance if those resources are also to be collected, catalogued and curated. Furthermore, the testimony of Staff's expert confirms that sacredness is in the eye of the beholder. (7/21/10 RT 150:4-14; 175:12-19.)~~

We are left with the following observations: damage to cultural resources is often permanent and cannot be repaired. Further, cultural resources mitigation strategies such as archaeological excavation preserve some important values – such as data – while simultaneously destroying other values – such cultural or spiritual values. These contradictions have resulted in a common preference for avoidance as a primary mitigation strategy. For cultural resources in general, CEQA gives a priority to avoidance. CARE also advocates avoidance. However, there are many mitigation strategies that preserve the multiple kinds of values inherent in cultural resources. In addition to encouraging the applicant to avoid 55 known cultural resources, staff has also designed multiple mitigation strategies for the remaining 27 cultural resources that will be directly impacted by GSEP construction. Data recovery will reduce the loss of information in these resources to less-than-significant. However, at least six, and perhaps more, of the 27 resources have cultural or ethnographic values as well as information values. Staff has designed several mitigation strategies that will reduce the impacts to these cultural values, but we conclude that reducing them to a level of less-than-significant may be impossible.

It seems that everyone agrees that sacredness is in the eye of the beholder, and that damage to sacredness is difficult or impossible to mitigate. Staff's expert testified to this effect (7/21/10 RT 150:4-14; 175:12-19.) (PMPD p. 19)

STAFF COMMENT: Suggested changes reflect a more accurate summary of staff's proposed mitigation. In addition, the proposed changes make this paragraph consistent with other parts of the PMPD, particularly pp. 17-18.

PMPD: **Alfredo Acosta Figueroa** introduced himself as the person in the La Cuna de Aztlan video and Chemehuevi Tribal Monitor of the sacred sites. He expressed his concern about the public participation process and the decision to hold hearings in Sacramento instead of Blythe. He complained that he did not receive notice of the informational hearing until the day before the hearing. **(PMPD pp. 25-26)**

The record indicates that considerable efforts were undertaken to ensure the Native American community received notice of the proposed project and given the opportunity to fully participate.

The applicant contacted the NAHC by email on October 17, 2007, in order to obtain information on known cultural resources and traditional cultural properties, and to learn of any concerns Native Americans may have about the GSEP. In addition, they requested a list of Native Americans who have heritage ties to Riverside County and who want to be informed about new development projects there (Farmer et al. 2009, app. E). The NAHC responded on October 19, 2007, with the information that the Sacred Lands File (SLF) database failed to indicate the presence of Native American cultural resources in the immediate GSEP vicinity. The NAHC also forwarded a list of Native American groups or individuals interested in development projects in Riverside County.

On November 26, 2007, the Palm Springs-South Coast Field Office of the BLM sent letters to 28 Native American groups, including those identified by the NAHC, initiating government-to-government consultation for the proposed project. In addition the letter invited comments or concerns regarding potential impacts to cultural resources or areas of traditional cultural importance within the vicinity of the proposed project. On November 23, 2009, an additional letter was sent to the Agua Caliente Band of Indians and informational copies to 12 groups listed in Cultural Resources Table 3, noting the Federal Register publication of the NOI for the proposed project. The letter urged any concerned groups to utilize the Section 106 process to provide comments or specific concerns. (Exhibit 400 Staff Assessment C.3-56 to C.3-58)

The record indicates a number of contacts and meetings between various tribes and the BLM early on in the process between November, 2007, and December, 2009. The details of these contacts are listed in Cultural Resources Tables 4 and 5. A number of tribes—Agua Caliente Band of Cahuilla Indians, Morongo Band of Mission Indians, Cabazon Band of Mission Indians, Torres-Martinez Desert Cahuilla Indians, Pechanga Band of Luiseño Indians, Anza Cahuilla, Ramona Band of Mission Indians, Twentynine Palms Band of Mission Indians, and San Manuel Band of Mission Indians—attended

meetings with BLM and Commission staff about various solar energy and transmission line projects in the region. (Exhibit 400 Staff Assessment C.3-58 to C.3-59)

STAFF COMMENT: The PMPD should provide a response to Mr. Figueroa's concerns with the public process and the notice to and participation from the Native American community. The record contains ample information regarding the public process as indicated by the proposed language from the Staff Assessment.

