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08-AFC-5	
DATE	<u>JUL 26 2010</u>
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July 26, 2010

Mr. Christopher Meyer
Project Manager
Attn: Docket No. 08-AFC-5
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Imperial Valley Solar (formerly Solar Two) (08-AFC-5)
Applicant's Additional Exhibits Distributed during the July 26-27
Energy Commission Evidentiary Hearings (Exhibits 133-139)

Dear Mr. Meyer:

On behalf of Imperial Valley Solar (formerly Solar Two), LLC, URS Corporation Americas (URS) hereby submits Applicant's Additional Exhibits Distributed during the July 26-27 Energy Commission Evidentiary Hearings (Exhibits 133-139).

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit on behalf of Imperial Valley Solar, LLC.

Sincerely,

Angela Leiba
Project Manager

AL: ml

Imperial Valley Solar Project Changes

Major Project Changes to Reduce Environmental Impacts and/or Respond to Agency Concerns:

1. Reduction of Project from 900 MW to 750 MW

The original project envisioned would have included the installation of solar generating facilities capable of generating up to 900 megawatts (MW) of electricity on approximately 7,650 acres of land. Prior to filing the AFC in June 2008, Applicant recognized that development in the eastern portion of the original proposed site would result in significant and unavoidable impacts to sensitive environmental resources. The project was therefore redesigned by the Applicant to avoid these impacts, resulting in a reduction of the developable area to 6,571 acres with the capacity of generating 750 MW of electricity.

2. Avoidance of Impacts to Waters of the United States, and related impacts to biological resources

Applicant has worked with the Army Corps of Engineers to reduce impacts to Waters of the United States. The Corps is only authorized to approve the Least Environmentally Damaging Practicable Alternative (LEDPA). As proposed, the project would have permanently impacted 177 acres of waters of the United States. As modified, the proposed project reduces permanent impacts to WUS to 38.2 acres, with 14 acres of temporary impacts. The Corps has preliminarily accepted the modifications to the project as the LEDPA. The modifications avoid impacts to the highest flow dry washes on the site, and allows for the generation of approximately 709 MW while significantly reducing impacts to aquatic resources. The modified project avoids the entirety of washes I, K, and C and avoids all of washes E and G southwest of the transmission line corridor, as well as providing a 200 foot wide avoidance corridor in washes E and G northeast of the transmission line corridor. Avoidance of wash C also allows for the preservation of the one existing potential flat tailed horned lizard movement corridor on the site.

The primary avoidance and minimization measures include the following:

- a. Reduced total generating capacity from 750 MW to 709 MW eliminating the entire eastern portion from the current project boundary to Dunaway Road which includes the downstream portions of streams E and G.
- b. Reduced the number of the east-west roads to minimize the number of roads in washes and the number of wash crossings.
- c. The waterline that extends to the SWWTF was shifted and co-located beneath a site arterial and maintenance roads to reduce temporary impacts to WUS to 0.0 acres.
- d. The complete avoidance of ephemeral streams I, K, and C and the avoidance of the upper reaches of ephemeral streams E and G. This removed 1,163 SunCatchers from WUS and reduced permanent impacts from 177.4 acres to 39.1 acres.
- e. Reducing the width of SunCatcher maintenance roads from 15 feet to 10 feet which is the narrowest road width allowed by industry standards.

- f. The removal of spur roads to individual SunCatchers from the maintenance road that runs down the middle of the two roads of SunCatchers (Figures 4 and 5). This increases the temporary disturbance for the construction of the SunCatchers by the use of a temporary 50-foot road that includes the 2-foot wide trench for the installation of an underground utility line and hydrogen pipeline, but decreases the permanent impacts to WUS substantially.

3. Avoidance of Cultural Resources on the Project Site

In addition to the reduction of the project from 900 MW to 750 MW before the AFC was filed, and the associated acreage reduction, Applicant has agreed to the creation of Environmentally Sensitive Areas to avoid cultural resources. The applicant has agreed to avoid areas defined as High Environmentally Sensitive Areas (HESAs) with a minimum buffer of 100-feet. Most HESAs have a buffer beyond 100-feet. For all other identified Environmentally Sensitive Areas (ESAs) the Applicant has agreed to a minimum buffer of 50-feet. Many ESAs have a buffer beyond 50-feet. It should be noted that ESAs being avoided currently are those areas identified by the Applicant. The BLM is still in process evaluating these HESAs and ESAs. If additional HESAs or ESAs arise through the consultation process or through agency review these same avoidance buffers will be implemented, where practicable. It should be noted that no ground-disturbance shall occur without BLM approval.

Other Significant Changes

1. Modification of Water Supply from IID Water to Treated Wastewater

The original AFC filing stated that the Imperial Irrigation District (IID) would provide water to the Imperial Valley Solar Project. In June 2009, after extensive research of five water supply options, the Applicant filed a Supplement to the AFC proposing the use and conveyance of water from the Seeley Waste Water Treatment Facility (SWWTF) as the Project's primary water source. The SWWTF is operated by the Seeley County Water District (SCWD) and is designed to produce secondary treated water at the rate of 200,000 gallons per day (gpd) (139 gpm or 224 AFY).

The applicant would finance an upgrade to the existing facility to allow it to meet Title 22 water quality standards and would fund the training of operators for the new facility. These upgrades are also necessary for SWWTF to comply with its existing NPDES permit and avoid future violations of its permit. The SCWD would provide as much treated effluent water as needed to the proposed IVSP. The current influent flow rate is approximately 150,000 gpd, or 168 AFY. Improvements to the treatment facility will provide the Title 22 effluent capacity of 250,000 gpd (current plant capacity). It is anticipated that IVS will need less than 1/3 of the treated effluent during construction and approximately 1/5 of the treated effluent during operation (assuming current production rates). Any surplus water not needed by the IVSP, will be controlled by SCWD and may be discharged into the New River or used for other reclaimed water uses such as irrigation.

Because of delays in the environmental review for the SWWTF upgrades, the applicant proposed in May 2010 to use the Dan Boyer Water Company (DBWC) well in Ocotillo as the project water supply if the SWWTF water supply is not available at the start of construction. The DBWC

operates State well #16S/9E-36G4 with a current permitted pumping rate of 40 AFY. Tessera Solar has negotiated a purchase agreement with the DBWC.

2. Hydrogen System:

The original AFC filing described a distributed hydrogen system in which hydrogen would be stored in k-bottles and provided by an offsite supplier (Table 1). In the June 2009 Supplement to the AFC, the Project was updated to include a centralized hydrogen gas supply, storage and distribution system. The system included onsite generation of hydrogen through electrolysis by one hydrogen generator and the storage of that hydrogen in a steel storage tank. Underground piping would deliver hydrogen to 87 individual compressor groups, each supplying 30 storage tanks and each of these tanks supplying hydrogen to 12 SunCatchers (Table 1). This hydrogen system was the one analyzed in the SA/DEIS.

The details of the centralized hydrogen system have evolved over time. The amount of hydrogen stored for each SunCatcher will be increased from 3.4 to 11 standard cubic feet (scf) which would accommodate PCU's operation. In order to support this increased hydrogen storage at each SunCatcher, the high pressure supply tanks and low pressure dump tanks at each compressor group would accommodate 29,333 scf and 9,900 scf, respectively. In the June 2009 Supplement to the AFC, each high pressure supply tank was anticipated to be 648 scf and each low pressure dump tank was also reported to be 648 scf (Table 1). Overall, these changes to the centralized hydrogen system would result in an increase in the hydrogen stored onsite from 1,070 pounds to 28,400 pounds.

3. Construction Power

June 2008: The original AFC filing stated that IID would provide electricity to the Imperial Valley Solar Project during construction.

July 2010: On June 16, 2010, IID sent the CEC an email that discussed the inability to adequately serve the project with construction power without additions to their grid. If IID were to make these grid changes, it would take additional time such that construction power would not be available when required.

To obtain the necessary construction power, the project will purchase or lease up to six 230kV diesel generators, depending on the peak construction need. The generators will be EPA Tier 4 generators and will meet local air district requirements. These generators may be available as early as September/October of 2010. In the unlikely event that Tier 4 generators are not available when needed, the Applicant will use a quantity of Tier 3 generators for limited hours, such that their emissions will not exceed federal or state conformity thresholds.

**IMPERIAL VALLEY SOLAR PROJECT
08-AFC-5C
SSA CONDITIONS OF CERTIFICATION**

	Applicant Agrees With:	Applicant Disagrees With:
1	AQ-SC1	BIO-6
2	AQ-SC2	BIO-8
3	AQ-SC3	BIO-9
4	AQ-SC4	BIO-10
5	AQ-SC5	BIO-17
6	AQ-SC6	BIO-19
7	AQ-SC7	BIO-21
8	AQ-SC8	HAZ-2
9	AQ-SC9	HAZ-5
10	AQ-SC10	HAZ-7
11	AQ-1	SOIL&WATER-1*
12	AQ-2	SOIL&WATER-2
13	AQ-3	SOIL&WATER-7
14	AQ-4	SOIL&WATER-9
15	AQ-5	SOIL&WATER-10*
16	AQ-6	SOIL&WATER-11
17	AQ-7	SOIL&WATER-12
18	AQ-8	LAND-1
19	AQ-9	NOISE-4
20	AQ-10	NOISE-6
21	AQ-11	TRANS-1*
22	AQ-12	TRANS-2*
23	AQ-13	TRANS-3
24	AQ-14	TRANS-4*
25	AQ-15	VIS-1
26	AQ-16	VIS-2
27	AQ-17	VIS-3
28	AQ-18	VIS-4
29	AQ-19	VIS-6
30	AQ-20	VIS-7*
31	AQ-21	WORKER SAFETY-7
32	AQ-22	WORKER SAFETY-8*
33	AQ-23	GEN-2*
34	AQ-24	
35	AQ-25	
36	AQ-26	
37	AQ-27	
38	AQ-28	
39	AQ-29	
40	AQ-30	
41	AQ-31	
42	BIO-1	
43	BIO-2	
44	BIO-3	
45	BIO-4	
46	BIO-5	
47	BIO-7	
48	BIO-11	
49	BIO-12	
50	BIO-13	
51	BIO-14	

**IMPERIAL VALLEY SOLAR PROJECT
08-AFC-5C
SSA CONDITIONS OF CERTIFICATION**

	Applicant Agrees With:	Applicant Disagrees With:
52	BIO-15	
53	BIO-16	
54	BIO-18	
55	BIO-20	
56	PAL-1	
57	PAL-2	
58	PAL-3	
59	PAL-4	
60	PAL-5	
61	PAL-6	
62	PAL-7	
63	HAZ-1	
64	HAZ-3	
65	HAZ-4	
66	HAZ-6	
67	SOIL&WATER-3	
68	SOIL&WATER-4	
69	SOIL&WATER-5	
70	SOIL&WATER-6	
71	SOIL&WATER-8	
72	NOISE-1	
73	NOISE-2	
74	NOISE-3	
75	NOISE-5	
76	TLSN-1	
77	TLSN-2	
78	TLSN-3	
79	TLSN-4	
80	VIS-5	
81	WASTE-1	
82	WASTE-2	
83	WASTE-3	
84	WASTE-4	
85	WASTE-5	
86	WASTE-6	
87	WASTE-7	
88	WASTE-8	
89	WORKER SAFETY-1	
90	WORKER SAFETY-2	
91	WORKER SAFETY-3	
92	WORKER SAFETY-4	
93	WORKER SAFETY-5	
94	WORKER SAFETY-6	
95	GEN-1	
96	GEN-3	
97	GEN-4	
98	GEN-5	
99	GEN-6	
100	GEN-7	
101	GEN-8	
102	CIVIL-1	

**IMPERIAL VALLEY SOLAR PROJECT
08-AFC-5C
SSA CONDITIONS OF CERTIFICATION**

	Applicant Agrees With:	Applicant Disagrees With:
103	CIVIL-2	
104	CIVIL-3	
105	CIVIL-4	
106	STRUC-1	
107	STRUC-2	
108	STRUC-3	
109	STRUC-4	
110	MECH-1	
111	MECH-2	
112	MECH-3	
113	ELEC-1	
114	TSE-1	
115	TSE-2	
116	TSE-3	
117	TSE-4	
118	TSE-5	
119	TSE-6	
120	TSE-7	
121	COMPLIANCE-1	
122	COMPLIANCE-2	
123	COMPLIANCE-3	
124	COMPLIANCE-4	
125	COMPLIANCE-5	
126	COMPLIANCE-6	
127	COMPLIANCE-7	
128	COMPLIANCE-8	
129	COMPLIANCE-9	
130	COMPLIANCE-10	
131	COMPLIANCE-11	
132	COMPLIANCE-12	
133	COMPLIANCE-13	

* Indicates Applicant proposed change relates to submittal timing only (e.g., proposed modification to “30 days prior to construction”, “or a lesser number of days agreed to by the applicant and the CPM or CBO”, etc.

SPECIAL STATUS SPECIES HABITAT COMPENSATORY MITIGATION

This condition is designed to compensate for project-related impacts to habitat for FTHL, ~~burrowing owl, golden eagle, American badger, and desert kit fox~~. However, to the extent that any compensation land acquired under this condition satisfies the selection criteria for **BIO-17**, such compensation acreage acquired pursuant to this condition may be used to fulfill all or a portion of **BIO-17**.

