Appendix D
Public Comments on the Draft Environmental Impact Statement

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D.1 Introduction

The California Energy Commission (CEC) and the United States Bureau of Land Management (BLM) distributed the joint Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) for the Imperial Valley Solar (IVS) project for public and agency review and comment on February 12, 2010. The comment period ended May 27, 2010.

Section 508, Accessibility of Electronic and Information Technology for People with Disabilities, of the Federal Rehabilitation Act (29 United States Code [USC] 796(d)) requires federal agencies to make their electronic and technology information accessible to people with disabilities. This appendix includes material that was not available to either the BLM or the CEC in a format that offered accessibility features compatible with Section 508 requirements. Specifically, the written comments provided on the SA/DEIS were received as either a printed paper product or a scanned version of a printed paper product, neither of which could be converted to an accessible format that would be consistent with the requirements of Section 508. As a result, Sections D.4, Common Responses, and D.5, Individual Responses, include a graphical interface that inserts pictures of individual written comments within the text pages. Because this graphical interface cannot be made accessible under Section 508, parts of Sections D.4 and D.5 may be unreadable under the requirements of Section 508. For the convenience of readers who wish to read the responses without the graphical interface comments in the text, the responses without those graphical interface comments are provided in Section D.6, Responses Without Graphical Interface Comments.

D.2 Format of the Responses to Comments

The comments received on the SA/DEIS are organized by agency, organization, or member of the general public. Each comment letter/email is assigned a unique number. Individual comments/issues within each comment letter/email are numbered individually along the right-hand margins.

This appendix is organized as follows:

- **D.1 Introduction**
- **D.2 Format of the Responses to Comments:** This section describes the format and organization of the comments received on the DEIS and the responses to those comments.
- **D.3 Index of Comments Received:** This section provides a list of the comments received on the DEIS, by agency, organization, or member of the general public, lists the unique letter/number code for each comment.
- **D.4 Common Responses:** This section provides consolidated responses for topics on which a number of similar and related comments were received. Section D.4 provides the language of the individual comments, grouped by topic, followed by the common responses to the grouped comments. As noted earlier, Section D.4 includes those comments as graphical interface inserts that are not accessible to people with certain disabilities and thus is not in compliance with Section 508 of the Federal Rehabilitation Act (29 USC 796(d)). Refer to Section D.6, Responses Without Graphical Interface Comments, for a text-only version of this section.
- **D.5 Individual Responses to the Comment Letters/Emails:** The section provides the language of individual comments followed by responses to individual comments not responded to in the common responses provided in Section D.4. As noted earlier, Section D.5 includes material which is not readable under the requirements of Section 508. Refer to Section D.6, Responses Without Graphical Interface Comments, for readable text of this section.
- **D.6 Responses Without Graphical Interface Comments:** This section contains all the responses to comments received on the SA/DEIS without the graphical interface comments.

D.3 Index of Comments Received

Table D-1 is an index list of the agencies, groups, and persons who commented on the DEIS during the review and comment period. As described above, each comment was assigned a unique letter/number with each comment individually numbered. For example, F1-2 is the first substantive comment in letter F1. "F" represents a Federal agency, the "1" refers to the first Federal agency letter, and the "2" refers to the second comment in that letter.

Copies of the individual comments are provided in Sections D.4, Common Responses, and D.5, Individual Responses to the Comment Letters/Emails, with the responses following the comments. The full comment letters are provided on a compact disc in the sleeve following the last page of text in this Appendix.

Table D-1 Summary of Comments Received on the Imperial Valley Solar Project Draft Environmental Impact Statement

Letter	Agency/Person
Comments from Federal Agencies	
F1	United States Department of the Interior National Park Service (May 4, 2010)
F2	United States Environmental Protection Agency (June 14, 2010)
Comments from Native American Tribal Governments	
NA1	Quechan Indian Tribe (May 17, 2010)
NA2	Kwaaymii, Laguna Band of Indians (May 16, 2010)
Comments from State Agencies	
S1	California Department of Transportation (May 27, 2010)
S2	State of California Department of Parks and Recreation (May 28, 2010)
Comments from Local Agencies	
L1	City of El Centro (May 13, 2010)
L2	Imperial County (May 27, 2010)
Comments from Organizations	
O1	Public Employees for Environmental Responsibility (PEER)
O2	Center for Biological Diversity (CBD)
O3	Defenders of Wildlife
O4	Natural Resource Defense Council and The Wilderness Society
O5	Anza Trail Coalition of Arizona
O6	Backcountry Against Dumps (June 15, 2010)
O7	Basin and Range Watch
O8	Backcountry Against Dumps (May 27, 2010)
O9	California Unions for Reliable Energy
O10	California Native Plant Society
O11	BLM California Desert District Advisory Council (email April 1, 2010)

Letter	Agency/Person
Comments from Public Utilities	
U1	San Diego Gas & Electric (May 14, 2010)
Comments from Members of the General Public	
P1	Edie Harmon and Donna Tisdale (email March 2, 2010)
P2	Anita Nicklen (email May 28, 2010)
P3	Kim Bauer (email April 17, 2010)
P4	Glenn Kirby (email April 24, 2010)
P5	Gregory Gandrud (email May 5, 2010)
P6	Cody Hanford (email May 13, 2010)
P7	Brendan Hughes (email May 17, 2010)
P8	Jamie Shores (email May 26, 2010)
P9	Patrick Donnelly (email May 26, 2010)
P10	Denis Trafecanty (no date)
P11	Edie Harmon (email May 26, 2010)
P12	Greg P. Smestad, Ph.D. (May 21, 2010)

D.4 Common Responses

A number of the comments received on the IVS project and the DEIS discussed the same issues or environmental concerns. Rather than repeat responses over and over again, Common Responses were prepared that address those comments, and the responses to those comments refer the reader to the applicable Common Response.

In addition, some comments raised issues that are not environmental issues within the context of the National Environmental Policy Act (NEPA) or are outside the authority and jurisdiction of the BLM. Consistent with requirements of NEPA, the BLM has only addressed comments that raise substantive environmental issues under NEPA. However, all the comments received on the DEIS are included in this appendix.

The Common Responses are listed briefly below and are provided in full in the following sections:

- Section D.4.1, Non-NEPA/BLM Issues
- Section D.4.2, Project Alternatives
- Section D.4.3, Purpose and Need
- Section D.4.4, Cumulative Impacts
- Section D.4.5, California Desert Conservation Area Plan
- Section D.4.6, Air Quality
- Section D.4.7, Biological Resources
- Section D4.8, Climate Change
- Section D.4.9, Cultural Resources
- Section D.4.10, Public Health and Safety and Hazardous Materials
- Section D.4.11, Bonds Required of the Applicant
- Section D.4.12, Visual Resources
- Section D.4.13, Water Resources

- Section D.4.14, NEPA Process and Issues
- Section D.4.15, CEC Process
- Section D.4.16, Determination of NEPA Adequacy

Each of those sections lists the unique letter/number code for each comment for which the common response applies.

The following sections contain:

- A list of the comments received on the SA/DEIS related to the topic or environmental parameter noted in the section title (such as air quality or biological resources)
- The language of each of those comments, from the written comment letters/emails
- The common response that addresses the issue or issues raised in those comments

D.4.1 Non-NEPA/BLM Issues

The following comments do not raise issues under the National Environmental Policy Act (NEPA) or that are outside the authority of the United States Bureau of Land Management (BLM).

Comments: NA1-3, NA1-4, NA2-1, S1-1, S1-6, L1-1, L2-12, U1-1, O1-1, O1-2, O1-3, O1-5, O1-6, O1-7, O1-13, O1-14, O1-15, O1-16, O2-1, O2-21, O2-36, O2-38, O2-40, O2-42, O4-1, O4-2, O4-7, O6-17, O7-1, O9-1, P3-1, P4-1, and P6-1.

The Quechan Tribe's Fort Yuma Reservation at its current site was established in 1884 as a permanent homeland for the Quechan people. The Quechan people and their ancestors have inhabited the area surrounding the confluence of the Colorado and Gila Rivers for centuries. The Quechan Tribe's traditional lands extend well beyond the boundaries of the present day Fort **NA1-3**

Yuma Indian Reservation. Traditionally, Quechan settlements, or rancherias, were scattered north and south along the Colorado River from the confluence area, and eastward along the Gila. Traditional lands to the west of the present day reservation were also utilized by the Quechan people. According to Quechan tradition, the northern territory extended to the vicinity of Blythe, California, the southern territory reached to Sonora, Mexico, the western territory extended to California's Cahuilla Mountains, and the eastern territory approached Gila Bend, Arizona. The lower Colorado River tribes, which include the Quechan, shifted up and down the Colorado and Gila rivers, utilizing the banks and floodplain on both sides of the rivers for subsistence and settlements at different historical periods. (Alfonzo Ortiz, *Handbook of North American Indians*, Volume 10, Southwest (Quechan)) (Smithsonian Institution, Washington D.C. 1982). The traditional use of the area near the proposed project by Native Americans, including the ancestors of the Quechan, is discussed and confirmed in the DEIS' discussion of the cultural and ethnographic history of the project area. DEIS, Cultural Resources, C.2-40 – C.2-45.

NA1-4

The Quechan cultural landscape consists of a myriad of natural and cultural features. Natural features include the Colorado desert and river, mountains, hills, rock outcrops, flora, and fauna. Cultural features include mythology locales, sacred places, settlement and battle site locations, trails, and other resource use areas, along with prehistoric and historic archaeological sites. The latter include rock art (geoglyphs, petroglyphs, and intaglios), trails (stamped paths), trail markers, rock alignments, rock cairns, cleared (tamped) circles (sleeping, teaching, prayer, and dance circles), milling areas, pot drops, and other site features. *See, e.g.,* Birnbam, Charles A., *Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment, and Management*; Technical Preservation Services, National Park Service, Washington D.C. (1994); Russell, John C.; Woods, Clyde M.; and Jackson, Underwood, *An Assessment of the Imperial Sand Dunes as a Native American Cultural Landscape,* prepared for the California State Office of Bureau of Land Management, Sacramento, California, by EDAW, Inc., San Diego, California (2002). The project will also have impacts on the flat-tailed horned lizard. The lizard is part of the Quechan Tribe's creation story and is of cultural significance to the Tribe.

BLM and CRM companies continue fill my mail box with request for information and or concerns. I am sure you feel the pain as strongly as I, none the less here it is the middle of May and no time to play.

My concerns for the entire Southern California Desert are stated in Enclosure (1), and are provided as an ease to reference. Those concerns have not diminished but instead have deepened in the past years. At this point in time, I am at a loss as to how many ways one can respond to such requests. The basic concern for me is to continue to plead that the Cultural Resources (The Indians History) be preserved and protected. Preserve and Protect Not Impacted would include;

NA2-1

(1) That the fragile surface of desert floor not be impacted.

(2) That the small fragmented remains (to include Human Remains) that tell the prehistory of the people who knew how to live and move with the rhythm of this environment for thousands of years with out destroying it not be impacted

(3) That the small animals that live beneath the fragile surface of the desert floor be allowed to continue to live in that environment without being impacted.

(4) That the intangible view sheds that help to tell the scared legends not be obstructed or impacted.

(5) That well qualified Native American Monitors who can contribute to the record in a meaningful way (not as an archeologist but as an Indian with heritage to the area to ensure that the cultural deposit is identified and interpreted correctly) be employed to participate at the commencement to all Cultural surveys. (The very first survey not after the fact).

(6) That site visits for all interested Indians be provided.

In an effort to simplify a complex process, as we discussed in reference (a) I am advising you as the BLM archeologist to provide all who apply for energy or any other type of project with enclosure (2). Always understand that I do not speak for the Indian Community, I can only speak for myself, non the less it is my desire that all people who have a desire to develop this non-replaceable desert landscape be apprised of the pre history of the desert area, hopefully to gain an understanding that we Indians are still here and that we do continue to hold such things and places as very scared. We also understand that once such things are impacted, they can not be renewed, I also desire to believe that such areas are also meaningful to the collective society. We all know that energy can be created and it will continue to be created for future generations. On the other hand, the Landscape as it is today and the Prehistory can not be created for future generations. NA2-1

Should you have any questions please feel free to call, thank you.

CARMEN LUCAS
P.O. Box 775
Pine Valley, California 91962

23 March 2007

Vicki L. Wood
Field Manager
United States Department of the Interior
Bureau of Land Management
El Centro Field Office
1661 South 4th Street
El Centro, California 92243

Reference: Ocotillo Meteorological (MET) Tower Environmental Assessment
CA-670-2005-95 dated February 2007
Encl: (1) Photograph Traditional Cultural Property

Dear Ms. Wood

NA2-1

The Affected environment to the Cultural Resources under Section 3.2.6 of the referenced report states, "Traditional Cultural Properties (TCPs) are resources that are important to a community's traditional practices and beliefs and for maintaining the community's cultural identity (Parker and King 998)". The report further states "No cultural resources were observed within the area of potential effects for the MET tower".

Under the Environmental Consequences section of the reference report it states, "...most of the cultural resources previously recorded in the area have never been evaluated for National Register eligibility. Visual impacts on cultural resources can occur when there is a change in setting at a resource for which visual setting is one element in its National Register eligibility.

Please be advised that part of what makes up Traditional Cultural Properties is often the visual and the intangible essence of a place. After having made a site visit to the area of concern, I am compelled to put the following to record:

Ah Kwir (Aakwer) Red Paint Fine dirt taken from the hills somewhere out in the desert. It was used to paint the Indians faces and bodies. (Lora Cline, The Kwaaymii reflections on a lost culture)

HUTA-PAH' 1*

... The meanest man, who ever lived, was waiting and watching for his feeble, old father to die. He told the people that he wanted to watch until death came so he might see that the body of his beloved father was properly burned and given ceremonial burial. But the people knew what a liar he was, and that he only wanted to be there that he might devour the body of his father.

So Orse (Oso or Naamuul) Bear) said, "No! Nim-me' and Quck and the rest of the people will watch by the side of your sick father. You go off and hunt for something to eat, you are always hungry."

He sulked and whined, but they made him go, and slowly he loped down the trail. Shortly he returned, saying he could not find a thing to eat. Surmising that he had only been hiding in the bushes waiting for father's death, they sent him away once more. Again he came back with nothing, and repeated this performance till they lost all patience, and finally they said, "Go far, far away and hunt. If you dare return before In'Ya takes his night rest, we shall kill you." NA2-1

This time he really went a long distance, for, with all his sly, crafty ways, he was a big coward and their threats frightened him.

His father died while he was gone, and the people started a fire as quickly as possible, and began burning the body in order that it might be consumed before Huta-pah' got back.

Now he was many miles away when the smoke from that funeral pyre rose up through the tall pines, and drifted off on the breeze, but his keen nose scented it, and he turned back at a great rate of speed.

Orse and Quck and Nim-me' and the other people heard him coming, and drew close together in a circle round the fire, guarding the dead body of his father.

Shrieking and wailing as he drew near, he cried, "I must see my dear father once more before he is all burned up." But they paid no heed to his cries for they knew what a bad man he was.

Then, in his crafty way, he discovered that there was a low place in the defensive circle where Nim-me' stood, for he, you know, is quite a short person; so Huta-pah' sneaked back in the brush, made a running jump over Nimme's head and landed by the side of his father's body.

Snatching out the heart from the glowing embers of fire, away he dashed. Across valleys and mountains he ran, and far out on the desert sands.

Finally, he stopped on a hill on the other side, and ate up the heart of his father. As the red drops of blood slowly oozed from his cruel jaws and fell to the ground beneath, the entire hillside assumed a ruddy hue. And to this day, the earth there retains the color of the blood, which dripped from the heart of Huta-pah's father.

1* The above legend was related to Mary E. Johnson by Maria Alto of Laguna Band o f Indians of Laguna Mountain, about 1914. Tom Lucas, son of Maria Alto, told his daughter Carmen Lucas this legend pointing to Coyote Mountain, Ocotillo, explaining that this is where Huta-pah carried his fathers' heart. To this day one can see the red sprinkled throughout the earth of this sacred mountain. NA2-1

At this time, I am left to wonder is it by design or is it collective stupidity with which we as a society continue to nibble away at the places that stimulates creative thought to instead create "poor white trash" environments? The creation of Wind Towers at Coyote Mountain, the Geothermal plants at Truckheaven, the SDG&E proposed 150-mile transmission line, and of course the All American Pipe line that proposes to stop the water leakage that supports one environment to instead supply an additional 120,000 San Diego Homes with water. Collectively, I can see where this type of progress creates a whole lot of ugliness and does nothing to provide the stimulus one needs to develop ones sense of wonder or helps to keep ones spirit healthy let alone retain any of those special places that one goes to to experience the sense of discovery, or to visit their creator and to hear the legends of the ancestors.

It should be understood that part of what makes up the sacred can and most often is the visual quality, and the quietness that is often part of that visual quality of place. It is my opinion, that the visual impact of the Wind Hunter Ocotillo Met Tower will have a destructive adverse effect on this important Intangible Culture Resource. Further it is also the undersigns opinion that Traditional Culture Landscape, the visual quality and the essence of those properties cannot be mitigated and the public is better served if such places are left alone and preserved for future generations.

The enclosed photograph depicts an interesting image of a medicine wheel in the foreground and Coyote Mountain in the background a Traditional Cultural Landscape, a Visual Resource.

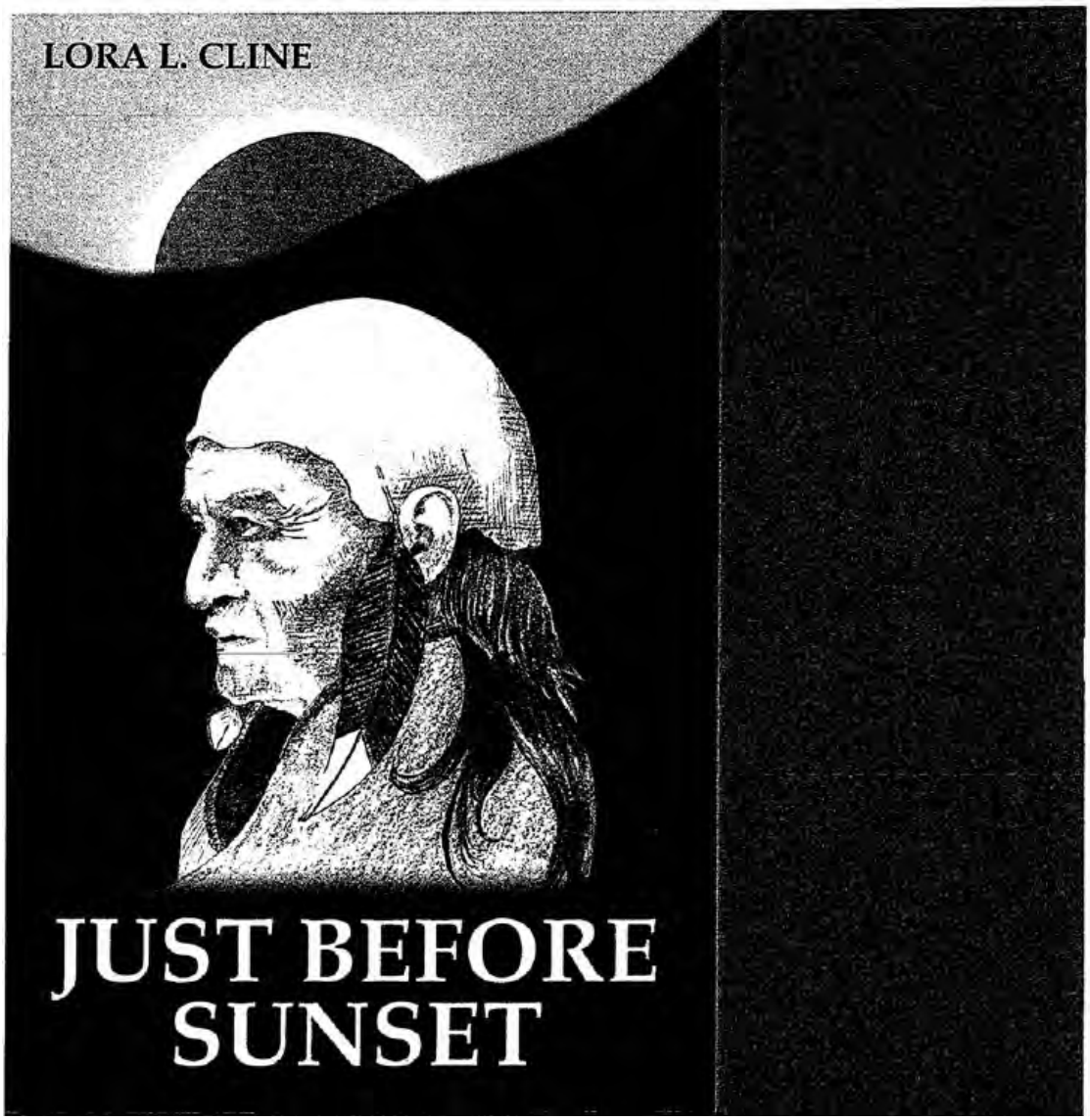
Thank you for the opportunity to comment. Should you have any questions please feel free to contract me.