PMPD: Findings of Fact, #5. There are presently ~~28~~ 23 known resources in the proposed GSEP site footprint and linear facilities corridor that staff assumes are eligible for listing in the NRHP and the CRHR. **(PMPD p. 26)**

STAFF COMMENT: Correction of a typographical error.

PMPD: CUL-1, The project owner shall contribute to a special fund set up by the Energy Commission and/or BLM to finance the completion of the PTNCL Documentation and Possible NRHP Nomination program presented in the cultural PTNCL Genesis Solar Energy Project (GSEP) Revised Staff Assessment (RSA). **(PMPD p. 27)**

STAFF COMMENT: Prior to the Evidentiary Hearing, NextEra requested that “and/or the BLM” be added to staff’s original language to ensure that they would be credited with complying with this condition if the BLM were to set up their own fund for the PTNCL documentation and nomination. The Hearing Officer expressed concern that if neither the Energy Commission nor the BLM is explicitly designated in CUL-1 to set up the PTNCL fund, it could happen that setting up that fund might be delayed or never implemented.

Staff prefers to leave the present language unchanged for two reasons. First, Energy Commission staff has already set up the PTNCL fund, and NextEra has been invoiced for the first installment, so no delay is possible. Second, BLM has not set up a fund, and it is uncertain at this point whether they will. The Energy Commission management is still negotiating with BLM management on cultural resources compliance coordination between the two agencies. If the language is left as is, Energy Commission cultural resources staff would have the flexibility to work with whatever is decided.

PMPD: CUL-1, Verification, The project owner shall make the required installment payment promptly upon receipt of an invoice from the Energy Commission or from the BLM. No later than 10 days after receiving notice of the successful transfer of funds for any installment to the Energy Commission’s and/or BLM’s special PTNCL fund, the project owner shall submit a copy of the notice to the Energy Commission’s Compliance Project Manager (CPM). **(PMPD p. 28)**

STAFF COMMENT: Insertion suggested by the Hearing Officer to ensure prompt payment. By including the option of NextEra paying into a fund that BLM may set up, staff ensures NextEra may be credited with complying with this condition.

PMPD: CUL-2, The project owner shall contribute to a special fund set up by the Energy Commission and/or BLM to finance the completion of the DTCCL Documentation and Possible NRHP Nomination program presented in the cultural DTCCL Genesis Solar Energy Project (GSEP) Revised Staff Assessment (RSA). (PMPD p. 28)

STAFF COMMENT: Prior to the Evidentiary Hearing, NextEra requested that “and/or the BLM” be added to staff’s original language to ensure that they would be credited with complying with this condition if the BLM were to set up their own fund for the DTCCL documentation and nomination. The Hearing Officer expressed concern that if neither the Energy Commission nor the BLM is explicitly designated in CUL-2 to set up the DTCCL fund, it could happen that setting up that fund might be delayed or never implemented.

Staff prefers to leave the present language unchanged for two reasons. First, Energy Commission staff has already set up the DTCCL fund, and NextEra has been invoiced for the first installment, so delay is not an issue. Second, BLM has not set up a fund, and it is uncertain at this point whether they will. The Energy Commission management is still negotiating with BLM management on cultural resources compliance coordination between the two agencies. If the language is left as is, Energy Commission cultural resources staff would have the flexibility to work with whatever is decided.

PMPD: CUL-2, **Verification,** The project owner shall make the required installment payment promptly upon receipt of an invoice from the Energy Commission or from the BLM. No later than 10 days after receiving notice of the successful transfer of funds for any installment to the Energy Commission’s and/or BLM’s special PTNCL fund, the project owner shall submit a copy of the notice to the Energy Commission’s Compliance Project Manager (CPM). (PMPD p. 29)

STAFF COMMENT: Insertion suggested by the Hearing Officer to ensure prompt payment. By including the option of NextEra paying into a fund that BLM may set up, staff ensures NextEra may be credited with complying with this condition.

PMPD: The Project Ethnographer’s (PE) training and background must meet the NPS standards for Anthropologist/Applied Ethnographer (GS-190, [delete space] 11-12 or 13-15). (PMPD p. 30)

STAFF COMMENT: Correction of a typographical error.

