

LETTER OF TRANSMITTAL	DOCKET	
TO: Docket Unit	08-AFC-10	
DATE : July 27, 2009	DATE July 27 2009	
PROJECT: SES Solar One	RECD. July 28 2009	

Enclosed/Attached please find the following:

• The Applicant's Responses to CURE Data Requests, Set One

Review and Comment Signature and Return Appropriate Action	 As Requested For Your Use	

Remarks:

The materials included in this submittal are listed below:

- 12 hard copies of the Applicant's Responses to CURE Data Requests, Set One
- 12 electronic copies of the Applicant's Responses to CURE Data Requests, Set One
- 1 original, signed Proof of Service

If you have any questions or need any further information, please feel free to call. Thank you!

Kindly,

Join Jace

Corinne Lytle Assistant Project Manager

SES SOLAR ONE

In Response to CURE Data Requests Set 1: Data Requests 1-228

Application for Certification (08-AFC-13)

July 2009

Submitted to: Bureau of Land Management 2601 Barstow Road Barstow, CA 92311

Submitted to: California Energy Commission 1516 9th Street, MS 15 Sacramento, CA 95814-5504



Submitted by: SES Solar Three, LLC SES Solar Six, LLC



Stirling Energy Systems 4800 N. Scottsdale Road, Suite 5500 Scottsdale, AZ 85251



July 27, 2009

Mr. Christopher Meyer Project Manager Attn: Docket No. 08-AFC-13 California Energy Commission 1516 Ninth Street Sacramento, CA 95814-5512

RE: SES Solar One Applicant's Responses to CURE Data Requests Set 1 Data Requests 1-228

Dear Mr. Meyer,

Tessera Solar hereby submits the Applicant's responses to CURE Data Requests 1-228 (Data Requests Set 1). Please note that while CURE submitted a document titled Data Requests 1-228, Data Requests 166-223 were not contained in that package. Therefore, responses to said Data Requests are not provided in this submittal.

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge.

Sincerely,

Camille Champion Project Manager

- **Data Request 1:** Please clarify why the Non-Federal Action protocol was the appropriate protocol to use for the Project rather than the Field Survey Protocol for any Federal Action when the Project involves a right-of-way permit from the BLM.
- **Response:** The Non-Federal Action protocol is appropriate because the Project proponent is a private entity requesting a ROW permit and lease hold of BLM land.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 2: In particular, please: 1. Clarify how surveyors were able to survey 160 acres a day to protocol while implementing the 30-foot transect spacing requirement. In your response please explain how surveying at least 35 km/day provides a valid estimate of tortoise presence and abundance, given the average rate of 15 km/day observed by Nussear et al. (2008). 2. Indicate how much of each 8-hour survey day was devoted to conducting protocol desert tortoise surveys (i.e., excluding travel time to and from each survey plot, lunch and other breaks, and time spent identifying other taxa). 3. Provide any GPS data files that document the survey transects conducted within each desert tortoise survey plot. 4. Indicate whether each team of biologists walked the same transect lines or separate transect lines **Response:** The tortoise plot survey protocol was pre-approved by the BLM and CEC prior to implementation. 1. The approved protocol assumed an 80-acre sample plot of potential tortoise habitat would be adequately searched during an 8-10 hour field day. A pair of biologists surveyed two 80-acre plots in a field day. Rate of travel through the plot was between 2 and 3 transect miles per hour or less than 10 acres per hour of searching. 2. Each plot was typically searched for 4+ hours by a pair of biologists. Some plots required more time due to steep topography. These files are not available and are not necessary for the AFC process. 4. Pairs of biologists walked parallel transects through each plot.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 3:	Please	explain	why	Zone	of	Influence	surveys	were	not
	conducted for the Project.								

Response: Given the scale of the survey effort (1000s of acres), USFWS staff (Ray Bransfield, Ventura – personal communication) determined that Zone of Influence surveys were not necessary because a sample plot survey protocol was being used in an area known to support tortoise.

- **Data Request 4:** Please explain why areas to the east and west of the Project site were surveyed, but not areas to the north and south.
- **Response:** A larger assessment area was done for planning flexibility. Habitat within one mile of the limits of the assessment area was qualitatively assessed per CEC guidelines. Plot surveys extended beyond the northern assessment boundary. The Interstate highway defined the southern boundary.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 5:** Please provide the results (including map) of the intensive surveys conducted for the Project. If intensive surveys were not conducted, please provide a justification for why they were not conducted and describe how surveyor accuracy was evaluated.
- **Response:** A sample plot survey protocol was implemented and tortoise was detected. The majority of the site is assumed to support tortoise at varying densities. The agencies have accepted the surveys as being valid. A sample plot survey protocol is a method recommended by the USFWS for large survey areas. See the 2009 tortoise survey guidelines.

Surveys conducted for the Project are described in Section 5.6 and Appendix Y of the AFC. The results of those surveys are also provided therein. Maps of the surveys are also provided therein. These surveys were intensive. The methods and protocols used for the surveys were approved by the resource agencies.

- Data Request 6:Please clarify whether closer transect spacing was implemented
at any location(s) within the survey area. If closer transects were
implemented, please mark these locations on a map.
- **Response:** The tortoise survey was a sample plot survey protocol, not linear transect. The assessment area was surveyed systematically as shown in the figures in Section 5.6 of the AFC.

- **Data Request 7:** Please indicate whether any desert tortoises were handled during Project surveys. If tortoises were handled, please provide documentation of the section 10(a)(1)(A) permit(s) issued by the USFWS authorizing handling. If tortoises were not handled, please indicate how tortoise measurements provided on the survey data sheets were obtained (AFC, Appendix H of Appendix Y).
- **Response:** No tortoises were physically handled because the survey protocol did not require this. Recorded measurements were visual estimates made without touching the animal.

- Data Request 8:Please explain why the desert tortoise data sheets are missing
survey information such as start time, stop time, and
temperature.
- **Response:** Not all of the field forms were completely filled out by the field biologists.

- **Data Request 9:** Please explain why surveyors did not record all sign including size of shelter sites, shells, and estimated size of live tortoises.
- **Response:** This data is not necessary for the purposes of the survey. The majority of the tortoises detected were adult or sub-adult individuals.

- Data Request 10:For each person that conducted desert tortoise surveys, please
indicate the personnel that had a minimum of 60 days prior field
experience searching for desert tortoises and tortoise sign.
- **Response:** Most of the URS staff were trained and had 60 days or more of previous tortoise survey experience. Less experienced staff with less than 60 days experience were paired with more experienced staffers. See resumes of field staff.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 11:	For surveyors without 60 days prior field experience, provide a
	discussion of how surveyors were trained and any measures
	that were taken to ensure they obtained accurate survey results.

Response: See the response to Data Request 10.

- **Data Request 12:** The Applicant's desert tortoise survey data sheets indicate considerably more tortoise scats and inactive tortoise burrows were detected than were mapped in the AFC.18 Please provide a corrected map that reflects all desert tortoises and tortoise signs that were detected during Project survey (*Id.* and AFC Appendix Y: Figure 4).
- **Response:** All tortoise sign recorded with GPS units are shown in Section 5.6 of the AFC document.

- **Data Request 13:** Please discuss how the surveyors determined burrows were inactive.
- **Response:** Occupied burrows typically had tortoise visible in the burrow. Unoccupied burrows lacked sign of occupation (presence of cobwebs, vegetation litter accumulation, lack of recent tracks, lack of excavation activity, etc.)

- Data Request 14:Please explain which desert tortoise data sheets were
completed during focused surveys and which ones were
completed as a result of incidental observations.
- **Response:** Incidental observations were not always recorded on data sheets, as it was not required. The data sheets in Appendix A of the Biological Resources Technical Report (Appendix Y of the AFC) are not differentiated between incidental observation and desert tortoise observed during focused surveys. Some data sheets may also be marked as "Incidental" or "Other" under the "Survey Type" heading.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 15:Please discuss how tortoise health was assessed, including
whether tortoises were examined for Upper Respiratory Tract
Disease or any other illness.

Response: Tortoise health was not assessed.

- **Data Request 16:** Since the AFC contains very little of the data collected by the survey team (i.e., size and health of each tortoise, burrow condition, habitat associated with sighting), please provide these data or clarify why they were omitted from many of the data sheets. (See AFC, Appendix H of Appendix Y).
- **Response:** The focus of the survey was to determine tortoise presence within the assessment area. Other data were not necessary for determining local level of tortoise occupation.

- **Data Request 17:** Please discuss the appropriateness of using the detection rate estimate provided by Nussear et al. (2008) considering the disparate level of effort per unit area between the two investigations (i.e., the Applicant's and Nussear's).
- **Response:** The published detection rates varied between 55 and 65 percent. URS used the lower number to be conservative in calculating the upper limit of occupation. We do not expect the actual detection rate to be much different from the published rates because tortoise and their sign were found in varying densities within the assessment area. The majority of the site support open vegetative cover (50% cover), so detection of tortoise was not constrained by vegetation.

- **Data Request 18:** Please discuss possible explanations for why there was a considerable difference in the number of tortoises and burrows detected through use of the two different survey methods (i.e., protocol versus incidental observation). In your response, please justify why the surveys should be deemed adequate despite the major differences that were observed.
- **Response:** Only one survey method was used (sample plot surveys) for formal determination of presence/absence and estimation of population densities. Incidental sightings outside the sample plots are not considered a survey method to be used for population estimates; however, these observations add to our understanding of the distribution of the species on site and are considered useful. All detected tortoise and sign were recorded using GPS units.

- **Data Request 19:** Please discuss how the results of Project desert tortoise surveys will be applied to impact evaluation and proposed mitigation. If tortoise abundance or presumed absence will be applied, please discuss any concurrence from the USFWS that survey results more than one year old can be applied.
- **Response:** The entire site is considered mostly suitable for tortoise occupation with regard to habitat. The sample plot surveys suggest tortoise densities are higher in some areas than others (for instance, the area isolated by the railroad and interstate highway have less tortoise and/or sign). Mitigation will be based on the acreage of suitable habitat impacted rather than number of tortoise displaced as dictated by the West Mojave Plan, although the evident very low density of desert tortoise on site relative to other areas in the Mojave Desert will be considered on an overall basis. The tortoise survey is current and appropriate for the processing of the AFC. The agencies have accepted the surveys as being valid and have stated that no additional survey effort is necessary.

- **Data Request 20:** Please clarify the distinction between the "AFC Assessment Area" and the "SES Assessment Area", indicate whether either of these areas includes land within the BLM ACEC, and confirm that the two terms were accurately applied throughout the AFC.
- **Response:** The AFC Assessment Area and SES Assessment Area are shown on Figure 5.6-2 in Section 5.6 of the AFC. The BLM ACEC is shown in that figure as a separate area. There is at least one reference in the AFC. The discussions in the text of the ACEC are believed to be accurate relative to these areas.

TECHNICAL AREA: BIOLOGICAL RESOURCES

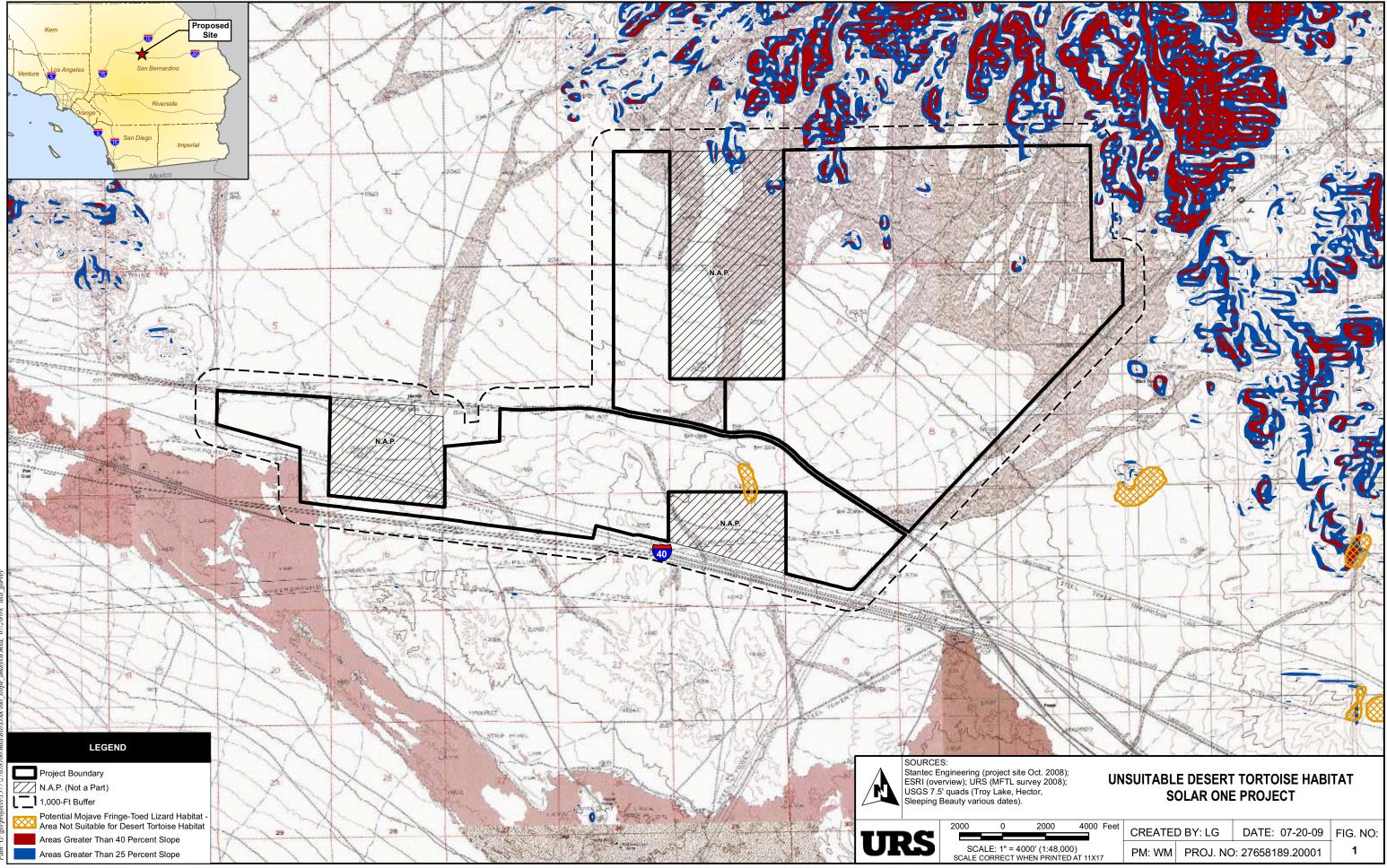
- **Data Request 21:** Please provide additional details to explain how the occupancy estimates provided in the AFC were derived. Specifically, please clarify why the estimates provided do not coincide with what is shown on maps in the AFC. (See AFC, Appendix Y: Figures 4 and 5.)
- **Response:** Occupancy estimates of desert tortoise provided in AFC Section 5.6 were derived by totaling the number of live desert tortoise and active desert tortoise burrows (burrows containing a visible tortoise) detected during focused surveys (not including incidental observations) and dividing by the sample size (0.33 for a 33% sample size) to derive an estimate of the total number of desert tortoise potentially in the entire Project site. This number was then further divided by the tortoise detection rates described in Nussear et al 2008 (55% to 68%) to account for surveyor detection efficiency. The total number of desert tortoise and active burrows was six. Six divided by 0.33 yields 18.18, rounded to 18 yields the desert tortoise estimate if 100% of the desert tortoise on the Project site were detected during focused surveys. Dividing 18 by 0.55 yields 32.7, which was rounded to 33 to yield the desert tortoise estimate if 55% of the desert tortoise on the Project site were detected during focused surveys. This results in the estimate of 18 to 33 desert tortoise for the AFC Assessment Area.