BIO-10 To fully mitigate for habitat loss for FTHL, ~~burrowing owl, golden eagle, American badger, and desert kit fox~~, the project owner shall provide compensatory mitigation acreage of 6,619.9 acres. This figure was calculated as follows: a 1:1 ratio for 6,063.1 acres of impact outside of the FTHL Management Area (MA), and a 6:1 ratio for impacts to 92.6 acres within the FTHL MA. These impact acreages are to be adjusted to reflect the final approved project footprint. For purposes of this condition, the project footprint means all lands disturbed in the construction and operation of the IVS Project, including the offsite transmission line, as well as undeveloped areas inside the Project's boundaries that will no longer provide viable long-term habitat for the species mentioned above. To satisfy this condition, the project owner shall acquire, protect and transfer to an approved land manager no fewer than 6,619.9 acres of FTHL, ~~burrowing owl, golden eagle, American badger and desert kit fox 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 ~~\$9,386,637.37~~ ~~\$11,969,549.33~~ 7,388,578.33 based on the acquisition of 6,619.9 acres (consult [the Biological Resources Mitigation/Compensation Cost Estimate Table 5](#) for a complete breakdown of estimated costs). This includes an estimated per-acre cost of \$500 for acquisition, a pre-acquisition liability survey at no less than ~~\$2,500~~ \$3,000 per parcel (assuming 40 acres per parcel), appraisal fees at ~~\$3,000~~ \$5,000 per parcel, \$27 per acre for initial habitat improvement, ~~BLM-agency~~ internal costs for transfer of land estimated at ~~\$772,011.07~~ \$580,896.23, administrative costs of \$330,995.00 estimated at 10% of land costs. The administrative and acquisition costs are based on BLM estimates that include the presumed minor long term management tasks associated with the FTHL mitigation properties. and In addition to these fees, a charge of \$692 per acre for long term management is anticipated at a cost of \$4,580,970.80. The estimated subtotal for acquisition and long term management of the 6,619.9 acres would be \$7,388,578.53 11,969,549.33.

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., below. If the project owner elects to use the REAT Account with NFWF, a total of \$279,467.06 in fees will be required by

NFWF including the following: a 7% 3 percent NFWF fee (totaling ~~\$682,633.38~~ \$221,657.36); a \$12,000 account establishment fee; and a \$45,809.71 account management fee for the land transfer will be added to the costs to comply with this condition. This would bring the total estimated cost of fulfilling this condition to ~~\$10,434,538.75~~ \$7,668,054.59 ~~12,249,016.397.~~

The actual costs to comply with this condition will vary depending on the final project footprint, 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 Property Analysis Record (PAR) report. The 6,619.9-acre habitat requirement, and associated funding requirements based on that acreage, will be adjusted up or down if there are changes in the final project footprint.

The requirements for the acquisition, initial improvement, protection and long-term maintenance and management of compensation lands include all of the following:

1. Selection Criteria for Compensation Lands. The compensation lands selected for acquisition shall:
 - a. be within in or near FTHL Management Areas (MAs) in the Colorado Desert, with potential to contribute to FTHL habitat connectivity and build linkages between FTHL MAs, known populations of FTHLs, and/or other preserve lands;
 - b. provide high to moderate quality habitat for FTHL with capacity to regenerate naturally when disturbances are removed, though moderate to good quality habitat is acceptable near protected FTHL habitats;
 - c. be near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;
 - d. be connected to lands where FTHLs can be reasonably expected to occur currently occupied by FTHL, based on habitat or historic occurrences, ideally with populations that are stable, recovering, or likely to recover;
 - e. ideally contain soils that are stable and not suffering erosional damage;

- f. not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;
- g. not contain hazardous wastes that cannot be removed to the extent that the site could not provide suitable habitat; and
- h. have water and mineral rights included as part of the acquisition, unless the CPM, in consultation with CDFG, BLM and USFWS, agrees in writing to the acceptability of land without these rights.

2. Review and Approval of Compensation Lands Prior to Acquisition. The Project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for FTHL, ~~burrowing owl, golden eagle, American badger, and desert kit fox~~ in relation to the criteria listed above, and must be approved by the CPM. The CPM will share the proposal with and consult with CDFG, BLM, and the USFWS before deciding whether to approve or disapprove the proposed acquisition.

3. Compensation Lands Acquisition Requirements. The project owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM, in consultation with CDFG, BLM, and the USFWS, has approved the proposed compensation lands:

- a. Preliminary Report. The project owner, or approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary or requested documents for the proposed compensation land to the CPM. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM, in consultation with CDFG, BLM and the USFWS. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board.
- b. Title/Conveyance. The project owner shall acquire and transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement, as required by the CPM in consultation with CDFG. Any transfer of a conservation easement or fee title must be to CDFG, a nonprofit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM or other public agency approved by the CPM in consultation with CDFG. If an approved non-profit organization

holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFG or another entity approved by the CPM. If an entity other than CDFG holds a conservation easement over the compensation lands, the CPM may require that CDFG or another entity approved by the CPM, in consultation with CDFG, be named a third party beneficiary of the conservation easement. The project owner shall obtain approval of the CPM, in consultation with CDFG, of the terms of any transfer of fee title or conservation easement to the compensation lands.

- c. Initial Protection and Habitat Improvement. The project owner shall fund activities that the CPM, in consultation with the CDFG, USFWS and BLM, 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 at \$27 an acre, but 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.
- d. Property Analysis Record. Upon identification of the compensation lands, the Project owner shall conduct a ~~Property Analysis Record~~ (PAR) or PAR-like analysis to establish the appropriate amount of the long-term maintenance and management fund to pay the in-perpetuity management of the compensation lands. The PAR or PAR-like analysis must be approved by the CPM, in consultation with CDFG, before it can be used to establish funding levels or management activities for the compensation lands.
- e. 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. It is initially assumed that the acquisition cost and administrative cost estimates provided above are inclusive of the amount of required funding of the long term management of the acquired lands. The amount of required funding is initially estimated to be \$692 for every acre of compensation lands. 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 \$4,580,970.80 (calculated at \$692 an acre for 6,619.9 acres) or the project owner shall include \$4,580,970.80 to reflect this amount in the security that is provided to the Energy Commission under section 3.h. of this condition. The amount of the required initial payment or security for this item shall be adjusted for any change in the project footprint as described above. If an initial payment is made based on the estimated per-acre costs, the project owner shall deposit additional money as may be needed to provide the full amount of longterm maintenance and management funding indicated by a PAR or PAR-like analysis, once the analysis is completed and approved. If the approved analysis indicates less than \$692 an acre will be required for long-term maintenance and management, the excess paid will be returned to the project owner. The project owner must obtain the CPM's approval of the entity that will receive and hold the long-term maintenance and management fund for the compensation lands. The CPM will consult with CDFG before deciding whether to approve an entity to hold the project's long-term maintenance and management funds.

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:

- i. Interest. Interest generated from the initial capital long-term maintenance and management fund shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action that is approved by the CPM in consultation with CDFG and is designed to protect or improve the habitat values of the compensation lands.
- ii. Withdrawal of Principal. The long-term maintenance and management fund principal shall not be drawn upon unless such withdrawal is deemed necessary by the CPM, in consultation with CDFG, or by the approved third-party long-term maintenance and management fund

manager, to ensure the continued viability of the species on the compensation lands.

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

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

- g. Management plan. The project owner shall prepare a Management Plan for the compensation lands in consultation with the entity that will be managing the lands. The Management Plan shall reflect site-specific enhancement measures on the acquired compensation lands. The plan shall be submitted for approval of the CPM, in consultation with CDFG, BLM and USFWS.

- h. Mitigation Security. The project owner shall provide financial assurances to the CPM, with copies of the final document to CDFG, 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. Because the project related impacts will occur in phases, the mitigation security will similarly be phased. 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 in consultation with CDFG. Prior to submitting the Security to the CPM, the project owner shall obtain the CPM's approval, in consultation with CDFG, of the form of the Security. The CPM may draw on the Security if the CPM determines the project owner has failed to comply with the requirements specified in this condition. The CPM may use money from the Security solely for implementation of the requirements of this condition, The CPM's use of the Security to implement measures in this condition may not fully satisfy the project owner's obligations under this condition. The Security shall be returned to the Project owner in whole or in part upon successful completion of the associated requirements in this condition.

Security shall be provided as follows:

- \$1 million good faith payment upon the BLM's issuance of the Right of Way Grant (ROWG):
- \$1 million payment each quarter following issuance of ROWG until financial close:
- Remainder of payment for mitigation associated with 2505 acres associated with Phase 1, upon financial close. The remaining payment for the Phase I security mitigation shall be calculated based on the total estimated mitigation cost for the Phase I disturbance area and related offsite improvements (\$2,923,220) less the good faith payment and any quarterly payment made.
- Prior to ground disturbance associated with installation of SunCatchers in the Phase 2 area, consisting of 4,066 acres., or by January 1, 2013 at the latest, mitigation payment for acreage associated with Phase 2 estimated to be \$4,744,835

For purposes of this Condition, financial close shall be defined as sixty days following receipt of the DOE loan guarantee. in the amount of \$9,386,637.37 \$11,969,549.33 or (\$10,434,538.75 \$12,249,016.39 if the project owner elects to use the REAT Account with NFWF pursuant to paragraph 3.h. of this condition, below). The security is calculated in part, from the items that follow but adjusted as specified below (consult **Biological Resources Mitigation/Compensation Cost Estimate Table-5** for the complete breakdown of estimated costs):

- land acquisition costs for compensation land, calculated at \$500/acre = \$3,309,950.00;
- initial protection and habitat improvement activities on the compensation land, calculated at \$27/acre = \$178,732.30;
- ~~long-term maintenance and management on the compensation land calculated at \$692/acre = \$4,580,970.80;~~
- ~~pre-acquisition liability survey at no less than \$2,500 \$3,000 per parcel (assuming 40 acres per parcel) = \$413,743.75 \$498,000.00;~~
- appraisal fees at ~~\$3,000 \$5,000~~ per parcel = ~~\$458,908.50 \$830,000.00~~;
- BLM Agency cost to accept land = ~~\$765,415.07 \$580,896.23~~ (if BLM is determine to be most reasonable land manager); and
- NFWF fee = ~~\$657,064.64 \$279,467.06~~ (if NFWF is used for acquisition).
- Third-party administrative costs (estimated at 10% of land value) = \$330,995.00

ix. Biological survey of compensation lands at \$5,000 per parcel = \$830,000.00

x. Initial site cleanup = \$178,737.30

xi. Closing and escrow cost at \$5,000 per parcel = \$830,000.00

The amount of security shall be adjusted for any change in the project footprint as described above. In addition, the amount of Security specified in this section may be reduced in proportion to any of the secured mitigation requirements that the project owner has completed at the time the Security is required to be submitted. For example, if the project owner transfers funds for long-term management of the compensation lands to an entity approved to hold those funds, the Security would not include any amount for long-term maintenance and management of the lands. The project owner will be entitled to partial or complete release of the Security as the secured mitigation requirements are successfully completed.

- i. The project owner may elect to comply with the requirements in this condition for acquisition of compensation lands, initial protection and habitat improvement on the compensation lands, or long-term maintenance and management of the compensation lands by funding, or any combination of these three requirements, by providing funds to implement those measures into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF). To use this option, the Project owner must make an initial deposit to the REAT Account in an amount equal to the estimated costs (as set forth in the Security section of this condition) of implementing the requirement. The security shall be provided according to the schedule provided in section 3h. If the actual cost of the acquisition, initial protection and habitat improvements, or long-term funding is more than the estimated amount initially paid by the project owner, the project owner shall make an additional deposit into the REAT Account sufficient to cover the actual acquisition costs, the actual costs of initial protection and habitat improvement on the compensation lands, or the long-term funding requirements as established in an approved PAR or PAR-like analysis. If those actual costs or PAR projections are less than the amount initially transferred by the applicant, the remaining balance shall be returned to the project owner.

The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a nongovernmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFG, BLM and USFWS, prior to land acquisition, enhancement or management activities. Agreements to delegate land

acquisition to an approved third party, or to manage compensation lands, shall be executed and implemented within 18 months of the Energy Commission's certification of the project.

4. The project owner may choose to satisfy its mitigation obligations identified in this condition by paying an in-lieu fee instead of acquiring compensation lands, pursuant to Fish and Game code sections 2069 and 2099 or any other applicable in-lieu fee provision, to the extent the in-lieu fee provision is found by the Commission to be in compliance with CEQA and CESA requirements.

Verification: The project owner shall provide the CPM with written notice of intent to start ground disturbance at least 30 days prior to the start of ground-disturbing activities on the project site.

If the mitigation actions required under this condition are not completed at least 30 days prior to the start of ground-disturbing activities, the project owner shall provide the CPM with approved Security at least 30 days prior to the start of project ground-disturbing activities.

No later than 12 months after the start of ground-disturbing project activities, the project owner shall submit a formal acquisition proposal to the CPM describing the parcels intended for purchase, and shall obtain approval from the CPM, in consultation with CDFG, BLM and USFWS, prior to the acquisition. If NFWF or another approved third party is handling the acquisition, the project owner shall fully cooperate with the third party to ensure the proposal is submitted within this time period: the project owner, however, shall be deemed in compliance of this condition if it has provided the required funding and satisfied the provisions of this condition no later than 12 months after start of ground-disturbing project activities. The project owner or an approved third party shall complete the acquisition and all required transfers of the compensation lands, and provide written verification to the CPM, CDFG, BLM and USFWS of such completion, no later than 18 months after the issuance of the Energy Commission Decision. If NFWF or another approved third party is being used for the acquisition, the project owner shall ensure that funds needed to accomplish the acquisition are transferred in timely manner to facilitate the planned acquisition and to ensure the land can be acquired and transferred prior to the 18-month deadline. Provision of such funds will satisfy the project owner's obligations under this condition.

Draft agreements to delegate land acquisition to CDFG, BLM, or an approved third party and agreements to manage compensation lands shall be submitted to Energy Commission staff for review and approval (in consultation with CDFG) prior to land acquisition. Such agreements shall be mutually approved and executed at least 30 days prior to start of any project-related ground disturbance activities. The project owner shall provide written verification to the CPM that the compensation lands have been acquired and recorded in favor of the approved recipient(s). Alternatively, before beginning project ground-disturbing activities, the project owner shall provide Security in accordance with section 3.h of this condition. The project owner shall provide CPM with

notice of receipt of the DOE loan guarantee within 7 days of receipt of notice from the DOE. Within 180 days after the land purchase, as determined by the date on the title, the project owner shall provide the CPM with a management plan for review and approval, in consultation with CDFG, BLM, and USFWS, for the compensation lands and associated funds.

The project owner shall complete and submit to the CPM a PAR or PAR-like analysis no later than 60 days after the CPM approves compensation lands for acquisition. The project owner shall fully fund the required amount for long-term maintenance and management of the compensation lands no later than 30 days after the CPM approves a PAR or PAR-like analysis of the anticipated long-term maintenance and management costs of the compensation lands. Written verification shall be provided to the CPM and CDFG to confirm payment of the long-term maintenance and management funds.