PMPD: CUL-4, Prior to the start of ground disturbance, the project owner shall provide the [delete space] CRS... **(PMPD p. 32)**

STAFF COMMENT: Correction of a typographical error.

PMPD: CUL-5, Copies of the CRMMP shall reside with the CRS, alternate [delete space] CRS the PPA, the PE, the PHA, the PG, each CRM, and the project owner's on-site construction manager. **(PMPD p. 33)**

STAFF COMMENT: Correction of a typographical error.

PMPD: CUL-7, #3, A discussion of what such artifacts may look like when partially buried, or [delete space] wholly buried and then freshly exposed; **(PMPD p. 38)**

STAFF COMMENT: Correction of a typographical error.

PMPD: CUL-10, 11—**(PMPD p. 45)**

STAFF COMMENT: Correction of a typographical error.

PMPD: CUL-14, ~~CUL-14~~ CUL-16 **(PMPD p. 49)**

STAFF COMMENT: Staff notes that the Conditions of Certification have been re-numbered consecutively. However, this change resulted in extensive numbering conflicts throughout the Staff Assessment, PMPD text, and the text of various Conditions of Certification. Staff recommends returning to the original numbering.

PMPD: CUL-14 Verification,

1. At least 30 days prior to the start of construction, the project owner shall notify the CPM that the Native American consultation by the PE has been initiated.

4. 2.) **(PMPD p. 50)**

STAFF COMMENT: Correction of a typographical error.

PMPD: CUL-15,

~~CUL-15~~ CUL-17 **(PMPD p. 50)**

STAFF COMMENT: Staff notes that the PMPD re-numbered the Conditions of Certification sequentially to compensate for the deletion of two conditions. However, this change resulted in extensive numbering conflicts throughout the Staff Assessment, PMPD text, and the text of various Conditions of Certification. Staff recommends

returning to the original numbering so the numbers in existing documents that cannot now be revised will not be confusing.

PMPD: **CUL-15 #5**, The project owner shall ensure that all ~~15~~ historic-period archaeological sites shall be revisited by the field crew. **(PMPD p. 51)**

STAFF COMMENT: Correction of a typographical error.

PMPD: **CUL-16**,

~~CUL-16~~ **CUL-18** **(PMPD p. 52)**

STAFF COMMENT: Staff notes that the PMPD re-numbered the Conditions of Certification sequentially to compensate for the deletion of two conditions. However, this change resulted in extensive numbering conflicts throughout the Staff Assessment, PMPD text, and the text of various Conditions of Certification. Staff recommends returning to the original numbering so the numbers in existing documents that cannot now be revised will not be confusing.

LAND USE

PMPD: The GSEP site (~~4,890~~ 1,800 acres) is located within the “Moderate Use” category of the BLM’s California Desert Conservation Area (CDCA) Plan. **Appendix A** of this Decision provides a general description of the land use LORS applicable to the proposed project and surrounding lands. **(PMPD p. 2)**

STAFF COMMENT: Changes reflect the correct acreage as identified in the record. See PMPD page 1, Project Description.

PMPD: The GSEP site currently consists of largely undisturbed desert land. . ~~A single four-wheel drive road runs north-south through the western portion of the greater 4,640-acre ROW area, but would be approximately 4.5 miles west of the GSEP facility. Access to the GSEP facility would be provided via a new access road constructed to the site from the Wiley’s Well Rest Area off of I-10. (Ex. 400, p. C.6-4.) But as indicated in this document’s Cultural Resources Condition of Certification~~ **CUL-16**, use of this new access road will be limited to the public by virtue of a gate to prevent illegal and unauthorized public access. **(PMPD p. 3)**

STAFF COMMENT: Suggested language acknowledges the proposed gate through CUL-16.

PMPD: ~~a minimum of two groundwater wells and a set of storage tanks for~~ Each 125-MW unit that would include a 700,000 ~~500,000~~ gallon raw water/fire water tank, a ~~1,250,000~~ 200,000 gallon treated water tank, and a ~~250,000~~ 155,000 gallon wastewater

tank each 125-MW unit would have ~~three~~ one, 5 8-acre double-lined evaporation ponds, totaling 10 acres of ponds for the two units (Evidentiary Hearing July 12 transcript, pg. 145) approximately 6.5 miles of 230-kV gen-tie transmission line routed in a southeasterly ROW connecting to the Blythe Energy Project Transmission Line (BEPTL) and ultimately terminating at the proposed, expanded Southern California Edison (SCE) Colorado River Substation; **(PMPD p. 3)**

STAFF COMMENT: Changes reflect the project's use of dry cooling.