Sincerely NA2-1

CARMEN LUCAS
Kwaaymii, Laguna Band of Indians
Laguna Mountain, California

Copy to:
Larry Myers, Native American Heritage Commission
Paul Cuero Jr., Chairperson Campo Band of Indians
Leroy J. Elliot, Chairperson Manzanita Band of Indians
Courtney Ann Coyle, Attorney at Law

NA2-1



NA2-1

The California Department of Transportation (Caltrans) received a copy of Draft Environmental Impact Statement (Draft EIS) for the proposed SES Solar Two / Imperial Valley Solar project located on Interstate 8 (I-8). Caltrans has the following comments:

S1-1

Ah Kwir [*Aakwer*]—Red Paint

Ah Kwir is the name of a war paint which was made from very fine dirt taken from a hill somewhere out on the desert.* It was of great value when the warriors painted their faces and bodies with the insignia of their tribe. The desert Indians were accustomed to bring it with other desert products up to the mountains to barter in trade with the tribes living there.

One of the numerous "Coyote stories" of the Indians living on the Cuyamacas gives their version of how this famous Ah Kwir came into existence.

Huta-pah' (Coyote) the meanest man who ever lived, was waiting and watching for his feeble, old father to die. He told the people that he wanted to watch until death came so he might see that the body of his beloved father was properly burned and given ceremonial burial. But the people knew what a liar he was, and that he only wanted to be there that he might devour the body of his father.

So Orse [Oso or *Naamuul*] (Bear) said, "No! Nim-me' and Quck and the rest of the people will watch by the side of your sick father. You go off and hunt for something to eat, you are always hungry."

He sulked and whined, but they made him go, and slowly he loped down the trail. Shortly he returned, saying he could not find a thing to eat. Surmising he that [sic] had only been hiding in the bushes waiting his father's death, they sent him away once more. Again he came back with nothing, and repeated this performance till they lost all patience, and finally

*Note: In 1980, a large deposit of iron oxide was found during a survey of the western Imperial Valley desert. It is located at the eastern foot of the Coyote Mountains near the Mexican border. This deposit is only a stone's throw off the major east-west corridor which linked the mountain Indians to their desert counterparts. Maria Alto had told Tom of an area in the desert where "*aakwer*" came from, but Tom had never been there. To date, this is the only deposit of iron oxide known in the area, and because of prehistoric artifacts found in association with the site, as well as its location along the main mountain-desert trail, it would seem probable that the deposit was used by prehistoric peoples.

they said, "Go far, far away and hunt. If you dare return before In'ya takes his night rest, we shall kill you."

This time he really went a long distance, for, with all his sly, crafty ways, he was a big coward and their threats frightened him.

His father died while he was gone, and the people started a fire as quickly as possible, and began burning the body in order that it might be consumed before Huta-pah' got back.

Now he was many miles away when the smoke from that funeral pyre rose up through the tall pines, and drifted off on the breeze, but his keen nose scented it, and he turned back at a great rate of speed.

Orse and Quck and Nim-me' and the other people heard him coming, and drew close together in a circle round the fire, guarding the dead body of his father.

Shrieking and wailing as he drew near, he cried, "I must see my dear father once more before all is burned up." But they paid no heed to his cries for they knew what a bad man he was.

Then, in his crafty way, he discovered that there was a low place in the defensive circle where Nim-me' stood, for he, you know, is quite a short person; so Huta-pah' sneaked back in the brush, made a running jump over Nim-me's head and landed by the side of his father's body.

Snatching out the heart from the glowing embers of fire, away he dashed. Across valleys and mountains he ran, and far out on the desert sands.

Finally, he stopped on a hill on the other side, and ate up the heart of his father. As the red drops of blood slowly oozed from his cruel jaws and fell to the ground beneath, the entire hillside assumed a ruddy hue. And to this day, the earth there retains the color of the blood which dripped from the heart of Huta-pah's father.

NA2-1

Additional information regarding encroachment permits may be obtained by contacting the Caltrans Permits Office at (619) 688-6158. Early coordination with Caltrans is strongly advised for all encroachment permits. S1-6

If you have any questions on the comments Caltrans has provided, please contact Leila Ibrahim of the Development Review Branch at (619) 688-6954.

Dear Chairwoman Douglas and Honorable Commissioners,

The County of Imperial has been identified as one of the best resources for renewable energy within the United States. The El Centro City Council has proactively supported the development of clean energy solutions throughout Imperial County.

The potential for solar energy resources in Imperial County could be a significant benefit to the electricity needs for all Californians with estimates exceeding 7,000 megawatts of solar capacity.

In addition to the extensive benefits to the environment from clean renewable energy, the development of this industry would be a significant economic benefit to the City of El Centro and the Imperial Valley. Green jobs in the clean energy industry would provide needed quality employment for the residents of El Centro, currently suffering from high unemployment. L1-1

Tessera Solar is processing approvals for a 750-megawatt solar generating facility to be located west of El Centro in the Imperial Valley utilizing the Stirling Energy Systems SunCatcher technology. The SunCatcher is the most efficient solar process in the world and uses very little water – a precious commodity in our county. The Tessera Solar Imperial Valley Solar Plant will be advantageous to the environment by emitting no harmful greenhouse gasses.

Office of the City Manager

1275 Main Street, El Centro, CA 92243 (760) 337-4540 Fax (760) 352-6177

Furthermore, the Imperial Valley Solar Project will generate hundreds of construction and permanent jobs, as well as contribute millions of dollar of revenue into the local economy. L1-1

Therefore, the El Centro City Council encourages the California Energy Commission to approve the Tessera Solar Imperial Valley Solar Plant in a timely manner. Thank you.

11) There has been a discussion of merging of private lands and ownership issues in the past. If there are to be any mergers deemed necessary, the CEC and BLM indicated that this would be handled "after" the CEC and AFC approval is complete. When this occurs, the County can assist in the Lot Merger process for any parcels that need to be merged when IVSP has completed the CEC and BLM approval process for the SSA/FEIS; L2-12

I am writing in support of the Imperial Valley Solar, LLC project (IVS) currently under review by the California Energy Commission (Commission) and the Bureau of Land Management (BLM). This very important project was initially selected by SDG&E in response to our 2004 Request for Offers for Eligible Renewable Resources and a Purchase Power Agreement (PPA) was executed in 2005. A contract amendment was executed in March and filed for approval at the CPUC to reflect the project's revised schedule and current market conditions.

Approval by the Commission and BLM is critical to SDG&E's efforts to achieve its RPS objectives, including the goal of achieving an RPS portfolio of 33% by 2020. The IVS project represents one of the largest components of SDG&E's renewable portfolio to date. The project complies with California's RPS program requirements and meets the portfolio needs outlined by SDG&E's 2009 RPS Plan. The IVS project will generate clean, renewable energy with zero fuel costs (and therefore contributing zero incremental need for foreign fuel imports) and zero greenhouse gas emissions directly associated with energy production into the atmosphere. U1-1

Our PPA for this project also demonstrates our strong commitment to renewable energy development in the Imperial Valley. Tessera Solar, the developer of the project, anticipates that IVS will create over 700 local jobs during the construction of the facility and approximately 160 long-term jobs to operate and maintain the facility. Tessera Solar has brought in an experienced senior management team and enthusiastic investors to help bring this project to fruition, and the project has significant local support. As a company fully engaged in bringing reliable, renewable energy to San Diego, we firmly believe the Tessera Solar team will bring this project online quickly and begin providing clean renewable solar power to our customers next year.

Your approval of the IVS project consistent with the existing schedule is crucial to the economics of the project, because IVS has applied for American Recovery and Reinvestment Act (ARRA) Renewable Energy Grants from the U. S. Treasury. These grants are an integral component in the cost structure of the project and require that they break ground before the end of 2010. Timely completion of the permitting process by the Commission and BLM is needed to allow qualification of this project to receive these very important economic stimulus grants. U1-1

In view of local economic benefits, overall environmental benefits, and the critical role that IVS will play in meeting SDG&E's renewable energy goals, I urge your timely approval of the project following the upcoming evidentiary hearings.

Thank you for your efforts and those of your staff to keep this important renewable project on track.

Following are the comments of Public Employees for Environmental Responsibility (PEER) on the subject SA/DEIS. PEER's summary opinion is that accelerating approval of so massive a project that uses a technology with no commercial track record is not appropriate. Any consideration of this project, and its companion proposal, should be abandoned or placed on hold until practical tests of the efficacy and impacts of the technology on the environment are made on a reasonable scale. O1-1

Authority and goals. Section 211 of the EPAct indicates only that the Secretary of the Interior seek to have approved a minimum of 10,000 MW of renewable energy generating capacity on public lands by 2015. This only grants an authority not a mandate to approve projects to achieve such capacity; it does not specify any particular type of renewable energy. If it is technically infeasible to meet the target date, or alternatives other than use of public lands provide greater benefits to the public, there is no requirement in EPAct to create the generating capacity on public lands. The term "capacity" is carelessly used throughout the document as is "nominal" production, neither clearly specified as to meaning. Both should be clearly defined and consistently used. O1-2

The CPUC, CEC, and EAP pledge of meeting an accelerated goal of 20% sales of renewable energy by 2010 is just that—a pledge, not a mandate or a requirement as stated. How to meet the pledge, if it is practical, is the central question. The same holds for the EO S-14-08 goal of 33% renewable energy sales by 2020—it is a goal, not a mandate.

Objectives, Purpose and Need. CEQA requires a statement of objectives, to include the underlying purpose of the project (Section 15126.6(a)), and NEPA requires the Federal O1-3

authority (BLM) to provide a statement of the underlying purpose and need to which the agency is responding in proposing alternatives (40 CFR §1502.13) O1-3

The **BLM Purpose and Need** statement is frivolous and wrong. Response to an application is not an "underlying purpose" of the project and demonstrates no "need" other than the applicant's need for a project approval—this relates only to paper work. EPAct does not require approval of at least 10,000 MW of renewable energy on public lands by 2015, as indicated in the comments on Authority and Goals above.

The **DOE Purpose and Need** statement assumes that the proposed project will avoid, or reduce air pollutants, including greenhouse gases, and employ a new or significantly improved technology compared to technologies in current service, none of which are demonstrated. Moreover, EPAct does not provide a mandate for DOE to select this, or any, project, as indicated in the above comment on Authority and Goals. O1-5

The **USACE Purpose and Need** statement addresses the substance of the CEQA and NEPA requirements for this statement, unlike the above agency statements. O1-6

Inappropriate procedure. Fast-tracking a major project which has no commercial track record and needs ARRA funding to be viable is bad policy. This deficiency makes full assessment of potential impacts, alternatives, and closure protocols impossible. For example, on p. C.2-3 it is stated "In summary, even with the implementation of staff's proposed conditions of certification, it is unknown if construction and operation of the SES Solar Two project would comply with all applicable laws, ordinances, regulations, and standards (LORS) relating to biological resources, and would be able to mitigate potential impacts to biological resources to less than CEQA significant levels. Similarly for purposes of NEPA compliance, it is unknown if the proposed SES Solar Two project would result in adverse impacts to biological resources due to the lack of information regarding mitigation of Waters of the U.S. These deficiencies call into question the wisdom of fast-tracking a project that has no significant track record. O1-7

p. B.2-6. Re conservation, energy saved is worth more than energy newly generated. There is huge potential to reduce energy demand, and plumbing that source could have substantial impact on CRPS demand. O1-13

This entire section is clumsily organized and incomplete O1-14

p. B.2-110. In connection to the statement on p. B.2-5 re achieving 750 MW of distributed solar energy, why is the California record of distributed PV (with the Nellis AFB facility in Nevada thrown in) relevant to a viable alternative to Solar Two? There are many other such facilities operating in other states.

p. B.2-111. So, how good is the assumed 30% capacity factor for solar thermal? The 9 SEGS parabolic mirror facilities climb that high only by liberal use of natural gas in non-solar periods—22% is closer to what they get from solar alone.

p. B.2-111. The SDSE plan, including maximizing Demand Reduction through Energy Efficiency upgrades sounds like a plan. Why not promote such approaches as vigorously as degrading unused desert lands? The DOE assumptions of a majority of installed capacity, 75%, will be commercial facilities over 100 kW need not be the goal.

p. B.2-112. Distributed solar thermal not only uses less land per MW, it requires less road-building than the proposed project, thus eliminating ancillary impacts. Substituting for Solar Two does not require that 750 MW capacity has to all be in one facility, thus maintaining the advantage of short transmission distances. O1-15

p. B.2-113 to 114. The feasibility argument is not relevant. In the same way that BLM is standing on its head to promote rapid development of renewables on public land, a serious program of distributed solar is possible—and for most of the reasons given in the SA/DEIS a distinct benefit to the public notwithstanding the "challenges." That is, distributed solar is the superior alternative.

p. B.2-114. Is it to be assumed that the discussion here constitutes a rejection of a distributed solar power alternative? If that is the intention, it should be explicitly stated and a section Rationale for Elimination provided as for other rejected alternatives.

p. B.2-115 to 116. Wind Energy alternative. It should be obvious from the wind potential map of the U.S. that the California desert (and most of the western public lands) are not the places to promote wind developments, certainly not to fast-track their development—most favorable locations in the west are mountain crests, which have major erosion and ecosystem segmentation problems with wind farm development.[6] The nation's prime wind potential lies in a N-S belt east of the Rocky Mountains, mostly on private lands. This is where the discussion should focus and a clear assessment of the comparative compatibility of wind energy development and agriculture and lack thereof of solar development. Restricting the scope of discussion to SES Solar Two's contract to sell electricity to San Diego is not pertinent. O1-16

These comments are submitted on behalf of the Center for Biological Diversity's 255,000 staff, members and on-line activists in California and throughout the western states, regarding the Staff Assessment and Draft Environmental Impact Statement And Draft California Desert Conservation Area Plan Amendment - SES Solar Two Project (the "DEIS") for the proposed SES Solar Two Project in Imperial County, California (hereinafter "proposed project" or "SES Solar 2"), issued by the Bureau of Land Management ("BLM").

The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and to assist California in meeting emission reductions set by AB 32 and Executive Orders S-03-05 and S-21-09. The Center for Biological Diversity (the "Center") strongly supports the development of renewable energy production, and the generation of electricity from solar power, in particular. However, like any project, proposed solar power projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy projects should avoid impacts to sensitive species and habitat, and should be sited in proximity to the areas of electricity end-use in order to reduce the need for extensive new transmission corridors and the efficiency loss associated with extended energy transmission. Only by maintaining the highest environmental standards with regard to local impacts, and effects on species and habitat, can renewable energy production be truly sustainable. **O2-1**

C. Failure to Identify and Analyze Direct and Indirect Impacts to Biological Resources

The EIS fails to adequately analyze the direct, indirect, and cumulative impacts of the proposed project on the environment. The Ninth Circuit has made clear that NEPA requires agencies to take a "hard look" at the effects of proposed actions; a cursory review of environmental impacts will not stand. *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150-52, 1154 (9th Cir. 1998). Where the BLM has incomplete or insufficient information, NEPA requires the agency to do the necessary work to obtain it where possible. 40 C.F.R. §1502.22; *see National Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 733 (9 th Cir. 2001) ("lack of knowledge does not excuse the preparation of an EIS; rather it requires [the agency] to do the necessary work to obtain it.") **O2-21**

Moreover, BLM must look at reasonable mitigation measures to avoid impacts in the DEIS but failed to do so here. Even in those cases where the extent of impacts may be somewhat uncertain due to the complexity of the issues, BLM is not relieved of its responsibility under NEPA to discuss mitigation of reasonably likely impacts at the outset. Even if the discussion may of necessity be tentative or contingent, NEPA requires that the BLM provide some information regarding whether significant impacts could be avoided. *South Fork Band Council of Western Shoshone v. DOI* , 588 F.3d 718 , 727 (9th Cir. 2009).

G. The Analysis of Cumulative Impacts in the DEIS Is Inadequate

A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. The Ninth Circuit requires federal agencies to "catalogue" and provide useful analysis of past, present, and future projects. *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.*, 123 F.3d 1142, 1160 (9th Cir. 1997); *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 809-810 (9th Cir. 1999).

"In determining whether a proposed action will significantly impact the human environment, the agency must consider '[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.' 40 C.F.R. § 1508.27(b)(7)." *Oregon Natural Resources Council v. BLM,* 470 F.3d 818, 822-823 (9th Cir. 2006). NEPA requires that cumulative impacts analysis provide "some quantified or detailed information," because "[w]ithout such information, neither courts nor the public . . . can be assured that the Forest Service provided the hard look that it is required to provide." *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1988); *see also id.* ("very general" cumulative impacts information was not hard look required by NEPA). The discussion of future foreseeable actions requires more than a list of the number of acres affected, which is a necessary but not sufficient component of a NEPA analysis; the agency must also consider the actual environmental effects that can be expected from the projects on those acres. *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004) (finding that the environmental review documents "do not sufficiently identify or discuss the incremental impact that can be expected from each [project], or how those individual impacts might combine or synergistically interact with each other to affect the [] environment. As a result, they do not satisfy the requirements of the NEPA.") Finally, cumulative analysis must be done as early in the environmental review process as possible, it is not appropriate to "defer consideration of cumulative impacts to a future date. 'NEPA requires consideration of the potential impacts of an action *before* the action takes place.'" *Neighbors*, 137 F.3d at 1380 *quoting City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1313 (9th Cir. 1990) (emphasis in original).

O2-36

O2-36

The NEPA regulations also require that indirect effects including changes to land use patterns and induced growth be analyzed. "Indirect effects", include those that "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include *growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems*." 40 C.F.R. s.1508.8(b) (emphasis added). *See TOMAC v. Norton*, 240 F. Supp.2d 45, 50-52 (D.D.C. 2003) (finding NEPA review lacking where the agency failed to address secondary growth as it pertained to impacts to groundwater, prime farmland, floodplains and stormwater run-off, wetlands and wildlife and vegetation); *Friends of the Earth v. United States Army Corps of Eng'rs*, 109 F. Supp.2d 30, 43 (D.D.C. 2000) (finding NEPA required analysis of inevitable secondary

O2-38

development that would result from casinos, and the agency failed to adequately consider the cumulative impact of casino construction in the area); *see also Mullin v. Skinner*, 756 F. Supp. 904, 925 (E.D.N.C. 1990) (Agency enjoined from proceeding with bridge project which induced growth in island community until it prepared an adequate EIS identifying and discussing in detail the direct, indirect, and cumulative impacts of and alternatives to the proposed Project); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975) (requiring agency to prepare an EIS on effects of proposed freeway interchange on a major interstate highway in an agricultural area and to include a full analysis of both the environmental effects of the exchange itself and of the development potential that it would create). O2-38

H. The EIS's Alternatives Analysis is Inadequate

NEPA requires that an EIS contain a discussion of the "alternatives to the proposed action." 42 U.S.C. §§ 4332(C)(iii),(E). The discussion of alternatives is at "the heart" of the NEPA process, and is intended to provide a "clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. §1502.14; *Idaho Sporting Congress*, 222 F.3d at 567 (compliance with NEPA's procedures "is not an end in itself . . . [but] it is through NEPA's action forcing procedures that the sweeping policy goals announced in § 101 of NEPA are realized.") (internal citations omitted). NEPA's regulations and Ninth Circuit caselaw require the agency to "rigorously explore" and objectively evaluate "all reasonable alternatives." 40 C.F.R. § 1502.14(a) (emphasis added); *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 234 Fed. Appx. 440, 442 (9th Cir. 2007). "The purpose of NEPA's alternatives requirement is to ensure agencies do not undertake projects "without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." *Envtl. Defense Fund, Inc. v. U.S. Army Corps of Engrs.*, 492 F.2d 1123, 1135 (5th Cir. 1974). An agency will be found in compliance with NEPA only when "all reasonable alternatives have been considered and an appropriate explanation is provided as to why an alternative was eliminated." *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1246 (9th Cir. 2005); *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228-1229 (9th Cir. 1988). The courts, in the Ninth Circuit as elsewhere, have consistently held that an agency's failure to consider a reasonable alternative is fatal to an agency's NEPA analysis. *See, e.g., Idaho Conserv. League v. Mumma*, 956 F.2d 1508, 1519-20 (9th Cir. 1992) ("The existence of a viable, but unexamined alternative renders an environmental impact statement inadequate."). O2-40

III. Conclusion

Thank you for your consideration of these comments. In light of the inadequacy of the environmental review to date, we urge the BLM to revise and re-circulate the DEIS or prepare a supplemental DEIS before making any decision regarding the proposed plan amendment and right-of-way application. In the event BLM chooses not to revise the DEIS and provide adequate analysis, the BLM should reject the right-of-way application and the plan amendment. Please feel free to contact us if you have any questions about these comments or the documents provided. O2-42

This letter constitutes the comments on the above-captioned proposed solar project and draft environmental impact statement (DEIS) of the Natural Resources Defense Council (NRDC) and The Wilderness Society (TWS), national environmental membership organizations with long histories of advocacy on behalf of the lands and resources administered by the Bureau of Land Management (BLM). More recently these organizations have been intensively involved in the Bureau's work to develop a comprehensive solar program as well as its efforts to "fast track" the permitting of individual utility-scale solar projects in California so that they may be eligible for grant funding under the American Recovery and Reinvestment Act of 2009 (ARRA).