No later than 60 days after the CPM determines what activities are required to provide for initial protection and habitat improvement on the compensation lands, the project owner shall make funding available for those activities and provide written verification to the CPM of what funds are available and how costs will be paid. Initial protection and habitat improvement activities on the compensation lands shall be completed, and written verification provided to the CPM, no later than six months after the CPM's determination of what activities are required on the compensation lands.

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

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

If electing to satisfy the requirements of this condition by utilizing the options created by CDFG pursuant to SBX8 34, the Project owner shall notify the Commission that it would like a determination that the Project's in-lieu fee proposal meets CEQA and CESA requirements.

WATERS OF THE U.S. LAKE AND STREAMBED AND PENINSULAR BIGHORN SHEEP FORAGING HABITAT IMPACT MINIMIZATION AND COMPENSATION MEASURES

BIO-17 The project owner is required to compensate for the loss of ~~247884~~ acres of ephemeral wash foraging habitat for the Peninsular bighorn sheep (PBHS), defined as the 28% of the ephemeral washes on site that provide sufficient vegetation to potentially provide PBHS foraging opportunities, as well as the functional loss of ~~38.2 of permanently impacted, 14 acres of temporarily impacted and 1.63 acres of indirectly impacted waters of the U.S. 48 acres of state jurisdictional waters.~~ Mitigation presented within this proposed Condition of Certification is designed to mitigate for impacts resulting from implementation of the alternative preliminarily determined by the U.S. Army Corps of Engineers to be the least environmentally damaging practicable alternative. Drainage Avoidance #1 Alternative. This alternative substantially reduces impacts to federal and state jurisdictional waters, and waters of the U.S. Further review and possible revision of compensation land acreage requirements will be necessary following determination of the final project footprint and impacts. ~~The acquisition of jurisdictional state waters can be included with the FTHL, burrowing owl, golden eagle, American badger, and desert kit fox mitigation lands (BIO-10) if they are acquired within 18 months of start of construction. If FTHL habitat mitigation lands are not acquired within 18 months, the project owner shall independently provide 48 acres of off-site desert ephemeral wash habitat. If changes are made to the project footprint, the mitigation requirement will be equal to the amount of the 247 acres of ephemeral washes on the site that provide potential PBHS foraging habitat at a 1:1 ratio, the amount of permanently impacted waters of the U.S. at a 5:1 ratio and the amount of temporarily impacted waters of the U.S. at a 1:1 ratio.~~

If all or any portion of the acquired habitat compensation lands from **BIO-10** meets the criteria for bighorn sheep foraging habitat and provide for the replacement of the functional values associated with the impacted waters of the U.S. state waters compensation lands, then the requirements of **BIO-17** are reduced by that amount.

In coordination with the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and State Parks, the applicant has proposed to conduct enhancement and rehabilitation of Carrizo Creek and marsh located west/northwest of the project on the Anza Borrego State Park. This area was chosen because it is within the same watershed as the project and is within known PBHS populations. The measures are focused on Tamarisk (*Tamarix* spp.) removal which will restore and enhance the aquatic functions of this area and PBHS foraging habitat. If this mitigation option is chosen, the applicant shall do the following:

- Carrizo Creek Enhancement Plan: the applicant shall prepare an enhancement and rehabilitation plan that shall cover approximately 25 miles

of Carrizo Creek from the headwaters downstream through Carrizo Marsh (Carrizo Creek Enhancement Plan). The enhancement and rehabilitation plan shall be prepared in accordance with the Corps' and EPA's Final Mitigation Rule (33 CFR Part 325 and 332 [40 CFR Part 230]) and will include detailed methods for the initial removal, retreatment methods, limited native species replanting, monitoring and reporting protocols, and performance standards.

- Mitigation Plan. Prepare a Mitigation Plan which provides for the rehabilitation and enhancement of 247 ephemeral washes consistent with the Carrizo Creek Plan. Although the applicant will prepare the enhancement and rehabilitation plan for the entire 25-mile reach of Carrizo Creek, the applicant will only be responsible for the enhancement and rehabilitation the amount necessary to mitigate direct and indirect impacts to waters of the U.S. and PBHS foraging habitat. The amount of mitigation shall be 247 acres of the Carrizo Creek. The Mitigation Plan shall include the measures needed to rehabilitate and enhance 247 acres of Carrizo Creek, monitoring of the rehabilitated and enhanced areas for 5 years, submitting annual reports to the CPM, Corps, USFWS, CDFG and BLM; success criteria; long term management requirements; and adaptive management provisions if the success criteria are not being met. The Mitigation Plan shall be submitted to the CPM, Corps, and USFWS for approval.
- Long Term Management. Following completion of the initial 5 year monitoring period and concurrence from the Corps that the Mitigation Plan's success criteria, the long term management shall be the responsibility of State Parks and shall be done in connection with the overall management of the Anza Borrego State Park.
- Funding. The applicant shall be responsible for funding the measures outlined in the approved Management Plan. It is estimated that the initial rehabilitation and enhancement will cost approximately \$494,000 (\$2,000 per acre) and that the 5 years of monitoring and active management will cost approximately \$230,000 (\$60,000 for the first three years when it is anticipated that some follow up control for tamarisk will be required as well as replanting of native vegetation and other weed control; \$50,000 for years four and five of the monitoring period where it is anticipated that efforts will be limited mostly to monitoring and maintenance). Long term management is estimated to cost \$170,924 (based on an assumed cost of \$692 per acre). The estimates regarding the cost associated with carrying out the enhancement/rehabilitation methods, monitoring and maintenance are based on Tamarisk Coalition cost estimates that were updated as of 2008. These numbers are appropriate for planning purposes; the actual cost, however, will degree of infestation present. The total cost of meeting the requirements of this condition is estimated to be \$894,924.
- Security. The project owner shall provide security to ensure satisfaction of the terms of this condition as follows: (1) prior to initiation ground-disturbing activity, the applicant shall provide security in the amount of \$494,000 to ensure the implementation of the enhancement and rehabilitation measures;

(2) remainder of the cost associated with this mitigation measure equaling \$300,924 shall be provided upon financial close for the project. For purposes of this Condition, financial close shall be defined as sixty days following receipt of the DOE loan guarantee.

Should the applicant not proceed with the above described mitigation of the Carrizo Creek, the applicant shall either, in coordination with the CEC, BLM, Corps, USFWS and CDFG, identify similar enhancement and rehabilitation measures on state or federally owned lands or acquire lands on which similar enhancement and rehabilitation measures can be implemented. If alternative measures are proposed, the mitigation land shall meet the following criteria. Although the criteria for ephemeral wash foraging habitat and waters of the statesU.S. habitat are listed separately below, anythe alternative compensation lands acquired pursuant to this conditions must meet both sets of criteria.

1. Selection Criteria for Compensation Lands: Land selected as compensation for loss of ephemeral wash PBHS foraging habitat must satisfy the following criteria;
 - a. Be within the “Essential Habitat Line” for PBHS, as delineated by the USFWS Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California (USFWS 2000). If sufficient available suitable habitat is not found within the Essential Habitat Line, then habitat immediately adjacent to the Essential Habitat Line must be purchased, and also of equal or higher quality habitat than present within the project site.
 - b. Be comprised of the same or higher quality habitat of demonstrated known utilization by PBHS as forage, and selected in conjunction with input from CDFG and the USFWS.

Land selected as compensation for impacts to waters of the U.S. state jurisdictional waters must satisfy the following criteria:

- c. Compensation land purchased in Sonoran creosote scrub habitat must include ephemeral washes with at least ~~24748~~ acres of waters of the U.S. and must allow for enhancement measures that will fully mitigate for the functional values of waters of the U.S. impacted by the project, state jurisdictional waters, mitigated at a 1:1 ratio.
 - d. Be characterized by similar soil permeability, hydrological and biological functions as the impacted drainages.
 - e. Located in the Colorado Desert.
2. Review and Approval of Compensation Lands Prior to Acquisition: The Project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for FTHL in relation to the criteria listed above, and must be approved by the CPM. The CPM will share

the proposal with and consult with Corps, CDFG, BLM, and the USFWS before deciding whether to approve or disapprove the proposed acquisition.

3. Compensation Lands Acquisition Requirements: The project owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM, in consultation with Corps, CDFG, BLM, and the USFWS, has approved the proposed compensation lands:
 - a. Preliminary Report. The Project owner, or approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary or requested documents for the proposed compensation land to the CPM. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM, in consultation with Corps, CDFG, BLM and the USFWS. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board.
 - b. Title/Conveyance. The Project owner shall acquire and transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement, as required by the CPM in consultation with CDFG. Any transfer of a conservation easement or fee title must be to CDFG, a nonprofit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM or other public agency approved by the CPM in consultation with CDFG. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFG or another entity approved by the CPM. If an entity other than CDFG holds a conservation easement over the compensation lands, the CPM may require that CDFG or another entity approved by the CPM, in consultation with CDFG, be named a third party beneficiary of the conservation easement. The Project owner shall obtain approval of the CPM, in consultation with CDFG, of the terms of any transfer of fee title or conservation easement to the compensation lands.
 - c. Initial Protection and Habitat Improvement. The project owner shall fund activities that the CPM, in consultation with the Corps, CDFG, USFWS and BLM, 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 at \$27 an acre, but 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.

- d. Property Analysis Record. Upon identification of the compensation lands, the Project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate amount of the long-term maintenance and management fund to pay the in-perpetuity management of the compensation lands. The PAR or PAR-like analysis must be approved by the CPM, in consultation with CDFG, before it can be used to establish funding levels or management activities for the compensation lands.
- e. 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 \$692 for every acre of compensation lands. 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 ~~\$609,652~~170,924 (calculated at \$692 an acre for ~~884,247~~ acres) or the project owner shall include ~~\$170,924~~609,652 to reflect this amount in the security that is provided to the Energy Commission under section 3.h. of this condition. The amount of the required initial payment or security for this item shall be adjusted for any change in the project footprint as described above. If an initial payment is made based on the estimated per-acre costs, the project owner shall deposit additional money as may be needed to provide the full amount of long-term maintenance and management funding indicated by a PAR or PAR-like analysis, once the analysis is completed and approved. If the approved analysis indicates less than \$692 an acre will be required for long-term maintenance and management, the excess paid will be returned to the project owner. The project owner must obtain the CPM's approval of the entity that will receive and hold the long-term maintenance and management fund for the compensation lands. The CPM will consult with CDFG before deciding whether to approve an entity to hold the project's long-term maintenance and management funds.

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:

- i. Interest. Interest generated from the initial capital long-term maintenance and management fund shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, Including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action that is approved by the CPM in consultation with CDFG and is designed to protect or improve the habitat values of the compensation lands.
 - ii. Withdrawal of Principal. The long-term maintenance and management fund principal shall not be drawn upon unless such withdrawal is deemed necessary by the CPM, in consultation with CDFG, or by the approved third-party long-term maintenance and management fund manager, to ensure the continued viability of the species on the compensation lands.
 - iii. Pooling Long-Term Maintenance and Management Funds. An entity approved to hold long-term maintenance and management funds for the Project may pool those funds with similar non-wasting funds that it holds from other projects for long-term maintenance and management of compensation lands for local populations of desert tortoise. However, for reporting purposes, the long-term maintenance and management funds for this Project must be tracked and reported individually to the CPM and CDFG.
- f. Other Expenses. In addition to the costs listed above, the project owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to the title and document review costs incurred from other state agency reviews, overhead related to providing compensation lands to CDFG or an approved third party, escrow fees or costs, environmental contaminants clearance, and other site cleanup measures.
- g. Management Plan. The project owner shall prepare a Management Plan for the compensation lands in consultation with the entity that will be

managing the lands. The Management Plan shall reflect site-specific enhancement measures for the drainages on the acquired compensation lands. The objective of the Management Plan shall be to enhance the wildlife value and the aquatic functions of the drainages and may include enhancement actions such as weed control, fencing to exclude livestock and OHVs, or erosion control. The plan shall be submitted for approval of the CPM, in consultation with CDFG, BLM and USFWS.

- h. Mitigation Security. The project owner shall provide financial assurances as provided above to the CPM, with copies of the final document to CDFG, 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 in consultation with CDFG. Prior to submitting the Security to the CPM, the project owner shall obtain the CPM’s approval, in consultation with CDFG, of the form of the Security. The CPM may draw on the Security if the CPM determines the project owner has failed to comply with the requirements specified in this condition. The CPM may use money from the Security solely for implementation of the requirements of this condition, The CPM’s use of the Security to implement measures in this condition may not fully satisfy the project owner’s obligations under this condition. The Security shall be returned to the Project owner in whole or in part upon successful completion of the associated requirements in this condition.

Security shall be provided in the amount of ~~\$1,297,656.86~~
~~\$900,4481,609,296.75~~ or (~~\$1,388,492.84~~ ~~\$963,4801,645,382.61~~ if the project owner elects to use the REAT Account with NFWF pursuant to paragraph 3.h. of this condition, below). The security is calculated in part, from the items that follow but adjusted as specified below (consult **Biological Resources Mitigation/Compensation Cost Estimate Table 5** for the calculation of estimated costs):

- i. land acquisition costs for compensation land, calculated at \$500/acre x 881247 acres = \$123,500440,500;
- ii. initial protection and habitat improvement activities on the compensation land, calculated at \$2,00027/acre x 881247 acres = \$494,00023,787;
- iii. long-term maintenance and management on the compensation land calculated at \$692/acre x 881247 acres = \$170,924609,652;

iv. pre-acquisition liability survey at no less than \$2,500 ~~\$3,000~~ per parcel (assuming 40 acres per parcel ~~= 23~~ 6 parcels): = \$6918,000;

(No. of parcels = ~~881 acres~~ : 40 acres = ~~22 parcels~~) 22 parcels x \$2500 = \$55,000;

v. appraisal fees at ~~\$3,000~~ \$5,000 per parcel = \$66,000 \$30,000~~115,000~~;

vi. Agency BLM cost to accept land calculated at (land cost x 15%) x 1.17 (17% of the 15% for overhead) = \$102,717.86 \$21,674.25~~77,307.75~~; (if BLM is determine to be most reasonable land manager); and

vii. Closing and escrow cost at \$5,000 per parcel = \$30,000~~115,000~~;

viii. Third party administrative costs (land cost x 10%) = \$12,350~~44,050~~;

ix. Biological survey for determining mitigation value of land at \$5,000 per parcel = \$115,000; and

x. NFWF fee = \$90,835.98 \$63,031~~36,085.86~~ (if NFWF is used for acquisition).