This number differs from the information presented in AFC Figure 5.6-4 because the figure shows the results of all surveys, including incidental observations. The purpose of the figures are to show actual results, not estimates of the number of desert tortoise or other resource detected on the Project site.

- **Data Request 22:** Please explain how desert tortoise habitat suitability was determined and quantify the modifier "majority" (in reference to the majority of the AFC Assessment Area being suitable habitat). (*Id.*)
- **Response:** Only tortoise individuals and burrows that were detected and deemed active during the sample plot surveys were used in the estimate. Incidental sightings not recorded as part of a plot survey are not relevant to the calculation of density. Sample plot coverage is 33% (80 acres surveyed per 240-acre cell). Detection rates of 55% and 100% were used to provide the full range of the estimate. There is no inconsistency between the estimates and maps provided in the AFC.

- Data Request 23:Please quantify the amount of unsuitable desert tortoise habitat
in the Assessment Area, indicate where this habitat occurs, and
discuss how the habitat was deemed unsuitable.
- **Response:** Most of the site supports vegetation and soils deemed suitable for tortoise occupation based on consideration of desert tortoise habitat requirements. Steep, rocky areas and sand dune areas are least suitable for tortoise use. About 1.7% of the site is less suitable for tortoise. A figure showing habitat not suitable for tortoise us is provided as attachment BIO-1, located behind this response.





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- **Data Request 24:** Please clarify how the Applicant estimated between 18 and 33 tortoises will be directly impacted by the Project and specify whether the presence of scats and carcasses were incorporated into the estimate (AFC, p. 5.6-22).
- **Response:** See the response to Data Request 21 and the descriptions in Section 5.6 and Appendix Y of the AFC.

- **Data Request 25:** In discussing impacts, the Applicant stated: "Additional tortoises may occur in the remainder of the AFC Project Site, although presumably at lower densities than the survey cells where tortoise and tortoise sign were actually detected."42 Please discuss the environmental conditions that would lead the Applicant to presume tortoise densities would be higher in survey cells than outside of them, particularly if the survey cells were designed to represent a random sample (*Id.*)
- **Response:** The Applicant does not presume the densities inside the plots were higher. 240acre survey cells where sample plots were negative are where tortoise densities are likely to be lower than cells where tortoise were detected.

- Data Request 26:Please provide a revised discussion of potential indirect impacts
to tortoises that accounts for the sampling that was conducted
and additional tortoises beyond the 1000-foot buffer.
- **Response:** The assessment of indirect impacts provided in the AFC is adequate, and describes direct and indirect impacts on desert tortoise (see Section 5.6 of the AFC). The assessment is based on methods, protocols, and concurrence with the selected survey areas by the BLM, USFWS, CEC, and CDFG. Tortoise located beyond 1000 feet from the limits of disturbance are not considered to be substantially affected by the proposed action, as discussed in the AFC.

- **Data Request 27:** In order to evaluate the Applicant's proposal for an exclusion fence around the construction area in occupied desert tortoise habitat, please explain how occupied desert tortoise habitat will be identified given portions of the Project area were not sampled, the detection rate is considerably less than 100%, and the dynamic nature of the organism (e.g., potential to colonize previously unoccupied areas).
- **Response:** The Project area was surveyed using the methods described in Section 5.6 and Appendix Y of the AFC. These methods, including the desert tortoise survey methods, were reviewed and approved by the USFWS, CDFG, and BLM. The USFWS recently issued new desert tortoise survey protocols that provide for probabilistic survey methods that are very similar to those used for this Project as approved by the resource agencies. The probabilistic surveys conducted for this Project provide for population estimates for the areas within the Project area as described in the AFC. The surveys also provide information on the distribution of desert tortoise on the Project site as described in the AFC. Mitigation proposed at this time provides for preconstruction surveys of the entire Project area. Discussions with the resource agencies to date have resulted in consideration of a range of options for exclusionary fencing from complete fencing of the entire Project site to some variation of partial fencing. Final fencing requirements are expected to be determined in coordination with the resource agencies.

Data Request 28:	In order to evaluate the Applicant's proposal for roving biological monitors in active construction areas and for access road improvements in occupied desert tortoise habitat, please clarify a) whether at least one biologist will be present to observe all construction activity, and b) how occupied desert tortoise habitat will be identified in areas subject to road improvements (<i>Id.</i>)

- **Response:** a. At least one biologist will be present in active construction areas and for access road improvements. The number of monitoring biologists will be proportional to the intensity and distribution of the construction activity.
 - b. All areas of the Project site are assumed to be occupied desert tortoise habitat. As such, areas subject to road improvements will require the presence of a monitoring biologist.

- **Data Request 29:** Please discuss how occupied desert tortoise habitat will be identified in areas requiring maintenance activities.
- **Response:** Maintenance activities will be conducted according to requirements, if any, determined in coordination with the resource agencies.

- Data Request 30: Please provide a proposed tortoise relocation plan that has a detailed discussion of 1) how disease (or other illness) will be identified and how transmission of disease will be minimized; 2) how tortoises will be handled and transported; 3) measures that will be taken if tortoises become overheated; 4) a proposed schedule for translocation efforts; 5) the specific habitat or other characteristics that will be assessed to determine the translocation site provides the best location for release; 6) proposed monitoring of the exclusion fence, including frequency and duration of monitoring; 7) actions that will be taken to monitor the fate of translocated tortoises, including preparation of monitoring reports; and 8) qualifications of the personnel that will conduct clearance surveys, health evaluations, habitat assessment (for relocation site), and post-translocation monitoring.
- **Response:** A tortoise relocation plan will be developed as a condition of approval in consultation with BLM, CEC, and the wildlife agencies. Specific details of the relocation plan are dependant on land management agency decisions that have not yet been made [e.g., relocation site(s)]. Relocation protocols will likely be similar to those of the Fort Irwin relocation project.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 31: Please identify potential release sites for tortoises that are cleared from the Project area and discuss how these sites provide the same level of desert tortoise habitat suitability as the Project site, taking into consideration the AFC's map that depicts several additional projects proposed in the Project region. (AFC, Appendix Y: Figure 7.)

Response: See the response to Data Request 30.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 32:** Please discuss the health of tortoises observed in the Project area, taking into consideration that upper respiratory tract disease is thought to be present throughout the adjacent Ord-Rodman Desert Wildlife Management Area (DWMA) (U.S. Fish and Wildlife Service. 1994. Desert Tortoise (Mojave Population) Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon), and discuss how the adverse effects associated with moving healthy tortoises into an infected area will be mitigated. (U.S. Fish and Wildlife Service. 1994. Desert Tortoise (Mojave Population) Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon), Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon) Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon.)
- **Response:** The objective of the desert tortoise survey for the Project site was presence/absence only. No data on the health of observed desert tortoises was collected.

The determination of the health of desert tortoises and any potential health risks associated in introducing "sick" tortoises into new areas will be addressed before desert tortoise relocation activities commence.

- **Data Request 33:** Please clarify whether the Applicant's proposed perimeter fence will preclude tortoises from re-entering the site, as stated in the AFC (Id.) or whether the existing culverts will allow for continued north-south movement through the site, as stated in the AFC. (AFC, p. 5.6-24.)
- **Response:** The Applicant's fence could be built to preclude desert tortoise, or to allow for movement through the site, based upon agency approval. Discussions with the resource agencies are ongoing to determine requirements for the Project.

- Data Request 34: Considering the Applicant proposes acreage-based compensatory mitigation using a formula provided in the West Mojave Plan (AFC, p. 5.6-26), which established a mitigation ratio of 5:1 for impacts within a Habitat Conservation Area (such as the ACEC adjacent to the Project site), please provide the ratio the Applicant proposes for compensatory mitigation so that the effectiveness of the Applicant's proposed mitigation for desert tortoise impacts can be evaluated (Bureau of Land Management. 2005. Final environmental impact report and statement for the West Mojave plan: a habitat conservation plan and California desert conservation area plan amendment. Moreno Valley (CA): U.S. Dept. of the Interior, Bureau of Land Management, California Desert District).
- **Response:** This data request does not apply to the Project area because it is not within a Habitat Conservation Area. Figure 2-8 of the West Mojave Plan shows the proposed Project area is within a 1:1 Compensation Area. The Applicant will have discussions with the agencies during the permitting process regarding the level of mitigation that is appropriate.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 35: Please provide the following information regarding the Applicant's proposal to monitor for the presence of ravens and other potential human-subsidized predators, and to implement a control plan if predator densities substantially increase in the vicinity of the facility (AFC, p. 5.6-2). a. Justify the implementation of a control plan only after predator densities have substantially increased. b. Discuss how implementation of a control plan after predator densities have substantially increased mitigates impacts to desert tortoise and other specialstatus species, given the low fecundity of the species and that substantial predation will likely already have occurred. c. Please provide the techniques that will be used to monitor ravens and other potential predators, including frequency of monitoring and means for determining densities have substantially increased (i.e., type of analysis). d. Please quantify "substantially" increase. e. Please quantify "vicinity" of the facility. Please specify the predators proposed for monitoring. f. Please discuss the techniques that may be implemented q. to control predators if control is deemed necessary Please discuss how the effectiveness of the predator h. monitoring and control program will be documented, including whether reports will be prepared for resource agency review. If reports will be prepared, specify the frequency and duration of report submittal.

Response: Please see the raven management plan docketed with the CEC and BLM on July 17, 2009.

- Data Request 36:Please clarify whether Project transmission poles and towers will
include design features to reduce potential for raven nesting.
- **Response:** A Raven Monitoring and Control Plan was docketed with the CEC and BLM on July 17th, 2009 and addresses this request.

Data Request 37:		 Please provide additional information on burrowing owls that were detected, including: a. Date(s) owls were detected and surveyor(s) making the detection. b. Information on how the two owls were detected and any subsequent efforts devoted to determining the status (e.g., residency and habitat use) of the owls. c. Behavior of the owls (<i>Id.</i>)
Response:	a.	Burrowing owls were detected on the following dates by the following surveyors:
		March 14, 2008 – K. Marsh, G. Kinoshita, M. Honer March 27, 2008 – R. Kleinleder
	b.	These owls were observed during rare plant surveys. No active burrows were detected. As stated in the AFC, the burrows of these owls were not detected. Pre-construction surveys are planned to determine occupancy of burrowing owl prior to vegetation clearing.
	c.	The owl detected on March 14, 2008 appeared to be seeking shelter from the wind.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 3	38: Please provide the following specific techniques that were used to document burrowing owl use of the Project area and surrounding buffer zone:
	a. Indicate how burrowing owl surveys met the CEC siting requirement, which states surveys must follow appropriate protocols during the appropriate season(s), and agencies with jurisdiction should be consulted for protocol guidance. (AFC, Master Section 5.6: Data Adequacy Worksheet.)
	 Discuss any focused survey efforts (i.e., non-incidental) that were devoted to locating owls and owl sign. Please include the dates these efforts were conducted and the personnel that were involved.
	c. Indicate whether burrowing owl surveys were conducted during the hours around sunrise and sunset, as required by the survey protocol. (The California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Available online at: http://www.dfg.ca.gov/wildlife/species/docs/boconsortium.p df).
	d. Indicate whether burrows were mapped in accordance with the survey protocol. (<i>Id</i> .) If the answer is yes, please provide a map showing burrow concentrations.
	e. Indicate the techniques that were used to determine whether burrows were being used (or had been used) by an owl.
	 f. Specify whether all burrows were examined for signs of owl use. If not all burrows were examined, please discuss the characteristics of the burrows that were examined.
	 g. Indicate whether potential owl burrows were monitored on four separate days as required by the survey protocol. (<i>Id.</i>) If the answer is yes, please provide information on these monitoring efforts (e.g., dates, times, locations).
	 Indicate how much of the Project area and surrounding buffer were surveyed for burrowing owls (i.e., did surveys provide 100% coverage or did they represent a sample).
Response:	Protocol surveys were determined to be unnecessary because of the extensive coverage provided by other focused surveys conducted onsite during 2007 and 2008. Two burrowing owls were observed and mapped. Pre-construction surveys will be conducted (following the Burrowing Owl Consortium pre-construction survey protocol) and any potential burrows will be scoped, and if unoccupied, will be collapsed within 30 days of planned ground disturbance during the non-breeding season. Any owls encountered during clearance surveys will be passively excluded from the area of disturbance. A biological construction monitor will search for nesting owls in areas adjacent to active construction twice

monthly during the breeding season. This level of monitoring is consistent with

established CDFG protocols for burrowing owl.

- **Data Request 39:** If Project surveys did not adhere to protocol survey guidelines, please either provide information on the survey guidance issued by California Department of Fish and Game (CDFG), or provide a schedule for conducting protocol surveys such that there is sufficient time to evaluate Project impacts to owls and establish compensatory mitigation
- **Response:** See the response to Data Request 38 above. Currently, two burrowing owls were detected on the Project site, and land purchased as compensatory mitigation for desert tortoise will include a provision that requires the presence of burrowing owl as well.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 40:Please indicate whether the Applicant's proposed mitigation will
conform to the guidelines issued by the California Burrowing
Owl Consortium and those presented in the West Mojave Plan.
To substantiate the response, please:

- a. Confirm that compensation habitat will provide suitable burrowing owl habitat (as defined in the Burrowing Owl Survey Protocol), will meet CDFG approval, and will be managed to maintain suitable burrowing owl habitat. (*Id*.)
- b. Confirm that the Applicant will provide compensatory burrowing owl habitat based on recommended ratios (i.e., 6.5 to 19.5 acres of foraging habitat per pair or individual bird), and that the compensation habitat will be placed in a conservation easement. (*Id.*)
- c. Provide a proposed burrowing owl mitigation monitoring plan that includes success criteria and triggers for additional mitigation if success criteria are not met. (See AFC, p. 5.6-3.)
- **Response:** The mitigation proposed by the Applicant is consistent with the standards of the Burrowing Owl Consortium.
 - a. Compensatory mitigation for desert tortoise would also mitigate for owl habitat impacts. Habitat purchased as mitigation for desert tortoise/burrowing owl will be burrowing owl occupied habitat. Any land proposed as mitigation will not be purchased without previous approval of the appropriate agencies. Once purchased, this land will be managed or turned over to a land management agency/organization via a conservation easement, along with an endowment to fund long-term management.
 - b. See response to a. above.
 - c. Land currently occupied by burrowing owls will be targeted as mitigation. Therefore, the land will preferably have suitable burrowing owl habitat, burrowing owl individuals, and a history of burrowing owl use, which would render a burrowing owl monitoring plan unnecessary.

Pre-construction surveys will follow the Burrowing Owl Consortium preconstruction survey protocol. Any potential burrows observed will be monitored, scoped, and if deemed unoccupied, collapsed within 30 days of planned ground disturbance during the non-breeding season. If owls are observed within construction areas, they will be passively excluded during the non-breeding season. During site development, a biological construction monitor will search for nesting owls in areas adjacent to active construction twice monthly during the breeding season. If owls are observed, these areas will be marked off and avoided until the end of the breeding season.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 41:** Please discuss the success of past burrowing owl mitigation programs implemented by URS and provide copies of monitoring reports that demonstrate the long-term success of passively relocating owls to artificial burrows in a desert ecosystem (similar to what is being proposed for SES Solar Two).
- **Response:** Burrowing owls found on the Project site will be passively excluded during the non-breeding season, not passively relocated. Once excluded from their burrows, the owls are expected to naturally relocate to other areas adjacent to the Project site. Compensatory mitigation for desert tortoise would also mitigate for owl habitat impacts. This includes purchasing owl occupied habitat in accordance with the number of owl detected on the Project site, which is currently two.

Solar Two does not have impacts to burrowing owl. URS has conducted owlrelated construction monitoring for CalTrans, IID, Kinder Morgan, BNSF, and Union Pacific. The methods proposed are commonly used by many parties and these methods have a long track record of success throughout southern California and elsewhere.