PMPD: **Wilderness and Recreation.** Approval of the proposed project would directly remove approximately 1,800 acres from potential use for recreational opportunities such as backpacking, camping, hunting, or other activities. These activities are determined, in part, by the California Desert Conservation Area (CDCA) Plan. **(PMPD p. 4)**

STAFF COMMENT: Changes reflect clarification as to the authority for the current multiple use activities on the project site.

PMPD: The project would not be constructed on wilderness lands so it would not directly disrupt activities in a federal wilderness area. However, the Palen/McCoy Wilderness north of the project site attracts limited, annual visitors based on its scenic, biological, cultural, and recreational amenities. Observations by BLM and Law Enforcement Ranger staff indicate only 100 to 200 hikers per year within the wilderness area (Genesis FEIS, page 3.13-3) The proposed project would not substantially reduce the scenic value of this wilderness area (see the **Visual Resources** section of this Decision). (Ex. 400, p. C.6-10.)

The 3,632-acre Palen Dry Lake Area of Critical Environmental Concern (ACEC) occurs southwest of the project site and is managed for protection of its prehistoric resources as a Multiple Use Class M (moderate) unit

STAFF COMMENT: Suggested changes provide clarification and factual background from the record.

TRAFFIC AND TRANSPORTATION

PMPD: The nearest rail passenger service stations are Amtrak stations in Palm Springs, California and Yuma, Arizona. The Desert Center Airport is located approximately 13 miles to the west of the GSEP; it will not be affected by the project's construction or operation. Similarly, the Blythe Airport is located approximately 15 miles to the east and its operation will not be affected by the GSEP. **(PMPD p. 2)**

STAFF COMMENT: The correct distances are 13 miles and 15 miles (Ex. 400, pp. C.10-4 to C.10-5.)

PMPD: Construction Traffic

The construction of GSEP will be completed in two phases over approximately 37 months. Phase 1 will consist of the Unit 1 powerblock, access road, gas and transmission line and Phase 2 will consist of the Unit 2 powerblock. The construction workforce will peak during month 23 with approximately ~~4,093~~ 1,085 workers per day and average approximately ~~652~~ 646 workers during the course of construction. (Ex. 400, p. C.10-6.)

A worst-case scenario, where all workers commute with only one occupant per vehicle, would yield a peak trip generation of approximately ~~4,093~~ 1,085 inbound trips during the morning peak period and another ~~4,093~~ 1,085 outbound trips during the evening peak period. **(PMPD p. 2)**

STAFF COMMENT: The correct construction workforce numbers are 1,085 at peak, with an average of 646 as provided in the Socioeconomic section of the Staff Assessment (Ex. 403, p. C.8-7.)

PMPD: Condition of Certification TRANS-1 requires a Traffic Control Plan (TCP) for the three solar projects. In addition to the standard traffic measures contained in a TCP such as a flagperson and signage notifying drivers of construction traffic, in lieu of coordinating construction schedules and park and ride for the three projects, each TCP contains the following two measures to address stacking on I-10:

- A work schedule and end-of-shift departure plan designed to ensure that stacking does not occur on intersections necessary to enter and exit the project sites. The project owner shall consider using one or more of the following measures designed to prevent stacking: staggered work shifts; off-peak work schedules; restricting travel to and departures from each project site to 10 or fewer vehicles every three minutes during peak travel hours on Interstate 10. The project owner may use any of the above traffic measures or any other measures if the project owner can demonstrate that the implemented measures would ensure that Interstate 10 operates at a Level of Service (LOS) C or higher during the peak travel hours.
- Provisions for an incentive program such as an employer-sponsored Commuter Check Program to encourage construction workers to carpool and/or use van or bus service

~~Condition of Certification TRANS-1 requires a Traffic Control Plan (TCP) for the three solar projects. In addition to the standard traffic measures contained in a TCP such as a flag person and signage notifying drivers of construction traffic, in lieu of coordinating construction schedules and park and ride for the three projects, each TCP contains the following two measures to address stacking on I-10:~~