The amount of security shall be adjusted for any change in the project footprint as described above. In addition, the amount of Security specified in this section may be reduced in proportion to any of the secured mitigation requirements that the project owner has completed at the time the Security is required to be submitted. If all or any portion of required habitat compensation lands from **BIO-10** and **BIO-17** meets the criteria set forth for special status compensation lands may be used to fulfill that portion of the obligation for this condition, thus reducing the compensation acreage amount needed to fulfill the needed 247884 acres. Also, if the project owner transfers funds for long-term management of the compensation lands to an entity approved to hold those funds, the Security would not include any amount for long-term maintenance and management of the lands. The project owner will be entitled to partial or complete release of the Security as the secured mitigation requirements are successfully completed.

- i. The project owner may elect to comply with the requirements in this condition for acquisition of compensation lands, initial protection and

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

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

4. The project owner may choose to satisfy its mitigation obligations identified in this condition by paying an in lieu fee instead of acquiring compensation lands, pursuant to Fish and Game code sections 2069 and 2099 or any other applicable in-lieu fee provision, to the extent the in-lieu fee provision is found by the Commission to be in compliance with CEQA and CESA requirements.
5. Notification. The project owner shall notify the CPM and CDFG in writing, at least five days prior to initiation of project activities in jurisdictional areas as noted and at least five days prior to completion of project activities in jurisdictional areas. The project owner shall notify the CPM and CDFG of any change of conditions to the project, the jurisdictional impacts, or the mitigation efforts, if the conditions at the site of a proposed project change in a manner which changes risk to biological resources that may be substantially adversely affected by the proposed project. The notifying report shall be provided to the CPM and CDFG no later than seven days after the change of conditions is identified. As used here, change of condition refers to the process, procedures, and methods of operation of a project; the biological and physical characteristics of a project area; or the

laws or regulations pertinent to the project as defined below. A copy of the notifying change of conditions report shall be included in the annual reports.

- Biological Conditions: a change in biological conditions includes, but is not limited to, the following: 1) the presence of biological resources within or adjacent to the project area, whether native or non-native, not previously known to occur in the area; or 2) the presence of biological resources within or adjacent to the project area, whether native or nonnative, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.
- Physical Conditions: a change in physical conditions includes, but is not limited to, the following: 1) a change in the morphology of a river, stream, or lake, such as the lowering of a bed or scouring of a bank, or changes in stream form and configuration caused by storm events; 2) the movement of a river or stream channel to a different location; 3) a reduction of or other change in vegetation on the bed, channel, or bank of a drainage, or 4) changes to the hydrologic regime such as fluctuations in the timing or volume of water flows in a river or stream.
- Legal Conditions: a change in legal conditions includes, but is not limited to, a change in Regulations, Statutory Law, a Judicial or Court decision, or the listing of a species, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California.

6. Waters of the U.S., Lake and Streambed Impact Minimization and Compensation Measures. The project owner shall provide a copy of Condition of Certification **BIO-17** from the Energy Commission Decision to all contractors, subcontractors, and the Applicant's project supervisors. Copies shall be readily available at work sites at all times during periods of active work and must be presented to any CDFG personnel or personnel from another agency upon demand. The CPM reserves the right to issue a stop work order or allow CDFG to issue a stop work order after giving notice to the project owner and the CPM, if the CPM in consultation with CDFG, determines that the project owner has breached any of the terms or conditions or for other reasons, including but not limited to the following:

- The information provided by the applicant regarding streambed alteration is incomplete or inaccurate;
- New information becomes available that was not known to it in preparing the terms and conditions;

- The project or project activities as described in the SAA have changed; or
- The conditions affecting biological resources changed or the CPM or BLM Biologist, in consultation with CDFG or USACE, determines that project activities would result in a substantial adverse effect on the environment.

Should project conditions change and impacts to bed, bank, or channel occur on any of the water ways along the reclaimed water pipeline route, a revised Lake and streambed Alteration Agreement (LSAA) application must be submitted to the Commission in consultation with CDFG either (1) for a Commission determination that the revised LSAA application complies with CEQA and CESA; or (2) should the project conditions change after a final decision in on the AFC in this proceeding, through an application for amendment to the Commission's final decision issued in this proceeding.

Verification: Prior to groundbreaking activities, the applicant shall submit to the CPM an enhancement and rehabilitation plan for the Carrizo Creek and a Mitigation Plan for restoring the 247 acres of Carrizo Creek consistent with the restoration and rehabilitation plan. The applicant shall submit documentation that the enhancement and rehabilitation plan and the Mitigation Plan have been approved by the Corps, USFWS, and State Parks. No later than 18 months after ground-disturbing activities, the applicant shall submit documentation that the initial enhancement and rehabilitation measures have been completed. The applicant shall submit annual monitoring reports to the CPM, Corps, USFWS, CDFG and State Parks documenting the success of the enhancement and rehabilitation activities. At the end of the initial 5 year monitoring period, applicant shall submit documentation to the CPM that the Corps has accepted the mitigation as being complete and documentation that funding has been provided to State Parks for the long term management of the mitigation lands and that State Parks has accepted such funds and has agreed to carry out long term management of these areas.

If the applicant elects to acquire lands to satisfy this condition, nNo later than 12 months after the start of ground-disturbing project activities, the project owner, or a third-party approved by the CPM, in consultation with CDFG and BLM, shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase containing no less than 247 acres of 48 acres of state jurisdictional waters and 881 acres of applicable PBHS foraging habitat and 247 acres of ephemeral drainages, and shall obtain approval from the CPM, in consultation with CDFG, BLM, and USFWS, prior to acquisition.

Draft agreements to delegate land acquisition to CDFG, BLM, or an approved third party and agreements to manage compensation lands shall be submitted to Energy

Commission staff for review and approval (in consultation with CDFG) prior to land acquisition. Such agreements shall be mutually approved and executed at least 30 days prior to start of any project-related ground disturbance activities. The project owner shall provide written verification to the CPM that the compensation lands have been acquired and recorded in favor of the approved recipient(s). Alternatively, before beginning project ground-disturbing activities, the project owner shall provide Security in accordance with section 3.h of this condition. Within 180 days after the land purchase, as determined by the date on the title, the project owner shall provide the CPM with a management plan for review and approval, in consultation with CDFG, BLM, and USFWS, for the compensation lands and associated funds.

The project owner shall complete and submit to the CPM a PAR or PAR-like analysis no later than 60 days after the CPM approves compensation lands for acquisition. The project owner shall fully fund the required amount for long-term maintenance and management of the compensation lands no later than 30 days after the CPM approves a PAR or PAR-like analysis of the anticipated long-term maintenance and management costs of the compensation lands. Written verification shall be provided to the CPM and CDFG to confirm payment of the long-term maintenance and management funds.

No later than 60 days after the CPM determines what activities are required to provide for initial protection and habitat improvement on the compensation lands, the project owner shall make funding available for those activities and provide written verification to the CPM of what funds are available and how costs will be paid. Initial protection and habitat improvement activities on the compensation lands shall be completed, and written verification provided to the CPM, no later than six months after the CPM's determination of what activities are required on the compensation lands.

If electing to satisfy the requirements of this condition by utilizing the options created by CDFG pursuant to SBX8 34, the Project owner shall notify the Commission that it would like a determination that the Project's in-lieu fee proposal meets CEQA and CESA requirements.

No fewer than 30 days prior to the start of work potentially affecting jurisdictional state waters, the project owner shall provide written verification (i.e., through incorporation into the BRMIMP) to the CPM that the above best management practices will be implemented and provide a discussion of work in jurisdictional state waters in Compliance Reports for the duration of the project.

SPECIAL STATUS PLANT IMPACT AVOIDANCE, MINIMIZATION, AND COMPENSATION

BIO-19 This condition contains the following four sections:

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

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

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

BIO-19 ~~The Project owner shall implement the following measures to avoid, minimize, and mitigate impacts to special-status plant species:~~

Section A: Special Status Plant Avoidance and Minimization Measures

To protect all special status plants¹ located on site outside of the Project Disturbance Area and within 100 feet of the permitted Project Disturbance Area (including access roads, staging areas, laydown areas, parking and storage areas) and special status plants occurring within the rights of way for the offsite pipeline and transmission line, as practicable, from accidental and indirect impacts during construction, operation, and closure, the Project owner shall implement the following measures:

1. Designated Botanist. An experienced botanist who meets the qualifications described in Section **B-2** below shall oversee compliance with all special-status plant avoidance, minimization, and compensation measures described in this condition throughout construction, operation, and closure. The Designated Botanist shall oversee and train all other Biological Monitors tasked with conducting botanical survey and monitoring work. During operation of the project, the Designated Biologist shall be responsible for protecting special status plant on site occurring within occurrences within 100 feet of the Project Disturbance Area and special status plant occurring with the right of way for the offsite pipeline and transmission lineproject boundariesd- as practicable.
2. Special Status Plant Impact Avoidance and Minimization Plan. The project owner shall develop and implement a Special Status Plant Impact Avoidance and Minimization Plan and shall incorporate the Plan into the BRMIMP (**BIO-7**). The Plan shall include the following elements:
 - a. Site Design Modifications: Incorporate site design modifications to minimize impacts to special-status plants along the Project linears: limiting the width of the work area; adjusting the location of staging areas, lay downs, spur roads and poles or towers; driving and crushing vegetation as an alternative to blading temporary roads to preserve the seed bank, and minor adjustments to the alignment of the roads and pipelines within the constraints of the right-of-way (ROW). These modifications shall be clearly depicted on the grading and construction plans, and on report-sized maps in the BRMIMP;
 - b. Establish Environmentally Sensitive Areas (ESAs). Before construction, the Designated Botanist shall establish ESAs to protect avoided special status plants that occur onsite outside of the Project Disturbance Areas and within 100 feet of Project Disturbance Areas, and avoided special status plants that occur within the right s of way for the offsite pipeline and transmission

¹ Staff defines special-status plants as described in *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (California Natural Resources Agency, Department of Fish and Game, issued November 24, 2009).

line, -as practicable. This includes plant occurrences identified during the spring 2010 surveys and the late season 2010 surveys.

The locations of ESAs shall be clearly depicted on construction drawings, which shall also include all avoidance and minimization measures on the margins of the construction plans. The boundaries of the ESAs shall be placed a minimum of 20 feet from the uphill side of the occurrence and 10 feet from the downhill side. Where this is not possible due to construction constraints, other protection measures, such as silt-fencing and signs prohibiting movement of the fencing or sediment controls, may be employed to protect the occurrences, and, ESAs shall be clearly delineated in the field with temporary construction fencing and signs prohibiting movement of the fence under penalty of work stoppages and additional compensatory mitigation. ESAs shall also be permanently marked clearly identified (with signage or other markers) to ensure that avoided plants are not inadvertently harmed during construction, operation, or closure. Where avoidance will not allow for long-term viability of the species, no ESA shall be established.

- c. Special-Status Plant Worker Environmental Awareness Program (WEAP). The Plan shall include training components specific to protection of special-status plants, and shall be incorporated into the WEAP described in **BIO-6**;
- d. Herbicide and Soil Stabilizer Drift Control Measures. The Plan shall provide 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 plants, consistent with guidelines provided by the Nature Conservancy's *The Global Invasive Species Team*², the U.S. Environmental Protection Agency, and the Pesticide Action Network Database³.
<<http://www.invasive.org/gist/products.html>>
- e. Erosion and Sediment Control Measures. The Plan shall include measures to ensure that erosion and sediment control measures do not inadvertently impact special-status plants located within an ESA (e.g., by using invasive or non-native plants in seed mixes, introducing pest plants through contaminated seed or straw, etc.).

² Hillmer, J. & D. Liedtke. 2003. Safe herbicide handling: a guide for land stewards and volunteer stewards. Ohio Chapter, The Nature Conservancy, Dublin, OH. 200 pp. Online: <<http://www.invasive.org/gist/products.html>>

³ Pesticide Action Network of North America. Kegley, S.E., Hill, B.R., Orme, S., Choi, A.H., 2010. PAN Pesticide Database, Pesticide Action Network, North America. San Francisco, CA. Online: <<http://www.pesticideinfo.org>>

These measures shall be incorporated in the Storm Water Pollution Prevention Plan.

- f. Avoid Special-Status Plant Occurrences. Designate spoil areas; equipment, vehicle, and materials storage areas; parking; equipment and vehicle maintenance areas, and; wash areas at least 100 feet from any ESAs, as practicable.
- g. Monitoring and Reporting Requirements. The Designated Botanist shall conduct weekly monitoring of the ESAs that protect special-status plant occurrences during construction, ~~operation, or~~ and decommissioning activities ~~within 100 feet of the occurrences,~~ and quarterly monitoring for the remainder of construction during operations. ~~The Project owner shall also conduct annual monitoring of the avoided occurrences on-site, and off-site occurrences that are adjacent to the Project, for the life of the Project~~ (see Verification, below).
- h. Seed Collection. ~~Conduct pre-construction collection of seed (or other propagules) of the affected special-status plants within the Project Disturbance Area in the summer-fall season prior to the start of construction and according to the seed collection and storage guidelines contained in (Wall 2009a; Bainbridge 2007). Collection of seed (or other propagules) shall be done by the Rancho Santa Ana Botanic Garden (RSABG) Conservation Program staff or other qualified seed or restoration specialist. The Project owner shall be responsible for all costs associated with seed storage. All seed storage shall occur at RSABG or other qualified seed dealer and at least 40 percent of the collected seed shall remain in long-term storage at RSABG Seed Conservation Program, San Diego Natural History Museum, or other qualified seed conservation program, and made available for contingency efforts in the event of on-site or off-site mitigation failure.~~

Section B: Conduct Late-Season Botanical Surveys

The Project owner shall conduct late-summer/fall botanical surveys for late-season special-status plants as described below:

1. Survey Timing. Surveys shall be timed to detect: ~~a) summer annuals triggered to germinate by the warm, tropical summer storms (which may occur any time between June and October), and b) f~~ Fall-blooming perennials that respond to the cooler, later season storms that originate in the Pacific northwest (typically beginning in September or October) shall only be required if blooms and seeds are necessary for identification or the species are summer-deciduous and require leaves for identification. The surveys shall not be timed to coincide with the statistical peak bloom period of the target species but shall instead be based on plant phenology and the timing of a significant storm event (i.e., a 10mm or greater rain or

multiple storm events of sufficient volume to trigger germination, as measured at or within 1 mile of the Project site). Surveys for ~~summer annuals shall be timed to occur approximately 4 to 7 weeks following a warm, tropical storm. Re-surveys shall occur as many times as necessary to ensure that surveys are conducted during~~ at the appropriate time to capture the characteristics necessary to identify identification period for the target taxa, which may be blooms, fruit, seed characteristics, or vegetative characteristics, depending on the taxon.