- **Data Request 42:** Please indicate whether one or more reference sites were visited as recommended by survey protocols. (California Department of Fish and Game. 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities. (Revision of 1983 Guidelines.) Sacramento, CA.) If a reference site was visited, please provide a description of the reference site(s) visited and phenological development of the target special-status plants, with an assessment of any conditions differing from the Project site that may have affected their identification.
- **Response:** Reference sites were located within the Project site. No off site visits to reference sites were made. Botanists surveyed during the appropriate blooming period for sensitive species with the potential to occur on site.

- Data Request 43:Please discuss the actual phenological development of all the
target species (see AFC, Appendix B of Appendix Y) at the time
Project surveys were conducted
- **Response:** Surveys were conducted March 19, 2007 through May 11, 2007 and from March 10, 2008 through May 10, 2008 which captures the blooming period of all desert annuals with the potential to occur on site. The phenological development of target species is irrelevant, as long as the species can be identified by botanists on site.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 44: Please identify the survey techniques that were implemented within each survey cell, including protocol-required assurance of thorough coverage of potential impact areas and, if survey transects were used, an indication of transect spacing

To conduct the special status plant species surveys, the entire AFC Assessment **Response:** Area was divided up into 240-acre cells. A team of two biologists surveyed two cells per day. Within each cell, a list of all plants species was made by each biologist. When a special status plant species was located during the special status plant surveys, its location was documented with the aid of consumergrade GPS units and imported to a geographical information system (GIS) database for display on 1-inch = 200 feet rectified 2005 aerial photographs. If terrain was steep or rocky or if there was more diversity to be recorded, extra field time was allocated. Because of less favorable conditions for surveying for rare plants during the 2007 field season as a result of a relatively dry season, special status plant surveys were repeated and expanded in 2008 to include areas south of the railroad and the BLM ACEC east of the existing transmission line. URS biologists conducted vegetation assessments and special status plant surveys within the AFC Assessment Area from March 19, 2007 through May 11, 2007. Special status plant species surveys were also conducted from March 10, 2008 through May 10, 2008 using the same methods as in 2007. Each 240-acre cell was sampled sufficiently to assess the presence or absence of sensitive plant species.

- **Data Request 45:** Please justify the Applicant's rare plant survey effort (i.e., 480 acres/day per team of two biologists) (AFC, p. 5.6-3) and discuss why the time per unit area spent surveying was appropriate for determining potential Project impacts.
- **Response:** Given the size of the assessment area (1000s of acres), a systematic sampling approach was used to assure an unbiased sample survey was conducted across the entire site. Regionally significant populations, if present, would have been detected using this method.

- Data Request 46:As required by established protocols, please provide precise
information on the locations (e.g., survey cell numbers) focused
special-status plant surveys were conducted, by date.
- **Response:** There are no required protocols for focused special-status plant surveys required by the CEC, CDFG, BLM, or USFWS. This information is not available and is not necessary for the AFC process. All 240-acre cells were surveyed for rare plants.

- **Data Request 47:** Please discuss whether the *E. vivipara* plant(s) documented as occurring on the Project site could have been the rosea variety, which is a CNPS List 2 species. If the rosea variety was eliminated from consideration, please provide the deterministic characteristics that were used to make the determination.
- **Response:** This species, *Coryphantha alversonii*, is a member of the Family *Cactaceae*, and others in its genus have recently undergone a taxonomic revision moving from the *Escobaria* (Beehive cactus) genus (*Escobaria vivipara ssp. alversonii*) to the *Coryphantha* genus. It can be confused with other members in its genus if not seen flowering, namely CNPS list 2.2 viviparous foxtail cactus (*Coryphantha vivipara*) (formerly *Escobaria vivipara ssp. rosea*). Viviparous foxtail cactus is confidently excluded as the species occurring on-site due to its typical elevation range of 1250-2700 meters, where the Project site maximum elevation is only 675 meters. Foxtail cactus is typically found in sandy and rocky areas typically consisting of granitic soils. It is found in creosote bush scrub habitat from 75-1525 meters in elevation.

- Data Request 48:
 Please discuss what characteristics were used to distinguish

 Calochortus plummerae (a rare plant) and C. kennedyi (reported occurring onsite).
- **Response:** Experienced botanists were used to survey and identify all plants on site. *Calochortus kennedyi* has channeled basal leaves and yellow to red (usually orange) petals. While *C. plummerae* has both basal and *cauline* leaves that lack a channel. The petals are pale pink to rose with a toothed margin and long yellow hairs wide central band on the petal. These two species look nothing alike.

- Data Request 49:Please discuss what characteristics were used to distinguish
Camissonia boothii ssp. condenseta and C. boothii ssp.
desertorum (reported occurring onsite) from C. boothii ssp.
boothii (a rare plant).
- **Response:** Botanists keyed plants to subspecies to determine if they were sensitive species. *Camissonia boothii ssp. condenseta* and *C. boothii ssp. desertorum* are easily distinguished from *C. boothii ssp. boothii* because they have a rosette present at the time of first flower, bracts that are not leaf like and often inconspicuous and are glabrous or at least lack spreading hairs.

- **Data Request 50:** Given that only one surveyor has listed experience identifying *C. boothii ssp. boothii*, please describe training provided to allow accurate differentiation among similar species and subspecies of *Camissonia* plants, and other plants present in the same genus and family.
- **Response:** Athough only one surveyor has listed experience identifying *C. boothii ssp. Boothii*, all surveyors were qualified to key plants to subspecies. More seasoned botanists were present to verify the identification if there was any uncertainty.

- Data Request 51: Booth's evening primrose is the common name attributed to the rare plant Camissonia boothii ssp. boothii. (California Native Plant Society. 2009. Inventory of Rare and Endangered Plants (online edition, v7-09b). California Native Plant Society. 2009 Sacramento, CA. Accessed 8 Jun from http://www.cnps.org/inventory.) Please explain the labeling presented in the AFC, which attributes the name Booth's evening primrose to C. boothii ssp. Condenseta (AFC, Appendix D of Appendix Y).
- **Response:** Common names vary between sources and have no regulatory standards. Since the scientific name of this plant is *Camissonia boothii* it could logically be called Booth's evening primrose, since it was named for William Beattie Booth and the common name for this genus is often evening primrose. In the Jespon manual, *Camissonia boothii* ssp. *boothii* is listed with the common name Booth's evening primrose while *C. boothii* ssp. *condenseta* is not listed with any common name.

- **Data Request 52:** For the dates 11 and 12 March 2008, the Applicant lists Michelle Balk as one of the Project surveyors. However, Ms. Balk was also reported to be surveying the Solar Two Project site (Imperial County) on those days (AFC for Solar Two, Biological Resources Technical Report, p. 8). Please clarify the site Ms. Balk was surveying on the dates in question and confirm the other individuals listed in the AFC were present on the Solar One site on the dates listed in AFC Appendix A of Appendix Y.
- **Response:** Ms. Balk was present on the Solar One site on the dates listed above. The table is accurate.

- Data Request 53:Please provide an estimate of the percentage of the
Assessment Area that was thoroughly surveyed for rare plants
in 2008 (i.e., the size of the sample).
- **Response:** The entire assessment area was systematically sampled using the 240-acre grid cells as an organizing tool.

- **Data Request 54:** If less than 100% of the Assessment Area was inspected by surveyors for rare plants in 2008, please discuss why survey data were not treated as a sample from which to generate an estimate of number of plants that would be impacted (as was done for the desert tortoise).
- **Response:** The goal of the sampling survey was not 100% coverage, which is not practicable for an area encompassing 1000s of acres. An unbiased survey was conducted using the 240-acre cells as an organization tool so that the survey effort was even across of entire survey area.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 55:If 100% of the Assessment Area was inspected by surveyors for
rare plants in 2008, please discuss how two biologists were able
to detect all plants (some of which are known to be very small)
within 480 acres in an 8-hour day.

Response: See responses to Data Requests 45 and 53.

- **Data Request 56:** Please clarify whether the observations of small-flowered *androstephium* reported in the AFC represent individual plants or populations. If observations represent more than one plant, please provide information on the abundance and distribution of the species at each location where it was detected.
- **Response:** The observations of small-flowered *androstephium* reported in the AFC represent individual plants.

- Data Request 57:Please indicate (or estimate if necessary) how many
occurrences of small-flowered androstephium will be directly or
indirectly impacted by the Project.
- **Response:** A total of 43 occurrences of small-flowered *androstephium* will likely be directly or indirectly impacted by the Project.

- **Data Request 58:** Please discuss the local, regional, and range-wide significance of Project impacts on small-flowered androstephium.
- **Response:** In the immediate area the BLM has designated the Pisgah Area of Critical Environmental Concern (ACEC). There are as many small-flowered *androstephium* inside this ACEC. This species occurs throughout the desert province, but is largely concentrated in the Mojave Desert. This Project impacts a small area within the greater range of this species and nearby occurrences have been conserved through the creation of the ACEC adjacent to the Project site.

- **Data Request 59:** Please clarify whether the observations of white-margined beardtongue reported in the AFC represent individual plants or populations. If observations represent more than one plant, please provide information on the abundance and distribution of the species at each location where it was detected.
- **Response:** The observations of white-margined beardtongue reported in the AFC represent individual plants.

- Data Request 60:Please indicate (or estimate if necessary) how many
occurrences of white-margined beardtongue will be directly or
indirectly impacted by the Project.
- **Response:** One white-margined beardtongue is in the impact area of the AFC (see AFC Figure 5.6-4), and may be affected if it is not in one of the undisturbed areas. Most recorded locations are in the south east portion of the area surveyed (BLM ACEC) and NAPs, which are not part of the proposed Project.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 61:Please discuss the local, regional, and range-wide significance
of Project impacts on white-margined beardtongue.

Response: The West Mojave Plan (WMP) addresses impacts on BLM land in the greater area as well as in the Project area. According to the WMP, this species is a disjunct group with a very limited range within California, all within the West Mojave. The WMP includes the planned acquisition of one private parcel where this plant occurs within the adjacent Pisgah ACEC. The Pisgah ACEC was established specifically to conserve populations of white-margined beardtongue and other rare species.

- **Data Request 62:** Please clarify whether the crucifixion-thorn and Utah vine milkweed plants detected will be directly or indirectly impacted by the Project.
- **Response:** The single locations of both species are likely to be directly impacted by the Project.

- **Data Request 63:** Please provide a justification for the AFC's conclusion that impacts to Emory's crucifixion-thorn and Utah vine milkweed would be less than significant.
- **Response:** Both occurrences are single individuals. These do not represent regionally significant populations and the impacts were assessed as less than significant. The adjacent Pisgah ACEC conserves locally sensitive species.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 64:Please provide information on the size (e.g., height and
diameter) of the crucifixion-thorn plant that was detected during
Project surveys.

Response: These data were not recorded during surveys.

- **Data Request 65:** Please discuss whether Project surveyors were aware of the relatively large population of crucifixion-thorn that has historically been documented as occurring within the Project area. If surveyors were aware of this information, please discuss any extra effort that was devoted to locating the population.
- **Response:** Surveys detected the single crucifixion thorn that occurred on site. This species is a distinctive shrub/tree that is easily detected if present.

- Data Request 66:Please discuss the Applicant's attempts to avoid and minimize
Project impacts to the rare plants known to occur in the Project
area.
- **Response:** Narrow areas of vegetation (75' wide) will be maintained in their natural state onsite and some rare plant locations may occur in these retained habitat patches.

- **Data Request 67:** Please discuss the basis for the Applicant's conclusion that compensatory mitigation for tortoise habitat will also benefit rare plants, including how the proposed mitigation will provide for the specialized habitat requirements of the rare plants on the Project site. (AFC, p. 5.6-29.)
- **Response:** This conclusion is consistent with the WMP. Planned conserved areas include populations of the species detected within the Project site. The Project mitigation lands will contribute to the implementation of the WMP, which benefits the species addressed by the plan. The adjacent ACEC was established to conserve rare plants in the vicinity.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 68:Please provide a detailed rare plant mitigation plan tailored to
the four species that would be impacted by the Project.
(California Public Resource Code § 21081.6 (c)). (California
Native Plant Society. 1998. Policy on Mitigation Guidelines
Regarding Impacts to Rare, Threatened, and Endangered
Plants.
Available
thtp://www.cnps.org/cnps/archive/mitigation.php.)
Please include:
a. The proposed timeline for collecting seeds and cuttings,

- a. The proposed timeline for collecting seeds and cuttings, propagation, and establishment of new plants at the relocation site.
- b. Methods that will be used to propagate each species.
- c. The proposed relocation site and specific microhabitat conditions that will be assessed to determine whether the site is suitable for each target species.
- d. Methods that will be implemented to prevent genetic contamination of plants at the relocation site.
- e. Success criteria, the timeline for their achievement, and triggers for additional mitigation.
- f. Mitigation monitoring plan, including the data that will be collected and the frequency of reporting.
- g. Management measures that will be implemented to protect plantings from anthropogenic disturbance.
- **Response:** Mitigation that is consistent with the WMP will mitigate for impacts to rare plants. There is no need to provide species specific mitigation measures for species addressed by the WMP. The BLM established the adjacent ACEC to conserve rare plants in the Project vicinity. The goal of the seed collection/cutting is to conserve the genetic resource. The relocation site would be the adjacent ACEC, so there is no concern related to genetic incompatibility. Details of the seed collection protocol will be developed as required by the resource agencies.

- **Data Request 69:** Please provide any information that the Applicant is aware of to suggest collection of seeds and cuttings for propagation and relocation has been successful for each of the four target species.
- **Response:** The Applicant is not aware of any information suggesting that collection of seeds, cuttings for propagation, or relocation has been successful for white-margined beardtongue, small-flowered androstephium, or Utah vine milkweed. The following website contains information stating seed collected from Emory's crucifixion thorn has been successfully germinated: (http://www.dmg.gov/documents/WMP_Species_Accounts/Species%20Accounts-Plants.pdf)

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 70: Please discuss how mitigation listed under BIO-8 will be applicable for white-margined beardtongue species, when previous attempts to propagate white-margined beardtongue by cuttings or transplantation have proven unsuccessful. (Scogin, R. 1989. Studies of *Penstemon albomarginatus* in California. Report for Rancho Santa Ana Botanic Garden, Claremont, California.)

Response: See the response to Data Request 69.

- **Data Request 71:** Please specify the USFWS database that was used as part of the Project biological resources assessment.
- **Response:** Desert Tortoise Critical Habitat boundaries were provided by the USFWS and are available for review through the USFWS Ventura Office website.

- **Data Request 72:** Please indicate any individuals (e.g., local experts), agencies (e.g., BLM) or organizations (e.g., California Native Plant Society) that were contacted to obtain information potentially useful to the site assessment.
- **Response:** CDFG CNDDB, BLM Barstow, USFWS Ventura, and Gary Thomas from the Society for the Conservation of Big Horn Sheep provided information relevant to the assessment.

- **Data Request 73:** Please specify the CEC regulation referenced in Appendix Y, p. 2-3 of the AFC to justify assessing habitat within a one-mile buffer, discuss how the habitat was "qualitatively" assessed, and provide information on habitat(s) within the one-mile buffer to the north and south of the site.
- **Response:** The discussion related to the 1-mile buffer is from the CEC Rules of Practice and Procedure. Habitat was quality assessed through the use aerial photography and direct observation of some of these areas.

- Data Request 74:Please discuss the methods that were implemented to map
MFTL habitat, including the minimum mapping unit that was
used and justification for selecting the minimum mapping unit.
- **Response:** MFTL habitat was mapped according to the presence of habitat elements necessary for the species' survival and normal behavior during the initial habitat assessment of the SES Assessment Area and BLM ACEC in March 2007. This includes all areas containing fine wind-blown sands. The minimum mapping unit used was 0.1 acre, which is an appropriate standard used to assess impacts to upland habitats.