~~A work schedule and end-of-shift departure plan designed to ensure that stacking does not occur on intersections necessary to enter and~~

~~exit the project sites. The project owner shall consider using one or more of the following measures designed to prevent stacking: staggered work shifts; off-peak work schedules; restricting travel to and departures from each project site to 10 or fewer vehicles every three minutes during peak travel hours on Interstate 10.~~

~~The project owner may use any of the above traffic measures or any other measures if the project owner can demonstrate that the implemented measures would ensure that Interstate 10 operates at a Level of Service (LOS) C or higher during the peak travel hours.~~

- ~~• Provisions for an incentive program such as an employer-sponsored Commuter Check Program to encourage construction workers to carpool and/or use van or bus service~~
- To coordinate construction schedules;
- To ensure that during overlapping construction periods traffic control measures such as staggered work schedule start times, and;
- Incentives for carpooling, such as an employer-sponsored Commuter Check Program.

With implementation of these measures, the transportation related impacts will be less than significant. **(PMPD pp. 6-7)**

STAFF COMMENT: The additional language provides more detail from evidence in the record and staff assessment as to how transportation related impacts will be addressed through mitigation.

PMPD: The evidence of record contains a discussion of proposed projects near the GSEP project site along the I-10 corridor in eastern Riverside County including: the Blythe Solar Power Project, Palen Solar Power Project and the GSEP. All three projects are in close proximity to one another and their construction schedules will overlap. Since the Blythe, Palen and Genesis projects will have overlapping construction schedules, traffic impacts could potentially be exacerbated locally along I-10 and each project's interchange/local intersections ~~and at the above intersections.~~ Without mitigation, the traffic and transportation impacts of the Blythe, Palen and Genesis solar Projects have the potential to result in cumulatively considerable impacts to I-10 as well as to local streets, highways, and intersections in the vicinity of the project sites. Condition of Certification **TRANS-1** requires that traffic control plans be implemented ~~coordinated~~ for all three projects. The Blythe and Palen projects also include this Condition of Certification. The traffic plans will include ~~park-and-ride bus transportation and staggered work schedule start times~~ to ensure acceptable traffic levels of service on I-10 are maintained throughout the projects' construction periods.

Condition of Certification **TRANS-5** ensures repair of any roadway damage caused by construction equipment and supply delivery. The Blythe and Palen Projects also include this Condition. (Ex. 400, pp. C.10-18 to C.10-23.) **(PMPD pp. 11-12)**

STAFF COMMENT: The suggested changes clarify the section for consistency with the record and the language in TRANS-1. Requirements for the park and ride have been removed for all three I-10 projects.

PMPD: With the Conditions of ~~Certificate~~, Certification the GSEP will comply with all applicable LORS related to **Traffic and Transportation (PMPD p. 12)**

STAFF COMMENT: Clerical edit.

NOISE

PMPD: NOISE-2 Throughout the construction and operation of Genesis, the project owner shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The project owner or ~~authorized agent~~ CPM shall **(PMPD p. 6)**

STAFF COMMENT: The CPM also as authority to handle and investigate noise complaints.

VISUAL RESOURCES

PMPD: There is limited existing development in the vicinity of the site: I-10, roughly ~~two~~ three miles south of the Project site, is the dominant man-made feature. Other developments include Chuckwalla Valley State Prison and Ironwood State Prison, 2-1/2 miles south of I-10 off of Wiley's Well Road. Both are roughly nine miles southeast of the GSEP site and are visible but visually very subordinate from I-10. **(PMPD p. 3)**

STAFF COMMENT: The record indicates the project is closer to three miles away from I-10.

PMPD: ~~Two 500,000 gallon cooling~~ A 700,000 gallon raw water storage tanks; a 265,000 gallon RO feed tank; ~~a 1,250,000~~ 200,000 gallon treated water storage tank; ~~a 250,000~~ 155,000 waste water storage tank; ~~a 400,000~~ 145,000 gallon demineralized water storage tank;

~~Two wet cooling towers~~ An air-cooled condenser; **(PMPD p. 6)**

STAFF COMMENT: Changes reflect the project's use of dry cooling.