2. Surveyor Qualifications and Training. Surveys shall be conducted by a qualified botanist knowledgeable in the complex biology of the local flora, and consistent with CDFG protocols (CDFG 2009). The botanical survey crew shall be prepared to mobilize quickly to conduct appropriately timed surveys. Each surveyor shall be equipped with a GPS unit and record a complete tracklog; these data shall be compiled and submitted along with the Summer-Fall Survey Botanical Report (described below). Prior to the start of surveys, all crew members shall, at a minimum, visit reference sites (where available) and/or review herbarium specimens of all BLM Sensitive plants, CNPS List 1B or 2 (Nature Serve rank S1 and S2) or proposed List 1B or 2 taxa, and any new reported or documented taxa, to obtain a search image. Because the potential for range extensions are ~~likely to be found~~ is unknown, the list of potentially occurring special-status plants shall include all special-status taxa known to occur within the Sonoran Desert region in California. The list shall also include taxa with bloom seasons that begin in fall and extend into the early spring as many of these are reported to be easier to detect in fall, following the start of the fall rains.
3. Survey Coverage.
 - a) Survey protocol utilized for the 2010 late spring surveys for the project site could be utilized for summer/fall botanical surveys (see **Methods** section of the URS report titled "Imperial Valley Solar (formerly Solar Two) (08-AFC-5) Applicant's Submittal of Late Spring Botany Report, URS Project No. 27657106.00804", dated June 11, 2010; **or** the project owner can do the following:
 - b) The survey coverage or intensity shall be in accordance with BLM Survey Protocols (issued July 2009), which specify that intuitive controlled surveys shall only be accomplished by botanists familiar with the habitats and species that may reasonably be expected to occur in the project area. At a minimum, the Applicant shall ~~conduct comprehensive surveys (i.e., 100 percent visual coverage) of the washes, and other lowlands within the Project Disturbance Area to capture the full extent of the washes that will be affected by development in the washes. In the intervening uplands (dry areas), surveys shall be conducted to ensure a 25 percent visual coverage. Other special or unique habitats associated with rare plants shall also be surveyed at 100 percent visual coverage. Transects shall~~

be “intuitive controlled” (per Whiteaker et al. 1998) to ensure a focus on habitat most likely to support rare plants (such as desert washes), rather than on pre-defined, evenly-spaced survey grids. In the one-mile Energy Commission buffer areas (outside the Project Disturbance Area), washes and other habitats strongly associated with rare plants shall also be surveyed comprehensively (i.e., 100 percent visual coverage) if they will be affected by development in the washes, but the intervening uplands or habitat not strongly associated with rare plants may be spot-checked or sampled at approximately 10 percent visual coverage.

4. Documenting Occurrences. If a special-status plant is detected, the full extent of the population shall be assessed, both onsite shall be recorded using GPS in accordance with BLM survey protocols and offsite. Additionally, the extent of the population within one mile of project boundaries shall be assessed at least qualitatively to facilitate an accurate estimation of the proportion of the population affected by the project. For populations that are very dense or very large, the population size may be estimated by simple sampling techniques. When populations are very extensive or locally abundant, the survey must provide some basis for this assertion and roughly map the extent on a topographic map. The number of individuals shall be counted (or sub-sampled and the population size estimated in the event of large populations). The boundaries of all occurrences shall be recorded with hand-held GPS units of one meter or better accuracy and then plotted on aerial photo base maps of a scale similar to that used in the AFC (SES 2008a). All but the smallest populations (e.g., a population occupying less than 100 square feet) shall be recorded as area polygons; small populations may be recorded as point features. All GPS-recorded occurrences shall include: the number of plants, phenology, observed threats (e.g., OHV or invasive exotics), and habitat or community type. The map of occurrences submitted with the progress reports and final botanical report shall be prepared to ensure consistency with mapping protocol and definitions of an occurrences in by CNDDDB: i.e., occurrences found within 0.25 miles of another occurrence of the same taxon, and not separated by significant habitat discontinuities, shall be combined into a single ‘occurrence’. The project owner shall also submit the raw GPS shape files and metadata, and completed CNDDDB forms for each ‘occurrence’ (as defined by CNDDDB).
5. Reporting. Raw GPS data, metadata, and CNDDDB field forms shall be provided to the CPM within two weeks of the completion of each survey. If surveys are split into two or more periods (e.g., a late summer survey and a fall survey), then a summary letter shall be submitted following each survey period. Progress Reports shall be submitted during surveys (as described below in verification), and shall include: a) the raw GPS data and metadata; b) a spreadsheet of the data (from the ‘dbf’ file), and c) a map of the data showing occurrence locations (labeled with their

corresponding occurrence number from the GPS files) and Project features on a USGS topographic base map.

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

- a. the BLM designation, NatureServe Global and State Rank of each species or taxon found (or proposed rank, or CNPS List);
- b. the number or percent of the occurrence that will be directly affected, and indirectly affected by changes in drainage patterns or altered geomorphic processes;
- c. the habitat or plant community that supports the occurrence and the total acres of that habitat or community type that occurs in the Project Disturbance Area;
- d. an indication of whether the occurrence has any local or regional significance (e.g., if it exhibits any unusual morphology, occurs at the periphery of its range in California, represents a significant range extension or disjunct occurrence, or occurs in an atypical habitat or substrate);
- e. a completed CNDDDB field form for every occurrence (occurrences of the same species within 0.25 mile or less of each other combined as one occurrence, consistent with CNDDDB methodology), and;
- f. two maps: one that depicts the raw GPS data (as collected in the field) on a topographic base map with Project features; and a second map that follows the CNDDDB protocol for occurrence mapping, which lumps two or more occurrences of the same species within one-quarter mile or less of each other into one occurrence.

Section C: Avoidance Requirements Triggers for Implementation of Mitigation for Special-Status Plants Detected in the Summer/Fall 2010 Surveys

The project owner shall apply the following avoidance standards listed below establish criteria that would trigger implementation of additional mitigation measures for impacts to late blooming special status plant species that might be detected during late summer/fall season special status plant species (if detected during the surveys required under Section B of this Condition). These Avoidance and/or the mitigation measures, described in Section D below, would reduce impacts to any special-status plant species detected during the late summer/fall plant surveys to less than significant levels. These rankings are based on the internationally accepted Natural Heritage Methodology, available online at: <http://www.natureserve.org/prodServices/heritagemethodology.jsp> Included in this methodology is the NatureServe global and state ranking process

(www.natureserve.org/explorer/ranking) which provides an estimate of extinction risk worldwide and in California (Master et al. 2009). Avoidance and Minimization Measures described in Section A of this condition are required for all special status plants, regardless of NatureServe rank or CNPS List.

1. Mitigation for CNDDDB Rank 1 Plants (Critically Imperiled) – Avoidance Required: Triggers. The following triggers for implementation of mitigation are not intended for use beyond their use in the application of this Condition (Subsection C): If late blooming species with a CNDDDB rank of 1 are detected within the Project Disturbance Area, the project owner shall prepare and implement a Special Status Plant Mitigation Plan (Plan). The goal of the Plan shall be to retain at least 75 percent of the local population of the affected species. Compensatory mitigation, as described in Section D of this condition, and at a mitigation ratio of 3:1, shall be required for the 25 percent or portion that is not avoided. ~~If after agency consultation, avoidance would not satisfy the long-term viability of the plant population, compensatory mitigation alone will be allowed. The Plan shall include at a minimum, the following components and definitions:~~
 - a. A description of the occurrences of the CNDDDB rank 1 species on and off the project site, the percent of the local population affected, and a description of how these occurrences would be impacted by the project, including direct and indirect effects. The local population shall be measured by the number of individuals occurring on the project site and within the local watershed of the project for wash-dependent species or species of unknown dispersal mechanism. Occurrences shall be considered impacted if they are within the project footprint or if they would be affected by project-related hydrologic changes. Level 1 Trigger. BLM requests 100 percent avoidance for BLM Sensitive species (CNPS List 1 species are BLM Sensitive) but BLM's State Botanist will decide the level of avoidance on a case-by-case basis. Any impacts to non-BLM Sensitive species with a NatureServe Global Rank of G1 or G2 will trigger mitigation as described in Section D below.
 - ~~b. A description of the avoidance and minimization measures that would achieve complete avoidance of occurrences on the project linears and construction laydown areas, unless such avoidance would cause disturbance to areas not previously surveyed for biological resources. Level 2 Trigger.~~ Any impact to a CNPS List 2 taxon will trigger mitigation described in Section D below. However, should a CNPS List 3 or 4 taxon be of local or regional significance, as described below in 2b, then the level of protection for the taxon shall be adjusted
 - c.b. A description of how avoidance and minimization measures would be implemented on the project solar facility, with the requirement of retaining at least 75 percent of the local population of this species. Compensatory mitigation, at a ratio of 3:1, and in

accordance with the standards and specifications described in Section D of this condition, shall be required for the remaining 25 percent of the local population that is not avoided. Avoidance shall include protection of ecosystem processes essential for maintenance of the protected plant occurrence. Isolated 'islands' of protected plants disconnected by the project from natural fluvial processes shall not be considered to be protected and shall not be credited as contributing to the 75 percent avoidance requirement because such isolated populations are not sustainable. For currently isolated plant occurrences, the 75% avoidance shall not be required as the isolated populations are unlikely to be sustainable. Mitigation as provided in Section D shall be required for such isolated occurrences.

2. Mitigation for CNDDDB Rank 2 Plants (Imperiled)—Avoidance on Linears Required: Adjustments for Triggers. The levels of protection for a taxon may be adjusted under the following scenarios: If species with a CNDDDB rank of 2 are detected within the Project Disturbance Area, the project owner shall prepare and implement a Special Status Plant Mitigation Plan (Plan). The Plan shall include mitigation, at a ratio of 2:1 as described below in Section D for Rank 2 plants that cannot be avoided. The Plan shall include the following: that describes measures to achieve complete avoidance of occurrences on the project linears and construction laydown areas, unless such avoidance would create greater environmental impacts in other resource areas (e.g., Cultural Resource Sites) or other restrictions (e.g., FAA or other restrictions for placement of transmission poles). The project owner shall provide compensatory mitigation, at a ratio of 2:1, as described below in Section D for impacts to Rank 2 plants that could not be avoided. If after agency consultation, it is determined that avoidance would not satisfy the long-term viability of the plant, compensatory mitigation alone will be allowed. The content of the Plan and definitions shall be as described above in subsection C.1.
 - a. A description of the occurrences of the CNDDDB rank 2 species on and off the project site, the percent of the local population affected, and how these occurrences would be affected by the project. The local population shall be measured, and the impacts defined, as described above under #1(a). State- or Federal-Listed Species. If a state or federal-listed species is detected, the project owner shall immediately notify the CDFG, USFWS, and the CPM, and comply with all measures contained in this condition as well as the terms and conditions of any applicable federal permit, including avoidance and reconfiguration if required.
 - b. Avoidance and minimization measures that would achieve maximize practicable complete avoidance of occurrences on the project linear features, unless such avoidance would cause disturbance to areas not previously surveyed for biological

resources. If after agency consultation, it is determined that avoidance would not satisfy the long-term viability of the plant, compensatory mitigation alone will be allowed. Local or Regional Significance. CNPS List 4 (typically assigned a State rank of 3) shall be adjusted to a higher level of protection if the plant occurrence has local or regional significance not captured by the above rankings. According to CDFG protocol (CDFG 2009): "List 3 plants may be analyzed under CEQA §15380 if sufficient information is available to assess potential impacts to such plants. Factors such as regional rarity vs. statewide rarity shall be considered in determining whether cumulative impacts to a List 4 plant are significant even if individual project impacts are not. CNPS List 3 and 4 may be considered regionally significant if, e.g., the occurrence is located at the periphery of the species' range, or exhibits unusual morphology, or occurs in an unusual habitat/substrate."

A plant occurrence of any rank may be assigned a five percent higher level of protection in its ranking if the plant occurrence exhibits one or more of the following features:

- i. occurs at the outermost periphery of its range in California;
 - ii. represents a significant range extension or disjunct occurrence (e.g., is located outside of the 9-quad region centered on the nearest known occurrence);
 - iii. is in an atypical habitat, region, or elevation for the taxon that suggests that the occurrence may have genetic significance (e.g., that may increase its ability to survive future threats), or;
 - iv. exhibits any unusual morphology that is not clearly attributable to environmental factors that may indicate a potential new variety or sub-species.
- c. Compensatory mitigation, at a ratio of 2:1, and in accordance with the standards and specifications described in Section D of this condition, shall be required for any special status plant species that cannot be avoided, portion of the local population that cannot be avoided. Avoidance shall include protection of the ecosystem processes essential for maintenance of the protected plant occurrence as described under #1 (c). New, Un-Described Taxa and Other Occurrences of Questionable Taxonomic Status. BLM will treat new un-described taxa as if they are BLM Sensitive, and requests 100 percent avoidance, but BLM's State Botanist will decide the level of avoidance on a case-by-case basis. Proposed additions to the CNPS Inventory, including any new un-described taxa that are proposed additions to the CNPS Inventory, will be treated as Proposed unless rejected by the CNPS Rare Plant

Botanist after the initial literature review and consultation with the network of botanists, representing state and federal agencies, consulting firms, and academic institutions. A description of the peer review process is available at: <http://www.cnps.org/cnps/rareplants/>. Typically, under NatureServe and CNPS ranking protocol, plants with a questionable taxonomy are assigned a lower conservation priority with the caveat that resolution of this uncertainty may result in a status change that may be lower or higher than originally assigned.