- **Data Request 75:** Please indicate the total number of hours that were allocated to surveying the MFTL habitat within the Project site (i.e., not within the ACEC).
- **Response:** Within the Project site boundaries, one patch of MFTL habitat exists near the southern edge of the Project site just north of I-40 and south of the railroad. This area covers approximately 16.9 acres and took approximately eight hours for three biologists to survey 100% of the area (24 survey hours total). MFTL was detected during this survey effort.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 76:** Please provide information on the sizes (i.e., acres) of the six MFTL habitat patches referenced in the AFC. (AFC, p. 5.6-10.)
- **Response:** There are actually seven (7) MFTL habitat patches referenced in the AFC. One (1) falls within the AFC Assessment Site (Solar One Project site), five (5) in the BLM ACEC area to the southeast of the Project site, and one (1) in the northeast corner of the entire SES Assessment Area (not within the Project site or ACEC boundaries).

The MFTL habitat patch within the Project assessment area totals approximately 16.9 acres; the five habitat patches within the ACEC total (in order from northwest to southeast) 54.3, 27.6, 14.3, 29.5, and 50.0 acres; and the habitat patch in the northeast corner of the SES Assessment Area totals 43.7 acres.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 77:	Please clarify whether the Applicant intends to avoid direct
	impacts to MFTL habitat, or only intends to avoid if practicable.

Response: As stated in Section 5.6.4.2 of the AFC, "Direct disturbance of this area [MFTL habitat on the Project site] will be avoided during construction and operation of the proposed Project."

- **Data Request 78:** The AFC indicates there are "sand dune areas" on the Project site. (AFC, p. 5.6-17.) Please clarify whether the Project site contains a single sand dune area or potentially multiple sand dune areas.
- **Response:** This was a typographical error. There is only one sand dune area on the Project site and it occurs between I-40 and the railroad. There are multiple sand dune areas within the SES Assessment Area, which includes the ACEC and large survey area to the northwest.

- **Data Request 79:** If multiple sand dune areas exist, please clarify how all but one was determined to be unsuitable habitat for the MFTL.
- **Response:** Only one sand dune area exists and it was surveyed for MFTL (see the response to Data Request 78 above). All potential MFTL habitat was determined to be occupied.

- Data Request 80:
 Please discuss the presence of shade plants associated with MFTL habitat and indicate whether these plants will be impacted by the Project.
- **Response:** Shade-providing plants do occur within the known occupied MFTL habitat; however, these plants will not be impacted as the MFTL habitat will be avoided during construction and operation of the proposed Project.

- Data Request 81:
 Please indicate whether sand corridors currently provide connectivity among the various MFTL habitat patches that were mentioned in the AFC.
- **Response:** No sand corridors are present between the various MFTL habitat patches mentioned in the AFC. Mojave creosote bush scrub exists between the sand dune patches.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 82:	If sand corridors exist, please discuss potential Project impacts
	to these corridors.

Response: See the response to Data Request 81.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- Data Request 83:Please discuss the potential Project impacts that would arise
from isolating the on-site MFTL population from the other habitat
patches located east and west of the Project area.
- **Response:** Section 5.6.6 of the AFC states:

"Currently east-west wildlife movement is unconstrained between the railroad and the Cady Mountains. This movement area will be constrained with the addition of the Project. Constraint of this area will primarily affect terrestrial species such as desert tortoise and MFTL."

However, it should also be noted that the habitat patch within the Project site is already isolated from the other habitat patches by the railroad, I-40, and extensive spans of Mojave creosote bush scrub that is not suitable for MFTL occupation.

- **Data Request 84:** Please discuss potential Project impacts on the physical processes necessary for the long-term maintenance of the FTHL habitat both within the Project assessment area and adjacent ACEC.
- **Response:** It is possible that the proposed facility may indirectly affect the quality of MFTL habitat by impeding, slowing, or redirecting the transport of sand to the existing MFTL habitat. This potential impact can be monitored over time to determine whether such an impact actually occurs.

- Data Request 85:Please identify the source of sand that has generated MFTL
habitat within the Project site and Pisgah ACEC.
- **Response:** The sand is from adjacent upstream watershed lands and is a result of the erosion process.

- **Data Request 86:** Please provide details on the temporary enclosure fence being proposed for the MFTL habitat patch within the Project site, including how long the fence will be in place, how the fence will affect MFTL access to resources, and whether the fence will incorporate a buffer zone to ensure any errant lizards are not excluded from their habitat.
- **Response:** The enclosure fence will be in place for the duration of construction activities. A biological monitor will regularly conduct fence checks and clearance surveys in the vicinity of the construction zone prior to the start of construction activities to ensure that no lizards are outside from the protected area. It is not anticipated that the fence will affect MFTL access to resources as its resources are typically found within the boundary of the habitat it utilizes. Resources including windblown sand, shade plants, and influx/exodus of prey items (such as insects) will not be affected by the enclosure fence.

- **Data Request 87:** Please provide an example of desert tortoise habitat that would also benefit the MFTL, as indicated by mitigation proposed in the AFC (AFC, p. 5.6-27), taking into consideration that desert tortoises require suitable substrates for burrowing, nesting, and overwintering (U.S. Fish and Wildlife Service. 2008. Draft revised recovery plan for the Mojave population of the desert tortoise (*Gopherus agassizii*). U.S. Fish and Wildlife Service, California and Nevada Region, Sacramento (CA). 209 pp.), that soils must be friable enough for digging of burrows, but firm enough so that burrows do not collapse (*Id.*), and that loose wind-blown sand habitat, upon which the MFTL is dependent, may not provide suitable burrow habitat for the desert tortoise.
- **Response:** While tortoises found in the vicinity of the MFTL habitat patch may not utilize MFTL habitat primarily for burrowing, nesting, and overwintering, they may utilize these areas for access to other resources such as shade or food (annual plants and grasses, perennial plants, and native forbs). Classifying the MFTL habitat area as non-desert tortoise habitat and excluding it from the associated mitigation measures may be considered inaccurate. MFTL habitat is a relatively small inclusion area within a larger area that is suitable for tortoise.

- **Data Request 88:** Please describe the specific techniques used to survey the assessment area for bighorn sheep, including whether survey personnel were trained in the identification of sheep scat, tracks, bedding sites, and signs of browse.
- **Response:** While focused surveys specifically for bighorn sheep were not conducted or required by the agencies, incidental observations of all special-status wildlife species (including sign) were documented during the habitat assessment and focused surveys. Please see Section 5.6.1.1 of the AFC for a detailed description of all survey methods. Surveyors were all familiar with the appearance of sheep scat and tracks relative to other wildlife species in the area; however, no sign of bighorn sheep was detected within the survey areas. Historical or recent sightings of bighorn sheep within the survey area was provided by Gary Thomas of the Society for the Conservation of Bighorn Sheep in 2008.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 89: If personnel were trained in identification of bighorn sheep identification, please discuss any focused efforts devoted to identifying sheep sign.

Response: See the response to Data Request 88.

- Data Request 90:Please indicate how habitat suitability for bighorn sheep was
determined and why the majority of the assessment area is not
considered suitable.
- **Response:** Bighorn sheep habitat suitability was provided by Gary Thomas of the Society for the Conservation of Bighorn Sheep in 2008.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 91:Please discuss the potential direct, indirect, and cumulative
Project impacts on bighorn sheep habitat and movement in the
Project region. The discussion should include (but not be limited
to):

- a. Information on how bighorn sheep metapopulation dynamics will be maintained after the Project site has been fenced (indirect impact) and if all projects proposed for the region are approved (cumulative impact).
- b. Information on any mitigation being proposed to offset potentially significant impacts other than the mitigation provided in the AFC (i.e., besides provision of an onsite monitor during construction and allowing sheep conservationists access to the Cady Mountains via Hector Road).
- **Response:** The Biological Resources Technical Report (AFC Appendix Y) has indicated that there is an open corridor north of the Project site that allows unrestricted movement east-west and another open corridor east of the Project site which allows movement north-south. The Project site and surrounding vicinity is unrestricted and conducive to movement of wildlife throughout the area. Adverse Project related impacts on wildlife movement are not anticipated.

The primary constraints to wildlife movement north and south are the railroad and Interstate 40. The railroad and Interstate 40 are part of existing conditions and are not part of the Project.

TECHNICAL AREA: BIOLOGICAL RESOURCES

 Data Request 92:
 Please provide information on the onsite watering stations, including:

 a.
 Whether any of the watering stations provide or retain water;

- b. A map of the locations of any watering stations that provide or retain water;
- c. A discussion of the indirect impacts removal of the stations will have on bighorn sheep and other wildlife;
- d. A description of any extra survey effort devoted to monitoring the watering stations to determine their value to bighorn sheep or other wildlife.
- **Response:** The watering stations referred to in the AFC are long-abandoned cattle watering stations that no longer contain water and, therefore, are not utilized by big horn sheep. These features do not provide water for wildlife. These are not to be confused with the watering stations placed throughout the Cady Mountains by conservation organizations with the sole purpose of providing water for big horn sheep and other wildlife. The watering stations on the Project site will most likely be removed prior to or during construction.

- Data Request 93:Please indicate the data that were used to map bighorn sheep
habitat on Figure 5.6-6 of the AFC.
- **Response:** Bighorn sheep habitat suitability was provided by Gary Thomas of the Society for the Conservation of Bighorn Sheep in 2008.

- **Data Request 94:** Please discuss the sources of information that were sought to obtain information on bighorn sheep use of the Assessment Area.
- **Response:** Bighorn sheep habitat suitability was provided by Gary Thomas of the Society for the Conservation of Bighorn Sheep in 2008.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- Data Request 95:Please provide information on the bighorn sheep management
efforts in the Cady Mountains, referenced in the AFC (AFC, p.
5.6-13), and discuss the Project's impacts on such efforts.
- **Response:** The California Chapter of the Foundation for North American Wild Sheep (CAFNAWS) and Society for the Conservation of Bighorn Sheep are organizations whose purposes are to ensure the persistence and restoration of healthy and sustainable meta-populations of desert bighorn sheep throughout their historical range in California. They are responsible for the majority of management efforts for bighorn sheep in the Cady Mountains. Many of their projects include high-altitude helicopter capture/collar population surveys; educating the public about wild sheep through workshops and seminars; development of water sources and monitoring of habitat; and to develop specific strategies and prioritize areas for possible translocations and further water development.

The Project will not impact the aforementioned efforts as the conservationists will still have access to the bighorn sheep range/habitat as allowed by the BLM.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 96:** Please discuss the population status of the local bighorn sheep herd(s) and provide information on the Applicant's personal communication with G. Thomas that was referred to in the AFC. (*Id.*)
- **Response:** In 2006 CDFG and CAFNAWS conducted a helicopter survey of 60% of the Cady Mountains that supported bighorn sheep habitat and estimated that approximately 425 bighorn sheep occupy the Cady Mountains.

Gary Thomas is a bighorn sheep specialist with the Society for the Conservation of Bighorn Sheep with specific knowledge of the bighorn sheep population in the Cady Mountains. He is responsible for maintaining the watering holes throughout the species' range in the Cady Mountains. He was contacted in 2008 to discuss potential habitat on the Project site, the potential for bighorn sheep to occur onsite, the potential for the sheep to utilize the Project site, and the current known range for bighorn sheep with respect to the Project site.

- **Data Request 97:** Please provide the locations of the areas the AFC indicates were delineated to determine jurisdiction under the California Fish and Game Code.
- **Response:** The Project area indicated in the AFC was surveyed for features potentially regulable pursuant to the California Fish and Game Code. Please refer to Section 5.6 of the AFC for more information on this area. The Project area is clearly shown in the figures in this section, and Figure 5.6-2, among others, provides a clear representation of the Project area. The Project Jurisdictional Delineation Report, docketed July 17th, 2009, may provide additional information relevant to this request. Please note that the CDFG is expected to render a determination on its jurisdiction, or lack thereof, some time in the future. A final determination will be filed after that determination is rendered by the CDFG.

- **Data Request 98:** Please provide a map that shows the areas that were searched and the features (e.g., drainages) that were assessed to determine the occurrence of potentially jurisdictional waters. Since Matt Moore is listed as one of the two individuals responsible for assessing the occurrence of jurisdictional waters at the site (AFC, Appendix A of Appendix Y) and Mr. Moore's resume does not indicate prior experience conducting wetland delineations, please provide information regarding Mr. Moore's experience conducting wetland delineations.
- **Response:** The Project area shown in Section 5.6 of the AFC (see Figure 5.6-2) was surveyed for potentially jurisdictional waters. Please see our response to Data Request 97, which addresses the first part of this request. All features on site were evaluated. Mr. Moore is a hydrologist and oversaw hydrologic modeling relevant to the assessment of conditions on the Applicant site.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 99:	 Please resolve inconsistencies in the AFC by clarifying: a. Where the Project will be designed to avoid major washes and roadways and to have dips to convey runoff into washes, as referenced in the AFC; b. The functions and locations of the culverts that are
	present in the Project area, as referenced in the AFC; c. Where localized channel grading will occur "to improve
	channel function," as referenced in the AFC (AFC, p. 5.6-20); and
	 Why the Project site is not considered to contain washes

- d. Why the Project site is not considered to contain washes even though numerous washes are depicted and labeled on the associated USGS topographic maps.
- **Response:** The AFC provides details available at this time relative to a-d in Sections 3.0, 5.5 and 5.6, and also in the related appendices. The existing culverts present in the Project area function to pass storm water runoff, and are associated with drainage features on site (see Section 5.5 of the AFC) that pass under the railroad.

In regard to d, the term "wash" does not bear a specific, universal definition that can be applied across the board among lay, technical, and regulatory audiences or use in the AFC. The term "wash" has been used in the AFC in reference to a variety of drainage features on site, as well as to refer to washing or cleaning. Section 5.6.1.13 and the relevant portion of Appendix Y dealing with jurisdictional waters states that no washes have been determined on site with regard to regulable washes pursuant to Federal and State regulations discussed therein. To clarify those sections, we recommend the reader recognize that the discussion therein was focused on jurisdictional waters, including features that potentially could be called jurisdictional washes.

Jurisdictional waters (including potential jurisdictional washes) have not been found on the Applicant site, subject to verification by appropriate agencies, as discussed in Section 5.6. A Jurisdictional Delineation Report was docketed July 17, 2009 for this Project, and may provide additional information relevant to this request. Please note that the agencies are expected to render a determination on their respective jurisdiction, or lack thereof, some time in the future. Final determinations will be filed with the CEC and BLM after such determinations are rendered by the respective agencies. At this time, the USACE has stated that it is processing a non-jurisdictional determination for waters of the U.S.

- **Data Request 100:** Since the SES Solar Two Project, the Applicant indicated washes within the SES Solar Two project site were mapped as floodplains (see p. 3 of Applicant's response to BLM minimum requirement comments for the Solar Two Project. Available in: Supplemental Information in Response to CEC Data Adequacy Requests and BLM Minimum Requirement Comments (dated Sep 2008) and floodplains are mapped as occurring on the Solar One Project site (AFC, Figure 5.5-4), please clarify whether the floodplains on the Solar One site are also intended to represent washes, as was done for the SES Solar Two Project.
- **Response:** The SES Solar Two Project is located in Imperial County, California, and it is a separate Applicant from the Solar One Project. Floodplains for the Solar One Applicant are shown and discussed in Section 5.5, and discussed to a lesser extent in Section 5.6, of the AFC. Floodplains mapped for the Solar One Project represent floodplains relevant to the Solar One Project as discussed therein. No other association is intended.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 101:** Please clarify how erosion was measured and over what time period to support the AFC's determination that "The path of shallow concentrated flow during more extreme rain events on the site does not exhibit erosion in most years" (AFC, p. 5.6-16). Please provide the source of data that was used and the method that was applied to model results in concluding: "Flow of water on-site does not occur in most years" (AFC, p. 5.6-17) and "[n]o surface flows are expected through the 5-year storm event". (*Id.*) Please clarify how "shallow concentrated flow" (*Id.*) constitutes an "undefined drainage feature". (*Id.*)
- **Response:** Hydrologic modeling was performed to evaluate the potential for water flow on site. As discussed in Section 5.6 of the AFC, no water flow is expected in most years. The Jurisdictional Delineation Report docketed July 17th, 2009 describes this modeling in more detail. In the absence of water flow in most years, erosion from flowing water, including along paths of shallow concentrated flow, will not occur during these periods without water flow. Direct observation of the landforms on site does not indicate patterns of water flow with erosion in most years.