PMPD: Construction activities will occur over approximately 37 months. The construction laydown areas will be provided within the GSEP site or, for construction of the proposed transmission gen-tie line, at Wiley's Well Rest Area southeast of the site north of I-10. Laydown within the GSEP site will thus be potentially visible but will occupy a smaller ~~area than~~ portion of the overall project footprint itself. Laydown will thus have substantially lower impact than either site grading or the completed project itself. The larger impacts of site grading are considered to be less than significant, as analyzed under Operation Impacts, below. The lesser effects of the laydown area within the surrounding main project footprint will thus also be less than significant. (PMPD p. 7)

STAFF COMMENT: Suggested language provides clarification regarding the laydown area in relation to the project site.

PMPD: Furthermore, effectiveness of revegetation in this arid environment is difficult, often of limited effectiveness, and capable of recovery only over a very long-term time frame. Although grading impacts will be similar in extent to the completed project itself, ~~the latter impacts of the project itself~~ were found to be less-than-significant from all KOPs. Therefore, grading impacts will also be less-than-significant. (Ex. 400, p. C.12-22 to C.12-23.) (PMPD p. 8)

STAFF COMMENT: Language change suggested for clarity. Visual impacts from both the project and grading were found to be less-than-significant.

PMPD: The project is ~~adjacent~~ in proximity to Highway I-10, which is not listed as an eligible State Scenic Highway. Since there are no notable scenic features or resources are present on the site, the GSEP will not directly damage any specific scenic resources located within the project site. (Ex. 400, p. C.12-27.) (PMPD p. 9)

STAFF COMMENT: The project site is three to four miles away from Highway I-10. (Exhibit 400 B.1-16)

PMPD: The evidence confirms that during certain times of day the mirror units can produce substantial glare and that such glare can be experienced by the public from locations in the GSEP vicinity as intrusive nuisances and may be a distraction, but generally do not pose a visual hazard except for persons within 60 feet of the plant perimeter fence, the distance at which staff determined that project glare could exceed a level deemed safe for the human eye. Public exposure to the GSEP at this distance is not anticipated. There are no known quantitative thresholds for determining unacceptable levels of nuisance or discomfort glare. (Ex. 400, p. C.12-21.) (PMPD p. 21)

STAFF COMMENT: Suggested changes provide for a more complete discussion regarding glare. (Exhibit 400 p. C.12-21)

PMPD: The evidence shows that, with the implementation of Condition of Certification **VIS-2**, impacts from temporary and permanent lighting at the GSEP will be less than significant. In addition, Condition VIS-2 requires the applicant to prepare a lighting mitigation plan for review by the CPM and Riverside County. The CPM will apply published professional standards and criteria to determine compliance with the Condition VIS-2 at that time. (Ex. 400, p. C.12-22.) **(PMPD p. 22)**

STAFF COMMENT: The suggested language describing VIS-2, provides additional support that VIS-2 adequately mitigates for light impacts.

PMPD: Cumulative impacts can result from individually minor but collectively significant impacts taking place over a period ~~or~~ of time. **(PMPD p. 22)**

STAFF COMMENT: Typographical error.

PMPD: The Significance of a cumulative visual impact depends on the degree to which the geographic area including the project is visually exposed and (1) the visual character of a viewshed is altered; (2) scenic features are impaired or removed (32) ~~views of a scenic resource~~ views are impaired or obstructed; or (43) visual character and quality of the cumulative viewshed is diminished; (5) substantial adverse sources of glare are introduced . **(PMPD p. 23)**

STAFF COMMENT: The proposed language more clearly describes the factors in a cumulative visual impact assessment.

PMPD: Furthermore, it is BLM's policy that all areas within the California Desert Conservation Area have inherent scenic value and high viewer sensitivity. (Ex. 400, p. C.12-7.)

Secondly, the applicant's brief implies that the conclusion of significant cumulative impacts within the Chuckwalla Valley are dependent solely on views from KOPs 4a and 4b. However as presented in staff's analysis (Ex. 400 pp. C.12-35) cumulative impacts would occur from a variety of viewpoints, including Highway I-10, Corn Springs Road, and portions of the Chuckwalla Wilderness, from which existing and foreseeable future projects would be visible in conjunction with the proposed project.