- d. ~~Significant Cumulative Effects.~~ The assessment of known threats from over 50 sources are considered and reflected in the CNDDDB threat rank, including renewable energy (see http://www.natureserve.org/publications/ConsStatusAssess_StatusFactors.pdf, "Threats").
- e. ~~Ownership/Management Threats.~~ The degree to which a taxon's occurrences are adequately protected and managed is not included in the set of core factors used for NatureServe rankings that pre-date the 2009 revised protocols (Master et al. 2009). The threats to special status plants with many occurrences on private lands without conservation easements, or on BLM lands managed for multiple uses (outside of a FTHL Management Area) will be captured in the new rankings available in summer 2010.

3. Mitigation for CNDDDB Rank 3 Plants (Vulnerable) – No Onsite Avoidance Required Unless Local or Regional Significance:~~Basis for Assessing Total Documented Occurrences.~~ The accounting or inventory of the species' total known or documented occurrences shall be based on the following sources: CNDDDB processed and unprocessed data; California Consortium of Herbaria and other herbaria records; BLM records; survey data from other renewable energy projects and other related projects for which survey data is available; and reported occurrences by qualified botanists accompanied by a completed CNDDDB or similar field form (with or without voucher specimens). Data considered unreliable include: range implied in literature but without collection numbers or specific location information and anecdotal reports without documentation or from non-credible sources. Occurrences based on historic (pre-CEQA, or pre-1972) collections that have not since been verified will not be considered unless verified and documented by one of the sources described above. If species with a CNDDDB rank of 3 are detected within the Project Disturbance Area, no onsite avoidance or compensatory mitigation shall be required unless the occurrence shall be treated as a CNDDDB rank 2 plant species. A plant occurrence would be considered to have local or regional significance, in which case, the plant occurrence shall be treated as a CNDDDB 2 ranked plant. A plant occurrence would be considered to have local or regional significance if:

- a. It occurs at the outermost periphery of its range in California;

- b. It occurs in an atypical habitat, region, or elevation for the taxon that suggests that the occurrence may have genetic significance (e.g., that may increase its ability to survive future threats), or;
 - c. It exhibits any unusual morphology that is not clearly attributable to environmental factors that may indicate a potential new variety or subspecies.
4. Pre-Construction Notification for State- or Federal-Listed Species, or BLM Sensitive Species. If a state or federal-listed species or BLM Sensitive species is detected, the project owner shall immediately notify the CDFG, USFWS, BLM, and the CPM.
5. Preservation of the Germplasm of Affected Special Status Plants. For all significant impacts to special status plants, regardless of whether compensatory mitigation is required, mitigation shall include seed collection from the affected special status plants onsite prior to construction to conserve the germplasm and provide a seed source for restoration efforts. The seed shall be collected under the supervision or guidance of a reputable seed storage facility such as the Rancho Santa Ana Botanical Garden Seed Conservation Program, San Diego Natural History Museum, or the Missouri Botanical Garden. The costs associated with the long-term storage of the seed shall be the responsibility of the project owner. Any efforts to propagate and reintroduce special status plants from seeds in the wild shall be carried out under the direct supervision of specialists such as those listed above and as part of a Habitat Restoration/Enhancement Plan approved by the CPM and made available for contingency efforts in the event of on-site or off-site mitigation failure.

Section D: Mitigation Measures for Special Status Plants

Where compensatory mitigation is required under the terms of Section C, above, the project owner shall mitigate project impacts to special status plant occurrences with compensatory mitigation. Compensatory mitigation shall consist of acquisition of habitat supporting the target species, or restoration/enhancement of populations of the target species, and shall meet the performance standards for mitigation described below. In the event that no opportunities for acquisition or restoration/enhancement exist, the Project owner can fund a species distribution study designed to promote the future preservation, protection or recovery of the species. Finally, if the project owner chooses, an in lieu fee can be paid to satisfy these requirements. If all or a portion of the acquired habitat compensation lands for Bio-10 or Bio-17 provide for the replacement of the Special Status Plants impacted, then the requirements of this condition will be reduced by that amount. Compensatory mitigation shall be at a ratio of 3:1 for CNDDDB Rank 1 plants, with three acres of habitat acquired or restored/enhanced for every acre of habitat occupied by the special status plant that will be disturbed by the Project Disturbance Area (for example if the area occupied by the special status plant collectively

measured is ¼ acre than the compensatory mitigation will be ¾ of an acre). The mitigation ratio for CNDDDB Rank 2 plants shall be 2:1. So, for the example above, the mitigation ratio would be one-half acre for the Rank 2 plants.

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

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

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

1. Selection Criteria for Acquisition Lands. The compensation lands selected for acquisition may include any of the following three categories:
 - a. Occupied Habitat, No Habitat Threats: The compensation lands selected for acquisition shall be occupied by the target plant population and shall be characterized by site integrity and habitat quality that are required to support the target species, and shall be of equal or better habitat quality than that of the affected occurrence. The occurrence of the target special-status plant on the proposed acquisition lands should be viable, stable or increasing (in size and reproduction).
 - b. Occupied Habitat, Habitat Threats. Occupied compensation lands characterized by habitat threats may also be acquired as long as the population could be reasonably expected to recover with habitat restoration efforts (e.g., OHV or grazing exclusion, or removal of invasive non-native plants) and is accompanied by a Habitat Enhancement/Restoration Plan as described in Section D.II, below.
 - c. Unoccupied but Adjacent. The project owner may also acquire habitat for which occupancy by the target species has not been documented, if the proposed acquisition lands are adjacent to occupied habitat. The Project owner shall provide evidence that acquisitions of such unoccupied lands would improve the defensibility and long-term sustainability of the occupied habitat by providing a protective buffer around the occurrence and by enhancing connectivity with undisturbed habitat. This acquisition may include habitat restoration efforts where

appropriate, particularly when these restoration efforts will benefit adjacent habitat that is occupied by the target species.

2. Review and Approval of Compensation Lands Prior to Acquisition. The project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for special-status plants in relation to the criteria listed above, and must be approved by the CPM.
3. Management Plan. The project owner or approved third party shall prepare a management plan for the compensation lands in consultation with the entity that will be managing the lands. The goal of the management plan shall be to support and enhance the long-term viability of the target special-status plant occurrences. The Management Plan shall be submitted for review and approval to the CPM.
4. Integrating Special-Status Plant Mitigation with Other Mitigation lands. If all or any portion of the acquired special status species habitat, state jurisdictional waters, or other required compensation lands meets the criteria above for special-status plant compensation lands, the portion of the other species' or habitat compensation lands that meets any of the criteria above may be used to fulfill that portion of the obligation for special-status plant mitigation.
5. Compensation Lands Acquisition Requirements. The project owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM, has approved the proposed compensation lands:

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

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

holds a conservation easement over the compensation lands, the CPM may require that CDFG or another entity approved by the CPM, in consultation with CDFG, be named a third party beneficiary of the conservation easement. The project owner shall obtain approval of the CPM of the terms of any transfer of fee title or conservation easement to the compensation lands.

Initial Protection and Habitat Improvement. The project owner shall fund activities that the CPM requires for the initial protection and habitat improvement of the compensation lands. These activities will vary depending on the condition and location of the land acquired, but may include trash removal, construction and repair of fences, invasive plant removal, and similar measures to protect habitat and improve habitat quality on the compensation lands. The costs of these activities are estimated to be \$27 per acre, using the estimated cost per acre for special status species habitat mitigation as a best available proxy, but actual costs will vary depending on the measures that are required for the compensation lands. A non-profit organization, CDFG or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFG, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.

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

Long-term Maintenance and Management Funding. The project owner shall provide money to establish an account with non-wasting capital that will be used to fund long-term maintenance and management of the compensation lands. The amount of money to be paid will be determined through an approved Property Analysis Record (PAR) or PAR-like analysis conducted for the compensation lands. Until an approved PAR or PAR-like analysis is conducted for the compensation lands, the amount of required funding is initially estimated to be \$692 for every acre of compensation lands, using as the best available proxy, the estimated cost for special status species habitat compensatory mitigation. If compensatory lands will not be identified and a PAR or PAR-like analysis completed within the time period specified for this payment (see verification section at the end of this

condition), the project owner shall either: (i) provide initial payment equal to the amount of \$692 per acre, multiplied by a mitigation ratio of 3:1 (for Rank 1 species) or 2:1 (for Rank 2 species), and multiplied by the number of acres the project owner proposes to acquire for compensatory mitigation; or (ii) provide security to the Energy Commission under subsection (g), "Mitigation Security" below, in an amount equal to \$692 multiplied by the number of acres the project owner proposes to acquire for compensatory mitigation at the established mitigation ratio. The amount of the required initial payment or security for this item shall be adjusted for any change in the Project Disturbance Area as described above. If an initial payment is made based on the estimated per acre costs, the project owner shall deposit additional money as may be needed to provide the full amount of long-term maintenance and management funding indicated by a PAR or PAR-like analysis, once the analysis is completed and approved. If the approved analysis indicates less than \$692 per acquired acre will be required for long-term maintenance and management, the excess paid will be returned to the project owner. The project owner must obtain the CPM's approval of the entity that will receive and hold the long-term maintenance and management fund for the compensation lands. The CPM will consult with CDFG before deciding whether to approve an entity to hold the project's long-term maintenance and management funds.

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

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

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

Pooling Long-Term Maintenance and Management Funds. An entity approved to hold long-term maintenance and management funds for the Project may pool those funds with similar non-wasting funds that it holds from other projects for long-term maintenance and

management of compensation lands for special-status plants. However, for reporting purposes, the long-term maintenance and management funds for this Project must be tracked and reported individually to the CPM.

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

Mitigation Security. The Project owner shall provide financial assurances 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. Because the project related impacts will occur in phases, the mitigation security will similarly be phased. 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 \$692 per acre, using the estimated cost per acre for special status species habitat mitigation as a best available proxy, and multiplied by the established mitigation ratio, for every acre of habitat supporting the target special status plant species which is significantly impacted by the project. The actual costs to comply with this condition will vary depending on the actual costs of acquiring compensation habitat, the costs of initially improving the habitat, and the actual costs of long-term management as determined by a PAR report. Prior to submitting the Security to the CPM, the Project owner shall obtain the CPM's approval of the form of the Security. The CPM may draw on the Security if the CPM determines the project owner has failed to comply with the requirements specified in this condition. The CPM may use money from the Security solely for implementation of the requirements of this condition. The CPM's use of the Security to implement measures in this condition may not fully satisfy the project owner's obligations under this condition, and the project owner remains responsible for satisfying the obligations under this condition if the Security is insufficient. The unused Security shall be returned to the Project owner in whole or in part upon successful completion of the associated requirements in this condition.

Security shall be provided as follows:

- \$1 million good faith payment upon the BLM's issuance of the Right of Way Grant (ROWG);

- \$1 million payment each quarter following issuance of ROWG until financial close;
- Remainder of payment for mitigation associated with 2505 acres associated with Phase 1, upon financial close. The remaining payment for the Phase I security mitigation shall be calculated based on the total estimated mitigation cost for the Phase I disturbance area and related offsite improvements (\$2,923,220) less the good faith payment and any quarterly payment made.
- Prior to ground disturbance associated with installation of SunCatchers in the Phase 2 area, consisting of 4,066 acres., or by January 1, 2013 at the latest, mitigation payment for acreage associated with Phase 2 estimated to be \$4,744,835

For purposes of this Condition, financial close shall be defined as sixty days following receipt of the DOE loan guarantee

II. Compensatory Mitigation by Habitat Enhancement/Restoration: As an alternative or adjunct to land acquisition for compensatory mitigation the project owner may undertake habitat enhancement or restoration for the target special-status plant species. Habitat enhancement or restoration activities must achieve protection at a 3:1 ratio for Rank 1 plants and 2:1 for Rank 2 plants, with improvements applied to three acres, or two acres, respectively, of habitat for every acre special-status plant habitat directly or indirectly disturbed by the Project Disturbance Area (for example if the area occupied by the special status plant collectively measured is ¼ acre than the improvements would be applied to an area equal to ¾ of an acre at a 3:1 ratio, or one-half acre at a 2:1 ratio). Examples of suitable enhancement projects include but are not limited to the following: i) control unauthorized vehicle use into an occurrence (or pedestrian use if clearly damaging to the species); ii) control of invasive non-native plants that infest or pose an immediate threat to an occurrence; iii) exclude grazing by wild burros or livestock from an occurrence; or iv) restore lost or degraded hydrologic or geomorphic functions critical to the species by restoring previously diverted flows or increasing groundwater availability for dependent species.

If the project owner elects to undertake a habitat enhancement project for mitigation, the project must meet the following performance standards: The proposed enhancement project shall achieve rescue of an off-site occurrence that is currently assessed, based on the NatureServe threat ranking system⁴

⁴ Master, L., D. Faber-Langendoen, R. Bittman, G. A., Hammerson, B. Heidel, J. Nichols, L. Ramsay, and A. Tomaino. 2009. *NatureServe Conservation Status Assessments: Factors for Assessing Extinction Risk*. NatureServe, Arlington, VA. Online: http://www.natureserve.org/publications/ConsStatusAssess_StatusFactors.pdf , "Threats". See also: Morse, L.E., J.M. Randall, N. Benton, R. Hiebert, and S. Lu. 2004. An Invasive Species Assessment

with one of the following threat ranks: a) long-term decline >30%; b) an immediate threat that affects >30% of the population, or c) has an overall threat impact that is High to Very High. "Rescue" would be considered successful if it achieves an improvement in the occurrence trend to "stable" or "increasing" status, or downgrading of the overall threat rank to slight or low (from "High" to "Very High").