Shallow concentrated flow refers to sheet flow that does not occur with sufficient frequency or magnitude to effectively maintain channels, such as described by Rosgen (1996) as referenced in the AFC. In reference to observations on site, the paths of potential shallow concentrated flow have not resulted in well defined drainage features, especially relative to potential jurisdictional waters on site.

- Data Request 102:Please clarify how "the site layout will maintain pre-development
drainage patterns" (AFC, Appendix Y: p. 4-1), if "blading will
occur to remove localized rises and depressions".(*Id.*)
- **Response:** The basic storm water drainage patterns on and through the site will remain largely unaffected by the development of the Project. Some stabilization of the alluvial system will occur by the use of a combination of basins, berms, or levees, and stabilization of the existing drainage paths. The system will be designed to temper the storm water flows and help to avoid damage to existing vegetation and areas around the BNSF facilities. The system will be designed to prevent damage to the SunCatcher field during large storm water flow events.

- **Data Request 103:** Please clarify why the Applicant's determination appears to conflict with guidance issued by the Army Corps of Engineers, which states alluvial fans in arid areas will include some channels subject to Section 404 of the Clean Water Act.
- **Response:** This request and apparent citation are not relevant to the specific conditions on the Applicant site. The findings presented in the AFC are based on the actual conditions observed on the Applicant site. The Section 404 process, including determination of waters of the U.S., is a Federal process that is separate from the CEC process. The USACE is processing a non-jurisdictional determination for the Applicant site.

- **Data Request 104:** Please provide photographs that illustrate representative drainage patterns occurring on the Project site, including photographs of areas upslope of culverts, and indicate (on a map or with geographic coordinates) where all photographs were taken.
- **Response:** The AFC provides information relevant to this request in Section 5.6 and Appendix Y, and in other sections as well. A Jurisdictional Delineation Report, docketed on July 17th, 2009 may provide additional information relevant to this request. Aerial photos that may provide representative views of drainage patterns on site are also readily available through free internet sources, including Google Maps and Google Earth.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 105:Please clarify whether any of the Universal Transverse Mercator
(UTM) coordinates for the locations listed below are within the
AFC Assessment Area or SES Assessment Area. (All
coordinates are for UTM Zone 11 S and are through use of the
WGS84 datum.)

- a. 545565, 3852567
 b. 545617, 3852516
 c. 545724, 3852569
 d. 545865, 3851012
 e. 546247, 3850792
 f. 545325, 3852615
 g. 550191, 3850638
- **Response:** UTM coordinates "a" through "f" are located outside both the AFC Assessment and SES Assessment areas. UTM coordinate "g" is within the Solar 1 Project area, east of Hector Road, and therefore, within the AFC Assessment Area.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 106:** If any of the locations referenced in data request 105 a through g are within an area that will be directly or indirectly affected by the Project, please provide any information available on the features located at the respective location, including information on the vegetation surrounding the feature.
- **Response:** UTM coordinate "g" is within the Project area. Information on this area is provided in AFC Section 5.6 and Appendix Y. The vegetation surrounding "g" is Mojave Creosote Bush Scrub.

Rich Rotte of the BLM (personal communication) indicated that this feature is probably a man-made excavated mining exploration pit. Mr. Rotte indicated that these old pits are common throughout this region, and they have never been properly reclaimed. It is a relatively shallow excavation, and it is dominated by Cryptantha maritima (Guadalupe cryptantha : UPL) and Lepidium fremontii (desert pepperweed: UPL) (possibly L. virginicum; Virginia pepperweed : FACU). Atriplex elegans var. fasciculata (wheelscale saltbush:UPL) was also observed in this feature, and this is a plant tolerant of drought conditions and saline soils. Other species observed include *Malacothrix coulteri* (snake's head : UPL), and Chaenactis fremontii (pincushion flower : UPL). Several shrubs of Tamarix ramosissima (salt cedar: FAC), which is a non-native noxious weed and halophyte, are also found at this old mining exploration pit. T. ramosissima and T. aphylla (athel: FAC), which is also a noxious weed and halophyte, occur as a wind break along the BNSF railroad, and were planted at some time in the past in uplands along the railroad right of way. These right of way plantings may be the source of the T. ramosissima found at "g". Tamarix sp. will be controlled on site through the weed management plan for the Applicant.

This old mine pit may express surface water from direct rainfall at limited times in rare years; however, no surface water was observed in this pit during several years of surveys, and no surface water is apparent in historic aerials available in Google Earth. Hydric soils were not observed in this old mining pit.

UTM coordinates "a" through "c", and "f" are also old man-made excavated mining exploration pits located in the hills west of the Project, off the Project site. UTM coordinates "d" and "e" appear to be natural features or perhaps naturalized features associated with historic pipeline construction, and these features are not on the Project site. Features located at UTM coordinates "a" through "f" will not be affected by the Project.

- **Data Request 107:** Please provide copies of any field notes associated with evaluation of jurisdictional water at the locations referenced in data request 105 a through g.
- **Response:** No field notes were prepared in association with the evaluation of jurisdictional waters. The data, assessment, and conclusions related to jurisdictional waters are presented in Section 5.6 and Appendix Y of the AFC, as well as the report docketed on July 17th, 2009.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 108:** Please provide information on the distribution and abundance of the potential wetland indicator plants documented as occurring on the Project site and discuss the source of information that was used to conclude these plants do not represent riparian or hydrophytic vegetation. (AFC, p. 5.6-16.)
- **Response:** This information is provided in Section 5.6 and Appendix Y of the AFC. Drainage features on site are dominated by upland vegetation as described therein, and vegetation on site along these drainage features is supported by direct rainfall, rather than by riparian flows.

The feature referred to as "g" in Data Request 105 is a relatively shallow excavation, and it is dominated by *Cryptantha maritima* (Guadalupe cryptantha : UPL) and *Lepidium fremontii* (desert pepperweed: UPL) (possibly *L. virginicum;* Virginia pepperweed : FACU). *Atriplex elegans* var. *fasciculata* (wheelscale saltbush:UPL) was also observed in this feature, and this is a plant tolerant of drought conditions and saline soils. Other species observed include *Malacothrix coulteri* (snake's head : UPL), and *Chaenactis fremontii* (pincushion flower : UPL). Several shrubs of *Tamarix ramosissima* (salt cedar: FAC), which is a nonnative noxious weed and halophyte, are also found at this old mining exploration pit. *T. ramosissima* and *T. aphylla* (athel: FAC), which is also a noxious weed and halophyte, occur as a wind break along the BNSF railroad, and were planted as some time in the past in uplands along the railroad right of way. These right of way plantings may be the source of the *T. ramosissima* found at "g". *Tamarix sp.* will be controlled on site through the weed management plan for the Applicant.

This old mine pit may express surface water from direct rainfall at limited times in rare years; however, no surface water was observed in this pit during several years of surveys, and no surface water is apparent in historic aerials available in Google Earth. Hydric soils were not observed in this old mining pit.

- **Data Request 109:** Please indicate whether any other indicators of an ordinary high water mark were evaluated, besides presence of a natural scour line impressed on the bank, recent bank erosion, destruction of native terrestrial vegetation, and the presence of litter and debris. (AFC, p. 5.6-17.) (170 US Army Corps of Engineers, South Pacific Division. 2001. Final summary report: Guidelines for jurisdictional determinations for waters of the United States in the arid southwest. US Army Corps of Engineers, San Francisco.)
- **Response:** Information relevant to this request is provided in Section 5.6 and Appendix Y of the AFC. A Jurisdictional Delineation Report was docketed on July 17th, 2009 and may provide relevant information. The potential presence of ordinary high water marks on site was evaluated as described therein and in consideration of relevant regulatory guidance. The term "ordinary high water mark" is a term used in Federal regulations pursuant to Section 404 of the Clean Water Act (see 33 CFR 328.3). The Section 404 process is a Federal process that is separate from the CEC process. The USACE is processing a non-jurisdictional determination for the Project site.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 110: Please clarify the type(s) of analysis that was used to estimate Project impacts to wildlife corridors.

Response: The Biological Resources Technical Report (AFC Appendix Y) has indicated that there is and open corridor north of the Project site which allows unrestricted movement east-west and another open corridor east of the Project site which allows movement north-south. The Project site and surrounding vicinity is unrestricted and conducive to movement of wildlife throughout the area. Project related impacts on wildlife movement are not anticipated.

The primary constraints to wildlife movement are the railroad an Interstate 40. The railroad and Interstate 40 are part of existing conditions and are not part of the Project.

- **Data Request 111:** Please identify the terrestrial wildlife species occurring in the Project region that will be able to use the foothills as a travel corridor.
- **Response:** Appendix B of the Biological Resources Technical Report contains a list of species potentially occurring within the Project vicinity. This list also provides a description of preferred habitat types for each species in turn indicating which species would be capable of using the foothills as a travel corridor. The Biological Resources Technical Report has been supplied as Appendix Y of the AFC.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 112:** Please discuss the significance of direct Project impacts on wildlife movement.
- **Response:** The Biological Resources Technical Report (AFC Appendix Y) has indicated that there is an open corridor north of the Project site which allows unrestricted movement east-west and another open corridor east of the Project site which allows movement north-south. The Project site and surrounding vicinity is unrestricted and conducive to movement of wildlife throughout the area. Adverse Project related impacts on wildlife movement are not anticipated.

The primary constraints to wildlife movement are the railroad and Interstate 40. The railroad and Interstate 40 are part of existing conditions and are not part of the Project.

- Data Request 113:Please describe the expected level of disturbance (e.g., noise
and siting of Suncatchers) around each culvert and discuss how
any identified disturbance might influence culvert use.
- **Response:** Existing culverts and bridges are located along the railroad and Interstate 40. Project development will occur up to the limits of the rights of way for the railroad and Interstate 40. Project development plans are described in Section 3.0 of the AFC and also in various other materials docketed with the CEC, which describe the proximity of SunCatchers. Adverse effects on wildlife from noise have not been identified with regard to biological resources. The Project will be designed to avoid adverse impact on culverts, and therefore, culvert use will not be affected at those locations.

Data Request 114:	Please provide a map or other information that clarifies the
-	Applicant's proposed mitigation, including the locations of the following:

- a. Existing roads and trails that the Applicant has concluded will constitute north-south travel corridors.
- b. Existing culverts that won't be fenced.
- c. Potential wildlife movement routes that would be available if the Project and other proposed projects in the region are approved.
- d. The location of the Applicant's proposed east-west corridor along the site's northern boundary.
- e. The location of Project fencing in relation to the access road that will be located along the site's northern boundary.
- f. Any east-west corridors through the site besides roads and the railroad tracks.
- **Response:** a. Hector Road and the road along the SCE transmission line are the primary north south roads on the Project site. Wildlife may move along these roads, but movement from north to south and back on the existing site not restricted to roads. After the Project is developed, movement along roads and throughout the Project site will be largely open to wildlife movement within the Project site. Final requirements for fencing have not yet been determined by the agencies to draw final conclusions on overall north-south movement through the site. This matter should be addressed as the AFC process proceeds.
 - b. Existing culverts are within the railroad and Interstate 40 rights of way and will not be fenced. Final requirements for fencing in the vicinity of culverts, but off the rights of way, will be addressed as the AFC process proceeds.
 - c. Interstate 40 provides a major existing barrier to much wildlife movement north-south. The Cady Mountains to the north are a wilderness study area and will remain open. The BLM ACEC to the east is expected to remain open. A future solar project is proposed to the west of Solar One (i.e., the Solar Three Project), that will extend the area of development to the west. The lands west of that site will remain open. The Solar Three Project will address potential cumulative effects of development in addition to the Solar One Project. Otherwise, lands surround both projects, if all are built will remain open to wildlife movement.
 - d. The east-west corridor north of the site is located on the land north of the site.
 - e. Fencing will be at the edge of the development parcels. Access roads will be on the inside (Project side) of the fence.
 - f. No corridors are proposed within the Project site; however, the SunCatchers will not prevent movement within the site. Final fencing requirements will be determined as the AFC process proceeds.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 115:** Please provide information on the existing corridors that will not be fenced, and that are expected to serve as passageways for wildlife. Specifically, indicate each culvert's height, width, and length. If existing culverts are various sizes, please identify the size of each one on the map.
- **Response:** The Biological Resources Technical Report (AFC Appendix Y) has indicated that there is an open corridor north of the Project site which allows unrestricted movement east-west and another open corridor east of the Project site which allows movement north-south. The Project site and surrounding vicinity is unrestricted and conducive to movement of wildlife throughout the area. Project related impacts on wildlife movement are not anticipated.

The primary constraints to wildlife movement are the railroad and Interstate 40. The railroad and Interstate 40 are part of existing conditions and are not part of the Project.

- Data Request 116:
 Please provide documentation describing how culverts provide larger connectivity around large construction sites.
- **Response:** The BLM and CEC (personal communication with Chris Otahal and Rick York during site visit on October 28, 2008) have indicated that they believe the existing culverts and bridges serve as corridors allowing many wildlife species to move north-south under the railroad and Interstate 40. Both the railroad and Interstate 40 provide a substantial barrier to some wildlife, such as desert tortoise and larger mammals. The culverts provide feasible means for such species to pass under these features. These culverts are not associated with movement around large construction sites; however, they will allow movement of wildlife moving through the Project site.

- **Data Request 117:** Please describe the vegetation surrounding each culvert and discuss whether the vegetation will be disturbed (e.g., trimmed or removed) by Project activities.
- **Response:** Vegetation cover on the Project site, including also along Interstate 40 and the railroad are described in Section 5.6 and Appendix Y of the AFC. Vegetation cover on site is comprised of upland species and is very uniform. Figure 5.6-2 of the AFC shows vegetation cover by vegetation community. Existing culverts are within the respective rights of way of the railroad and Interstate 40; therefore, vegetation near these culverts will not be affected by the Project because these areas within the respective rights of way are not within the Project construction or operation zones.

- Data Request 118: Please clarify whether fencing will be installed to encourage culvert use.
- **Response:** Fencing will be designed based on best management practices and with input from the natural resource agencies. Designs are not available at this time but will be developed through the permitting process.

- Data Request 119: Please indicate the species expected to use culverts, and provide any species-specific information documenting culvert use.
- **Response:** The species that may use the culverts after construction are the same species that may use the culverts now. Project references used for evaluation of the effects of the Project are cited in the AFC for Section 5.6 and Appendix Y.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 120:** For wildlife attempting to move east-west, please discuss how the Applicant will prevent animals from being funneled onto access roads, the railroad tracks, or I-40. In addition, please clarify whether these would be the only east-west travel corridors for species adverse to rocky terrain.
- **Response:** The Biological Resources Technical Report (AFC Appendix Y) has indicated that there is an open corridor north of the Project site that allows unrestricted movement east-west and another open corridor east of the Project site that allows movement north-south. The Project site and surrounding vicinity is unrestricted and conducive to movement of wildlife throughout the area. Project related impacts on wildlife movement in the region are not anticipated.