Introduction: Our organizations recognize the need to develop the nation's renewable energy resources and to do so rapidly in order to respond effectively to the challenge of climate change. Unique natural resources here in California are already being affected by climate change, including, for example, the pikas of Yosemite National Park and the Joshua trees in Joshua Tree National Park. We also recognize that renewables development can help create jobs in communities that are eager for them, because of the nation's economic crisis. For these and other related reasons, our organizations are working with regulators and project proponents to move renewables projects forward. That said, renewable development is not appropriate everywhere on the public lands and must be balanced against the equally urgent need to protect unique and sensitive resources of the California Desert Conservation Area (CDCA). California is lucky indeed that we have sufficient renewable resources, including solar resources, to do their development in an environmentally and fiscally sensitive way.[1] O4-1

As we and our colleagues at sister organizations have repeatedly stated, the best way to develop the solar resources of the CDCA is through comprehensive, pro-active planning by both the federal government and the state to identify the most appropriate areas for such development -- *i.e.*, solar development zones -- and to guide development to those zones. *See, e.g.,* letter dated June 29, 2009 to Interior Secretary Salazar and California's Governor Schwarzenegger and signed by 11 organizations, including our own, attached as Exhibit 1.

We support the BLM's adoption of zone designation for its forthcoming solar programmatic EIS because of the benefits inherent in this approach, including but not limited to clustering

development of large-scale projects in appropriate places, rather than permitting them to be located across the landscape in numerous locations. We also applaud the agency's – and the Interior Department's – commitment to work closely with the State of California in the development of the Desert Renewable Energy Conservation Plan which, as you may already know, will designate not only renewable energy development zones, but also zones for conservation as well as include a comprehensive mitigation strategy. The integration and completion of both of these efforts offers the promise of a balanced plan that will facilitate development of renewable resources in the Desert while protecting desert resources.

Despite our fundamental belief in the critical importance of agency-guided development of renewables, rather than developer-initiated development, we have, as indicated, been investing a great deal of time and effort into the fast track projects. We have done so in response to the emphasis the Department, the BLM and the developers place on meeting ARRA deadlines as well as the potential role these projects could play in meeting the renewable generation and economic goals of the state and federal governments. We have also done so because we wanted to make the projects, and especially the utility-scale solar projects, as environmentally sensitive as they can be and because we wanted to ensure, to the extent possible, that their accompanying environmental documents are as sound as they can be. It is now apparent to us that not even the best of the environmental documents being produced for the fast track projects and/or the best projects should be models or precedents for the future. O4-1

The last track project sites were chosen without the benefit of siting criteria developed either by desert activists, environmental organizations, scientists and others, *see* Renewable Siting Criteria for California Desert Conservation Area, attached to June 29, 2009 letter referred to above, or by the Bureau. The Bureau in fact has yet to develop any siting guidance that would help field staff, developers and others identify appropriate sites – i.e., those with relatively low resource values and fewer resource conflicts. Moreover, the projects themselves were designated by Interior and the BLM as fast track projects without consideration of potential environmental issues. And, equally important, the timetable established for review of these projects did not take into account their scale, the agency's lack of experience with the technologies involved, and the agency's lack of experience permitting these kinds of projects.

Regardless of the outcome of the environmental review process for this or any other fast track project, we urge the BLM and the Interior Department to acknowledge publicly the deficiencies of the current process and to commit publicly to improving it. More specifically, we urge both entities to affirm that neither the current process, nor any of the project sites, nor any of the environmental documents, establish any legal or procedural precedents for future decision-making, siting or environmental review. We make this urgent recommendation notwithstanding the fact that this particular project appears to be proposed for an appropriate site and the accompanying DEIS represents an improvement in several respects over other such documents. O4-2

<u>The SES Solar Two Project:</u> The proposed project site appears to have potential for developing large scale solar energy with fewer impacts to sensitive resources than some other areas with high solar potential being considered for such development by the BLM. Site characteristics that are conducive to solar development include the presence of disturbed acreage, "approximately 1,039 acres of dirt and off highway vehicle (OHV) roads on BLM administered land" see SES Solar Two Project CEC-BLM SA/DEIS at C.2-1. In addition, there are "a rail line, transmission line and buildings in the study area" id.C-2.11. Another characteristic conducive to solar development is the existing transmission capacity that exists to support the first 300 MW of the project without any upgrades, id. ES-2. The site is also served by existing road access from Interstate 8, id. ES-5, although miles of new roads are contemplated as part of the project proposal.

Equally important, the lands subject to this Right of Way (ROW) application appear to be of comparatively lower natural resource values than some of the other ROW applications currently being considered for ARRA funding: the site includes no critical habitat for any listed species, and implicates no Area of Critical Environmental Concern (ACEC) designated by the BLM. Also, no desert tortoise, a federally endangered species, were found on the site, id. ES-21, unlike other ARRA project sites such as Brightsource's Ivanpah project and Solar Millennium's Ridgecrest project which support sizable populations of this endangered species. See Ivanpah Solar Electric Generating System CEC-BLM SA/DEIS at 6.2-29 and Ridgecrest Solar Power Project CEC-BLM SA/DEIS 5.3-1 (Solar Millennium's Ridgecrest project is no longer on the ARRA "fast track" list). While the above characteristics render the site more appropriate than some other locations for solar development, we do still have concerns about project impacts and the draft EIS document. O4-2

Project Phasing: As previously mentioned in scoping comments submitted by our organizations on December 31, 2008, the technology for the Stirling Two plant has not been deployed at commercial scale, and we would urge the BLM to consider issuing a condition on the permit to limit construction of the first 300 MW of the project until such time that commercial application of this technology at this site has been demonstrated. This would allow the project proponent and the permitting agencies to learn from the first 300 MW of development and make any necessary adjustments to construction and operation practices based on lessons learned from this experience. O4-7

VIII. IF AN ACTION IS TAKEN, BLM SHOULD ADOPT THE NO ACTION ALTERNATIVE WHICH WOULD MAKE THE AREA UNAVAILABLE FOR FUTURE SOLAR DEVELOPMENT.

The SA/DEIS studies three No Action Alternatives under NEPA, each of which would result in a different CDCA Plan: (1) the No Action/No CDCA Plan Amendment Alternative; (2) the No Action/Amend the CDCA to make the area *available* for future solar development Alternative; and (3) the No Action/Amend the CDCA to make the area *unavailable* for future solar development Alternative ("Unavailable Alternative") (emphasis added). We support the third alternative because it will provide the greatest protection to this immaculate landscape and will ensure that the character of the area is preserved for future generations. O6-17

The SA/DEIS recognizes that adoption of this alternative would prevent future environmental impacts from other renewable energy projects. Unless this alternative is adopted, "other renewable energy projects" with "similar[ly]" devastating cultural impacts could be approved. SA/DEIS, p. C.2-142. Adoption of the Unavailable Alternative would also prevent future impacts to the PBHS, FTHL, and special-status plant species. SA/DEIS, p. C.2-70. Visual resources would be similarly protected. SA/DEIS, p. C.13-33.[9] BLM should demonstrate its commitment to the preservation of our nation's rapidly disappearing desert lands by adopting the Unavailable Alternative.

CONCLUSION

For these reasons, the SA/DEIS violates both NEPA and CEQA. Accordingly, it should be revised and re-released. With regard to the various CDCA Amendment alternatives, the No Action/Amend the CDCA to make the area unavailable for future solar development Alternative should be adopted. O6-17

We have a great interest in this project as it lies in a unique part of the California Desert that we have both visited and spent time in, the Colorado Desert of the Imperial Valley, an imperiled biologically rich region. We have both participated in Flat-tailed horned lizard surveys in the county near the project site. But even more, we have camped and hiked in the area, on public land, and enjoyed the scenic value of deserts outside of parklands. O7-1

There is so much history here, beauty, that cannot be replaced or mitigated. We urge the No Action alternative with no future solar projects.

I. INTRODUCTION

On behalf of California Unions for Reliable Energy ("CURE"), this letter provides comments on the Draft Environmental Impact Statement ("DEIS") for the Imperial Valley, formerly Solar Two Project ("Project"). The Bureau of Land Management ("BLM") is the lead federal agency for evaluating the environmental impacts of the proposed right-of-way grant under the National Environmental Policy Act ("NEPA"). BLM has identified several key issues and has provided preliminary analyses of these issues in the DEIS. However, as explained more fully below, the DEIS does not satisfy the basic requirements of NEPA.[1] An adequate, revised DEIS must be prepared and circulated for public review and comment.

CURE is a coalition of unions whose purpose is to help solve the State's energy problems by building, maintaining and operating conventional and renewable energy power plants. Environmental degradation jeopardizes future jobs by causing construction moratoriums, eliminating protected species and habitat, using limited fresh water, and putting added stresses on the environmental carrying capacity of the state. This reduces future employment opportunities. In contrast, well designed projects that reduce environmental impacts of electricity generation improve long-term economic prospects. O9-1

Individual members work in areas affected by environmental degradation and health and safety risks from industrial development. Individual members also live in and use areas that will suffer the impacts of projects related to power plant development, including noise and visual intrusion, water and soil pollution, and destruction of archaeological and wildlife habitat areas.

Based on these concerns, CURE and its members have a strong interest in ensuring that projects comply with NEPA and all applicable federal, state, and local laws and regulations.

These comments are supported by the attached comments of Dr. Vernon Bleich, Scott Cashen, Dr. Christopher Bowles and Christopher Campbell. These expert qualifications and comments are attached and incorporated herein.

my comment is negative on any further building in this area as too much construction has already destroyed too much of this fragile habitat without concern for proper studies and impact reports. P3-1

We recently learned about the proposed solar array that would cover a 6200 acre site in a sensitive area of Imperial County near Ocotillo Springs. While we are generally very much in support of developing renewable sources of power as an alternative to fossil fuel powered plants, we are also aware of the great environmental harm that would be done by a facility that would cover 6500 acres of land. Trading the environmental impact of the carbon reduction realized by this type of plant with the shading 6500 acres of desert is not, in our view a reasonable trade-off. We believe solar power can be designed in a more local manner closer to the communities that will be served.
Covering 6500 acres of land to generate power for homes and businesses many miles away is not environmentally prudent and also requires considerable infrastructure to transmit the power to these areas. **P4-1**

Please register these comments in opposition to the proposed soar array on environmental grounds.

Glenn Kirby

>>> Cody Hanford <codyhanford@gmail.com> 5/13/2010 9:31 PM >>>
In regards to the Imperial Valley Solar Project:

I am a resident of the California Desert and I am concerned about the Imperial Valley Solar project. While I applaud our country's interest in renewable energy, I strongly oppose developing these projects in undisturbed, pristine public lands. I have traveled extensively in the California Desert and there are many thousands of acres more suitable for large solar projects than the area selected for Imperial Valley Solar. Have you been to this area? It's a beautiful, rich ecosystem that remains intact. Just because it is not covered by forests and streams does not make it acceptable to clear it, grade it, and cover it with mirrors. I suggest you visit this area and see for your self. Then travel to the heart of Imperial County; to El Centro, Niland, Brawley, and Calexico and further investigate the large, disturbed tracts of land that would be great for solar in my opinion. It makes no sense to destroy more untouched land when there are already areas cleared of vegetation and ready for development. I feel that these solar companies are choosing the easy/profitable way out when they select public BLM lands instead of choosing more ideal private lands. Our nation is choosing to develop our solar energy potential because we have made bad judgements in the past and we are now paying for it.
Please do not reward energy companies who continue to make bad decisions motivated by the bottom line instead of reasonable and logical decisions motivated by ethics and the common pubic interest. Thank you. **P6-1**

Sincerely,

Cody Hanford

Response: These comments do not raise environmental issues under the National Environmental Policy Act (NEPA), provide general comments or statements without raising a specific environmental question, and/or represent an opinion of the commenter that does not raise issues under NEPA. In compliance with NEPA, the BLM prepared a Final Environmental Impact Statement (FEIS) and that FEIS will be available to the public for 30 days. After publication of the FEIS and after consideration of the comments received on the SA/DEIS, including comments regarding the IVS project, possible BLM actions related to a right-of-way grant or an amendment to the *California Desert Conservation Area Plan* (CDCA Plan, 1980, as amended), or environmental issues, the BLM may select an alternative and set forth its approval in a Record of Decision (23 Code of Federal Regulations [CFR] 771.127) along with a summary of the adverse impacts of the project and avoidance, minimization, and mitigation measures incorporated into the Agency Preferred Alternative to complete the environmental process under NEPA.

D.4.2 Project Alternatives

These comments raised questions regarding the description of the Imperial Valley Solar (IVS) project, the alternatives to the project, and other possible alternatives for consideration. This section responds to those questions and discusses and clarifies issues concerning the project and the alternatives to the project evaluated in the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) and the Final Environmental Impact Statement (FEIS). Responses to comments on the purpose and need for the project are discussed later in Section D.4.3, Purpose and Need.

Comments: F1-6, F2-1, F2-2, F2-3, F2-7, F2-14, F2-16, F2-39, F2-40, NA1-2, S2-2, O1-11, O1-15, O1-16, O2-17, O2-41, O3-3, O4-2, O6-13, O6-14, O9-50, P1-1, P7-7, P10-6, O1-8, O1-12, O2-2, O2-3, O2-5, O2-9, O2-10, O6-2, and P11-25.

NPS prefers alternatives that would locate the project within or adjacent to existing disturbed lands, either in Imperial County, or closer to metropolitan areas that would consume the energy generated by the project. The merits of such alternatives need to be fully examined in the final EIS. Locating the proposed project on or near existing agricultural or urbanized areas in the vicinity would avoid or minimize impacts to the natural landscape. The Mesquite Lake and Agricultural Lands Alternatives for this project, evaluated under CEQA, would meet some of these criteria and avoid impacts to the historic corridor of the Anza NHT. It should also be noted that the Mesquite Lake and South of Highway 98 Alternatives would be located adjacent to the Auto Tour Route of the Anza NHT (Highways 98 and 86), but these Alternative locations would preferable to the proposed project site. **F1-6**

The U.S. Environmental Protection Agency (EPA) has reviewed the Joint Draft Environmental Impact Statement (DEIS) and Staff Assessment for the Imperial Valley Solar Project (Project). Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act (CAA).

I am directing this comment letter to you because of our concerns over the Project's environmental impacts, insufficient evaluation of potentially environmentally preferable alternatives, and implications for other renewable energy projects that have been proposed on Bureau of Land Management (BLM) lands throughout our Region. In light of these concerns, and our recent adverse rating of BLM's Amargosa Solar Millenium Project in Nevada, (comments submitted on May 17, 2010), I would like to meet with you and BLM's Nevada State Director Ron Wenker in the next 30 to discuss these issues further. I believe it is important for us to coordinate now to avoid unnecessary delays in the NEPA process as we all work toward the nation's renewable energy goals. F2-1

EPA supports increasing the development of renewable energy resources in an expeditious and well planned manner. Using renewable energy resources such as solar power can help the nation meet its energy requirements while reducing greenhouse gas emissions. While renewable energy facilities offer many environmental benefits, appropriate siting and design of such facilities is of paramount importance if the nation is to make optimum use of its renewable energy resources without unnecessarily depleting or degrading its water resources, wildlife habitats, recreational opportunities, and scenic vistas.

BLM has identified thirty-four proposed renewable energy projects as "fast track" projects that are expected to complete the environmental review process and be ready to break ground by December 2010 in order to be eligible for funding under the American Recovery and Reinvestment Act (Section 1603). Twenty-eight of these projects are located in our Region, of which fourteen are located in California. We are aware that many more projects that have not been designated "fast-track" are also being considered by BLM. Many, if not all, of these projects, fast track or otherwise, are proposed for previously undeveloped sites on public lands. In making its decisions regarding whether or not to grant rights-of-way for such projects, we recommend that BLM consider a full range of reasonable alternatives to minimize the adverse environmental impacts. Such alternatives could include alternative technologies or altered project footprints at the proposed locations, as well as alternate sites, such as inactive mining or other disturbed sites that may offer advantages in terms of availability of infrastructure and less vulnerable habitats. Given the large number of renewable energy project applications currently under consideration, particularly in the Desert Southwest, we continue to encourage BLM to apply its land management authorities in a manner that will promote a long-term sustainable balance between available energy supplies, energy demand, and protection of ecosystems and human health. F2-2 F2-2

On November 18, 2008, EPA provided extensive formal scoping comments for the proposed Project which included a variety of detailed recommendations regarding purpose and need, range of alternatives, water resources, and other resource areas of concern. On May 12, 2010, we submitted comments (enclosed) to the Army Corps of Engineers (Corps) on the March 15, 2010 Public Notice (Application for Permit) which highlighted our recommendations to comply with Section 404(b)(1) of the Clean Water Act Guidelines. EPA continues to work collaboratively with the Corps, fellow resource and regulatory agencies, and the applicant toward the goal of arriving at a permittable Project, while protecting natural resources. F2-3

environmental impacts of its use should be fully incorporated into the FEIS. Lastly, we have concerns that two of the three off-site alternatives included in the DEIS would have reduced impacts to key resources areas, but were eliminated from further consideration. F2-7

Analysis of Alternatives – 40 CFR 230.10(a)

In order to comply with the Guidelines, the Applicant must comprehensively evaluate a range of alternatives to ensure that the *"preferred"* alternative is the *Least Environmentally Damaging Practicable Alternative* (LEDPA). Identification of the LEDPA is achieved by performing an alternatives analysis that estimates the direct, indirect, and cumulative impacts to jurisdictional waters resulting from a set of on- and off-site project alternatives. Project F2-14

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alternatives that are not practicable and do not meet the project purpose are eliminated. The LEDPA is the remaining alternative with the fewest impacts to aquatic resources, so long as it does not have other significant adverse environmental consequences. Only when this analysis has been performed can the applicant and the permitting authority be assured that the selected alternative is the LEDPA (40 CFR 230.10(a)).

Over the course of the past several months, we have been working collaboratively with the Corps, fellow resource and regulatory agencies, and the Applicant on the proposed Project. On April 28, 2010, EPA met with the Applicant and the Corps to discuss new alternatives proposed by the Applicant to reduce impacts to aquatic resources. We appreciate the Applicant's effort toward compliance with the Guidelines. On May 12, 2010, EPA submitted comments to the Corps identifying our concerns with the Public Notice (Permit for Application). Given the importance of the desert ephemeral washes, which are tributaries to the New River and the Salton Sea, and the limited information currently available regarding the Project—particularly related to practicable alternatives with fewer impacts to aquatic resources—EPA determined that the project **may result** in substantial and unacceptable impacts to "aquatic resources of national importance" (ARNI), and identified the permit action as a candidate for elevation to the Corps' and EPA's respective headquarters.[1] The ephemeral waters at the Project site have been designated as ARNI due the hydrologic, biogeochemical, and habitat functions that directly affect the integrity and functional condition of waters downstream at the New River and the Salton Sea.