~~Secondly~~ Thirdly, the law is well settled that a project whose individual impacts are less than significant may still contribute to create a cumulatively considerable impact. (Cal. Code Regs., tit. 14, § 15355; *City of Long Beach v. Los Angeles Unified School Dist.*

(2nd, Dist., 2009) 176 Cal. App. 4th 889; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692.) **(PMPD pp. 23-24)**

STAFF COMMENT: Suggested language provide additional support from the record, (Exhibit 400 pp. C.12-35) regarding significant cumulative impacts.

PMPD: GSEP will cumulatively contribute to the large- scale solar development that will change the overall look of Chuckwalla Valley for decades to come. (Ex. 400, p. C.12-35).

The anticipated operational visual impacts of the GSEP in combination with past and foreseeable future projects in the local viewshed of Chuckwalla Valley are considered potentially significant from some sensitive viewpoints, particularly within the Chuckwalla Wilderness and from Highway I-10. The record establishes that anticipated cumulative operational impacts of past and foreseeable future region-wide projects in the southern California desert are considered cumulatively considerable and potentially significant. We agree with Staff's conclusion that the cumulative impacts of the GSEP significant and unmitigable. (Ex. 400, p. C.12-37.) **(PMPD p. 24)**

STAFF COMMENT: Suggested changes more accurately identify the sensitive viewpoint areas by adding highway I-10.

VERRIDE FINDINGS

STAFF COMMENT: The PMPD cites the testimony of Terry O'Brien as support for issuing an override. To more accurately reflect the record the PMPD should also cite to the testimony of Dr. Beth Bagwell and Mike Monasmith. Both witnesses offered testimony in support of an override relating to the area of Cultural Resources. (Testimony July 21, 2010 p148: 13-25, p149: 1-15, p156: 3-25, p157: 1-25, p158: 1-25, p159: 1-12) **(PMPD p.5 Override Findings)**

PMPD: Override Findings, The record shows that ~~24~~ 27 significant cultural resources were deemed to be present on the GSEP site footprint and linear corridor. Staff employed a "worst case scenario" to determine the presence of the ~~24~~ 27 significant cultural resources. ~~Nine~~ Twelve of the ~~24~~ 27 cultural resources were prehistoric and the remaining 15 were historical archaeological sites. ~~Staff's analysis concluded that data recovery would mitigate direct impacts to these cultural resources below significance to a less-than-significant level. However, we found that a true worst case scenario must include the possibility that at least of the presumed-significant cultural resources would contain ethnographic values. The record establishes that the only way to mitigate ethnographic values is avoidance, not data recovery. Since data recovery of the cultural resources directly impacted by the GSEP would not mitigate the ethnographic values,~~

~~the proposed mitigation (data recovery) would not fully mitigate direct impacts to cultural resources containing ethnographic values. Therefore the Committee found an unmitigable direct impact. (PMPD p. 1)~~

Staff encouraged the applicant to avoid 55 known cultural resources and designed multiple mitigation strategies for the remaining 27 cultural resources that will be directly impacted by GSEP construction. Staff's proposed data recovery will reduce the loss of information in these resources to less-than-significant. However, at least six, and perhaps more, of the 27 resources have cultural or ethnographic values as well as information values. Staff has designed several mitigation strategies that will reduce the impacts to these cultural values, but we conclude that reducing them to a level of less-than-significant may be impossible. Specifically, mitigation to reduce impacts to ethnographic values to levels below significance is likely infeasible as impacts may be the result of proximity to the project site. Therefore the Committee found an unmitigable direct impact.

STAFF COMMENT: Suggested changes reflect a more accurate summary of staff's proposed mitigation. In addition, the proposed changes make this paragraph consistent with other parts of the PMPD, particularly Cultural Resources pp. 17-18. The proposed language also clarifies that mitigation is likely infeasible, a showing required for an override. (Pub. Resources Code, § 21081(a)(3))

Dated: September 20, 2010

Respectfully submitted,



JARED J. BABULA
Senior Staff Counsel



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

APPLICATION FOR CERTIFICATION FOR THE
GENESIS SOLAR ENERGY PROJECT

Docket No. 09-AFC-8

PROOF OF SERVICE
(Revised 8/5/10)

APPLICANT

Ryan O'Keefe, Vice President
Genesis Solar LLC
700 Universe Boulevard
Juno Beach, Florida 33408
e-mail service preferred
Ryan.okeefe@nexteraenergy.com