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 \$692 per acre, using the estimated cost per acre for special status species habitat 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. The implementation and monitoring of the enhancement/restoration may be undertaken by an appropriate third party such as NFWF, subject to approval by the CPM. The Habitat Enhancement/Restoration Plan shall include each of the following:

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

implementation phase of the enhancement must be completed within five years.

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

III. Compensatory Mitigation by Conducting or Contributing to a Special Status Plant Species Distribution Study: As determined by the CPM, in the event that there are no opportunities for mitigation through acquisition or restoration/enhancement, a Scientific Study of Distribution and Status for the affected special status plant species may be implemented or funded. Information on the distribution, status, or health of known occurrences, ecological requirements, and ownership and management opportunities is very limited for many of the special status species that occur on the project or have potential to occur on the project, especially the late summer and fall blooming species. Some of these late blooming species are only known from a few viable occurrences in California, and historic occurrences that have not been relocated or surveyed since they were first documented. The objectives of this study would be to better understand the full distribution of the affected species, the degree and immediacy of threats to occurrences, and ownership and management opportunities, with the primary goal of future preservation, protection, or recovery of the affected species within California. Additionally, the study should delineate other areas in the region that should be avoided or protected due to rare plant presence. To further ensure protection, study data shall be published in the state's rare plant database.

At a minimum, the study shall include the following:

1. Occurrence and Life History Review. The Study would include an evaluation of all documented, historical, and reported localities for the affected species and a review of current information on the species life history. This would include a review of the CNDDDB database, records from regional and national herbaria, literature review, consultation with U.C. Riverside, San Diego Natural History Museum, and other educational institutions or natural heritage organizations in California, Arizona, and Nevada, etc.), other biotechnical survey reports from the region, and information from regional botanical experts.
2. Conduct Site Visits to Documented and Reported Localities. Documented and reported occurrences would be evaluated in the field during the appropriate time of the year for each late blooming species. If located, these occurrences would be evaluated for population size (area and quantity), population trend, ecological characteristics, soils, habitat quality, potential threats, degree and immediacy of threats, ownership, and management opportunities. GPS location data would also be collected during these site visits.
3. Survey Surrounding Areas. Areas surrounding the occurrences that contain habitat suitable to support the affected species shall be surveyed to determine the full extent of its range and distribution. If additional populations are found, collect data (GPS and assessment) on these additional populations consistent with III.2 above.
4. Prepare a Status and Distribution Study Report. A report shall be prepared that contains the results of the surveys and assessments. The report shall contain the following components: a) Range and Distribution (including maps and GPS data); b) Abundance and Population Trends; c) Life History; d) Habitat Necessary for Survival; d) Factors affecting Ability to Survive and Reproduce; e) Degree and Immediacy of Threat; f) Ownership and Management Opportunities for Protection or Recovery; g) Sources of Information, and g) Conclusions. The conclusions shall contain the following factors: i) present or threatened modification or destruction of its habitat; ii) competition; iii) disease; iv) or other natural occurrences (such as climate change) or human-related activities. This valuable information will provide a better understanding of the ecological factors driving the distribution of these species, identify opportunities for mitigation, and management opportunities for recovery. All data from this study will be submitted for incorporation into the CNDDDB system and the study report will be made available to resource agencies, conservation groups, and other interested parties.

The cost to implement or fund the study shall be no greater than the cost for acquisition, enhancement, and long-term management of compensatory

mitigation lands based on the specifications and standards for acquisition or restoration/enhancement described under D.I and D.II.

~~Special Status Plant Mitigation Plan.~~ Upon completion of the summer-fall 2010 surveys, (see Section B of this Condition), the project owner shall prepare a Special Status Plant Mitigation Plan. The Plan shall also include the mitigation requirements for any additional special-status plants found during the summer-fall 2010 surveys (see Sections B and C of this Condition) in accordance with the mitigation triggers described above (Section C of this condition) and that meet the performance standards specified below. Avoidance and Minimization Measures described in Section A of this condition are required for all special-status plants, regardless of NatureServe rank or CNPS List.

- ~~1. On-Site Avoidance. BLM requests 100 percent avoidance for BLM Sensitive species but BLM's State Botanist will decide the level of avoidance on a case-by-case basis. On-site avoidance shall also be required if the impact to a special-status species with a NatureServe Global Rank of G1 or G2 exceeds 10 percent of the species' known and documented occurrences (see 'Level 1 Trigger', Section C of this Condition). Under this scenario, the Project owner shall be required to avoid a minimum of 75 percent of the total population. For perennial taxa the percent avoidance shall be measured based on the percentage of the total individuals affected; for annuals the percent avoidance shall be measured based on the total area occupied by the occurrence plus any additional habitat deemed essential for maintaining healthy, reproductive populations (BLM CDD 2002). The Project owner shall implement all measures described in Section A of this Condition to protect the avoided occurrence from accidental direct and indirect effects during construction, operation, and closure.~~
- ~~2. Off-Site Compensatory Mitigation. One or more of the following options for mitigation may be used to reduce Level 2 and Level 3 impacts to special-status plants (see Section C of this Condition) to less than significant levels:~~
 - ~~a. Acquire Off-Site Compensatory Land. To fully mitigate for the loss of special-status plants, the Project owner shall provide compensatory mitigation by acquiring, in fee title or conservation easement, lands meeting the specific criteria outlined in **D2b** below, and in an amount equal to the amount of occupied special-status plant habitat disturbed by the final Project footprint. The Project footprint means all lands disturbed in the construction and operation of the Project, including all Project linears.~~
 - ~~b. Criteria for Compensatory Acquisition Lands. If offsite acquisition is selected to meet the mitigation obligations under **BIO-19**, the Project owner shall acquire, in fee title or conservation easement, lands that meet the criteria below. The responsibilities for~~

acquisition and management of the compensation lands may be delegated by written agreement to a qualified third party, such as a non-governmental organization dedicated to habitat conservation. Additional funds shall be provided for basic long-term stewardship of the conservation easement. At a minimum, long-term management shall consist of the activities described in Land Trust Standards and Practices (Land Trust Alliance 2004, Practice 12A) <http://www.landtrustalliance.org/learning/sp/land-trust-standards-and-practices> for start-up and annual management activities, including preparation of a long-term management and monitoring plan. The amount of the long-term management and maintenance fund shall be based on [PAR](#) or PAR-like analysis. The terms and conditions for acquisition under this condition shall be modeled on those described in **BIO-10**. The acquisition lands must be within California, and must meet one or more of the following additional requirements:

- ~~1) Occupied with good to excellent site integrity. Contains an occurrence of the target special-status plant. The occurrence may be smaller than the affected occurrence but must be a viable reproducing occurrence, stable or increasing (in size and reproduction), with good or better habitat quality than the affected occurrence, and with a reasonable expectation of long-term sustainability. The amount of land to be acquired shall be equivalent to the total acres of the affected occupied habitat mitigated at a ratio of 3:1 (3 acres acquired for every one acre of occupied habitat affected).~~
- ~~2) Occupied but with threats to habitat quality and accompanied by an approved restoration plan. The occurrence or the site may contain threats to its integrity as long as the population or the site can be reasonably expected to recover with minor restoration (e.g., barricading OHV, excluding grazing, or minor pest plant removal) and is accompanied by a restoration plan that meets the minimum standards described in **Section D2c Guidelines for the Preparation of Habitat Restoration Plan** below. The amount of land to be acquired shall be equivalent to the total acres of affected occupied habitat mitigated at a ratio of 3:1 (3 acres acquired for every one acre of occupied habitat affected), with the additional expense of preparing and implementing an approved habitat restoration plan, including long-term monitoring. The restoration plan shall be prepared in accordance with all guidelines described below in **Section D2c, Guidelines for the Preparation of Habitat Restoration Plan**.~~
- ~~3) Unoccupied but adjacent to occupied habitat. The acquired habitat may be unoccupied but it improves the defensibility and long-term sustainability of the occupied habitat by expanding the~~

~~buffer of protection around the occurrence so as to prevent future development of adjacent habitat and protect its connectivity to undisturbed habitat. Buffer lands may or may not be dominated by the same habitats that support the special-status plants but must provide some habitat continuity between the occupied habitat and undisturbed habitats of a high integrity beyond the buffer lands. Habitat integrity, connectivity, defensibility, and potential threats shall also be addressed in the proposal. The amount of land to be acquired shall be equivalent to the total acres of affected occupied habitat mitigated at a ratio of 4:1 (4 acres acquired for every one acre of occupied habitat affected).~~

- ~~4) Unoccupied and not adjacent to occupied habitat. Must contain high-quality habitat that is critical to the maintenance or sustainability of the affected species and represent a potential reserve in the future (for either natural colonization or artificial). Good to high quality within the Colorado Desert near or within the Yuha Desert or West Mesa FTHL Management Areas. Acquired lands may also focus on linkages for species dispersal between major populations and refugia at higher elevations/more mesic habitats to accommodate species migration with future climate change. Habitat integrity, connectivity, defensibility, and potential threats shall also be addressed in the proposal. The amount of land to be acquired shall be equivalent to the total acres of affected occupied habitat mitigated at a ratio of 5:1 (5 acres acquired for every one acre of occupied habitat affected).~~

~~Review and Approval of Compensation Lands Prior to Acquisition. The project owner shall submit a formal acquisition proposal to the CPM and CDFG, describing the parcel intended for purchase. This proposal shall discuss the suitability of the proposed parcel(s) as compensation for project-related impacts to special status plants in relation to the criteria specified above, and must be approved by the CPM. The CPM will share the proposal with and consult with CDFG, BLM, and the USFWS before deciding whether to approve or disapprove the proposed acquisition.~~

- ~~c. Guidelines for the Preparation of Habitat Restoration Plan. The Project owner shall submit a detailed Habitat Restoration Plan that includes all of the following components and according to the guidelines in [1)] through [10)] below:~~
- ~~1) Define the goals of the restoration project and a measurable course of action developed to achieve those goals. The goals and objectives must meet the following performance standards described below:~~

- ~~The proposed habitat restoration project must achieve the rescue of an occurrence on acquired compensation land that is currently assessed with: a long-term decline >30 percent, or; an immediate threat that affects >30 percent of the population, or; has an overall threat impact that is High to Very High (see NatureServe Threat Ranking system, at: http://www.natureserve.org/publications/ConsStatusAssess_StatusFactors.pdf , “Threats”).~~
 - ~~The proposed restoration must achieve an improvement in the occurrence trend to “stable” or “increasing” status, or downgrading of the overall threat rank to slight or low (from “High” to “Very High”).~~
 - ~~Restoration projects may include one or more of the following types of projects: i) control unauthorized vehicle use into an occurrence (or pedestrian use if clearly damaging to the species); ii) control invasive weeds that infest or pose an immediate threat to an occurrence; iii) exclude grazing by wild burros or livestock from an occurrence; or iv) restore critical lost or degraded hydrologic or geomorphic functions to known special status plant occurrences that have lost historic sheet flow or instream flows, as a result of diverting washes upslope by roads or ditches.~~
- 2) ~~Estimate the pre-impact or historical conditions (before the site was degraded by weeds or grazing or OHV, etc.), and the desired conditions;~~
 - 3) ~~Describe other site characteristics relevant to the restoration or enhancement project (e.g., composition of native and pest plants, topography and drainage patterns, soil types, geomorphic and hydrologic processes important to the site or species;~~
 - 4) ~~Describe other important ecological factors of the species being protected, restored, or enhanced such as total population, reproduction, distribution, pollinators, etc.;~~
 - 5) ~~Describe the restoration methods that will be used (e.g., invasive exotics control, site protection, seedling protection, propagation techniques, etc.) and the long-term maintenance required. The implementation phase of the restoration must be completed within five years;~~
 - 6) ~~Provide a detailed budget and time-line, develop clear, measurable, objective-driven annual success criteria;~~

- ~~7) Develop clear, measurable monitoring methods that can be used to evaluate the effectiveness of the restoration and the benefit to the affected species. The Plan shall initially include a minimum of five years of quarterly monitoring and subsequent annual monitoring for the remainder of the life of the Project. At a minimum the progress reports shall include: quantitative measurements of the projects progress in meeting the restoration project success criteria, detailed description of remedial actions taken or proposed, and contact information for the responsible parties.~~
- ~~8) Ensure accountability with a reporting program that includes progress toward goals and success criteria. Include names of responsible parties.~~
- ~~9) Describe the contingency plan and adaptive management measures for failure to meet annual goals.~~
- ~~10) Include proof of the existence of long-term protection for the acquired site.~~

~~Mitigation Security. The Project owner shall provide financial assurances to the CPM under terms modeled on those specified in **Section 3** of **BIO-10**, to guarantee that an adequate level of funding is available to implement the mitigation measures described above. These funds shall be used solely for implementation of the measures associated with the project in the event the project owner fails to comply with the requirements specified in this condition. The CPM's use of the security to implement measures in this condition may not fully satisfy the project owner's obligations under this condition. Financial assurance can be provided to the CPM in the form of security prior to initiating ground-disturbing project activities. Prior to submittal to the CPM, the security shall be approved by the CPM, in consultation with BLM, to ensure funding. The amount of the security shall be determined according to the mitigation ratios described in **D2b** [1) through 4)], Off-Site Compensatory Mitigation section of this condition. The amount of security shall be adjusted for any change in the Project footprint as described above.~~

~~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), under terms modeled on those in Section A.3(i) in Condition of Certification **BIO-10**.~~

~~The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a qualified land trust or other non-governmental organization supportive of habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM in consultation with BLM prior to land acquisition, restoration, or management activities.~~

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

Raw GPS data, metadata, and CNDDDB field forms shall be submitted to the CPM within two weeks of the completion of each survey. A preliminary summary of results for the late summer/fall botanical surveys shall also be submitted to the CPM and BLM's State Botanist within two weeks following the completion of the surveys. If surveys are split into more than one period, then a summary letter shall be submitted following each survey period. The Final Summer-Fall Botanical Survey Report, GIS shape files, and metadata shall be submitted to the BLM State Botanist and the CPM no less than 30 days prior to the start of ground-disturbing activities. The Final Report shall include a detailed accounting of the acreage of Project impacts to special status plant occurrences. Where avoidance shall not provide for the long-term viability of the special status plants, the report will document the reasons why avoidance is deemed to not be effective.