Based on our review of the DEIS and the Public Notice, additional information, including an offsite alternatives analysis, analysis of impacts associated with site design (*e.g.*, perimeter fencing and roads), and onsite alternative designs (*e.g.*, future development of in holdings, additional avoidance through removal of SunCatchers in drainages, alternative locations of substation, maintenance buildings, holding areas and assembly tents) is necessary in order to ensure authorization of the LEDPA. F2-14

At this time, the DEIS and the Public Notice provide minimal consideration of practicable alternatives in light of costs, logistics, and existing technology as required under the Guidelines, and, as a result, we cannot determine the extent to which each alternative is practicable and should be considered as the LEDPA. The DEIS presents four on-site alternatives including the Applicant's proposed 750 MW full build-out alternative, two 'Drainage Avoidance' alternatives, and a 300 MW reduced project size alternative. Additionally, the DEIS contains an evaluation of three off-site alternatives; however, these off-site alternatives are included for CEQA purposes only and are eliminated from further consideration under NEPA for their failure to meet BLM's purpose and need for the proposed Project (at pg. B.2-2). A full analysis of off-site alternatives is an integral component of the CWA 404 analysis. We strongly recommend off-site alternatives be given full consideration under NEPA and to demonstrate compliance with the Guidelines. The DEIS indicates that all three of the off-site alternatives would have less severe cultural and visual impacts than would occur at the proposed site, and two of the three alternative sites (located on disturbed lands) would also have reduced impacts to

[1] This letter follows the field level procedures outlined in the August 1992 Memorandum of Agreement between the EPA and the Department of the Army, Part IV, paragraph 3(a) regarding section 404(q) of the Clean Water Act.

biological resources (at pg. B.2-1). As previously mentioned, EPA supports the consideration of off-site alternatives on disturbed lands, including fallow agricultural lands, and other candidate parcels that are currently under consideration by BLM as a Solar Energy Study area.

As part of determining the LEDPA, the FEIS should further justify the elimination of the 300 MW Phase I as a practicable alternative. Based on the information in the DEIS, it appears that the Phase I alternative may be practicable and less environmentally damaging to jurisdictional waters when compared to the proposed Project alternative. It is our understanding that the Applicant has a Power Purchase Agreement with SDG&E to provide 300 MW of power once on-line. The FEIS should confirm that this is the case. In light of the contingency of Phase II of the Project upon the Sunrise Powerlink Transmission Line (SPTL) (at pg. B.1-19), it appears that the 300 MW alternative may have been considered by the Applicant or SDG&E to have independent utility. Additionally, SPTL appears to be further delayed based on the recent decision by the Cleveland National Forest Service Supervisor to open up the project for further public review. The FEIS should also discuss the implications to the proposed Project if the SPTL is not built. As such, a single 300 MW plant would be considered an on-site *less environmentally damaging, practicable alternative*, pursuant to the Guidelines. Finally, the FEIS should analyze a 300 MW alternative in a design configuration that avoids all impacts to Waters on-site. F2-14

Recommendation:

- EPA recommends that BLM include analyses of on- and off-site alternatives in the FEIS to support the identification of the LEDPA. Sufficient detail should be provided to allow for meaningful comparisons.

The DEIS has not clearly demonstrated that all practicable measures to minimize unavoidable impacts to potential waters of the United States have been incorporated into the proposed project design. For example, according to an April 26, 2010 *Preliminary Draft 404B-1 Alternatives Analysis For the Imperial Valley Solar Project*, all on-site design alternatives utilize the same location and footprint for the Main Service Complex, which results in 18 acres of permanent impacts to Waters. The FEIS should evaluate alternative locations, as well as the reconfiguration or redesign of building footprints within the Main Service Complex, to avoid jurisdictional waters. The FEIS should also discuss alternate designs that reduce the size of holding areas, and consider minimizing the number of temporary assembly tents required to outfit the facility. We note that the DEIS appears to indicate that only one assembly building is necessary (at pg. C.7-14). F2-16

Similarly, the FEIS should fully describe the potential for avoiding redundancy of arterial and perimeter roads, as well as further elimination of SunCatchers in drainages, which could result in avoidance of jurisdictional waters. The FEIS should provide additional details, including acres of Waters avoided, as a result of these avoidance measures. Avoidance of sensitive plant species should be an important consideration in the design and configuration of the SunCatcher layouts as well. F2-16

Reasonable Range of Alternatives Analysis

CEQ Regulations for implementing NEPA (40 CFR, Parts 1500 - 1508) state that the alternatives section of an EIS should "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly describe the reasons for their having been eliminated" (40 CFR, part 1502.14). All reasonable alternatives that fulfill the purpose of the project's purpose and need should be evaluated in detail, including alternatives outside the legal jurisdiction of the BLM (Council on Environmental Quality's (CEQ) Forty Questions[4], #2a and #2b).

The DEIS indicates that BLM interprets the above to apply to "exceptional circumstance" and limits its application to broad, programmatic EISs that would involve multiple agencies. The DEIS further indicates the "purpose and need statement should be constructed to reflect BLM's discretion consistent with its decision space under its statutory and regulatory requirements. Thus, alternatives that are not within BLM jurisdiction would not be considered reasonable" (at pg. B.2-7). The FEIS should cite the specific regulation or BLM policy that overrides CEQ's guidance and supports this claim. Further, BLM should discuss this issue in the context of the recent decision to include an off-site alternative in the recently released Ivanpah Solar Electric Generating System Supplemental DEIS for which BLM serves as the lead Federal agency. We commend BLM for the decision to incorporate off-site, potentially environmentally preferable alternatives on that project. F2-39

Additionally, as discussed above regarding the CWA Section 404 Alternatives Analysis, a full evaluation of off-site alternatives will be necessary to support a LEDPA demonstration.

As stated in our scoping comments, reasonable alternatives should include, but are not necessarily limited to, alternative sites, capacities, and technologies as well as alternatives that identify environmentally sensitive areas or areas with potential use conflicts. A robust range of alternatives will include more options for avoiding significant environmental impacts.

[4]Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 40 CFR Parts 1500-1508, Federal Register, Vol. 46, No. 55, March 23, 1981.

Recommendations:

- Include supporting documentation and additional discussion on BLM's rationale for the elimination of off-site alternatives from further consideration under NEPA.
- Clearly identify the economic criteria used for analyzing alternatives. As appropriate, fully consider alternatives rejected in the earlier analysis. If a cost-benefit analysis of the proposed Project and the various alternatives has been completed, it should be incorporated by reference in, or appended to, the FEIS (40 CFR 1502.23) and summarized in the Executive Summary. F2-39

Consideration of Disturbed Site Alternatives

As additional alternatives are considered for evaluation in the FEIS, as well for future projects, EPA continues to recommend the identification of locations that have been previously disturbed or contaminated. The FEIS should discuss any methods or tools BLM has used to identify and compare locations for siting renewable energy facilities, and to ascertain whether or not any disturbed sites are available that would be suitable for the proposed project. For example, the EPA's Re-Powering America initiative works to identify disturbed and contaminated lands appropriate for renewable energy development. For more information on that initiative, visit http://www.epa.gov/oswercpa/. F2-40

Recommendations:

- EPA strongly encourages BLM to promote the siting of renewable energy projects on disturbed, degraded, and contaminated sites, before considering large tracts of undisturbed public lands.
- The FEIS should include information regarding all criteria used to evaluate the Project site and alternatives.

for development of a short-term energy source. Alternative locations that have been subject to prior disturbance and that lack the cultural significance of this area should be evaluated further. NA1-2

First and foremost, it would seem to us (as has undoubtedly been pointed out by others) that from a land use and landscape conservation perspective the proposed 6,000+ acre project would provide far more benefit to the public and the citizens of California if it were sited on nearby fallowed farmlands, or other previously disturbed lands – rather than undisturbed desert lands currently in public ownership. Virtually all of the negative biological and aesthetic impacts associated with the proposed project (and the necessity of a large-scale mitigation program) could be eliminated with a change to a previously-disturbed site. S2-2

Inadequate assessment of alternatives. It is asserted (p. B.2-2) that distributed PV placed on surfaces such as rooftops and parking facilities would require extensive acreage, and increasing distributed solar "faces challenges in manufacturing capacity, cost, and policy implementation." The adequacy of rooftop PV to supplant the Solar Two power production is well-demonstrated by NREL reports[1] not cited in this document. Inclusion of distributed generation on brownfields,[2] and small near-urban power plants directly serving local customers also has high potential, as does passive building design and retrofitting.[3] So such developments face challenges, so do utility-scale PV and concentrating solar facilities, plus other major challenges such as transmission facilities not shared by distributed solar. The position taken by CEC and BLM is narrow and unimaginative. O1-8

p. B.2-2. Rejection of all offsite alternatives deemed unreasonable by the BLM because, as discussed below, none would accomplish the purpose and need for the proposed action. Considering that the BLM statement of Purpose and Need addresses only paper-work requirements, not real underlying purposes and needs as required by NEPA, this rejection is unreasonable.

p. B.2-2. Out of hand rejection of other generation technologies simply underscores impact issues of the proposed project. For example, this document does not demonstrate differences in greenhouse gas releases on any rigorous basis, including effects of release by land disturbance to create the facilities, the GHG cost of producing the hydrogen to be used by Solar Two, and the actual extensive use of natural gas as at existing concentrating solar power plants. O1-11

p. B.2-5. Alternatives Table 1. The statement "While it will very likely be possible to achieve 750 MW of distributed solar energy over the coming years, the limited numbers of existing facilities make it difficult to conclude with confidence that this much distributed solar will be available within the timeframe required for the SES Two project" is absurd on two counts: 1) there is no existing SunCatcher facility to rely on either; and 2) the only requirement that Solar Two meet the chosen timeframe is to qualify the

builders for free federal dollars. Moreover, distributed solar power does not require grid interconnection, except for local small plant operations, which is much more limited than remote power plants. O1-11

p. B.2-5. Alternatives Table 1. Why is the discussion of wind energy restricted to Imperial and eastern San Diego counties? While environmental impacts could also be significant, they might also be less—and wind is much more compatible with many agricultural land uses than solar. O1-12

p. B.2-110. In connection to the statement on p. B.2-5 re achieving 750 MW of distributed solar energy, why is the California record of distributed PV (with the Nellis AFB facility in Nevada thrown in) relevant to a viable alternative to Solar Two? There are many other such facilities operating in other states.

p. B.2-111. So, how good is the assumed 30% capacity factor for solar thermal? The 9 SEGS parabolic mirror facilities climb that high only by liberal use of natural gas in non-solar periods—22% is closer to what they get from solar alone.

p. B.2-111. The SDSE plan, including maximizing Demand Reduction through Energy Efficiency upgrades sounds like a plan. Why not promote such approaches as vigorously as degrading unused desert lands? The DOE assumptions of a majority of installed capacity, 75%, will be commercial facilities over 100 kW need not be the goal.

p. B.2-112. Distributed solar thermal not only uses less land per MW, it requires less road-building than the proposed project, thus eliminating ancillary impacts. Substituting for Solar Two does not require that 750 MW capacity has to all be in one facility, thus maintaining the advantage of short transmission distances. O1-15

p. B.2-113 to 114. The feasibility argument is not relevant. In the same way that BLM is standing on its head to promote rapid development of renewables on public land, a serious program of distributed solar is possible—and for most of the reasons given in the SA/DEIS a distinct benefit to the public notwithstanding the "challenges." That is, distributed solar is the superior alternative.

p. B.2-114. Is it to be assumed that the discussion here constitutes a rejection of a distributed solar power alternative? If that is the intention, it should be explicitly stated and a section Rationale for Elimination provided as for other rejected alternatives.

p. B.2-115 to 116. Wind Energy alternative. It should be obvious from the wind potential map of the U.S. that the California desert (and most of the western public lands) are not the places to promote wind developments, certainly not to fast-track their development—most favorable locations in the west are mountain crests, which have major erosion and ecosystem segmentation problems with wind farm development.[6] The nation's prime wind potential lies in a N-S belt east of the Rocky Mountains, mostly on private lands. This is where the discussion should focus and a clear assessment of the comparative compatibility of wind energy development and agriculture and lack thereof of solar development. Restricting the scope of discussion to SES Solar Two's contract to sell electricity to San Diego is not pertinent. O1-16

As proposed, the proposed project would cover approximately 6,185 acres (approximately 9.7 square miles) of Sonoran desert scrub that is prime habitat for the federally proposed threatened flat-tailed horned lizard ("FTHL") including foraging habitat for the federally and state listed endangered Peninsular bighorn sheep. Unfortunately, the DEIS for the proposed plan amendment and right-of-way application fails to provide adequate identification O2-2

and analysis of the significant impacts to the endangered Peninsular bighorn sheep, the flat-tailed horned lizard, rare plants, and other biological resources, fails to adequately address the significant cumulative and growth inducing impacts of the project, and lacks consideration of a reasonable range of alternatives. In addition, BLM has failed to fully examine the impact of the proposed plan amendment to the California Desert Conservation Act Plan ("CDCA Plan") along with other similar proposed plan amendments that which would result in industrial sites sprawling across the California Desert within habitat that should be protected to achieve the goals of the bioregional plan as a whole. O2-2

Nonetheless, even the inadequate information provided in the DEIS shows that the proposed plan amendment and right-of-way application should be denied because the proposed project will result in significant impacts to a breeding population of flat-tailed horned lizards, which are proposed to be listed under the Endangered Species Act ("ESA"). In addition to direct impacts to the flat-tailed horned lizard, the proposed project is in an area that links the northern and southern populations and management areas for this imperiled species – areas which were set aside for the conservation and recovery of the species. Although the DEIS acknowledges that this site includes documented foraging area for the federally and state endangered Peninsular bighorn sheep (DEIS at C.2-39), the DEIS improperly ignored potential impacts to the bighorn from the loss of this foraging area. Alternative siting, which the BLM failed to adequately address in the DEIS, could significantly reduce the impacts to both of these species, their occupied habitat, and other special status species including potentially rare plants. The Center urges the BLM to revise the DEIS to adequately address these and other issues detailed below and re-circulate the DEIS or a supplemental DEIS for public comment. O2-3

In the sections that follow, the Center provides detailed comments on the ways in which the DEIS fails to adequately identify and analyze many of the impacts that could result from the proposed project, including but not limited to: impacts to biological resources, growth inducing impacts alternatives and cumulative impacts. In addition, if undertaken as proposed, this industrial project is inconsistent with local planning and zoning laws, the Endangered Species Act ("ESA"), the Federal Land Policy Management Act ("FLPMA"), the California Desert Conservation Act ("CDCA"), and other laws, ordinances, regulations and standards.

I. The BLM's Analysis of the Proposed Plan Amendment and Proposed Project Fail to Comply with FLPMA.

O2-5

As part of FLPMA, Congress designated 25 million acres of southern California as the California Desert Conservation Area ("CDCA"). 43 U.S.C. § 1781(c). Congress declared in FLPMA that the CDCA is a rich and unique environment teeming with "historical, scenic,

archaeological, environmental, biological, cultural, scientific, educational, recreational, and economic resources." 43 U.S.C. § 1781(a)(2). Congress found that this desert and its resources are "extremely fragile, easily scarred, and slowly healed." *Id.* For the CDCA and other public lands, Congress mandated that the BLM "shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." 43 U.S.C § 1732(b).

The sum total of the plan amendment to the CDCA plan is one sentence: "Permission granted to construct solar energy facility (proposed SES Solar Two Project)." DEIS at A-6. Given the impact of the proposed project on other multiple uses of these public lands at the proposed site as well as other aspects of the bioregional planning, it appears that BLM may also need to amend other parts of the plan as well and should have looked at additional and/or different amendments as part of the alternatives analysis. For example, the project surveys again confirm and provide new information on the biological richness of the area and the relatively robust flat-tailed horned lizard population, the proposed project site as a potential connector between existing Yuha Basin Management Area and the West Mesa Management Area, which were specifically set up for conservation of flat-tailed horned lizard, and also show the utilization of the site by the federally and state endangered Peninsular bighorn sheep. In light of this information, the BLM should consider an alternative plan amendment that would designate this area as an Area of Critical Environmental Concern for habitat conservation or an expansion of the flat-tailed horned lizard management areas in conjunction with improvements to increase wildlife connectivity across Interstate 8. Based on the 2,000 - 5,000 animals (DEIS at C.2-22) that are estimated to be on the proposed project site, the site would serve flat-tailed horned lizard conservation at least as well as the existing Management Areas for the conservation of this species and would also provide connectivity values. This should have been considered as an alternative to the proposed large-scale industrial use, which could instead be sited on previously disturbed areas that provide little habitat values for imperiled wildlife. O2-5

As discussed further below regarding FLPMA, and in the section on NEPA and segmentation, the BLM should have taken a more comprehensive look at the plan amendment to determine: 1) whether industrial scale projects are appropriate for any of the public lands in this area; 2) if so, how much of the public lands are suitable for such industrial uses given the need to balance other management goals including flat-tailed horned lizard and Peninsular bighorn sheep conservation and recreational uses; and 3) the location of the public lands suitable for such uses, if any. Rather, BLM appears to have looked at this application and others in the area on BLM managed lands, as well as other proposed projects, in isolation. As a result, this piecemeal approach to project review threatens to undermine the "bioregional" approach in the CDCA Plan as a whole as well as violate the fundamental planning principles of FLPMA.

The DEIS acknowledges that "Under the proposed project an area of roughly 10 square miles, including over 5.6 miles of frontage on Highway I-8, would experience a dramatic visual transformation from a predominantly natural desert landscape to one of a highly industrial character." DEIS at C.13-23 (in the context of visual resources). In the DEIS this issue is looked at solely in the context of visual resources, however, and no where in the document does BLM look at the issue of industrialization in the context of biological resources, the CDCA Plan as a whole, or how transformation of this area will affect the overall landscape-wide bioregional planning approach.

The adoption of the proposed plan amendment will change the multiple-use character of these lands which currently provides habitat for imperiled species, recreational uses including a historic trail and other cultural resources, camping and off-road vehicle routes, in favor of a single use that will completely displace other uses on the proposed site. For example, the proposal would require changes in the route network resulting in several routes which would need to be moved—those changes to the route network are simply not addressed in the DEIS (nor are the likely direct, indirect and cumulative impacts of changing those route designations adequately identified or analyzed, as discussed in detail below). Any changes to routes would require BLM to amend the route designations in the area because these routes are part of a network that was adopted through a plan amendment. When BLM does consider these issues, as it must, in a revised or supplemental DEIS, a range of alternatives must be considered in addition to the fact that such changes will undoubtedly change use of the previously existing nearby routes, most likely causing increased use on other nearby routes. Even if BLM attempts to simply reroute along the fenceline for the proposed project a plan amendment would be required and BLM must then consider that new unauthorized routes to provide connections to the other routes, and/or entirely new unauthorized routes may be created by off-road vehicle users *to avoid the industrial site entirely*. There is no evidence that recreational off-road vehicle users will be content to drive for miles along a fence adjoining an industrial site rather than striking off cross-country to connect with more scenic routes. Past experience shows that the latter is quite understandably a much more likely outcome and BLM should recognize this in analyzing the impacts of this project on the existing route network and any proposal to amend that network. **O2-9**

O2-9

The DEIS's failure to adequately identify or analyze many of the significant impacts to the flat-tailed horned lizard population in the area from direct impacts (loss of habitat, fragmentation, take due to translocation, etc.) indirect impacts, and cumulative impacts is discussed in detail below. In addition, BLM provides no meaningful analysis of how the actual use of the adjacent areas might change if a large 6,000+ acre fenced industrial project site is constructed, particularly with regards to recreational activities. Nor there any discussion of the impacts of increased and more concentrated off-road recreation at the translocation sites for the flat-tailed horned lizard from those displaced from the project site, or, more to the point, the need to reduce recreation in areas any translocation areas after flat-tailed horned lizard are removed from the project site under a translocation plan.[3] The DEIS for the proposed plan amendment should at minimum have included an alternative that would limit impacts to the lizards from off-road vehicle use in the translocation areas. **O2-10**

A. Purpose and Need and Project Description are Too Narrowly Construed and Unlawfully Segment the Analysis

1. Purpose and Need:

Agencies cannot narrow the purpose and need statement to fit only the proposed project and then shape their findings to approve that project without a "hard look" at the environmental consequences. To do so would allow an agency to circumvent environmental laws by simply "going-through-the-motions." It is well established that NEPA review cannot be "used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5; *Metcalf v. Daley*, 214 F.3d 1135, 1141-42 (9th Cir. 2000) ("the comprehensive 'hard look' mandated by Congress and required by the statute must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.") As Ninth Circuit noted an "agency cannot define its objectives in unreasonably narrow terms." *City of Carmel-by-the-Sea v. U.S. Dept. of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997); *Muckleshot Indian Tribe v. U.S. Forest Service*, 177 F. 3d 900, 812 (9th Cir. 1999). The statement of purpose and alternatives are closely linked since "the stated goal of a project necessarily dictates the range of 'reasonable' alternatives." *City of Carmel*, 123 F.3d at 1155. The Ninth Circuit recently reaffirmed this point in *National Parks Conservation Assn v. BLM*, 586 F.3d 735, 746-48 (9th Cir. 2009) (holding that "[a]s a result of [an] unreasonably narrow purpose and need statement, the BLM necessarily considered an unreasonably narrow range of alternatives" in violation of NEPA). O2-17

The purpose behind the requirement that the purpose and need statement not be unreasonably narrow, and NEPA in general is, in large part, to "guarantee[ ] that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). The agency cannot camouflage its analysis or avoid robust public input, because "the very purpose of a draft and the ensuing comment period is to elicit suggestions and criticisms to enhance the proposed project." *City of Carmel-by-the-Sea*, 123 F.3d at 1156. The agency cannot circumvent relevant public input by narrowing the purpose and need so that no alternatives can be meaningfully explored or by failing to review a reasonable range of alternatives.