The primary constraints to wildlife movement are the railroad an Interstate 40. The railroad and Interstate 40 are part of existing conditions and are not part of the Project. The Project will not result changes likely to funnel wildlife onto roads, including Interstate 40 and the railroad.

- **Data Request 121:** Please indicate whether the Project will meet with the objectives established by the Desert Tortoise Supergroup, specifically, the maintenance of movement corridors between DWMAs, with corridors being at least two miles wide. (Desert Tortoise Supergroup. 1999. Chapter Two in West Mojave Plan: Draft Evaluation Report (Working Draft). Moreno Valley (CA): U.S. Dept. of the Interior, Bureau of Land Management, California Desert District.)
- **Response:** The Project will comply with wildlife corridor requirements set forth by the West Mojave Plan. It does not need to meet the objectives established by the Desert Tortoise Supergroup. Discussions of wildlife movement corridors is presented on pages 5.6-23 and 24 of the AFC. Wildlife movement mitigation measures are presented on page 5.6-29 of the AFC.

- Data Request 122:Please provide a discussion of the Project's contribution to
cumulative impacts on "allowable ground disturbance"
established by the West Mojave Plan.
- **Response:** The "Allowable Ground Disturbance" issue is only applicable to the Habitat Conservation Area, which includes Desert Wildlife Management Areas (DWMA) on BLM lands. The proposed Project area is not within the Habitat Conservation Area defined in the West Mojave Plan (see page 2-32 of the WMP).

- Data Request 123:Please discuss the regional significance of cumulative impacts
on desert tortoise and other sensitive biological resources, and
how mitigation will offset significant impacts.
- **Response:** Cumulative impacts for the region associated with development of BLM lands are discussed in the West Mojave Plan/EIS/EIR. See Sections 4.2.2 and 4.2.7 of the WMP/EIS/EIR. The proposed action is consistent with this BLM approved plan. Mitigation consistent with the WMP will mitigate for cumulative impacts to biological resources.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 124:** The AFC states no special-status species will be affected by the access road; therefore the temporary impacts of the access road would not contribute to cumulative effects of the Project. (AFC, p. 5.6-26.) Please justify this conclusion given desert tortoises were documented as occurring on roads within the Project area. (AFC, Appendix H of Appendix Y.)
- **Response:** The AFC states that no special status plant or wildlife species were found within the 100-foot buffer of the proposed temporary access road, which includes the access road. Desert tortoises were not found in the general vicinity of the temporary access road. Mitigation measures have not yet been finalized; however, use of exclusionary fencing could be used, if desired by the resource agencies, to further prevent desert tortoises from entering the temporary access road.

Based on current plans, this temporary access road would not be used for construction activities/access. It continues to be identified for potential emergency uses without improvement.

- **Data Request 125:** Please clarify the measures that will be taken to minimize impacts on badgers.
- **Response:** A single badger was detected near the northeast boundary of the assessment area. Construction monitoring will be conducted to minimize incidental take of badger during vegetation clearing and construction activities.

- **Data Request 126:** Please specify the techniques (including number of biologists) that will be implemented to locate active badger dens prior to Project construction.
- **Response:** Prior to vegetation clearing, biologists will search for potential badger burrows and determine if the burrow is active. Badgers will be passively displaced. Construction monitoring will be conducted to minimize incidental take of badger during vegetation clearing and construction activities.

- Data Request 127:Please specify the timing of pre-construction badger surveys in
relation to site grading or other activities that would potentially
entomb a badger in its den.
- **Response:** Pre-construction surveys for badger would occur 10 to 30 days prior to vegetation clearing activities. Ongoing construction monitoring will be conducted to minimize incidental take of badger during vegetation clearing and construction activities.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 128: If pre-construction surveys will not be conducted immediately before grading or other activities that would potentially entomb a badger in its den, discuss how the potential for badgers to dig new dens each night will be accounted for.

Response: See the response to Data Request 127.

- Data Request 129: Please clarity occurrence of the flat-tailed horned lizard on the Project site.
- **Response:** This species was not detected on-site, nor is it expected to occur on-site or in the general area of the Site. The range of the flat-tailed horned lizard extends from eastern SD county to eastern Imperial county, south from the US-Mexico border north into western Riverside county. This species prefers low desert habitat, with maximum elevations of 600 feet above mean sea level. The Project site is located in San Bernardino County, and is situated at elevations ranging from 1,925 to 3,050 feet above mean sea level (page 5.6-1 of AFC).

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 130:	Please	discuss	the	attempts	that	were	made	to	document
	nesting of special-status bird species in the Project area.								

Response: No attempts were made to document nesting of special-status bird species in the Project area; however, all wildlife species encountered were noted, including any special-status bird species encountered in the Project area.

- **Data Request 131:** Please indicate whether any of the California horned larks that were detected in the Project area were nesting.
- **Response:** The horned larks that were detected in the Project area are not the sensitive coastal subspecies; as such, the determination of whether or not the California horned larks detected were nesting or not was not noted or necessary.

- **Data Request 132:** Please quantify the "extensive amount of suitable habitat" that will remain for the species listed after the Project is built, and if all projects proposed for the region are approved.
- **Response:** This is beyond the reasonable scope of this assessment; however, information regarding this request may be found at Solar Energy Development Programmatic EIS Information Center at http://solareis.anl.gov/.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 133:** Please provide a discussion of direct, indirect, and cumulative impacts on special-status bird species that depend on the site forage during migration.
- **Response:** Direct impacts to special-status bird species use of the Project site for forage include removal of approximately 8,230 acres of land containing vegetation and associated insects and small mammals that may serve as potential forage. Some vegetation will remain onsite and may support a reduced number of individuals compared to existing condition.

Indirect impacts to special-status bird species that use the Project site for forage include typical edge effects of development (noise, lighting, reduced vegetation quality, etc).

Cumulative impacts to special-status bird species that use the Project site for forage include the removal of additional large tracts of native habitat in the region. This impact has been assessed in the West Mojave Plan/EIS.

- **Data Request 134:** Please clarify the months in which both initial and routine vegetation clearing activities will be conducted.
- **Response:** Vegetation clearing will occur during the bird non-breeding season after clearance surveys for tortoise and burrowing owl are completed. Vegetation clearing during the breeding season will be limited to areas lacking active nesting birds. Nest surveys will be conducted and any active nests will be avoided. Biological construction monitoring will be an ongoing activity.

- **Data Request 135:** Since the Migratory Bird Treaty Act prohibits disturbance to nests of migratory birds making a clearance survey unacceptable, please clarify how the Project will comply with the Migratory Bird Treaty Act if disturbance activities are conducted during the nesting season.
- **Response:** The Project will avoid "take" of migratory birds to the maximum extent practicable. Initial vegetation clearance will occur outside of the breeding season (July 1 through January 31), where practicable. If any vegetation needs to be cleared outside that period, nest surveys will be conducted and active nests will be avoided unless otherwise permitted to be taken.

- Data Request 136:Please provide information on any bird nests that were detected
during Project surveys.
- **Response:** No information on bird nests detected during Project surveys is available.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 137:** Please provide an assessment of potential direct, indirect, and cumulative Project impacts to the chuckwalla and rosy boa.
- **Response:** Chuckwalla was listed as a species potentially occurring in the vicinity of the Solar One Project area in Appendix B of the Biological Resources Technical Report. However, chuckwalla was not observed during the 2007 and 2008 surveys. Therefore, there are no potential direct, indirect, or cumulative impacts to chuckwalla.

Rosy boa was listed as a special status species potentially occurring in the vicinity of the Solar One Project area in Appendix B of the Biological Resources Technical Report. However, rosy boa was not observed during the 2007 and 2008 surveys. Therefore, there are no potential direct, indirect, or cumulative impacts to rosy boa.

The Biological Resources Technical Report has been provided as Appendix Y in Volume 2 of the AFC.

- **Data Request 138:** Please discuss any proposed mitigation for potential Project impacts to the chuckwalla and rosy boa.
- **Response:** It has been determined that there are no potential impacts to either the chuckwalla or rosy boa species since neither of these species were observed during the 2007 and 2008 surveys. Mitigation for impacts to these species has not been proposed.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 139:** Please discuss the attempts the Applicant made to document the presence of the chuckwalla and rosy boa within the Project area.
- **Response:** Observations of all wildlife species were made during special status plant and wildlife species surveys conducted in 2007 and 2008. Incidental observations were documented and locations were documented with consumer-grade GPS units and individuals were photographed when possible.

Neither chuckwalla nor rosy boa are species requiring specific surveys. Section 2.2 of the Biological Resource Technical Report (AFC Appendix Y) describes survey methods used for special status plant and wildlife species. If either of the species in question were observed, biologists would have followed proper documentation procedures. Appendix B of the Biological Resources Technical Report indicates the potential presence theses species and indicates there is a high potential for chuckwalla being present and moderate potential for rosy boa.

- Data Request 140:Please clarify whether the assessment of potential collision
hazards incorporated bird species unlikely to attempt to perch
on Project structures and transmission lines.
- **Response:** The assessment addressed all bird species expected to be in the vicinity of the Project.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 141:	Please discuss site-specific environment				factors	and	line-
-	related factors influencing the collision risk.						

Response: This issue is addressed in Section 5.6 and Appendix Y of the AFC.

- Data Request 142:Please discuss any Project-specific design measures that will be
implemented to mitigate potential avian collision hazards with
Project structures and the proposed transmission line.
- **Response:** The transmission line will be constructed parallel to the existing railroad tracks. An adaptive management monitoring plan will be implemented to determine if a risk requiring mitigation develops. Avian collision avoidance measures (e.g., bird flight diverter devices) can be implemented near Project structures and/or the transmission line if the risk develops.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 143:	Please provide support for the AFC's statement that waterfowl
	are uncommon or absent in the Project vicinity.

Response: No waterbirds were detected during two spring seasons of field effort. There is no permanent pond water near the Project site that would be a reliable attractant to waterbirds that may be passing through the vicinity.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- Data Request 144:Please describe the management strategies that will be
implemented to prevent ravens and other potential predators of
special-status species from using Project evaporation ponds.
- **Response:** The potential use of Project evaporation ponds by predator species is addressed in Section 5.2 of the Biological Technical Report (AFC Appendix Y). The presence of ravens and other potential human subsidized predators should be monitored to determine whether or not the predator densities have substantially increased. If it is determined that predator densities have increased and may affect special status species, specific BMPs would be implemented to minimize the subsidization of predators.

Pond covers may be implemented and designed to minimize attraction of predator and scavenger species if deemed an issue during operational monitoring. This would effectively minimize the availability of limited resources (e.g. freshwater) and limit the promotion of predator species.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 145: Please discuss the design features that will minimize potential wildlife mortality at the proposed evaporation ponds.

Response: The potential use of Project evaporation ponds by predator species is addressed in Section 5.2 of the Biological Technical Report (AFC Appendix Y). The presence of ravens and other potential human subsidized predators would be monitored to determine whether or not the predator densities have substantially increased. If it is determined that predator densities have increased and may affect special status species, specific BMPs would be implemented to minimize the subsidization of predators.

Pond covers may be implemented and designed to minimize attraction of predator and scavenger species if deemed an issue during operational monitoring. This would effectively minimize the availability of limited resources (e.g. freshwater) and limit the promotion of predator species.

An initial monitoring program of pond water is recommended. Water quality should be monitored for trace elements, such as selenium or arsenic.

TECHNICAL AREA: BIOLOGICAL RESOURCES

 Data Request 146:
 Please clarify whether the Applicant will implement an evaporation pond monitoring program. If a monitoring program will be implemented, please:

- a. Indicate data that will be collected, including the specific water quality and wildlife use elements.
- b. Indicate the proposed frequency and duration of monitoring.
- c. Provide proposed success criteria and triggers for adaptive management.
- **Response:** Trace element concentrations of the evaporation pond water should be monitored quarterly to determine if there is a concern regarding wildlife access to the pond water. If toxicity effects on wildlife become apparent, the evaporation ponds will be covered to minimize wildlife access. Pond covers may be implemented and designed to minimize attraction of predator and scavenger species.

- **Data Request 147:** Please provide information on the current abundance and distribution of invasive weeds in the AFC Assessment Area (i.e., baseline conditions).
- **Response:** Common invasive plant species that persist in the Mojave Desert region include sahara mustard and red brome. Vegetation mapping was conducted during 2007 and 2008 surveys and is provided in the Biological Resources Technical Report.

- Data Request 148: Please clarify which tasks outlined in the MOU the Applicant intends to conduct.
- **Response:** A specific MOU is defined in this request. If this request is referring to the MOU between the CEC and the BLM for Solar Projects, the Applicant will adhere to the requirements of the MOU as is feasible and as required by the CEC and BLM.

Data Request 149:	 Please provide a weed management plan for the Project. (Id.) The plan should contain: a. A discussion of the specific measures that will be implemented to prevent, control, and eradicate invasive plant species.
	b. Identification of the geographic area covered by the plan.
	c. Monitoring techniques, frequency, and duration.

- d. Success criteria and triggers for additional mitigation.
- e. Proposed reporting requirements.
- **Response:** A weed management plan is not developed at this time. Section 5.6 of the AFC does however; indicate that a plan will be developed as a condition of approval and that the management plan will be consistent with the federal Mojave Weed Management Memorandum of Understanding (MOU). The plan will include methods to prevent, control, and eradicate weeds and invasive plants, as well as ways to educate the public about weed control in the region.

- **Data Request 150:** Please specify how the Project and its contribution to cumulative impacts is consistent with thresholds set by the West Mojave Plan (Plan).
- **Response:** The proposed action area is within an area planned for development by the WMP and does not impact any DWMA assumed to be conserved by the plan. The cumulative impact is proportional to area being impacted, but is in an area deemed less important for conservation of resources compared to areas planned for conservation. See Section 4.2.7 of the WMP/EIS/EIR.

- **Data Request 151:** Please clarify whether flat-tailed horned lizards occur (or have the potential to occur) on the Project site and the corresponding relationship between the Project area and the Flat-tailed Horned Lizard Rangewide Management Strategy.
- **Response:** Flat-tailed horned lizard has not been identified as a species with the potential to occur on the Project site nor was it observed during 2007 and 2008 surveys. The Project area is outside the range of the species.

- **Data Request 152:** Please discuss how the Project will comply with the Plan's direction to conserve all known occurrences of crucifixion thorn on public land. (Final environmental impact report and statement for the West Mojave Plan: a habitat conservation plan and California desert conservation area plan amendment. Moreno Valley (CA): U.S. Dept. of the Interior, Bureau of Land Management, California Desert District.)
- **Response:** Although the Project area falls within the West Mojave Coordinated Management Plan, it does not fall within any of the DWMAs and ACECs designated by the West Mojave Plan. DWMAs and ACECs are where rare plant conservation is focused in the WMP. See section 4.2.2.8.5 of the WMP.

- **Data Request 153:** Please provide information on the amount of incidental take that has already occurred under the Plan and discuss how the Project will meet the white-margined beardtongue conservation requirement established by the Plan.
- **Response:** This information regarding past incidental take is not available. The BLM established two ACECs that conserves populations of white-margined beardtongue.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 154: Please discuss the Project's compliance with the burrowing owl conservation measures presented in the Plan.

Response: Section 3 of the Biological Resources Technical Report (AFC Appendix Y) indicates that there were two separate observations of the species within the AFC assessment area made during 2008. No detections were reported during 2007. It has not been determined whether or not the observed individuals were migrants or residents.

Section 6.2 of the Biological Resources Technical Report (AFC Appendix Y) describes preconstruction activities to avoid impacts on resident burrowing owls. Pre-construction surveys for occupied owl burrows will be conducted during the non-breeding season prior to initial site disturbance. If an occupied owl burrow is detected, the owl will be passively displaced from the burrow, which would be subsequently collapsed to prevent reoccupation.

A replacement burrow(s) would be installed within the ACEC east of the Project if an occupied burrow is removed from the Project site.