A draft Conceptual Special Status Plant Mitigation Plan as described in Section C shall be submitted to the BLM State Botanist and the CPM for review and approval no less than 30 days prior to the start of ground-disturbing activities, if required. ~~Progress reports for the late summer and fall botanical surveys shall be submitted to the CPM and BLM's State Botanist no later than September 30, 2010 and October 30, 2010, respectively. The Final Summer-Fall Botanical Survey Report, GIS shape files and metadata shall be submitted to the BLM State Botanist and the CPM no less than 30 days prior to the start of ground-disturbing activities.~~

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

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

If the mitigation actions required under this condition are not completed prior to ground-disturbing activities, the project owner shall provide the CPM with approved Security as described above.

No later than 12 months after the start of ground-disturbing project activities, the project owner shall submit a formal acquisition proposal to the CPM describing the parcels intended for purchase, and shall obtain approval from the CPM, in consultation with CDFG, BLM and USFWS, prior to the acquisition. If NFWF or another approved third party is handling the acquisition, the project owner shall fully cooperate with the third

party to ensure the proposal is submitted within this time period; the project owner, however, shall be deemed in compliance of this condition if it has provided the required funding and satisfied the provisions of this condition no later than 12 months after start of ground-disturbing project activities. The project owner or an approved third party shall complete the acquisition and all required transfers of the compensation lands, and provide written verification to the CPM, CDFG, BLM and USFWS of such completion, no later than 18 months after the issuance of the Energy Commission Decision. If NFWF or another approved third party is being used for the acquisition, the project owner shall ensure that funds needed to accomplish the acquisition are transferred in timely manner to facilitate the planned acquisition and to ensure the land can be acquired and transferred prior to the 18-month deadline. Provision of such funds will satisfy the project owner's obligations under this condition.

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

The Project owner or an approved third party shall complete the acquisition and all required transfers of the compensation lands, and provide written verification to the CPM of such completion no later than 18 months after the start of project ground-disturbing activities. If NFWF or another approved third party is being used for the acquisition, the project owner shall ensure that funds needed to accomplish the acquisition are transferred in timely manner to facilitate the planned acquisition and to ensure the land can be acquired and transferred prior to the 18-month deadline.

If habitat enhancement is proposed, no later than six months following the start of ground-disturbing activities, the project owner shall obtain CPM approval of the final Habitat Enhancement/Restoration Plan, prepared in accordance with Section D, and submit to the CPM or a third party approved by the CPM Security adequate for long-term implementation and monitoring of the Habitat Enhancement/Restoration Plan.

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

If a Status and Distribution Study is proposed, the study shall commence no later than six months following the start of ground-disturbing activities. The draft study shall be submitted to the CPM and BLM Botanist for review and approval no more than two years following the start of ground-disturbing activities. The final study shall be submitted no more than 30 months following the start of ground-disturbing activities.

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

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

The Project owner shall submit a monitoring report every year for the life of the project to monitor effectiveness of protection measures for all avoided special-status plants to the CPM and BLM State Botanist. The monitoring report shall include: dates of worker awareness training sessions and attendees, completed CNDDDB field forms for each avoided occurrence on-site and within 100 feet of the Project boundary off-site, and description of the remedial action, if warranted and planned for the upcoming year. The completed forms shall include an inventory of the special-status plant occurrences and description of the habitat conditions, an indication of population and habitat quality trends.

~~No less than 30 days prior to ground-disturbing activities the Project owner shall submit to the CPM for review and approval, in consultation with the BLM State Botanist, a draft Special-Status Plant Mitigation Plan. If state or federal listed plants are potentially affected, the Project owner shall also submit the Special-Status Plant Mitigation Plan to CDFG and USFWS. The Plan shall contain, at a minimum, a conceptual proposal for compensatory mitigation through acquisition and possible restoration. If avoidance is mandatory (in accordance with Section C-1 and D-1 of this condition) the draft Plan shall include grading plans and other relevant construction drawings clearly depicting the location of the avoided plants.~~

~~The implementation phase of the restoration on acquired lands shall be completed within five years of initiation. During the initial five-year period, quarterly reports shall be submitted to the CPM no more than 30 days after the end of each quarter. After completion of the initial five-year period, the Project owner shall submit a monitoring report yearly for the life of the project to monitor effectiveness of restoration measures and description of any planned remedial actions or additional habitat restoration measures to be performed in the upcoming year. This report shall provide, at a~~

minimum: a summary of activities for the preceding year and a summary of activities for the following year; quantitative measurements of the Project's progress in meeting the restoration project success criteria; detailed description of remedial actions taken or proposed; and contact information for the responsible parties.

Within 90 days after completion of Project construction, the Project owner shall provide to the CPM an analysis with the final accounting, based on GIS analysis of post-construction aerial photography, of the amount of special-status plants and their habitat disturbed during Project construction. This shall be the basis for the final number of acres of habitat required for acquisition, as described in Section C.

If the Project owner elects to fund the acquisition and initial improvement of compensation lands through NFWF by depositing funds for that purpose into NFWF's REAT Account, payment of the initial funds for acquisition and initial improvement must be made at least 30 days prior to the start of ground-disturbing activities. No later than 12 months after the start of ground-disturbing project activities, the project owner, or a third party approved by the CPM, in consultation with CDFG and BLM, shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase and shall obtain approval from the CPM, in consultation with CDFG, BLM, and USFWS, prior to acquisition. The PAR or PAR-like Analysis shall be completed no later than 18 months from the start of ground-disturbing activities, after which the amount will be adjusted. If acquisition is proposed, the Project owner shall submit to the CPM for review and approval, in consultation with the BLM State Botanist, a final Special-Status Plant Mitigation Plan for proposed acquisition lands no later than 18 months from the start of ground-disturbing activities.

Draft agreements to delegate land acquisition to CDFG, BLM, or an approved third party and agreements to manage compensation lands shall be submitted to Energy Commission staff for review and approval (in consultation with CDFG) prior to land acquisition. Such agreements shall be mutually approved and executed at least 30 days prior to start of any project-related ground disturbance activities. The project owner shall provide written verification to the CPM that the compensation lands have been acquired and recorded in favor of the approved recipient(s). Alternatively, before beginning project ground-disturbing activities, the project owner shall provide Security in accordance with **Mitigation Security** section **D** of this condition. Within 180 days after the land purchase, as determined by the date on the title, the project owner shall provide the CPM with a management plan for review and approval, in consultation with CDFG, BLM, and USFWS, for the compensation lands and associated funds.

If special status plant are preserved onsite, an annual report shall be prepared that summarizes any protection measures for all avoided special-status plants onsite to the CPM and BLM State Botanist. The monitoring report shall include: dates of worker awareness training sessions and attendees, an inventory of the special-status plant occurrences and description of the habitat conditions, an indication of population and habitat quality trends, and description of the remedial action, if warranted and planned for the upcoming year. Implementation of the special-status plant impact avoidance and minimization measures shall be reported in the Monthly Compliance Reports prepared

~~by the Designated Botanist. Within 30 days after completion of Project construction, the Project owner shall provide to the CPM, for review and approval in consultation with the BLM State Botanist, a written construction termination report identifying how measures have been completed.~~

STORM WATER DAMAGE MONITORING AND RESPONSE PLAN

SOIL&WATER-7 The project owner shall ~~prepare a~~submit the detailed drainage maps prepared for CDFG and ACOE for existing conditions showing the location of all watercourses on the site, including those not mapped in **Soil and Water Figure 3** of this report, recognizing that site areas with visible evidence of past flows are subject to future flows. The drainage map may be based on a geomorphic evaluation based on aerial photographs, topographic maps, site visits, and other relevant factors, and may be supplemented by a two-dimensional flow analysis at the discretion of the project owner.

The project owner shall ensure that all SunCatchers within flow areas as identified in the above-referenced drainage map are designed to withstand 100-year storm water scour, ~~as estimated by a SunCatcher Foundation Depth and Stability Report to be completed by the project owner. The report shall include estimates of hydraulic conditions at each location where SunCatchers are to be located in flood hazard areas and relevant scour calculations for each location. Scour calculations shall be developed by a registered civil engineer competent in scour calculation and include all relevant scour components including pier scour, general scour, antidune trough depth, bend scour, and long term degradation. An assessment shall be made whether foundation widths should be increased for debris production.~~

The project owner shall also develop a Storm Water Damage Monitoring and Response Plan to evaluate potential impacts from storm water, including SunCatchers that fail due to storm water flow or otherwise break and scatter mirror debris on to the ground surface. The Storm Water Damage Monitoring and Response Plan shall include the following elements:

- Detailed maps showing the installed location of all SunCatchers.
- Each SunCatcher shall be identified by a unique ID number marked to show initial ground surface at its base and the depth of the pylon below ground.
- Minimum Depth Stability Threshold to be maintained of pylons to meet long-term stability for applicable wind, water, and debris loading effects.
- Above and below ground construction details of a typical installed SunCatcher.
- BMPs to be employed to minimize the potential impact of broken mirrors to soil resources.

- Methods and response time of mirror cleanup and measures that may be used to mitigate further impact to soil resources from broken mirror fragments.
- Monitoring, documenting, and restoring the soil surface when impacted by sedimentation or broken mirror shards.

Monitor and Inspect Periodically, Before First Seasonal and After Every 10-Year Storm Event:

- SunCatchers within Drainages or subject to drainage overflow: Inspect for tilting, mirror damage, depth of scour compared to pylon depth below ground and the Minimum Depth Stability Threshold, collapse, and downstream transport.
- Drainage Channels: Inspect for substantial migration or changes in depth, and transport of broken glass, if applicable.
- Constructed Diversion Channels: Inspect for scour and structural integrity issues caused by erosion, and for sediment and debris buildup.
- ~~Ground Surface: Inspect for changes in the surface texture and quality from sediment buildup, erosion, or broken glass, if applicable.~~

Short-Term Incident-Based Response:

- SunCatchers: Remove broken glass, damaged structure, and wiring from the ground, and for foundations no longer meeting the Minimum Depth Stability Threshold, either replace/reinforce or remove the mirrors to avoid exposure for broken glass.
- Drainage Channels: no short-term response necessary unless changes indicate risk to facility structures.

Long-Term Design-Based Response:

- Propose operation/BMP modifications to address ongoing issues. Include proposed changes to monitoring and response procedures, frequency, or standards.
- Replace/reinforce foundations no longer meeting the Minimum Depth Stability Threshold or remove the mirrors to avoid exposure for broken glass.
- Propose design modifications to address ongoing issues.

Inspection, short-term incident response, and long-term design-based response may include activities both inside and outside of the approved right-of-way. For activities outside of the approved right-of-way, the project owner shall notify BLM and acquire environmental review and approval before field activities begin.

Verification: At least ~~90~~30 days prior to the start of site mobilization, the project owner shall submit the final drainage map, ~~the Foundation Depth and Stability Report,~~ and the Storm Water Damage Monitoring and Response Plan, with supporting analysis, to the CPM for review and approval. The project owner shall retain a copy of these documents onsite at the power plant at all times. The project owner shall prepare an annual summary of the number of SunCatchers failed, cause of the failure, and cleanup and mitigation performed for each failed SunCatcher.

WORKER SAFETY-7 The project owner shall either (1) reach an agreement with the Imperial County Fire Department regarding the funding of resources to mitigate potential project-related impacts on fire protection services or if no agreement can be reached shall (2) fund an independent consultant's study to evaluate the following:

- Potential for impacts on local fire protection and costs of new local fire protection services necessary to mitigate such impacts;
- The risk of impact on the local population that could result from potential unmitigated impacts on local fire protection services;
- The extent to which local tax revenue from the project will provide funding to reduce impacts on local fire protection services;
- Recommend the amount of funding that should be provided to mitigate any identified significant impacts on local fire protection services.

Compliance Protocols:

- The project owner shall provide a protocol for conducting the independent consultant study for review and comment by the Imperial County Fire Department and review and approval by the CEC CPM prior to conducting the study.
- The independent consultant study shall be funded by the project owner and conducted by a consultant approved by the CEC CPM.
- No construction of permanent above ground structures shall occur until funding of mitigation occurs either pursuant to an agreement reached between the project owner and the Imperial County Fire Department, pursuant to the staff-approved independent consultant's study, or payment of \$200,000 to the Imperial County Fire Department to be used as an initial payment. If initial payment is made, this payment will off-set any initial funding required by the independent consultant's study based on a full accounting by Imperial County Fire Department regarding the use of these funds.
- In the event that the parties disagree with the consultant's recommendations the CEC CPM shall, based on the results of the CEC CPM approved independent consultant study and comments from the project owner and the Imperial County Fire Department, make the final determination regarding the mitigation measures that will be required and the amounts of funding to be provided to the Imperial County Fire Department to accomplish any required mitigation.

Verification: The project owner shall provide the CEC CPM with a copy of the agreement with the Imperial County Fire Department; or a study outline and scope of work for the proposed independent consultant study and qualifications for proposed contractors for approval. The project owner shall provide the CEC CPM with a copy of the completed study prior to any construction of permanent above-ground structures at the project site. In the event that an agreement is not reached with Imperial County Fire Department nor has the independent consultant's

report been prepared, the project owner shall provide proof that the initial \$200,000 payment has been made to the Imperial County Fire Department. Annually thereafter, the owner shall provide the CEC CPM with verification of funding to the Imperial County Fire Department for required fire protection services mitigation pursuant to the agreement with the Department or the CEC CPM approved independent consultant study.



**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
IMPERIAL VALLEY SOLAR PROJECT**
(formerly known as SES Solar Two Project)
IMPERIAL VALLEY SOLAR, LLC

**Docket No. 08-AFC-5
PROOF OF SERVICE
(Revised 6/8/10)**

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DECLARATION OF SERVICE

I, Darin Neufeld, declare that on July 26, 2010, I served and filed copies of the attached, Applicant's Submittal of Additional Exhibits Distributed during the July 26-27 Energy Commission Evidentiary Hearings (Exhibits 133-139). The original documents, filed with the Docket Unit, are 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/solartwo/index.html>

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

(Check all that Apply)

FOR SERVICE TO ALL OTHER PARTIES:

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

by personal delivery;

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:

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

OR

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

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 08-AFC-5
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

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

original signed by
Darin Neufeld