The BLM's purpose and need for the SES Solar Two Project is "to respond to SES Solar Two, LLC's application under Title V of FLPMA (43 U.S.C. 1761) for a ROW grant to construct, operate, and decommission a solar thermal facility on public lands in compliance with FLPMA, BLM ROW regulations, and other Federal applicable laws", and also states that the "BLM authorities include:

- Executive order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the "production and transmission of energy in a safe and environmentally sound manner."
- The EPAct, which requires the Department of the Interior (BLM's parent agency) to approve at least 10,000 MW of renewable energy on public lands by 2015.
- Secretarial Order 3285, dated March 11, 2009, which "establishes the development of renewable energy as a priority for the Department of the Interior."

DEIS at A-12. The DEIS notes that an amendment to the CDCA Plan is needed in order to approve the project but does not clearly identify the plan amendment as a part of the project being evaluated. Rather, the DEIS states: "The BLM will decide whether to approve, approve with modification, or deny issuance of a ROW grant to SES Solar Two, LLC for the proposed SES Solar Two Project. The BLM's actions will also include consideration of amending the CDCA Plan concurrently." DEIS at A-12. BLM's purpose and need is very narrowly construed to the proposed project itself and an amendment to the Plan *for the project only*. The purpose and need provided in the DEIS is impermissibly narrow under NEPA for several reasons, most importantly because it foreclosed meaningful alternatives review in the DEIS. *See* DEIS at B.2-1 and discussion below regarding alternatives. Because the purpose and need and the alternatives analysis are at the "heart" of NEPA review and affect nearly all other aspects of the EIS, on this basis and others, BLM must revise and re-circulate the DEIS. O2-17

The DOE purpose and need statement provides:

> The EPAct of 2005 established a Federal loan guarantee program for eligible energy projects that employ innovative technologies. Title XVII of the EPAct of 2005 authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects, including those that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued".
>
> The two purposes of the loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. The purpose and need for action by DOE is to comply with its mandate under EPAct by selecting eligible projects that meet the goals of the Act.

DEIS at A-12. As the applicant admits the proposed project is experimental at the scale proposed: the applicant's objective is states: "To assist in meeting the requirement for additional

generating capacity, the applicant has developed solar technology which requires commercial-scale development to demonstrate its technical and commercial viability" DEIS at A-10. Thus, the proposed project appears to meet the DOE criteria because it is admittedly "new" — indeed, experimental — technology at the proposed scale, and the applicant hopes that it will assist in meeting the renewable generating capacity. However, by that same token, the DEIS fails to address the experimental nature of the proposed project[5] including the likelihood of success (or failure) and the consequences of failure (including technological failures and financial failures) and the full extent of the likely resulting impacts to public lands.

In discussing the cumulative scenario, the DOE loan guarantee program is also described as one of the incentive programs for funding renewable energy projects:

> Example[s] of incentives for developers to propose renewable energy projects on private and public lands in California, Nevada and Arizona, include the following:
>
> ● U.S. Treasury Department's Payments for Specified Energy Property in Lieu of Tax Credits under §1603 of the American Recovery and Reinvestment Act of 2009 (Public Law 1115) - Offers a grant (in lieu of investment tax credit) to receive funding for 30% of their total capital cost at such time as a project achieves commercial operation (currently applies to projects that begin construction by December 31, 2010 and begin commercial operation before January 1, 2017).
>
> ● U.S. Department of Energy (DOE) Loan Guarantee Program pursuant to §1703 of Title XVII of the Energy Policy Act of 2005 - Offers a loan guarantee that is also a low interest loan to finance up to 80% of the capital cost at an interest rate much lower than conventional financing. The lower interest rate can reduce the cost of financing and the gross project cost on the order of several hundred million dollars over the life of the project, depending on the capital cost of the project.

O2-17

DEIS at B.3-2 to 3.

The Center is well aware that deadlines for funding, particularly for the American Recovery and Reinvestment Act ("ARRA") funds, have driven the pace of the environmental review for this project and, while such funding mechanisms are important, deadlines cannot be used as an excuse for rushed and inadequate NEPA review. The BLM and DOE must be concerned with the adequate NEPA review and even if the agencies can properly have an objective of *timely* approval of projects they cannot properly have as purpose and need of the project a *rushed* inadequate environmental impact review.

[5] As the BLM is aware, the largest installation of Stirling suncatchers is a 1.5 MW, 60 dish facility in Maricopa County, Arizona installed in January 2010. The proposed project is proposed to install 30,000 suncatchers (DEIS at B.1-20) approximately 500 times larger. http://www.stirlingenergy.com/pdf/2010_01_22.pdf

Moreover, in its discussion of the need for renewable energy production the DEIS fails to address risks associated with global climate change in context of including both the need for climate change mitigation strategies (e.g., reducing greenhouse gas emissions) and the need for climate change adaptation strategies (e.g., conserving intact wild lands and the corridors that connect them). All climate change adaptation strategies underline the importance of protecting intact wild lands and associated wildlife corridors as a priority adaptation strategy measure.

As the DEIS admits, building the proposed project at the proposed location "would permanently eliminate approximately 5,024.4 acres of Sonoran creosote bush scrub and approximately 1,038.7 acres of disturbed/developed Sonoran creosote bush scrub." DEIS p. C.2-29. In addition, "[g]rading would directly affect wildlife and other special status species by removal of shrubs and herbaceous vegetation, resulting in loss and fragmentation of cover, breeding, and foraging habitat." DEIS p. C.2-29. O2-17

The habitat fragmentation, loss of connectivity for terrestrial wildlife, and introduction of predators and invasive weed species associated with the proposed project in the proposed location are contrary to an effective climate change adaptation strategy that the agencies also claim to support. Siting the proposed project in the proposed location impacting major washes and occupied habitat of imperiled species could undermine a meaningful climate change adaptation strategy with a poorly executed climate change mitigation strategy. The way to maintain healthy, vibrant ecosystems is not to fragment them and reduce their biodiversity.

If BLM rejects an alternative from consideration, it must explain why a particular option is not feasible and was therefore eliminated from further consideration. 40 C.F.R. § 1502.14(a). The courts will scrutinize this explanation to ensure that the reasons given are adequately supported by the record. *See Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 813-15 (9th Cir. 1999); *Idaho Conserv. League*, 956 F.2d at 1522 (while agencies can use criteria to determine which options to fully evaluate, those criteria are subject to judicial review); *Citizens for a Better Henderson*, 768 F.2d at 1057. O2-41

Here, BLM so narrowly construed the project purpose and need (and ignored the requirements for NEPA analysis of a plan amendment) that the DEIS did not consider an adequate range of alternatives to the proposed project.

The alternatives analysis is inadequate even with the inclusion of an alternative that would avoid all "primary" streams (Drainage Avoidance #1) and a smaller 300 MW project for which there is existing transmission capacity (Drainage Avoidance #2). At least one alternative should be considered that both avoids all primary streams and is limited to the 300 MW for which there is existing transmission capacity. At least one additional 300 MW alternative should be considered which would both be sized for the existing transmission *and* avoid both "primary" and "secondary" streams on site. This would also allow the project proponent to learn how and whether the technology will perform as expected at this scale.

The inclusion of two "no action" alternatives, while interesting, is also confusing and appears to be based on a misinterpretation of the governing plans. The second no action alternative states that it would not approve the ROW and "make the area unavailable for future solar development." This alternative is not a true "no action" alternative because it would require a CDCA plan amendment.

The document also includes other alternatives that were stated as being "Site Alternatives Evaluated only under CEQA" these include off-site alternatives. The document also eliminated from consideration a distributed renewable energy alternative. The BLM should have also looked alternative siting on previously degraded lands such as nearby farmlands, distributed solar alternatives, and other alternatives that could avoid impacts of the proposed project as well as impacts of the associated transmission lines and substations. In addition, as discussed above, the BLM should have looked at alternatives for construction and operations that would reduce GHG emissions including from SF6 and off-sets for those emissions. O2-41

The BLM failed to consider any off-site alternative that would significantly reduce the impacts to water resources and water quality, as well as biological resources including the flat-tailed horned lizard and its occupied habitat, Peninsular bighorn sheep, and other special status species including rare plants. Because such alternatives are feasible, on this basis and other the range of alternatives is inadequate. The Center urges the BLM to revise the DEIS to adequately address a range of feasible alternatives and other issues detailed above and then to re-circulate a revised or supplemental DEIS for public comment.

In addition, in order to meet the DOE's purpose and need states that: "The two principal goals of the loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. The purpose and need for action by DOE is to comply with their mandate under EPAct by selecting eligible projects that meet the goals of the Act." Assuming for the sake of argument alone that these are proper project objectives, the DEIS should have considered alternatives that would provide funding to other types of projects. Such alternatives could include, for example, conservation measures that both avoid and reduce energy use within high-energy use load-centers including the Los Angeles and San Diego areas.

Alternative measures could include funding community projects for training and implementation of conservation measures such as increased insulation, sealing and caulking, and new windows for older buildings and new or improved technologies for accomplishing these important goals. For example, air conditioning creates the largest demand for energy during peak times and there already exist methods to reduce the energy use from air conditioning but implementation has lagged well behind technology. Conservation and efficiency measures are an excellent and quick way of reducing demand in both the short- and long-term and reduce the need for additional power sources. In addition, many of the existing conservation and efficiency measures can provide immediate jobs and training in high population areas with significant unemployment (particularly among low skilled workers and youth). O2-41

The existence of these and other feasible but unexplored alternatives shows that the BLM's analysis of alternatives in the DEIS is inadequate.

Project Alternatives: In addition to properly defining the purpose and need of an agency action, agencies must consider a range of reasonable alternatives to the agency action in the EIS. *See* 42 U.S.C. § 4332(2)(E). The range of alternatives is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. NEPA requires BLM to "rigorously explore and objectively evaluate" a range of alternatives to proposed federal actions." *See* 40 C.F.R. §§ 1502.14(a) and 1508.25(c). The purpose of this requirement is "to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." *Environmental Defense Fund v. Cops of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974); *see also Methow Valley Citizens Council v. Regional Forester*, 833 F.2d 810 (9th Cir. 1987), rev'd on other grounds, 490 U.S. 332 (1989) (agency must consider alternative sites for a project).

We are pleased that several alternatives are considered and analyzed by the California Energy Commission (CEC) staff under the standards of the California Environmental Quality Act. We are particularly pleased that the CEC considered alternatives that entail the use of degraded private land, and two smaller-sized projects within the proposed project boundary. Unfortunately, the private land alternative was dismissed by BLM because the applicant is unlikely to secure project permits in time to receive federal government assistance for project development pursuant to the American Recovery and Reinvest Act of 2009. Dismissal of a private land alternative is unfortunate because it would very likely result in far fewer environmental impacts to significant cultural and biological resources found on the public land alternative that was proposed by the applicant. **O3-3**

BLM appears to have severely limited consideration of what constitutes a reasonable alternative by rejecting those involving private lands. We are pleased the CEC staff have identified and analyzed private land alternatives as a means of avoiding and minimizing the impacts of the project to sensitive resources, both biological and cultural. We are pleased, however, that BLM has determined that three public land alternatives, all of which would result in reduction in biological resources and ephemeral wash impacts, are reasonable and are addressed in the SA/DEIS. Two of these alternatives were recommended by the USACE. We are pleased the USACE has identified two alternatives that would significantly reduce impacts to jurisdictional waters of the U.S. that discharge into the Salton Sea, namely the New and Alamo Rivers.

Recommendation: BLM should reconsider and include private land alternatives found to be feasible by the CEC staff as reasonable under NEPA. While we understand BLM has no jurisdiction over the use of private lands, by automatically dismissing all such alternatives as "unreasonable" (SA/DEIS at B.2-1), BLM appears to be acting arbitrarily. BLM has a duty to work jointly with the CEC staff in considering all potentially viable alternatives that would avoid or minimize significant impacts to public land resources and values. NEPA regulations require inclusion of reasonable alternatives not within the jurisdiction of the lead agency. *See* 40 C.F.R. § 1502.14(c).

The last track project sites were chosen without the benefit of siting criteria developed either by desert activists, environmental organizations, scientists and others, *see* Renewable Siting Criteria for California Desert Conservation Area, attached to June 29, 2009 letter referred to above, or by the Bureau. The Bureau in fact has yet to develop any siting guidance that would help field staff, developers and others identify appropriate sites – i.e., those with relatively low resource values and fewer resource conflicts. Moreover, the projects themselves were designated by Interior and the BLM as fast track projects without consideration of potential environmental issues. And, equally important, the timetable established for review of these projects did not take into account their scale, the agency's lack of experience with the technologies involved, and the agency's lack of experience permitting these kinds of projects.

Regardless of the outcome of the environmental review process for this or any other fast track project, we urge the BLM and the Interior Department to acknowledge publicly the deficiencies of the current process and to commit publicly to improving it. More specifically, we urge both entities to affirm that neither the current process, nor any of the project sites, nor any of the environmental documents, establish any legal or procedural precedents for future decision-making, siting or environmental review. We make this urgent recommendation notwithstanding the fact that this particular project appears to be proposed for an appropriate site and the accompanying DEIS represents an improvement in several respects over other such documents. O4-2

The SES Solar Two Project: The proposed project site appears to have potential for developing large scale solar energy with fewer impacts to sensitive resources than some other areas with high solar potential being considered for such development by the BLM. Site characteristics that are conducive to solar development include the presence of disturbed acreage, "approximately 1,039 acres of dirt and off highway vehicle (OHV) roads on BLM administered land" see SES Solar Two Project CEC-BLM SA/DEIS at C.2-1. In addition, there are "a rail line, transmission line and buildings in the study area" id.C-2.11. Another characteristic conducive to solar development is the existing transmission capacity that exists to support the first 300 MW of the project without any upgrades, id. ES-2. The site is also served by existing road access from Interstate 8, id. ES-5, although miles of new roads are contemplated as part of the project proposal.

Equally important, the lands subject to this Right of Way (ROW) application appear to be of comparatively lower natural resource values than some of the other ROW applications currently being considered for ARRA funding: the site includes no critical habitat for any listed species, and implicates no Area of Critical Environmental Concern (ACEC) designated by the BLM. Also, no desert tortoise, a federally endangered species, were found on the site, id. ES-21, unlike other ARRA project sites such as Brightsource's Ivanpah project and Solar Millennium's Ridgecrest project which support sizable populations of this endangered species. See Ivanpah Solar Electric Generating System CEC-BLM SA/DEIS at 6.2-29 and Ridgecrest Solar Power Project CEC-BLM SA/DEIS 5.3-1 (Solar Millennium's Ridgecrest project is no longer on the ARRA "fast track" list). While the above characteristics render the site more appropriate than some other locations for solar development, we do still have concerns about project impacts and the draft EIS document. O4-2

The Yuha Desert, where the Project is to be located, is a pristine but extraordinarily sensitive landscape. Damage to it from this Project is likely to be irreversible. "Implementation of this [P]roject will forever change the landscape of this area,"[1] and also lead to "the permanent destruction of hundreds of cultural resources. . . ."[2] The environmental devastation that this Project will cause is permanent, but the Project's benefits are only temporary.[3] Nonetheless, the California Energy Commission ("CEC") and United States Bureau of Land Management ("BLM") are rushing through critical environmental reviews and omitting essential information for the sake of the Project applicant's arbitrary timetables. An applicant's supposed time constraints are not a recognized exception to the requirements of either the California Environmental Quality Act ("CEQA") or the National Environmental Policy Act ("NEPA"). It is crucial that a complete and thorough inquiry into the Project's impacts be made *before* the CEC and BLM commit themselves to allowing irreversible environmental damage.

The SA/DEIS fails to comply with CEQA and NEPA in seven distinct ways. First, it omits essential information and, as a result, fails as an informational document. Second, the SA/DEIS unlawfully defers the formulation of various studies and mitigation measures. Third, the assessment of the Project's environmental impacts is inadequate. Significant impacts are deemed insignificant and impacts that can be mitigated are mistakenly found to be unavoidable. Fourth, significant unstudied changes have been made to the Project since the SA/DEIS' release, and significant new information is planned to be added to the SA/DEIS at a future date, so the SA/DEIS must be recirculated and an additional public comment period provided. Fifth, the discussion of Alternatives is inadequate insofar as BLM declined to evaluate Site Alternatives on the sole basis that they are inconsistent with the *applicant's* purpose and need. Sixth, the SA/DEIS unlawfully segments the Project by failing to consider the impacts of the related Sunrise Powerlink project. Seventh, the Project applicant now proposes to satisfy the Project's water needs with well water, but such use of that water would violate the federal Safe Drinking Water Act because the underlying aquifer has been designated a "sole source aquifer" by the United States Environmental Protection Agency. **O6-2**

BLM failed to consider the three site alternatives under NEPA because "none would accomplish the purpose and need for the proposed action." SA/DEIS p. B.2-2. However, BLM's statement of purpose and need for the SA/DEIS is too narrowly drawn. As the Ninth Circuit has held, although an agency has discretion to define the purpose and need of a project, it cannot use "unreasonably narrow" terms to define a project's objective. *City of Carmel-By-The-Sea v. United States Dep't. of Transp.*, 123 F.3d 1142, 1155 (9th Cir.1997). Otherwise, "the EIS would become a foreordained formality." *Friends of Southeast's Future v. Morrison,* 153 F.3d 1059, 1066 (9th Cir.1998), (quoting *Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 196 (D.C.Cir.1991), *cert. denied,* 502 U.S. 994, 112 S.Ct. 616, 116 L.Ed.2d 638 (1991)). **O6-13**

"[T]he Department of Interior has promulgated no regulations emphasizing the primacy of private interests. The DOI . . . regulation, 40 C.F.R. § 1502.13, merely requires that an EIS "briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." *National Parks & Conservation Ass'n v. Bureau of Land Management* 587 F.3d 735, (2009) *as modified by* 2010 Daily Journal D.A.R. 7271, at 7277. As the Ninth Circuit noted:

> DOI's NEPA handbook explains that the "purpose and need statement for an externally generated action must describe the BLM purpose and need, *not an applicant's or external proponent's purpose and need.* " Department of Interior, Bureau of Land Management, National Environmental Policy Act Handbook 35, (citing 40 C.F.R. § 1502.13) (emphasis added), *available at* http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.24487.File.dat/h1790-1-2008-1.pdf (citing 40 C.F.R. § 1502.13) (emphasis added). "The applicant's purpose and need may provide useful background information, but this description must not be confused with the BLM purpose and need for action.... It is the BLM purpose and need for action that will dictate the range of alternatives...." *Id.*

O6-13

National Parks & Conservation Ass'n v. Bureau of Land Management, *supra*, 2010 D.J. at p. 7280 n. 9.

Instead, however, the SA/DEIS statement of BLM's purpose and need is "to respond to the SES application under Title V of FLMPA for a ROW grant to construct, operate and decommission a solar thermal facility and associated infrastructure in compliance with FLPMA, BLM ROW regulations, and other applicable federal laws." SA/DEIS p. B.2-11. For this reason, BLM has declined to examine any off-site alternatives, despite its duty to comply with NEPA. SA/DEIS p. B.2-2. As the Energy Policy Act, and related Secretarial and Executive Orders direct BLM to "encourage the development of environmentally responsible renewable energy" while complying with existing environmental laws, its purpose and need statement need not be so narrowly drawn as to preclude the consideration of alternative locations. To do so reflects the needs of the Project applicant, not the needs of BLM, in violation of NEPA.

BLM additionally failed to consider the three site alternatives under NEPA on the grounds such alternatives were "unreasonable" because they did not fall within the BLM's jurisdiction. SA/DEIS p. B.2-19. However, NEPA itself does not declare such alternatives unreasonable.

O6-14

Indeed, "[a]n agency may not reject a reasonable alternative because it is 'not within the jurisdiction of the lead agency.' 40 C.F.R. § 1502.14(c); *see also Muckleshoot Indian Tribe,* 177 F.3d at 814. An agency's refusal to consider an alternative that would require some action beyond that of its congressional authorization is counter to NEPA's intent to provide options for both agencies and

Congress." *National Wildlife Federation v. National Marine Fisheries Service*, 235 F.Supp.2d 1143, 1154 (W.D. Wash. 2002).