Compensatory mitigation for tortoise habitat will also mitigate for burrowing owl habitat loss. Owl-specific offsite mitigation can be designated as a component of the compensatory habitat mitigation program.

- **Data Request 155:** Please clarify how much of the Pisgah ACEC will be impacted by installation of Project features and whether the Project will comply with the Plan's protection of Joshua trees, yucca and cacti.
- **Response:** The Project solar facilities will not encroach within the Pisgah ACEC. The new Pisgah substation would be in the ACEC based on current understanding of the Project. The temporary access road is along the alignment of an existing road within the ACEC. No improvements of the existing road are currently proposed.

- Data Request 156:Please clarify whether the Project will comply with the Plan's
requirement for raptor-safe electrical distribution lines
associated with new construction. (Id.)
- **Response:** It is not clear what plan is referred to in this request. If it is the West Mojave Plan, the Applicant will work with the BLM through the permit process to ensure compliance with required components of applicable plans.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- Data Request 157: Please clarify how the Project will comply with the Plan's objective of protecting occupied Mojave fringe-toed lizard habitat. (Id.)
- **Response:** There are approximately 16.9 acres of potential Mojave fringe-toed lizard (MFTL) habitat between the railroad and Interstate 40. One MFTL was observed in this area. One individual was observed in this area. Direct disturbance of this area will be avoided during construction and operation of the proposed Project.

A temporary enclosure fence around the one MFTL habitat patch within the Project site will be erected to protect MFTL from adjacent construction activities.

Compensatory mitigation for tortoise habitat will also benefit MFTL.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 158: As required by CEC siting regulations, please provide:

- Detailed maps at a scale of 1:6000 that show the a. proposed Project site and related facilities, biological resources, and associated areas where biological conducted. surveys were (California Energy Commission. 2007. Appendix B of Rules of practice and procedure & power plant site certification regulations. Document No. CEC-140-2007-003. Also see the 2008 updated Appendix В from July at http://www.energy.ca.gov/2008publications/CEC-140-2008-003/CEC-140-2008-003.PDF
 - b. A discussion of all proposed off-site habitat mitigation and habitat improvement or compensation, and an identification of contacts for compensation habitat and management. (Id.)
 - c. A discussion of proposed compliance and monitoring programs that will be implemented to ensure the effectiveness of impact avoidance and mitigation measures incorporated into the Project. (Id.)
 - d. Copies of any preliminary correspondence between the Applicant and state and federal resources agencies regarding the need for federal or state permits. (Id.)
- **Response:** a. Maps of sufficient scale and detail are provided in Section 3.0, 5.6, Appendix Y, and other sections of the AFC to show features requested in "a".
 - b. Specific off-site habitat mitigation and habitat improvement or compensation required for the Project, if any, has not been identified at this time. No contacts for compensation habitat and management have been identified.
 - c. Mitigation measures are described in Section 5.6 and Appendix Y of the AFC. Additional measures and requirements, including potential monitoring, may be developed through the CEC and BLM permit processes and will be disclosed if and when they are developed.
 - d. No preliminary correspondence regarding the need for Federal or State permits is available. Federal permits are separate from the CEC process.

TECHNICAL AREA: BIOLOGICAL RESOURCES

- **Data Request 159:** Please discuss any attempts the Applicant made to identify bat roosts within the Project area.
- **Response:** Several bat species were identified as having the potential to occur within the Solar I Project vicinity. Habitat types associated with each of these species are described in Appendix B of the Biological Resources Technical Report (AFC Appendix Y).

There were no suitable roosting habitats found at the Project site. The site supports moderate potential foraging habitat.

- Data Request 160: Please provide information on bat roosts documented as occurring within the Pisgah ACEC or elsewhere in the Project vicinity.
- **Response:** There is very limited opportunity for bat roosts on the proposed Project site. Bat roosts are potentially present within the Cady Mountains or areas supporting rock crevices. No bat roosts were reported during the field effort. Impacts to roosting bats is not expected.

- **Data Request 161:** Please provide information on features within the site that may serve as bat roosts (e.g., buildings, mine features, cliff faces), indicate whether these features will be directly or indirectly affected by the Project, and indicate whether the Applicant will conduct a survey to document presence of bat roosts within the Project area.
- **Response:** See the response to Data Request 160. Bat surveys are not planned.

- **Data Request 162:** Please provide any studies that have been conducted on the effect of Suncatchers on the surrounding microclimate (or microhabitat) or on species composition, abundance, and diversity.
- **Response:** No reports on this matter are available. No adverse effects have been observed by the Applicant at its test facilities relative to microclimate (or microhabitat) or on species composition, abundance, and diversity. Potential impacts on biological resources, including these considerations, are described in Section 5.6 and Appendix Y of the AFC.

- Data Request 163:Please discuss how runoff from water used to wash
Suncatchers, and shade created by the Suncatchers are
expected to influence vegetation and habitat surrounding them.
- **Response:** The amount of water used to wash SunCatchers is a very small amount per dish, as discussed in the AFC. Little or no water from washing will reach the ground. The potential effects of wash water and shade are discussed in the AFC, including Section 5.6 and Appendix Y.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Data Request 164:	Please	clarify	what	percentage	of	the	Project	site	and
	transmis	sion line	e corric	lor will be dist	urbe	ed by	Project a	ctiviti	es.

Response: Information on disturbance of the Project site, including transmission lines that are part of the Project, is provided in the AFC, including Sections 5.6 and Appendix Y.

TECHNICAL AREA: BIOLOGICAL RESOURCES

Marc Baker Peggy Wood (missing pages)	Data Request 165:	
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Response: The resumes requested above were provided in the Applicant's responses to CEC Data Adequacy Requests (See the response to CEC Data Adequacy Request 8) docketed on April 6, 2009, with the exception of a resume for Peggy Wood. The resume for Peggy Wood is provided as attachment BIO-2, located behind this response.



Peggy Wood Wildlife Biologist

1133 N. Cedarview Dr. Bozeman, MT 59715 Cell: (435) 881-6444 Email: pegwood@mtwest.net

EDUCATION

- MS Wildlife Ecology, 1986. Utah State University, Logan, UT. Thesis: Interceptive Feeding as a Means of Reducing Deer-vehicle Collisions.
 • BS Wildlife Science, 1984 - With Honors. Rutgers University, NJ.
- **RESEARCH SKILLS** Population sampling: species presence surveys; area coverage techniques for animal and bird species, population size estimation using various transect methods; plant frequency and density transect methods; fish sampling and tagging methods. Scientific writing. Telemetry tracking techniques; behavioral information collection; methodical and concise data organization, tabulation, and analysis. Critical thinking.

EXPERIENCE

Biological Consultant

Peggy Wood, Inc. - An independently owned company. Bozeman, MT (1/90-present). Research with the Wildlife Conservation Society (WCS) in 2003 on wolverines in the NW region of the Greater Yellowstone Ecosystem, Madison valley, MT. Ran traps and worked with veterinarian on captured wolverine. Lynx research for WCS from 1998-2001 in MT, WA and NY involving non-invasive snagging of lynx hair for DNA analysis to identify species and individual identity. Conducted density sampling transects for snowshoe hares, the lynx prey base, in MT and ID. Adapted this hair snagging technique for detection of ocelots in south TX in 1999 and 2000.

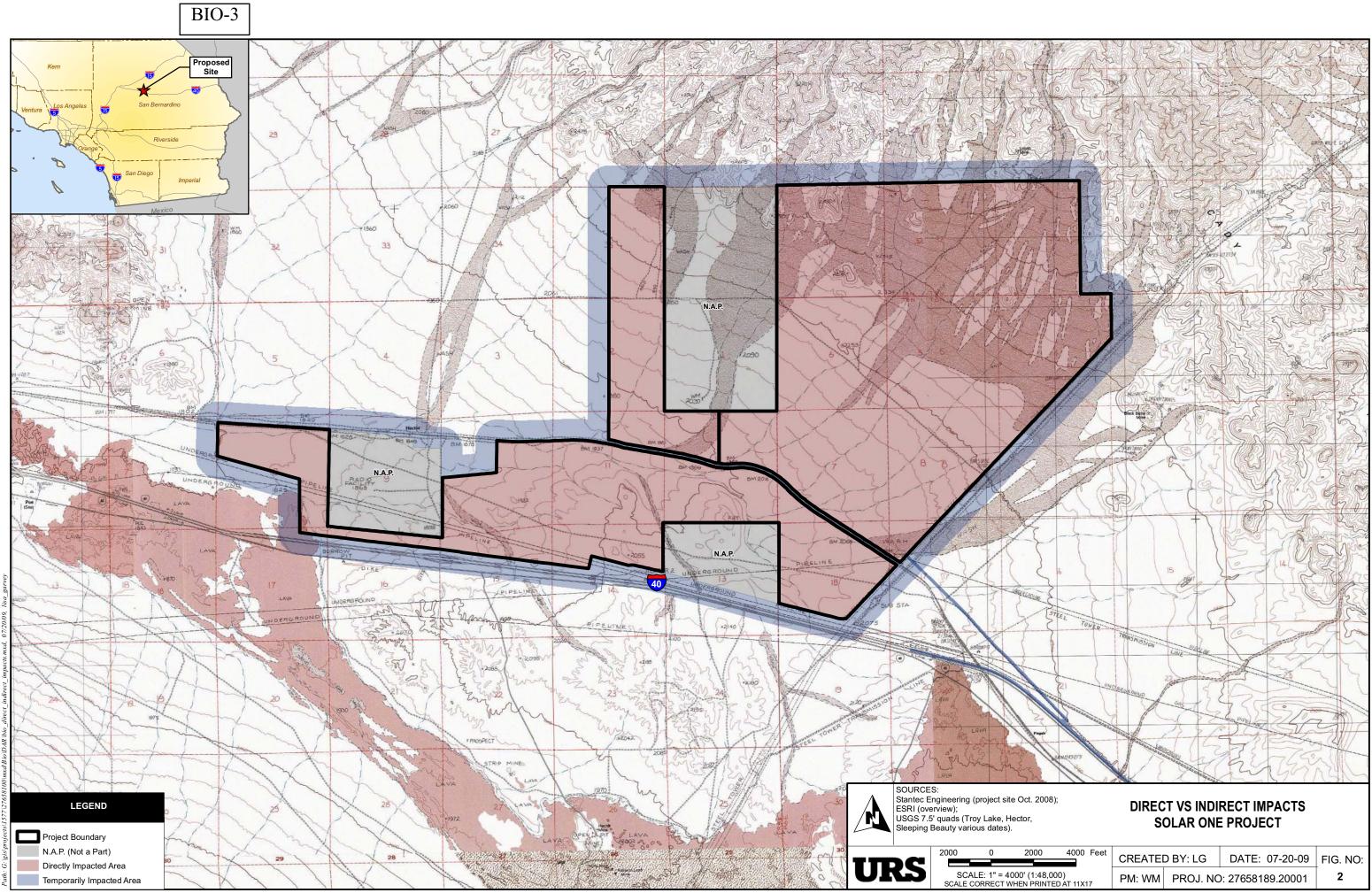
Conducted goshawk surveys in the Black Hills of South Dakota (spring 2005); involved broadcasting calls and tracking adults to the nest.

Seventeen years of experience working with desert tortoises including federal permits for handling. Research projects include population estimation by markrecapture method, line distance density estimation using transects across the Mojave (spring, summer 2001), and line-intercept method (Fort Irwin, 1999). Supervised crew of 12 on 3 NV tortoise population study plots (spring 1994); field researcher on 7 AZ tortoise population study plots (fall '91, '92, '93) & 2 CA plots (spring '91). Data included location, weight, measurements, health, and photographs; assisted writing final reports. Other tortoise projects include resource assessment surveys in CA, NV and UT on over 30 projects including a 6 sq. mi. proposed wind farm ('05), a 7 sq.mi. Hyundai Motor vehicle test track ('04), pipelines, fiberoptic lines, transmission lines, railroad landfill, highway expansions, community developments, and commercial development. Worked as a biological monitor on construction sites to insure compliance with federal resource protection mandates on 40 construction projects including Union Pacific RR repair and maintenance (2006, '07), pipeline, transmission and fiberoptic lines, highway improvements and expansions, vehicle test track. Responsibilities included providing environmental education to workers, insuring contractor compliance with federal guidelines, conducting surveys and interpreting activities and impacts to the resource, radio-tracking desert tortoises on and surrounding work sites, and recording and reporting all work related activities, observations, and problems as required per project.

Biological	Completed southwestern willow flycatcher protocol training, St. George, UT. Participated with expert birders on swwf riparian surveys for experience.
Consultant	Monitored construction of AT&T fiberoptic line in Klamath National Forest, CA, for compliance with northwest environmental protection mandates.
(cont.)	GIS and Remote Sensing basic training; ARC/INFO digitizing for GeoGraphics, Inc. Species surveys include: raptor nest, bat, and vegetation surveys near Delta, UT; bird, small mammal and fish inventory surveys along riparian habitat of the Virgin River near Mesquite, NV; Forest Service inventory plots in Boise National Forest, ID, for description of tree species and habitat characteristics; relative abundance bird survey transects on cottonwood plantations in eastern WA to identify and compare bird use there with surrounding avifauna; spotted owl surveys following BLM protocol in Klamath National Forest, CA; sage grouse lek surveys in northern CA; and bald eagle wintering habitat surveys in northern UT. Evaluated the legality of an innovative zoning amendment in CO to limit development at high elevation; researched characteristics of high elevation lands. Completed FWS-certified prairie dog colony mapping and black-footed ferret clearance surveys for WYCAL Gas Pipeline in SW Wyoming and for CIG Gas Pipeline in WY, CO and UT; involved extensive nocturnal spotlighting surveys. Telemetry tracked humpback chub on 3 river trips within Grand Canyon National Park; involved motor rafting up and down the Colorado River; set drift nets and fish traps to document native fish populations. On the Yampa River in CO, radio-tracked, electroshocked and pit tagged native fish species; included field surgery operations to implant radio transmitters. Radio tracked chub on Green River, UT; electrofished and netted through Cataract Canyon
Wildlife Field Biologist	Dr. John Weaver, University of Montana; work in Jasper National Park, Alberta, Canada (6/89-9/89). Conducted big game pellet group transects throughout the home range of a wolf pack as part of a timber wolf prey selectivity study in Jasper National Park, Alberta, Canada. Coordinated field logistics; supervised one field assistant.
Wildlife Consultant	Bio/West, Inc., Logan, UT (1/88-1/89). Evaluated the potential impacts of various types of development on wildlife including: FWS-certified prairie dog colony mapping and black-footed ferret searches in WY, CO, and UT; a study of avian behavioral response to and collision rate with a 260 kV transmission line in northwest MT; ski area expansion effects on black bears in VT; and endangered fish species electroshocking, netting and radio tracking studies in the Colorado and Green Rivers. Authored portions of project reports.
Biological Technician	US Fish & Wildlife Service, Alaska Maritime National Wildlife Refuge: Aleutian Islands Unit, Adak, AK (1/87-4/87). Completed secondary phase of arctic fox eradication on Kiska Island implemented for the preservation of the endangered Aleutian Canada goose. Conducted bald eagle and sea lion helicopter surveys on Kiska Island; repeatedly surveyed Adak Island avifauna; collected bald eagle morphometrics on electrocuted birds; analyzed auklet activity patterns using time- lapse photography.