Scott Busa/Project Director
Meg Russel/Project Manager
Duane McCloud/Lead Engineer
NextEra Energy
700 Universe Boulevard
Juno Beach, FL 33408
Scott.Busa@nexteraenergy.com
Meg.Russell@nexteraenergy.com
Duane.mccloud@nexteraenergy.com
e-mail service preferred

Matt Handel/Vice President
Matt.Handel@nexteraenergy.com
e-mail service preferred
Kenny Stein,
Environmental Services Manager
Kenneth.Stein@nexteraenergy.com

Mike Pappalardo
Permitting Manager
3368 Videra Drive
Eugene, OR 97405
mike.pappalardo@nexteraenergy.com

Kerry Hattevik/Director
West Region Regulatory Affairs
829 Arlington Boulevard
El Cerrito, CA 94530
Kerry.Hattevik@nexteraenergy.com

APPLICANT'S CONSULTANTS

Tricia Bernhardt/Project Manager
Tetra Tech, EC
143 Union Boulevard, Ste 1010
Lakewood, CO 80228
Tricia.bernhardt@ttech.com

James Kimura, Project Engineer
Worley Parsons
2330 East Bidwell Street, Ste.150
Folsom, CA 95630
James.Kimura@WorleyParsons.com

COUNSEL FOR APPLICANT

Scott Galati, Esq.
***Marie Mills**
Galati/Blek, LLP
455 Capitol Mall, Suite 350
Sacramento, CA 95814
sgalati@gb-llp.com
mmills@gb-llp.com

INTERESTED AGENCIES

California-ISO
e-recipient@caiso.com

Allison Shaffer, Project Manager
Bureau of Land Management
Palm Springs South Coast
Field Office
1201 Bird Center Drive
Palm Springs, CA 92262
Allison_Shaffer@blm.gov

INTERVENORS

California Unions for Reliable
Energy (CURE)
c/o: Tanya A. Gulesserian,
Rachael E. Koss,
Marc D. Joseph
Adams Broadwell Joesph
& Cardoza
601 Gateway Boulevard,
Ste 1000
South San Francisco, CA 94080
tgulesserian@adamsbroadwell.com
rkoss@adamsbroadwell.com

Tom Budlong
3216 Mandeville Cyn Rd.
Los Angeles, CA 90049-1016
tombudlong@roadrunner.com

Mr. Larry Silver
California Environmental
Law Project
Counsel to Mr. Budlong
e-mail preferred
larrysilver@celproject.net

Californians for Renewable
Energy, Inc. (CARE)
Michael E. Boyd, President
5439 Soquel Drive
Soquel, CA 95073-2659
michaelboyd@sbcglobal.net

Lisa T. Belenky, Senior Attorney
Center for Biological Diversity
351 California St., Suite 600
San Francisco, CA 94104
lbelenky@biologicaldiversity.org

Ileene Anderson
Public Lands Desert Director
Center for Biological Diversity
PMB 447, 8033 Sunset Boulevard
Los Angeles, CA 90046
ianderson@biologicaldiversity.org

OTHER

Alfredo Figueroa
424 North Carlton
Blythe, CA 92225
lacunadeaztlan@aol.com

ENERGY COMMISSION

JAMES D. BOYD
Commissioner and Presiding
Member
jboyd@energy.state.ca.us

ROBERT WEISENMILLER
Commissioner and Associate Member
rweisenm@energy.state.ca.us

Kenneth Celli
Hearing Officer
kcelli@energy.state.ca.us

Mike Monasmith
Siting Project Manager
mmonasmi@energy.state.ca.us

Caryn Holmes
Staff Counsel
cholmes@energy.state.ca.us

Robin Mayer
Co-Staff Counsel
rmayer@energy.state.ca.us

***Jared Babula**
Co-Staff Counsel
jbabula@energy.state.ca.us

Jennifer Jennings
Public Adviser's Office
e-mail service preferred
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Scott McDonald, declare that on September 20, 2010, I served and filed copies of the attached Staff's Comments on the Presiding Member's Proposed Decision, dated September 20, 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [http://www.energy.ca.gov/sitingcases/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, hand-delivered 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.



Scott McDonald