BLM's determination to narrow its purpose and need to preclude the analysis of alternative sites, and to avoid analysis of offsite alternatives because they are outside of its jurisdiction, renders the SA/DEIS deficient.

C. *Relocation to an Alternative Site Would Reduce the Project's Impacts.*

O6-14

Both the Agricultural Lands Alternative and the Mesquite Lake Alternative are environmentally superior to the proposed Project's environmentally sensitive location within the undisturbed desert environment, amid washes and habitat for protected species. BLM and the Energy Commission should adopt either of these alternatives in lieu of the Project alternative, to avoid the Project's significant impacts, including its degradation of visual resources, cultural resources and artifacts, and habitat for bighorn sheep.

The Mesquite Lake Alternative site is an environmentally superior location to the proposed Project. Selecting the Mesquite Lake Alternative would reduce the Project's impacts on visual resources (SA/DEIS p. B.2-43) and on Native American cultural resources. SA/DEIS p. B.2-31. Likewise, selecting the Agricultural Lands Alternative would reduce the project's impact on Native American cultural resources. SA/DEIS p. B.2-58. Accordingly, one of these two alternatives should be adopted.

VII. THE DEIS ALTERNATIVES ANALYSIS IS INADEQUATE

O9-50

The alternatives analysis is the heart of the environmental impact statement.[139] A DEIS should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options.[140] Agencies shall rigorously explore and objectively evaluate all reasonable alternatives.

Alternatives should include reasonable alternatives not within the jurisdiction of the lead agency.

The DEIS failed to consider two reasonable alternatives that should have been analyzed to provide a basis for the public to meaningfully evaluate the impacts of the Project: 1) an alternative that restricts all Project components from the Juan Bautista de Anza trail corridor, as established by Congress; and 2) an offsite alternative that would not impact any waters of the United States on the Project site.

O9-50

Rather than studying these two reasonable alternatives that are necessary in order to reduce two of the Project's significant adverse impacts, the DEIS only analyzed three alternatives other than the proposed project: a 300 MW alternative and two alternatives that would reduce but not eliminate adverse effects to waters of the United States. These alternatives are insufficient because "the existence of a viable but unexamined alternative renders an environmental impact statement inadequate." *Morongo Band of Mission Indians v. FAA* (1998) 161 F.3d 569, 575. The DEIS must examine the following alternatives.

Eddie and Donna,

I met with the Hearing Officer on this issue yesterday (staff does not see the Committee's schedule before you do) and explained the concerns Jim and I have on compiling, reading, and responding to comments after the 90-day comment period and then completing and filing the Supplemental Staff Assessment/Final Environmental Impact Statement.

P1-1

The publication dates will be determined by staff's completion of the work, and though driven by the directives we receive

from the Commission, providing a complete analysis is the primary focus.

The technical authors, Jim, and myself are not the decision-makers on this project and our job is to inform them and the public of the project's potential impacts and guide the project through the public process. We will continue to focus on the environmental issues and leave the pressures from the state or federal administrations to those up the food chain in our respective agencies.

Christopher

>>> Edie Harmon <desertharmon@gmail.com> 3/2/2010 8:36 PM >>>
Hello Donna and Chris,

Honestly, Chris, I did not discuss my concerns about the shortened times between comment periods, cultural resource materials after the SA/DEIS, the two weeks between the end of the comment period on the DEIS and the availability of the SA/FEIS, and the date for the BLM ROD with Donna before I left a message on your phone. And yes, I am among those who submitted comments and concerns on the Seeley Wastewater issue.

It seems highly improbable that comments, substantive or otherwise on the Solar 2 SA/DEIS will be considered and/or responded to in the final documents given the short time and the fact that it is likely that the most substantive comments will arrive the date of the comment deadline. The comment deadline ends 5-27-2010, with the Final EIS to be out 6-15-2010 according to the posted Third Committee Schedule (Revised) on the CEC website. And with the scheduling of the BLM ROD, one wonders why the public should take the process seriously, unless there is a possibility that the issue of cultural resource impacts and sacred geography is already leading the agencies toward a decision to deny the project at the proposed location.

P1-1

Are these shortened timeframes allowing the agencies to comply with the provisions of CEQA and NEPA? I am certain that staffs at both BLM and CEC are already pushed to the limits in trying to deal with so many projects at once. It certainly seems inappropriate to be dealing with the water issue and cultural resources issues AFTER the SA/EIS reviews. Indeed, the timing scheduling seems inconsistent with everything I have seen in more than 30 years of commenting on CEQA and NEPA documents in Imperial County. It seems that the importance of the issues should mandate that the public be given access to the completed essential review analysis prior to completing environmental review rather than after. The San Diego Smart Energy 2020 report by Bill Powers points that there is truly no urgent reason to rush to a decision on the project, unless that decision is to deny the project because it is not needed and because impacts to cultural resources and the cultural resources lands are unacceptable.

Remember that the proposed project site was identified in the 1980 BLM DEIS for the CDCA Plan as the "Plaster City ACEC" because of the significance of cultural resources and known cremation sites. Each of the Plan Alternatives Maps depicts the Plaster City ACEC. Yes, some of us do have a collection of old BLM documents and they can be a treasurehouse of interesting historical information!

Thank you for considering the variety of collective concerns about the opportunity and consideration of public input on the SA/DEIS for Solar 2.

Edie Harmon
desertharmon@gmail.com
619-729-7178
On Tue, Mar 2, 2010 at 5:04 PM, <donnatisdale@hughes.net> wrote:

> Hello Chris,
>
> I just got the following notice on SES Solar Two"
>
> *"The BLM and Energy Commission staff are currently preparing an
> addendum to the Staff Assessment and Draft Environmental Impact
> Statement
(SA/DEIS)
> to address comments received on the Mitigated Negative Declaration
> (MND) prepared by the Seeley County Water District for the expansion
> of the
Seeley
> Wastewater Treatment Facility, and the lack of adoption of the MND by
> the Seeley County Water District Board of Directors. The analysis in
> this addendum will be incorporated in the Supplemental SA/Final EIS
> that will

be
> published following the 90-day comment period on the SA/DEIS. "
> *
> Shouldn't this information be included for public comment before the
> SA/FEIS? Why didn't the Water District Board adopt the MND? Did they
> give
a
> reason. Is this information available on the project website. If so,
where?
>
> The latest schedule also shows the Final Decision hearing on August
25--the
> same date given for the BLM's ROD? This means the hearing is
> meaningless because the decision will already be made!
>
> What the heck is going on?
> P1-1

Finally, the Sun Catcher technology is wholly untested on a large scale. The maintenance of 30,000 individual Stirling engines will require an army of attendants to keep them in working order. Also, no one knows how these Sun Catchers will hold up to the extreme winds and potentially strong earthquakes that occur in the area. For instance, did Tessera determine how the recent 7.2 magnitude earthquake near Mexicali would have affected 30,000 Sun Catchers? Would all of them have fallen over, or just half of them? Would all of them have lost portions of their mirrors, or just half of them? This type of technology may be appropriate and functional on a small scale, but the sheer number of engines that would be built for this project leaves many questions unanswered. **P7-7**

6. The proposed IV project has problems with its technology which is the main reason that it has taken so long to move it through the approval process. There were six of these Stirling Solar machines at Sandia Labs in New Mexico for years and years and now recently only 60 units in operation in Arizona. Are we sure that these machines work? Building a few machines at a lab is not the same as mass production. All that has happened so far is prototypes. You can't permanently destroy 6,500 acres of our public lands for an unproven product still in the R&D stages of development! You can't rush this decision based on unproven technology. **P10-6**

Alternatives

45. SA/DEIS fails as an informational document because the Alternatives discussion really only considers variations in the size and placement of SunCatcher units on the site under NEPA of at off site locations under CEQA in addition to the Np Action/No Project Alternative. See Sections starting with B.2.6. There was no consideration of alternative measures or technologies recommended by the public as measures which could accomplish the energy and GHG emissions goals of the proposed project. CEQA and NEPA provide opportunities for considering alternative measures, solutions, or locations to solve a problem even if they are not part of the project as described by a project applicant.
46. Here Alternatives analysis other than the No Action alternatives seem to be driven by the profit motives of the project applicant. The SA/DEIS Alternatives discussion is from the perspective of applicant financial motives, when there must be some analysis of what the same amount of taxpayer funding could accomplish if the same amount of funding were to be made available for community based solutions which would reduce electrical demands on the system. **P11-25**
47. Please add an analysis of public generated recommendations for alternatives to the proposed industrial scale privatization of public lands to solve the energy and emissions problems.
48. And please add to the analysis the savings in fossil fuels that will accrue when the speed limit is reduced to 55 mph as under President Carter. Surely there is abundant data indicating the success of that effort in the past.

Response: The responses to the questions and comments related to the project alternatives are provided in the following sections.

D.4.2.1 Scope and Range of Alternatives Considered

For an adequate NEPA analysis, for "…the alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of implementing an alternative." (United States Bureau of Land Management [BLM] *National Environmental Policy Act Handbook H-1790-1* [January 30, 2008]). In order to establish the reasonable range of alternatives to be considered, the defined project purpose and need functions as the first and most important screening tool. For the project, the applicant's purpose is to implement a profitable solar energy-providing enterprise. The BLM's purpose for the project is to specifically respond to Imperial Valley Solar, LLC's application under Title V of the Federal Land Policy and Management Act (FLPMA; 43 United States Code [USC] 1701) for a right-of-way (ROW) grant to construct, operate, maintain, and decommission a solar energy generation facility on public lands in compliance with FLPMA, BLM right-of-way regulations, and other applicable Federal laws. The United States Army Corps of Engineers (Corps) and the California Energy Commission (CEC) also have agency specific purpose and need statements for the project.

For BLM, the range of alternatives is based on the applicant's proposed project, alternatives that would reduce or avoid adverse impacts of the applicant's project, appropriate No Action Alternatives. The alternatives considered by the BLM must involve an action on the part of the BLM. For this project, those actions are to approve or disapprove a ROW grant for the use of the project site for the proposed project and to amend or not amend the California Desert Conservation Area Plan (CDCA Plan, 1980 as amended) to allow or not allow solar on the IVS project site. Some of the comments on the SA/DEIS suggested the BLM should be proactive about the placement of these types of facilities on BLM jurisdictional lands and that lands outside the California desert should be considered for the IVS project. However, the BLM's role in managing its lands includes facilitating land uses on those lands while appropriately balancing and responding to multiple interests concerning Federal mandates, collaborating agencies' directives', and BLM's own interests. As a result, the alternatives considered in the SA/DEIS and the FEIS focus on alternatives which would require an action by the BLM and which respond to the specific application for a ROW grant received by the BLM for the IVS project.

D.4.2.2 Agency Preferred Alternative

The BLM must identify the Agency Preferred Alternative no later than as part of the Record of Decision (ROD) and potentially as early as in the DEIS. The BLM did not identify an Agency Preferred Alternative in the SA/DEIS but has identified the Agency Preferred Alternative in the FEIS. The 709 MW Alternative is the Agency Preferred Alternative. The 709 MW Alternative is the IVS project (750 MW) with modifications. Those modifications are specifically to remove SunCatchers from within certain drainages on the site and to move the Main Services Complex out of drainages. The Agency Preferred Alternative also includes four applicant proposed modifications that are also included in all the other Build Alternatives. Those modifications, which were incorporated in the Build Alternatives after the SA/DEIS was published, were minor realignments of the transmission line and the water line, changes in the hydrogen storage system on the site, and use of an alternative water source (a private off site water well) during construction and initial operations. The Agency Preferred Alternative, the other Build Alternatives with the applicant-proposed modifications, and the No Action Alternatives evaluated in the FEIS are described in detail in Chapter 2, Alternatives Including the Proposed Action, in the FEIS.

D.4.2.3 Alternatives Evaluation and Rejection

The SA/DEIS included a substantial discussion regarding alternatives which were considered but not carried forward for detailed evaluation in the SA/DEIS. The alternatives considered and

the reasons why they were not carried forward are described in detail in Section 2.8.3, Other Alternatives Considered but Eliminated from Detailed Analysis, in the FEIS and are described briefly below.

Alternative Sites

Several comments on the SA/DEIS suggested that alternative sites for the project be considered, in particular sites that are closer to urban areas. The SA/DEIS considered three alternative sites for the project: the Mesquite Lake, Agricultural Lands and South of Highway 98 Alternatives. Section 2.3.8 details why those alternative sites were not carried forward for detailed analysis. In addition, it is important to note that those three sites are not on BLM managed lands and, therefore, would require no action by the BLM. As a result, the BLM did not consider those three sites in the SA/DEIS or in the FEIS under the requirements of NEPA. Those sites were assessed in the SA/DEIS under the requirements of CEQA only.

Additional sites closer to urban areas or on previously disturbed lands were not considered in the SA/DEIS because the consideration of the three alternative sites described above was adequate in identifying and considering alternative sites. Alternative sites on other BLM managed lands were not considered because the BLM is responding to the specific individual application for the specific parcel identified in the applicant's ROW grant application. In addition, there are a very large number of other renewable energy projects for which applications for the use of BLM-managed lands have been submitted to the BLM. As a result, other BLM-managed lands in the general area of the project site are already subject to consideration of applications for other projects and, therefore, would not be considered by the BLM to be available for alternative projects until those applications are considered and either approved or denied by the BLM. Finally, many of the areas that have previously been disturbed or are closer to urban areas are not within the jurisdiction of the BLM and, therefore, would require no action by the BLM.

Alternative Strategies

Two alternative energy production strategies were suggested in the comment letters: promoting energy conservation through education and fossil fuel consumption reduction through lower speed limits. While both of these could result in a decrease in demand for electricity and fossil fuels, the reduction amount is unpredictable because both strategies are based on assumptions of behavioral change. As a result, there is no way to quantify these strategies. These strategies are also outside the jurisdiction and authority of the BLM. Therefore, because these strategies do not meet the BLM's purpose and need regarding renewable energy on BLM-managed lands

and they are outside the jurisdiction and authority of the BLM, they are not considered viable alternatives to the project.

Several comments noted that the SunCatcher technology proposed for the IVS project is a relatively new technology. New technologies are allowed in renewable energy projects on BLM managed lands. The demand for renewable energy across the globe is requiring advancements in the field. Therefore, the IVS project would not be the only renewable energy project benefitting from recent technological advancements.

Suggested Alternatives

Other alternatives were suggested in the comment letters. One proposed avoidance of the Juan Bautista de Anza National Historic Trail (Anza Trail) corridor and the other proposed a jurisdictional waters avoidance alternative. The Anza Trail corridor is extensive across southern California and its actual alignment is uncertain in many areas, including on and in the vicinity of the IVS project site. To entirely avoid the inferred alignment of the Anza Trail Corridor, the IVS project would likely need to be moved completely away from the project vicinity. The 300 MW Alternative evaluated in the SA/DEIS and the FEIS moves the project features further away from the inferred alignment of the Anza Trail Corridor on the IVS project site. Several alternatives already considered in the SA/DEIS avoid many of the major and minor drainages on the project site. These include the 300 MW Alternative, Drainage Avoidance # 1 Alternative, and Drainage Avoidance #2 Alternative. In addition, all three No Action Alternatives evaluated in the SA/DEIS and the FEIS would avoid impacts to the inferred alignment of the Anza Trail corridor and all the drainages on the site.

It should be noted that the Agency Preferred Alternative includes avoidance of many of the major drainages on the project site.

Another suggestion was to consider distributed solar technology. However, that technology was already considered in the SA/DEIS and FEIS, but was rejected as shown in this text from the SA/DEIS: “The conclusion of this section is that, while it will very likely be possible to achieve 750 MW of distributed solar energy over the coming years, the very limited numbers of existing facilities make it difficult to conclude with confidence that it will happen within the timeframe required for the IVS project. As a result, this technology is eliminated from detailed analysis in this SA/DEIS.” In addition, the distributed solar technology is dependent on many variables outside the control and authority of the BLM. Therefore, given the directive for the BLM to implement substantial renewable energy projects on BLM managed lands by 2015, this technology alternative was not carried forward for detailed analysis in the SA/DEIS and the FEIS.

In June 2009, the United States Department of Energy (DOE) Solar Energy Technologies Program initiated a *Solar Vision Study* (refer to Chapter 9, References, in the FEIS). That study is guided by the following goals:

- To evaluate the technical, economic, and environmental feasibility of meeting or offsetting 10 to 20 percent of electricity demand from solar energy technologies by 2030
- To identify the technology research, development, demonstration, and deployment and policy options necessary to achieve the first goal

During the past year, the study was conducted through a collaborative process, engaging a broad mix of perspectives from the private sector, universities, national laboratories, not-for-profits, and state and local interests. The primary technologies examined in that report are solar photovoltaics, concentrating solar power, and solar heating and cooling technologies.

Exploring high solar penetration cases for the United States grid will help identify synergies, constraints, and operational issues that analyses of incremental changes may miss. It also allows exploration of the resource, technology, materials, finance, and other factors that may constrain large-scale deployment of solar technologies in the longer-term future, especially beyond 2030. In addition, the *Solar Vision Study* is providing information for inclusion in and is being conducted in coordination with the DOE's *Renewable Electricity Futures (REF) Study*. The REF Study is exploring the potential for meeting 60 to 80 percent of the grid's power requirements by 2050 through a mix of renewable energy technologies. That study, which will be finalized soon after anticipated release of the Imperial Valley FEIS, underscores the need for both distributed and centralized solar power generation facilities in the United States in order to achieve the identified renewable energy goals.

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D.4.3 Purpose and Need

These comments requested that the purpose and need be broadened and that additional alternatives be identified based on the broader purpose and need.

Comments: F2-38, O3-2, O4-8, O6-2, P11-21, and P11-23.

Project Purpose and Need

EPA believes the discussion in the DEIS regarding the purpose and need for the Project should be expanded. As we indicated in our scoping comments, the *purpose* of the proposed action is typically the specific objectives of the activity, while the *need* for the proposed action may be to eliminate a broader underlying problem or take advantage of an opportunity.

Building upon the comment above, the Purpose and Need for a project should be broad enough to spur identification of the full breadth of a reasonable range of alternatives, regardless of what the future findings of an alternatives analysis may be. It is critical that the Purpose and Need should not prescribe a solution, nor should it imply a predetermined solution, such as a specific type of renewable energy plant in a specific location that generates a specific amount of

F2-38

power. The Purpose and Need should focus on the underlying problems to address (e.g., lack of capacity to serve an increasing demand for energy, or the need to develop sufficient renewable energy to meet State renewable portfolio standards). A solar power plant may be an integral component of the potential solution to the problems identified in a Purpose and Need discussion; however, the Purpose and Need should allow for the analysis of a full scope of alternatives, including off-site locations, environmentally preferable on-site alternatives or other modes of renewable energy generation.

For NEPA purposes, the DEIS eliminates all off-site and alternative technology alternatives from consideration. The analysis of potential on-site alternatives includes the proposed action, two reduced drainage alternatives and a single reduced size alternative. Such a narrow range of alternatives is, in part, influenced by the BLM's narrowly defined Purpose. According to the DEIS, BLM's purpose and need for the proposed action is to approve, approve with modifications, or deny issuance of a Right-of-Way (ROW) grant for the Project (at pg. A-12). EPA understands the rationale in considering the "federal" Purpose and Need for the Project; however, EPA recommends that the FEIS further characterize the "project" Purpose and Need as part of BLM's statement of purpose. BLM's purpose statement should be broad enough to allow for a reasonable range of alternatives, including environmentally preferable alternatives. It is our understanding that BLM has considered other potential areas for future renewable energy development, including other BLM sites, private lands and previously disturbed sites; however, BLM's purpose statement appears too narrowly focused on the potential Project site, and this unduly limits the alternatives carried forward for further analysis in the DEIS. F2-38

Recommendation:

- The FEIS should reflect a broader purpose and need statement that allows for a full evaluation of other alternatives, including off-site locations and other environmentally preferable on-site alternatives.

Additionally, as indicated in our scoping comments, this section of the FEIS should discuss the proposed Project in the context of the larger energy market that this Project would serve. While the DEIS appears to indicate the need for the proposed Project has its basis in Federal orders and laws that require government agencies to evaluate energy generation projects and facilitate the development of renewable energy sources, EPA does not believe the current Purpose and Need section fully describes the specific Federal, State, and individual utility power provider renewable energy targets, timelines, and underlying needs to which BLM is responding. EPA believes this context is imperative for decision makers and the public to have, in light of the large number of renewable energy projects moving forward.