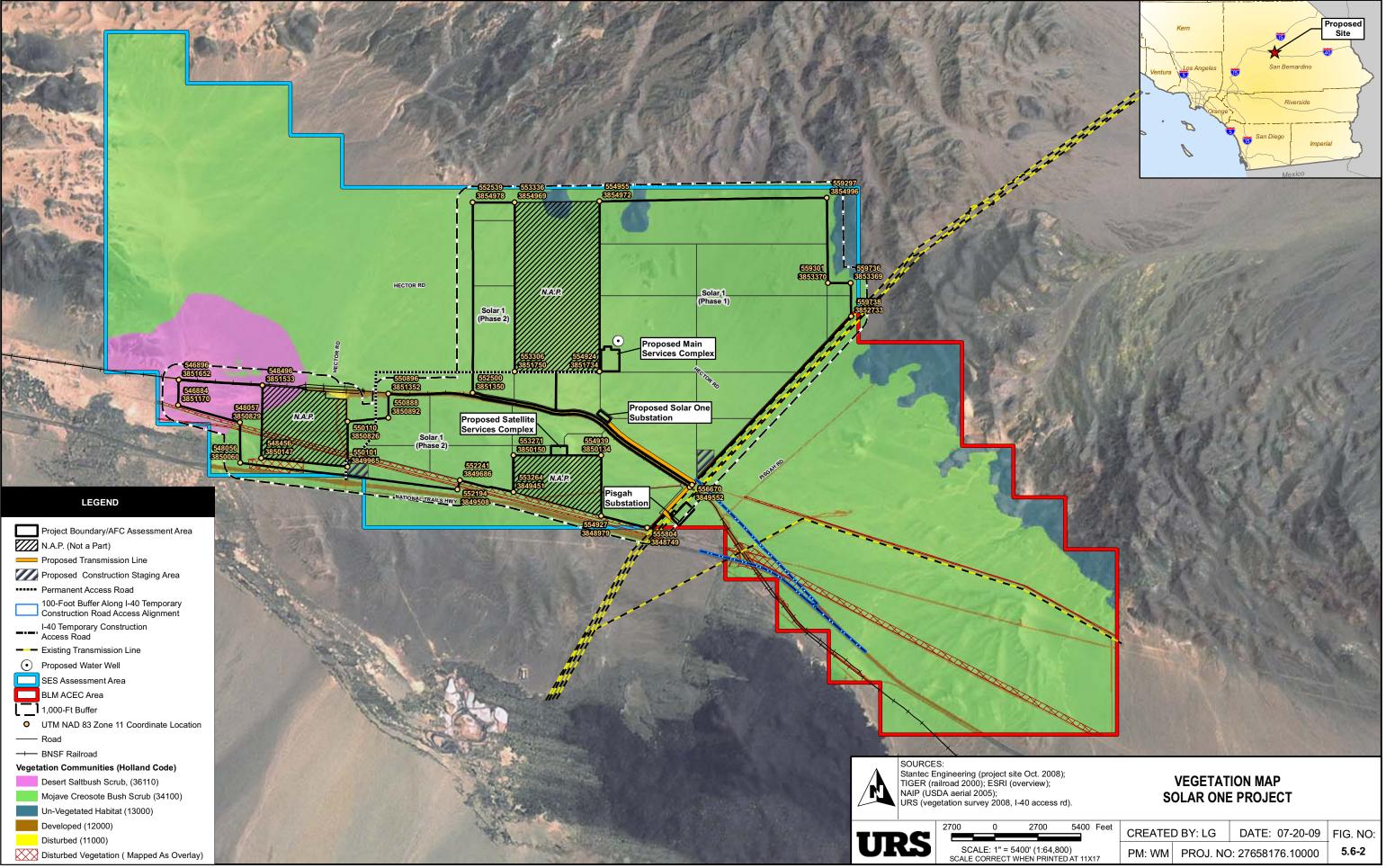
Graduate Research Assistant	Utah State Univ., Logan, UT (10/84-12/86). Master's research: documented deer- vehicle collision frequency and distribution on three Utah highway segments; provided interceptive attractant to modify deer movement patterns and reduce collision frequency. Taught Natural Resources 101 two quarters on issues relating to natural resource conservation.
Range Research Technician	Utah Div. of Wildlife Resources, Salt Lake City, UT (6/85 -9/85). Sampled vegetation frequency and density to evaluate condition of big game wintering range in south-central UT.
Research Assistant	Alaska Dept. of Game and Fisheries, Anchorage, AK (7/84-8/84). Conducted vegetation transects to estimate moose browse biomass in the Susitna River Valley, central AK, preliminary to proposed hydroelectric dam site; used Landsat photographs to locate and access sampling transects by helicopter; utilized Epson mini-computers in the field.
Bald Eagle Hack Site Attendant	NJ Div. of Fish, Game & Wildlife, Port Norris, NJ (6/83-9/83). Raised six bald eagle young in a hack tower; telemetry tracked the fledglings following their release using a vehicle, boat and small plane; conducted a study of bald eagle pre-fledging behavior in a hack tower.
Nature Education Counselor	Wharton State Forest, NJ (8/83). Instructed children aged 8 to 16 on basic ecological concepts in the Pine Barrens of NJ.
PUBLICATIONS	 Weaver, J.L., P. Wood, D. Paetkau, and L.L. Laack. 2005. Use of scented hair snares to detect ocelots. Wildl. Soc. Bull. Vol 33(4):1384-1391. Weaver, J.L., C. Arvidson, and P. Wood. 1992. Two wolves, <i>Canis lupus</i>, killed by a moose, <i>Alces alces</i>, in Jasper National Park, Alberta. Canadian Field Naturalist. 106(1):126-127. Wood, P. and M.L. Wolfe. 1988. Interceptive feeding as a means of reducing deer-vehicle collisions. Wildl. Soc. Bull. Vol 16(4):376-380.
PERSONAL INFORMATION	Birth date: 28 September 1962 Health: Excellent Interests: telemark skiing, running, backpacking, kayaking, rock climbing, reading, music, and travel.
REFERENCES	Dr. John Weaver: Wildl. Cons. Society, St. Ignatius, MT 59865 406/745-0169. Dr. Christina Vojta: US Forest Service Research Station, Flagstaff, AZ 520/556-2182. Dr. Alice Karl, Terrestrial Ecologist, Davis, CA 530/304-4121. Dr. Justina Ray: Wildlife Conservation Soc., Toronto, Canada 416/406-5219.

- **Data Request 224:** Please provide a map at a scale that clearly depicts the topography within the direct, indirect, and cumulative impacts areas.
- **Response:** A topography map has been created showing direct and indirect impact areas for the AFC, provided behind this response as attachment BIO-3. Please refer to the West Mojave Plan EIS for cumulative impacts.



- Data Request 225:Please provide a map of the Project site that indicates the UTM
coordinates of Project boundaries.
- **Response:** UTM coordinates of the Project boundaries have been included on Figure 5.6-2 of the AFC, provided behind this response as attachment BIO-4.

BIO-4



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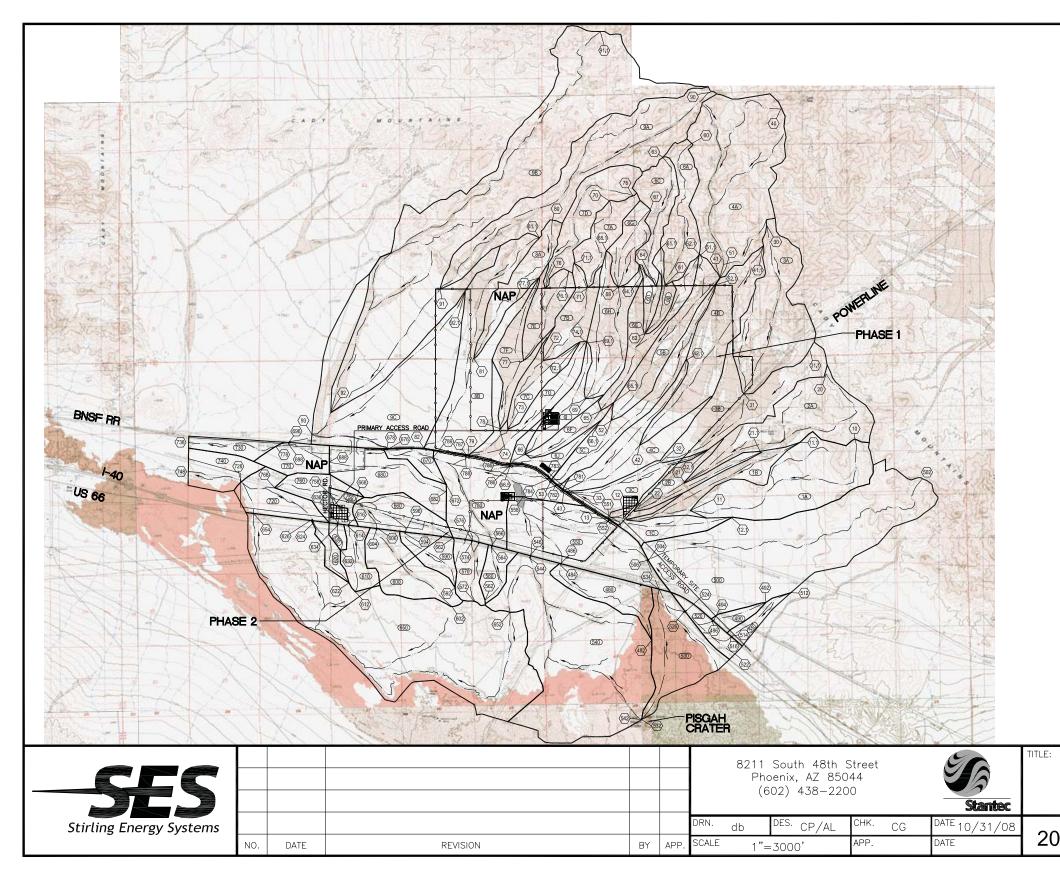
TECHNICAL AREA: BIOLOGICAL RESOURCES

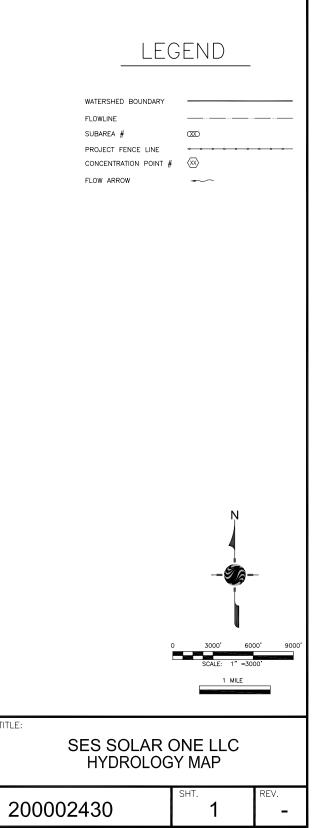
Data Request 226:	Please provide information on the anticipated amount of Project-
-	related ground disturbance within the BLM ACEC.

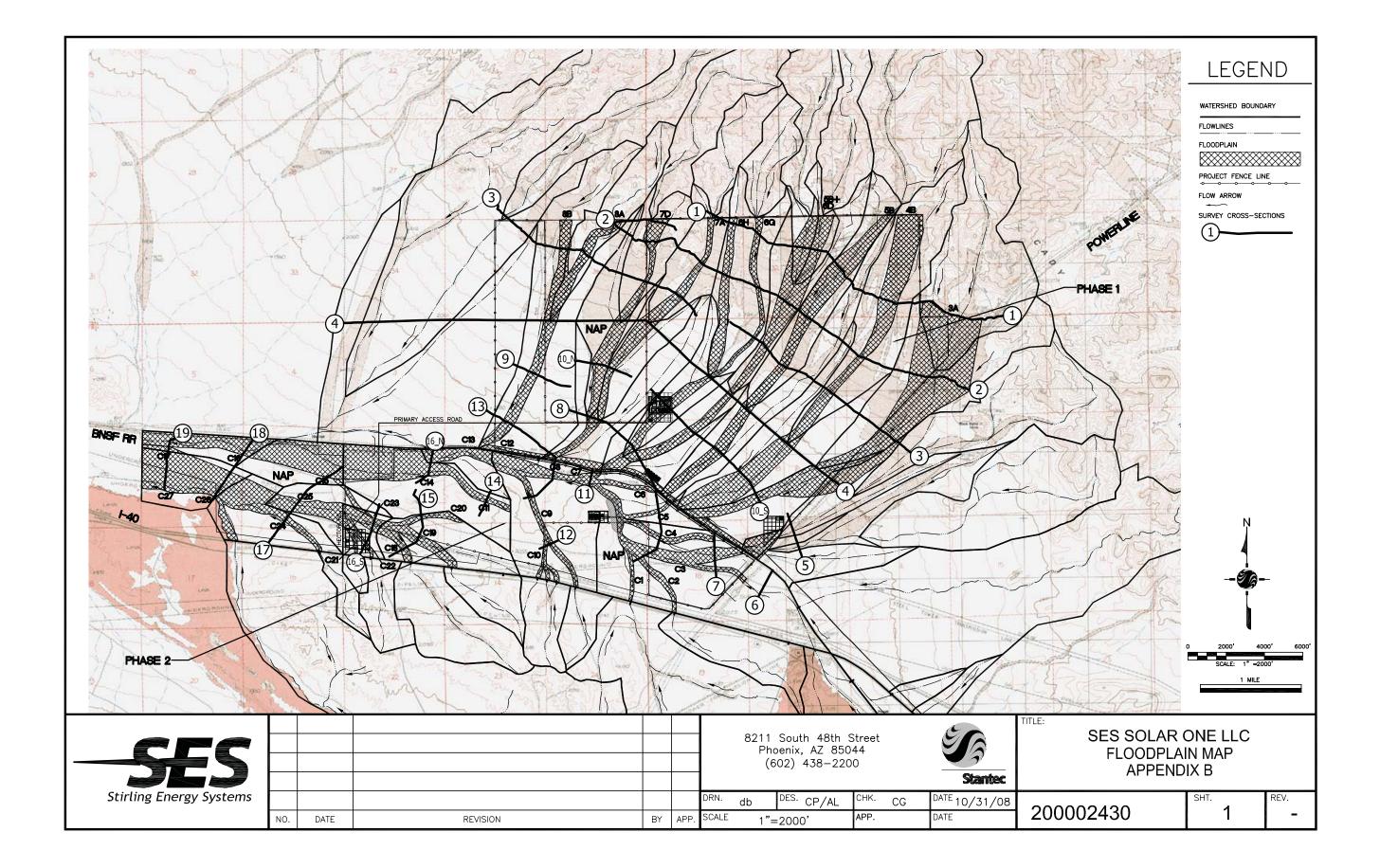
Response: The new substation is in the ACEC based on current understanding, and is estimated to require 40 acres of disturbance.

- Data Request 227:Please provide legible maps and legends for AFC Figures 5.5-3
and 5.5-4.
- **Response:** Legible versions of Figures 5.5-3 and 5.5-4 are provided behind this response as attachment BIO-5.

BIO-5







- **Data Request 228:** Please discuss any attempts that will be made to revegetate areas temporarily impacted by ground disturbance during the construction phase, and the Project site once the Project is decommissioned.
- **Response:** Mitigation measures are discussed in Section 5.6 and Appendix Y of the AFC, including revegetation of areas temporarily disturbed.



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 SES SOLAR ONE PROJECT

Docket No. 08-AFC-13

PROOF OF SERVICE

(Revised 7/20/09)

<u>APPLICANT</u>

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CONSULTANT

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*Becky Jones California Department of Fish & Game 36431 41st Street East Palmdale, CA 93552 <u>dfgpalm@adelphia.net</u>

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DECLARATION OF SERVICE

I, <u>Corinne Lytle</u> declare that on <u>July 27</u>, 2009, I served and filed copies of the attached <u>Applicant's Response</u> to <u>CURE Data Requests</u>, <u>dated July 27</u>, 2009. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/solarone].

The document has 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 :

<u>X</u> sent electronically to all email addresses on the Proof of Service list;

X by personal delivery or by depositing in the United States mail at ______ with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses NOT marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

<u>X</u> 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. <u>08-AFC-13</u> 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.

Original Signed By

Corinne Lytle