Presumably, some number of renewable energy facilities will be constructed pursuant to the joint Department of Energy (DOE)/BLM Programmatic Solar DEIS effort as well as the Desert Renewable Energy Conservation Plan (DRECP) process. It would be helpful to know the likely locations, construction timing, and generation capacities of such facilities relative to the proposed Project.

Recommendations:

- Fully describe the specific Federal and State renewable energy targets, timelines, and underlying needs to which BLM is responding, and explain how the Project meets those needs in the context of the many renewable energy project applications in the Desert Southwest and California.
- To the extent practicable, the FEIS should discuss how many of the total renewable energy applications received by BLM are likely to proceed pursuant to the joint Department of Energy (DOE)/BLM Programmatic Solar DEIS effort and the Desert Renewable Energy Conservation Plan (DRECP) process, and the level of energy production those applications represent.
- Further describe the utility purchases of power and provide a description of how the power would be bought, sold, and used so that the reader can better evaluate the tradeoffs between resource protection and power generation.

F2-38

I. National Environmental Policy Act (NEPA)

Purpose and Need: In specifying their EIS obligations under the National Environmental Policy Act (NEPA), federal agencies must "specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. Courts "have interpreted NEPA to preclude agencies from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only one alternative (i.e. the applicant's proposed project)." *Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162, 1165, 1174 (10th Cir. 1999), at 1174 (*citing Simmons v. United States Corps of Eng'rs*, 120 F.3d 664, 669 (7th Cir. 1997)).

BLM Purpose and Need: According to the DEIS, the stated purpose and need for the proposed project is to "…respond to the SES Solar II, LLC's application under Title V of the Federal Land Policy and Management Act (FLPMA) (43 U.S.C. § 1761) for a right-of- way grant to construct, operate and decommission a solar thermal generation facility and associated infrastructure in accordance with FLPMA, BLM right-of-way regulations, and other applicable federal laws. (SA/DEIS at A-12)." The purpose is also to "use BLM's authority under the Energy Policy Act "…to approve at least 10,000 MW of renewable energy on public lands by 2015." (SA/DEIS at A-12).

O3-2

Recommendation: Instead of the current purpose and need statement focusing on the BLM responding to a right of way application under Title V of FLPMA, we recommend that the purpose and need statement focus on the need to generate and greater amounts of electrical energy from renewable energy sources so that dependency on carbon-based fuels is reduced, and to contribute to the requirement to generate certain minimum amounts of renewable energy to comply with State and federal standards. By providing a broader statement of purpose and need, BLM ensures the NEPA documents are legally defensive documents.

By so radically narrowing the scope of the project's purpose, BLM has impermissibly constricted the range of alternatives considered. *See Carmel by the Sea v. U.S. DOT*, 123 F.3d 1142, 1155 (9th Cir. 1995). Further, BLM has misinterpreted the intent of Congress in the Energy Policy Act in stating that the law mandates BLM to approve at least 10,000 MW of renewable energy from public lands by 2015. (SA/DEIS at A-13). Rather, the Act encourages the Secretary of the Interior to approve a minimum of 10,000 MW of renewable energy from the public lands by the year 2015, which is correctly stated elsewhere in the document (*see* SA/DEIS at B.2-10).

Department of Energy Purpose and Need: According to the DEIS, the stated purpose and need for proposed action is "…to comply with its mandate under the EPAct by selecting eligible projects (potentially suitable for funding support) that meet the goals of the EP Act." (SA/DEIS at A-12).

U.S. Army Corps of Engineers (USACE) Purpose and Need: USACE uses two purpose and need statements to identify and analyze a reasonable range of alternatives under Section 404(b)(1) of the Clean Water Act. These include the basic project purpose and the overall project purpose. The basic project purpose is producing energy. The USACE determines whether or not and to what degree the proposed project would affect wetlands or waters of the United States subject to provisions of the Clean Water Act. (DEIS at A-13).

O3-2

DEIS Elements: Our concerns with the draft environmental review document itself relate to three key elements: the purpose and need statement, the alternatives considered, and the cumulative impact analysis, all of which were problems with the Bureau's first solar DEIS, the Ivanpah DEIS, and are showing incremental improvement with subsequent DEIS documents including the Solar Two DEIS. We are also concerned about how the BLM will ensure that the new proposal(s) and new information that have come to light since the DEIS was published will be fully analyzed and made available to the public.

The purpose and need statement for this project is slightly broader than the one in the Ivanpah draft, but it remains too narrow. Ivanpah's purpose and need was explicitly limited to a stark dichotomy: "approve" or "deny" the company's application for a solar project and, as the result, the document addressed only the "no action" option and the "proposed project." A supplemental draft with a revised purpose and need and additional alternatives was issued in an attempt to remedy this egregious approach to "the heart" of the process established by the National Environmental Policy Act (NEPA).

O4-8

The draft states that the BLM's purpose and need is "to respond to" the company's ROW application, id. A-12. The BLM should avoid both this mindset as well as too narrow a statement of purpose and need in order to help ensure that its EISs are legally defensible documents. In place of the statement that was used here, our organizations urge the adoption of the following to achieve these goals:

> The purpose of the proposed action is to "facilitate environmentally responsible commercial development of solar energy projects"[2] consistent with the statutory authorities and policies applicable to the Bureau of Land Management, including those providing for contributions towards achieving the renewable energy and economic stimulus and renewable energy development objectives under the Energy Policy Act of 2005 (EPAct), the American Recovery and Re-Investment Act, and Presidential and Secretarial orders.

> The need for this action is to implement Federal policies, orders and laws that mandate or encourage the development of renewable energy sources, including the Energy Policy Act of 2005, which requires the Department of the Interior to seek to approve at least 10,000 MW of non-hydropower renewable energy on public lands by 2015, and the Federal policy goal of producing 10% of the nation's electricity from renewable resources by 2010 and 25% by 2025; to enable effective implementation of the economic incentives for qualifying projects intended by the American Recovery and Reinvestment Act; and to support the State of California's renewable energy and climate change objectives, consistent with BLM's mandates and responsibilities.

This kind of purpose and need statement would clearly satisfy applicable legal requirements, see, e.g., National Parks Conservation Assn v. BLM, 586 F.3rd 735 (9th Cir. 2009), and thus help ensure that environmentally acceptable projects – which this project may end up being –will not only be permitted but will also be built without unnecessary delays. O4-8

The DEIS for the Stirling Two projects shows marked improvement over the Ivanpah DEIS in its treatment of alternatives – six are presented, including three build alternatives and three no project approval alternatives id.ES-8. The alternatives proposed by the Army Corps of Engineers are included in the DEIS and must be given full consideration id. ES-8. We commend the BLM for including these options which are key to establishing a real range of alternatives as well as to providing readers a fuller understanding of the tradeoffs inherent in the other larger "action" alternatives.

The Yuha Desert, where the Project is to be located, is a pristine but extraordinarily sensitive landscape. Damage to it from this Project is likely to be irreversible. "Implementation of this [P]roject will forever change the landscape of this area,"[1] and also lead to "the permanent destruction of hundreds of cultural resources. . . ."[2] The environmental devastation that this Project will cause is permanent, but the Project's benefits are only temporary.[3] Nonetheless, the California Energy Commission ("CEC") and United States Bureau of Land Management ("BLM") are rushing through critical environmental reviews and omitting essential information for the sake of the Project applicant's arbitrary timetables. An applicant's supposed time constraints are not a recognized exception to the requirements of either the California Environmental Quality Act ("CEQA") or the National Environmental Policy Act ("NEPA"). It is crucial that a complete and thorough inquiry into the Project's impacts be made *before* the CEC and BLM commit themselves to allowing irreversible environmental damage.

The SA/DEIS fails to comply with CEQA and NEPA in seven distinct ways. First, it omits essential information and, as a result, fails as an informational document. Second, the SA/DEIS unlawfully defers the formulation of various studies and mitigation measures. Third, the assessment of the Project's environmental impacts is inadequate. Significant impacts are deemed insignificant and impacts that can be mitigated are mistakenly found to be unavoidable. Fourth, significant unstudied changes have been made to the Project since the SA/DEIS' release, and significant new information is planned to be added to the SA/DEIS at a future date, so the SA/DEIS must be recirculated and an additional public comment period provided. Fifth, the discussion of Alternatives is inadequate insofar as BLM declined to evaluate Site Alternatives on the sole basis that they are inconsistent with the *applicant's* purpose and need. Sixth, the SA/DEIS unlawfully segments the Project by failing to consider the impacts of the related Sunrise Powerlink project. Seventh, the Project applicant now proposes to satisfy the Project's water needs with well water, but such use of that water would violate the federal Safe Drinking Water Act because the underlying aquifer has been designated a "sole source aquifer" by the United States Environmental Protection Agency. **O6-2**

34. For example, if a goal is reducing GHG, what amount of GHG reduction could be achieved by reducing the speed limit back to 55 mph, increasing the energy efficiency of existing housing stock and using distributed rooftop PV rather than using all the fuel for manufacturing, transportation and construction of the materials needed for the SunCatcher technology and needed new transmission lines? How would those alternatives, either alone or combined make a contribution to reduction of toxic air contaminants? **P11-21**

37. Why not be innovative and creative and try the new and improved technologies to insulate homes, change behaviors and lifestyles be driving less, and using small portable 6 inch personal fans rather than air conditioning and sweaters and jerseys instead of heating homes and buildings in Southern CA, what about retrofitting windows on public places that would be energy efficient **P11-23**

Response: The responses to the questions and comments related to the project purpose and need are provided in the following sections.

D.4.3.1 Broader Purpose and Need

These comments requested that the project purpose be substantially expanded to address more broad and less specific purposes in order to allow for consideration of a broader range of

alternatives. The purpose and need for the project provided Chapter 1.0, Introduction and Purpose and Need, in the Final Environmental impact Statement (FEIS) is based on two key considerations:

- The potential action the BLM could or would take on the specific project, the Imperial Valley Solar (IVS) project
- The response of the BLM in meeting specific directives regarding the implementation of renewable energy projects on Federally managed lands

Clearly, the primary action that BLM is considering is related to responding to a specific right-of-way (ROW) grant application from the project applicant to construct and operate a specific solar project on a specific site managed by the BLM. As a result, the BLM determined that a key purpose of this project was to determine whether to approve, approve with conditions, or deny that ROW application for the 750 megawatt (MW) IVS project. In addition, the BLM considered several other Build Alternatives on the same site and three No Action Alternatives as described in detail in Chapter 2.0, Alternatives Including the Proposed Action, in the FEIS.

The suggestion that the project purpose should be expanded to "…focus on the need to generate...greater amounts of electrical energy from renewable energy sources so that dependency on carbon based fuels is reduced…" is outside the purview of the BLM. The need for increased energy from renewable sources is not the responsibility of the BLM. However, the BLM can respond, within the context of specific directives under which it operates, to those needs by considering ROW grant applications for projects that would produce renewable energy on Federally managed lands. As a result, the BLM purpose for the IVS project responds in part to specific directives related to renewable energy production:

- Executive Order 13212 (May 18, 2001) which mandates that Federal agencies act expediently and in a manner consistent with applicable laws to increase the "…production and transmission of energy in a safe and environmentally sound manner."
- The Energy Policy Act, which requires the Department of the Interior (BLM's parent agency) to approve at least 10,000 MW of renewable energy on public lands by 2015.
- Secretarial Order 3285 (March 11, 2009) which "…establishes the development of renewable energy as a priority for the Department of the Interior…"

As noted above, these directives give the BLM the authority to act expediently in increasing the production of renewable energy within the bounds of its other authorities regarding the

management of Federal lands. The BLM is not in the business of developing and operating energy production facilities; its responsibilities are to consider and grant (or deny) ROW to any qualified individual, business, or government entity and to direct and control the use of rights-of-way on public land in a manner that:

- Protects the natural resources associated with public lands and adjacent lands, whether private or administered by a government entity;
- Prevents unnecessary or undue degradation to public lands;
- Promotes the use of rights-of-way in common considering engineering and technological compatibility, national security, and land use plans; and
- Coordinates, to the fullest extent possible, all BLM actions under the regulations in this part with state and local governments, interested individuals and appropriate quasi-public entities.

As directed by Secretarial Order 3285, the BLM has identified renewable energy projects on Federally managed lands as a priority throughout the lands it manages. As a result, the BLM is considering ROW grants for various renewable energy projects throughout California and other western states. Each of these projects is considered by the BLM on its own merits and with consideration of the impacts of each specific project on a specific site. Therefore, the purpose and need for each project, including the IVS project, are specific to each project within the broader scope of the directives prioritizing renewable energy development on Federally managed lands. Further, the FEIS does consider other possible energy projects in the cumulative impacts analyses provided in Chapter 4.0, Environmental Consequences.

The BLM believes that the purpose and need for the IVS project, as discussed in Section 1.0 in the FEIS, is consistent with the directives described above and the requirements of Title V of the Federal Land Policy and Management Act (FLPMA; 43 United States Code [USC] 1701) and satisfies the requirements of the National Environmental Policy Act (NEPA). Therefore, the BLM purpose and need for this project were not revised in response to these comments.

One comment related to whether the reduction of greenhouse gases (GHGs) is a goal and, if so, what the effects of other energy conservation or generation options (speed limit reductions, use of rooftop photovoltaic) would be related to GHG. The reduction of greenhouse gas is not a specific goal or purpose of the project. However, GHG would be reduced as a result of the Build Alternatives as discussed in Section 4.4, Climate Change, in the FEIS. However, that analysis does not compare the reductions of GHG under the IVS project with possible reductions from other energy conservation generation options as that type of analysis is outside the scope of the

analysis in the FEIS for the IVS project. While the reduction of GHG is a benefit of the IVS project, the BLM is not charged with any responsibility for the reduction of GHG in its directives related to renewable energy projects, including the IVS project.

D.4.3.2 Increase the Range of Alternatives Consistent with a Broader Purpose and Need

As discussed in detail in Chapter 2.0 in the FEIS, the following Build Alternatives, which all meet the BLM purpose and need, were evaluated in detail in the FEIS:

- IVS Project: 750 MW Alternative
- 709 MW Alternative: Agency Preferred Alternative
- 300 MW Alternative
- Drainage Avoidance #1 Alternative
- Drainage Avoidance #2 Alternative

In addition, the following No Action Alternatives, which do not meet the BLM purpose and need, were evaluated in detail in the FEIS:

- No Action Alternative: No ROW Grant and No CDCA Plan Amendment
- No Action Alternative: No ROW Grant and Amend the CDCA Plan for No Solar
- No Action Alternative: No ROW Grant and Amend the CDCA Plan for Other Solar

Chapter 2.0 of the FEIS also discusses alternative sites that were considered by the California Energy Commission (CEC) under the requirements of the California Environmental Quality Act (CEQA) only because those sites are not on BLM land and would not require any action by the BLM. A large number of other alternatives was also considered but was not carried forward for detailed evaluation in the FEIS as explained in Chapter 2.0.

Refer also to Chapter 2.0, Alternatives Including the Proposed Action, in the FEIS for additional discussion of alternatives considered in the FEIS and why other alternatives were either not considered or were considered but not carried forward for detailed analyses in the FEIS.

D.4.4 Cumulative Impacts

The comments regarding the cumulative impacts analyses discussed several topics, as addressed below.

Comments: F1-2, F1-7, F1-15, F2-1, F2-6, F2-20, F2-25, F2-34, L2-5, O2-2, O2-3, O2-11, O2-12, O2-22, O2-37, O3-4, O4-9, O4-10, O4-11, O6-2, O6-11, and O8-17.

NPS is also very concerned about the cumulative effects that this and other planned renewable energy projects will have on the California desert, and specifically, other National Park units. The combined effect of these projects, proposed on vast tracts of relatively undisturbed open land, will result in fundamental changes in how the desert is experienced by the public. The cumulative effects of these projects will also result in substantial impacts to a wide range of environmental resources in the California desert. **F1-2**

B.3 - Cumulative Scenario

Section B.3, Cumulative Scenario, identifies many other past, present, or future projects that could impact the Anza NHT, and the California desert as a whole. Several of the wind projects identified in the EIS, proposed west of the site near Ocotillo, would be visible from the Anza NHT (Wind Zero, Ocotillo Express, TelStar Energies). The analysis does not identify projects underway or anticipated in Arizona near the Anza NHT alignment that could add to cumulative impacts (i.e. cultural, visual, noise, recreational) and further degrade the integrity of the trail. As a result, the cumulative impact analysis needs to be expanded in the final EIS to include such projects and specifically address cumulative impacts to the Anza NHT corridor. **F1-7**

Nonetheless, the cumulative analysis makes clear that the implementation of this and other energy projects would result in significant impacts to many environmental resources in the California desert and elsewhere in the west. The result will be profound changes to the visitor's experience in these areas. NPS is very concerned about the implications of these long term changes. To ensure that projects are sited in appropriate locations using appropriate technologies to avoid impacts to our nation's natural and cultural heritage, it is imperative that landscape level analyses be conducted to fully evaluate the implications of the widespread deployment of renewable energy projects, and their associated support facilities, on the public lands. We recommend that the final EIS include a section discussing this aspect of cumulative impacts and efforts underway by the Bureau to address landscape level concerns. **F1-7**

With regard to the visual impacts from cumulative projects, the Draft EIS raises an important concern about the potential for other energy projects to concentrate in the area once it has been degraded by this project. The additional impacts of future projects would be considered less severe once area is disturbed by the proposed project:

> *By substantially lowering the prevailing visual quality of its local viewshed, the Yuha Desert/western Salton Trough, the project could have the indirect effect of encouraging additional subsequent development of similar character in the area. Because the relatively intact existing landscape would appear highly compromised after introduction of the SES Solar Two Project, the incremental additional impact of other future projects could appear to be less significant than if they were occurring in the current, intact landscape without the project.* (Draft EIS, page C.13-22)

The analysis also raises a very significant concern regarding the potential for cumulative energy projects in the California desert to fundamentally change the character of this vast open landscape. **F1-15**

> *. . . the potential for profound widespread cumulative impacts to scenic resources within the southern California desert is clear. These cumulative impacts could include a substantial decline in the overall number and extent of scenically intact, undisturbed desert landscapes, and a substantially more urbanized character in the overall southern California desert landscape.* (Draft EIS p. C.13-36 and 37)

The scale of the cumulative impacts described above points to the need for federal land managers to comprehensively plan and designate where energy projects should be concentrated and where they should be avoided. Relying on the current application-driven process for reviewing and approving energy projects continues the piecemeal approach to development that degrades the country's remaining open lands. The Solar Energy PEIS is a step in the right direction and provides a comprehensive approach to assessing and mitigating the impacts of solar projects, but stronger policies or legislation is needed to direct and concentrate energy projects into the most appropriate areas. This is a major public policy issue that needs to be addressed upfront prior to giving authorization for the siting of projects.

The U.S. Environmental Protection Agency (EPA) has reviewed the Joint Draft Environmental Impact Statement (DEIS) and Staff Assessment for the Imperial Valley Solar Project (Project). Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act (CAA).

I am directing this comment letter to you because of our concerns over the Project's environmental impacts, insufficient evaluation of potentially environmentally preferable alternatives, and implications for other renewable energy projects that have been proposed on Bureau of Land Management (BLM) lands throughout our Region. In light of these concerns, and our recent adverse rating of BLM's Amargosa Solar Millenium Project in Nevada, (comments submitted on May 17, 2010), I would like to meet with you and BLM's Nevada State Director Ron Wenker in the next 30 to discuss these issues further. I believe it is important for us to coordinate now to avoid unnecessary delays in the NEPA process as we all work toward the nation's renewable energy goals. F2-1

EPA supports increasing the development of renewable energy resources in an expeditious and well planned manner. Using renewable energy resources such as solar power can help the nation meet its energy requirements while reducing greenhouse gas emissions. While renewable energy facilities offer many environmental benefits, appropriate siting and design of such facilities is of paramount importance if the nation is to make optimum use of its renewable energy resources without unnecessarily depleting or degrading its water resources, wildlife habitats, recreational opportunities, and scenic vistas.

In addition to the above, we are concerned about the Project's potential impacts on groundwater, We note that, on May 10th the Project proponent released a Supplement to the Imperial Valley Solar Application for Certification to BLM and the California Energy Commission (CEC). That supplement includes analyses of project design modifications, and proposes, as an alternative water supply for the Project, a sole source aquifer that may already be over-appropriated. An analysis of this newly proposed water source and the potential F2-6

Finally, the DEIS provides no assessment of the cumulative impacts on waters of the United States that are likely to result from the proposed Project and other proposed energy-related projects in the area. In short, the Project, as proposed, does not comply with EPA's Guidelines, nor with the Corps' and EPA's regulations governing mitigation under Section 404 of the CWA.[2] F2-20

Recommendations:

- Discuss the steps that will be taken to avoid and minimize impacts to waters of the United States. To the extent any aquatic features that could be affected by the Project are determined not to constitute waters of the United States, EPA recommends that the FEIS characterize the functions of such features and discuss potential mitigation. F2-20
- Include in the FEIS a mitigation plan for unavoidable impacts to waters of the United States, as required by Corps and EPA regulations.

Water Supply and Groundwater Resources

The DEIS proposes to supply water for the Project via a new 12-mile water line from the Seeley Wastewater Treatment Plant (SWWTP). The DEIS indicates that a Mitigated Negative Declaration (MND) had been prepared for the necessary improvements to the SWWTP to increase its capacity (at pg. C.7-28). The recent lack of adoption of the MND by the County Water District Board of Directors, as described on page 1-1 of the May 10th Supplement to the Imperial Valley Solar Application for Certification (Supplement), has raised concerns as to the viability of the SWWTP as a water source for the Project. The FEIS should include an update on the recent decision and a full evaluation of the environmental impacts from the proposed SWWTP upgrades if it is still considered to be a viable water source for the proposed Project.

The DEIS indicates there is currently no backup water supply for the Project (at pg. C.7-40). The DEIS also indicates no groundwater would be used by the Project and, therefore, the effect on groundwater infiltration would be negligible (at pg. C.7-3). On May 10th, the Supplement was submitted to BLM and CEC which includes changes to the Project description and new analyses of project design modifications, and proposes a sole source aquifer as an alternative water supply for the Project. In light of the fundamental changes to the Project, the Supplement should be fully integrated into the FEIS and the FEIS should adequately respond to stakeholder comments.

F2-25

Recommendations:

- Include an update on the proposed upgrades to the SWWTP and include a full evaluation of the environmental impacts from the proposed SWWTP.
- Fully integrate the recent Supplement into the FEIS.

F2-25

Cumulative Impacts Analysis

According to the DEIS, a total of 72 projects and 649,440 acres of solar energy production and 61 projects and 433,721 acres of wind energy production are currently proposed for development in the California desert lands (at pg. C.8-40). While we acknowledge the identification of the reasonably foreseeable projects mentioned in the DEIS and the qualitative discussion of cumulative impacts in each resource chapter, the DEIS does not fully assess and quantify cumulative impacts associated with the Project, and does not adequately link the Project's effects to the health of the affected resources.

F2-34

The FEIS and all future environmental analyses related to renewable energy, transmission, and development projects in the region should provide a comprehensive description of the associated elements of all foreseeable future actions. Specifically, the FEIS should disclose to the public the cumulative impacts that are anticipated when the impacts of the Project are considered along with those of all of the energy projects and development projects in the Project vicinity. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR Part 1508.7). Incorporating this thorough analysis as part of this Project will help provide the context necessary to evaluate project related impacts into the future. These analyses should be summarized as part of the Cumulative Impacts Chapter, and should address the indirect and cumulative impacts associated with multiple large-scale solar projects proposed in the Desert Southwest on various resources, including: habitat, endangered species, groundwater, aquatic species, and air quality.

For example, the methodology used for the cumulative impacts air quality analysis appears to be quite robust; however, the results are not presented nor described. The methodology describes consideration of numerous projects in close proximity to the proposed project, but limits the scope of the cumulative impact analysis to only those projects occurring within 6 miles of the proposed project site. The scope of the cumulative impact analysis is limited to focus on 'localized' cumulative impacts; however, in an area in nonattainment for multiple criteria pollutants, including PM_{10}, the cumulative impacts analysis should cast a wider net. Without further information about projects in the region, it is difficult to conduct a thorough cumulative impacts analysis. The FEIS should include a more extensive analysis that defines the parameters of the analysis and the reasons for the establishment of those parameters. F2-34

Additionally, the DEIS presents a brief cumulative impacts discussion in the Soil and Water Resources chapter but does not provide detailed information nor in-depth analyses of potential impacts for any resource, including groundwater (at pg. C.7-14). Although the DEIS notes that no groundwater will be used by the Project, in light of the May 10th Supplement, the cumulative impacts analysis should be updated to account for the newly proposed water supply from the sole source aquifer. The FEIS should consider what will happen to groundwater levels if pumping continues at existing rates and address what might happen if there is an incremental increase associated with pumping due to the influx of large-scale solar projects in the area.

Finally, as an indirect result of providing additional power, it can be anticipated that this project will allow for development and population growth to occur in those areas that receive the generated electricity.

Recommendations:

- Update the list of reasonably foreseeable projects used in the air quality analysis to include all projects that may have impacts that may cumulatively affect the region ability to attain air quality goals.
- Adequately analyze the cumulative impacts, including further habitat fragmentation, to species, such as the FTHL, from the reasonably foreseeable energy projects and developments identified.

- Estimate the annual water use associated with the reasonably, foreseeable large-scale solar projects proposed in the Project's vicinity. BLM should be able to obtain this information, upon request, from proponents of viable projects.
- EPA recommends the FEIS clearly demonstrate whether there is sufficient groundwater for the lifetime of this Project and other reasonably foreseeable projects in the study area.
- EPA recommends the cumulative impacts analysis for groundwater include a discussion of the potential effect of future climate change on the proposed Project and groundwater development.
- EPA recommends that the ground water monitoring program be clearly defined and include a mitigation section for water resources. The ground water monitoring plan should describe the location of the monitoring wells and discuss contingency actions in the event of detection of contamination. The FEIS, and ultimately the Record of Decision (ROD), should include a commitment to the monitoring program and funding for the program. F2-34
- Address what measures would be taken, and by whom, should groundwater resources in the basin become overextended to the point that further curtailment is necessary due to, for example, additional growth, the influx of large-scale solar projects, drought, and the utilization of existing or pending water rights in the basin.
- Describe the reasonably foreseeable future land use and associated impacts that will result from the additional power supply. The document should provide an estimate of the amount of growth, likely location, and the biological and environmental resources at risk.

4) It is the County's understanding, based on the CEC hearing on May 25, 2010, that IVSP proposes to use water from the Westwind's water well in Ocotillo for a temporary water source during the construction phase, with permanent water from the Seeley County Water District. If a water supply is proposed from the Ocotillo "Westwind's" water well, proof of compliance with the February 23, 2005 Imperial County Planning Commission's approved conditions of well registration will be necessary along with an executed contract for water prior to use of the water well by IVSP. The conditions limit the well water extraction to 40 acre feet a year, it is strongly recommended that the CEC take into account the on-site water needs for the Westwind's parcel and historical residential users in its permitting of the IVSP to use this off-site water source. Also, it needs to be noted that the project description does not denote Westwind as a water supply source. L2-5

As proposed, the proposed project would cover approximately 6,185 acres (approximately 9.7 square miles) of Sonoran desert scrub that is prime habitat for the federally proposed threatened flat-tailed horned lizard ("FTHL") including foraging habitat for the federally and state listed endangered Peninsular bighorn sheep. Unfortunately, the DEIS for the proposed plan amendment and right-of-way application fails to provide adequate identification O2-2

and analysis of the significant impacts to the endangered Peninsular bighorn sheep, the flat-tailed horned lizard, rare plants, and other biological resources, fails to adequately address the significant cumulative and growth inducing impacts of the project, and lacks consideration of a reasonable range of alternatives. In addition, BLM has failed to fully examine the impact of the proposed plan amendment to the California Desert Conservation Act Plan ("CDCA Plan") along with other similar proposed plan amendments that which would result in industrial sites sprawling across the California Desert within habitat that should be protected to achieve the goals of the bioregional plan as a whole. O2-2

Nonetheless, even the inadequate information provided in the DEIS shows that the proposed plan amendment and right-of-way application should be denied because the proposed project will result in significant impacts to a breeding population of flat-tailed horned lizards, which are proposed to be listed under the Endangered Species Act ("ESA"). In addition to direct impacts to the flat-tailed horned lizard, the proposed project is in an area that links the northern and southern populations and management areas for this imperiled species – areas which were set aside for the conservation and recovery of the species. Although the DEIS acknowledges that this site includes documented foraging area for the federally and state endangered Peninsular bighorn sheep (DEIS at C.2-39), the DEIS improperly ignored potential impacts to the bighorn from the loss of this foraging area. Alternative siting, which the BLM failed to adequately address in the DEIS, could significantly reduce the impacts to both of these species, their occupied habitat, and other special status species including potentially rare plants. The Center urges the BLM to revise the DEIS to adequately address these and other issues detailed below and re-circulate the DEIS or a supplemental DEIS for public comment. O2-3

In the sections that follow, the Center provides detailed comments on the ways in which the DEIS fails to adequately identify and analyze many of the impacts that could result from the proposed project, including but not limited to: impacts to biological resources, growth inducing impacts alternatives and cumulative impacts. In addition, if undertaken as proposed, this industrial project is inconsistent with local planning and zoning laws, the Endangered Species Act ("ESA"), the Federal Land Policy Management Act ("FLPMA"), the California Desert Conservation Act ("CDCA"), and other laws, ordinances, regulations and standards.

C. Fails to Adequately Address Other Ongoing Planning Efforts

The DEIS fails to adequately address the proposed project in the context of other connected projects (including multiple renewable energy projects, substations and additional transmission lines) and the ongoing PEIS planning process for solar development in six western states undertaken by BLM and DOE which does not identify this area as a proposed solar energy study area[4]. Direct, indirect and cumulative impacts of the proposed project in conjunction with others will lead to sprawl development in the area and undermine the *planning* for renewable energy industrial zones that BLM has undertaken. O2-11

The cumulative impacts to species in this area from sprawl development, as opposed to well planned and sited development, are not adequately addressed in the planning context. Nor is the conversion of the western Imperial Valley into a highly industrialized area (with additional wind and large scale solar plants, accompanying substations and power lines, and glare and heat islands) adequately addressed in the environmental review. In fact, it is clear that piecemeal project approvals in this area and others may undermine the solar programmatic planning by federal agencies for the western states. This critical issue regarding planning on public lands is not adequately addressed in the DEIS which only mentions the PEIS process particularly with regards to the "south of Highway 98 alternative". DEIS at B.2-74 to 84. The BLM does not analyze how the PEIS could be affected by piecemeal approval of this and other projects. Such analysis *after the fact* is not consistent with the planning requirements of FLPMA or, indeed, any rational land use planning principles. **O2-12**

1. Flat-tailed Horned Lizard

Declines in populations of and habitat for the flat-tailed horned lizard were noted for decades resulting in a proposed listing of the species in 1993. Several legal challenges have resulted in the U.S. Fish and Wildlife Service currently reviewing data to determine if the species needs federal Endangered Species Act protection[7]. Threats to the flat-tailed horned lizard are abundant from its small geographic range, it specialized and highly fragmented habitat, its sensitivity to anthropogenic effects, its narrow breadth of diet (almost exclusively harvester ants), and the lowest rates of reproduction of all known horned lizards[8]. All of these factors highlight the potential risk of local and regional extinctions for this species. **O2-22**

In the more than 15 years since this listing was first proposed in 1993, the threats to the flat-tailed horned lizard have only increased. Clearly the lizard is still in decline, and the Flat-tailed Horned Lizard Management Areas, the voluntary conservation agreement that has been in place since 1997 and the Rangewide Management Strategy (2003) are not sufficient to protect the survival of the species or contribute to its recovery. Moreover, threats to the species are increasing.

Damage to habitat from off-road vehicles has continued in all flat-tailed horned lizard areas, including the Yuha Desert, Coachella Valley, West and East Mesas, near the Algodones Dunes, and near Yuma as well as in other flat-tailed horned lizard habitat. There is increasing ORV use of designated routes as well as increased route proliferation in many areas both within the FTHL Management areas and in lizard habitat outside of these areas. These ongoing and increased impacts remain one of the greatest threats to species survival. Off-road vehicle use and route proliferation both causes direct loss of habitat and increasingly fragments remaining habitats. Habitat fragmentation is a significant factor in decreasing flat-tailed horned lizard survival and may preclude recovery in many areas. A study of flat-tailed horned lizards and other species within a conservation areas found that edge effects from roads had a significant impact on flat-tailed horned lizard populations up to 150 m from roads (as well as impacts from increased predation). Barrows et al. (2006); *see also* Barrows and Allen (2009) (discussion of habitat loss and high degree of fragmentation in remaining habitats).

Several renewable energy projects are proposed within flat-tailed horned lizard habitat including the proposed project here which includes thousands of acres of flat-tailed horned lizard habitat and the Ocotillo Express wind project proposal which would cover over 6,000 acres, including many acres of flat-tailed horned lizard habitat. This project could also further fragment the remaining habitat for the species and could block gene flow between the West Mesa and Yuha Desert area populations. In addition, there are at least another five pending right of way applications for both solar and wind projects covering more than 20,000 acres in areas that may include significant lizard habitat some of them adjacent to the management areas.[9] Each of the proposed energy projects will require a new gen-tie power lines that will likely impact lizard habitat and many may also require new substations and other infrastructure that may directly affect lizard habitat. Moreover, these large-scale, single-use projects will displace other multiple uses on public lands and increase the pressure on the FTHL Management areas and other lizard habitat from ORV use. O2-22

Loss of habitat due to urban sprawl development and farming was the largest historic threat to the flat-tailed horned lizard. One new sprawl development proposal that may impact flat-tailed horned lizards and their habitat in Imperial County is the Travertine Point which proposes 12,000 housing units on nearly 5,000 acres adjacent to the Salton Sea.[10] In addition, the renewable energy projects, as discussed above, represent another kind of sprawl development that threatens the survival of the species through direct loss of habitat as well as increasing fragmentation of habitat. For this reason, the Center and other conservation groups have advocated for siting the new renewable energy projects on previously degraded sites in the desert habitats (including fallowed farmlands) and alternative siting should have been more fully considered here.

The flat-tailed horned lizard has largely been extirpated from the Coachella Valley outside of existing conservation areas and the little remaining habitat in Coachella Valley continues to be lost to sprawl development. Problems with small reserve size, invasive weeds, loss of sand sources, and boundary effects suggest the current Coachella Valley reserve will not

ensure the survival of the flat-tailed horned lizard in the Coachella Valley. Barrows et al. (2006) noted the significant "sink" effect along the boundary areas and cautioned "Without immigration from the preserve core, flat-tailed horned lizards may not be able to sustain populations in the boundary region." This same concern regarding boundary effects arises for the management areas where routes already fragment the management areas and where additional development is proposed on the borders. This project could similarly limit the effectiveness of the FTHL Management areas by fragmenting the habitat and cutting off connectivity between areas.

The Sunrise Powerlink powerline project would also directly impact lizard habitat. This project, if built, will also increase the likelihood that other proposed energy projects will be built in areas that will directly affect the lizard including the proposed project and other such as the Ocotillo wind project and the associated gen-tie lines and substations. Powerlines also provide perches for raptors which then prey on the flat-tailed horned lizards, putting further unnatural predation pressures on this declining species (Barrows, pers. communication).

On-going and increasing impacts to flat-tailed horned lizard habitat near the US-Mexican border in CA and AZ are also of concern particularly off-road vehicle use by border patrol agents (and others). Border Patrol 'tire drags' of dirt roads in lizard habitat are also a problem and continue to kill or injure lizards. The spread of non-native mustards and other invasive plants may also threaten flat-tailed horned lizard habitat viability. Even if exotic plant species do not directly change the habitat character or decrease food sources, many of these invasive weed plants can support and spread fire that could kill or injure lizards in an area where fire would naturally be an extremely rare occurrence (Brooks et al. 2004). The proposed project with its large hydrogen reserves and piping system would also greatly increase the likelihood of fire and the impacts to the lizard and other wildland resources should have been considered in the DEIS but were not. O2-22

Many of the existing and proposed development projects including the proposed project as well as ORV use will increase the likelihood of predation of flat-tailed horned lizards further diminishing their numbers and ability to survive. Barrows et al. (2006) found a significant increase predation in their study of boundary effects. Increased development provides new roosting and nesting sites for predators including for example shrikes and kestrels which are known predators of the flat-tailed horned lizard. It is well established that increases in subsidies from human activities which provide additional water sources and food/trash also increase other potential predators such as ravens.

The flat-tailed horned lizard as all other species, will be affected by climate change. The Service is well aware of the threats to species due to climate change and in turn the threats to biodiversity across in many diverse ecosystems. In its most recent 2007 report, the Intergovernmental Panel on Climate Change (IPCC) expressed in the strongest language possible its finding that global warming is occurring: "Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level" (IPCC 2007: 30). The international scientific consensus of the IPCC is that most of the recent warming observed has been caused by human activities (IPCC 2007). The U.S. Global Change Research Program also stated that "global warming is unequivocal and primarily human-induced" (UCGCRP: 12). One

of the most troubling recent findings is that the concentration of atmospheric carbon dioxide, the biggest contributor to global warming, has been rapidly increasing throughout the 2000s and is generating stronger-than-expected and sooner-than-predicted climate forcing (Raupach et al. 2007).

The global average temperature has risen by approximately 0.74° C ± 0.18° C (1.33° F ± 0.32° F) during the past 100 years (1906-2005) (Trenberth et al. 2007) in response to rapidly increasing greenhouse gas concentrations. Atmospheric concentration of carbon dioxide has increased by 36% since 1750 to a level that has not been exceeded during the past 650,000 years and likely not during the past 20 million years (Denman et al. 2007). The rate of increase in the atmospheric carbon dioxide concentration is accelerating, with especially rapid increases observed in the 2000s. The emissions growth rate rose from 1.1% per year from 1990-1999 to 3.5 % per year from 2000-2007 (McMullen and Jabbour 2009). The emissions growth rate since 2000 has even exceeded that of the most fossil-fuel intensive IPCC SRES emissions scenario, A1FI (McMullen and Jabbour 2009, Richardson et al. 2009). During the past 50 years, carbon dioxide sinks on land and in the oceans have become less efficient in absorbing atmospheric carbon dioxide, which is contributing to the observed rapid rise (Canadell et al. 2007). The atmospheric concentration of methane, another important greenhouse gas, has increased by about 150% since 1750, continues to increase, and has not been exceeded during the past 650,000 years (Forster et al. 2007). Similarly, the atmospheric concentration of nitrous oxide has increased by about 18% since 1750, continues to increase, and has not been exceeded during at least the last 2000 years (Forster et al. 2007). With atmospheric carbon dioxide at ~390 ppm and worldwide emissions continuing to increase, rapid and substantial reductions are clearly needed immediately. **O2-22**

As scientific understanding of global warming has advanced, so too has the urgency of the warnings from scientists about the consequences of our greenhouse gas emissions for biodiversity loss. Significant and wide-ranging ecological impacts of climate change have been well-documented by thousands of peer-reviewed papers. These impacts include changes in distribution, phenology, physiology, demographic rates, abundance, and genetics (see Lovejoy and Hannah (2005), Parmesan (2006), Hartley et al. (2006) for a small sampling of comprehensive reviews). Studies that have forecast species extinction risk under projected climate conditions have predicted catastrophic species losses during this century. Under a mid-level emissions scenario, Thomas et al. (2004) predicted that climate change will commit 15-37% of species to extinction by 2050. The IPCC found that 20 to 30% of plant and animal species will face an increasingly high risk of extinction as global mean temperatures exceed 2 to 3°C above pre-industrial temperatures (Parry et al. 2007). *If current carbon pollution trends continue, the IPCC estimated that climate change will threaten up to 70% of plant and animals with extinction by 2100* (Parry et al. 2007). Therefore, immediate reduction of greenhouse gas pollution is critical to slow global warming and ultimately stabilize the climate system before we commit a significant portion of the world's species to extinction.

Threats to the flat-tailed horned lizard from climate change are significant for several reasons. First, a recent study shows that desert areas may be some of the first affected by increasing temperature and that the changes may be more rapid in these ecosystems making adaptation more difficult. Second, the existing and likely increasing fragmentation of the

lizard's habitat by the proposed project and others will make any adaptation through movement across the landscape far more difficult. Thus, the flat-tailed horned lizard although adapted to hot desert environments may nonetheless be significantly impacted by climate change due to its loss of habitat and the constraints on adaptation.

While the FTHL Rangewide Management Strategy (2003) established Management Areas for the conservation and recovery of the flat-tailed horned lizard, it fails to include connectivity corridors that will help to ensure genetic viability of the core Management Areas. The proposed project site clearly supports significant populations of flat-tailed horned lizard – an estimated 2000 – 5000 animals or 0.32-0.81 lizards/acre which provides an important linkage between the adjacent management areas (Yuha and West Mesa). When last surveyed these two "conserved" areas provided only somewhat higher densities than those estimated at the proposed project site,[11] which also shows the importance of preserving the habitat here.

Impacts to the flat-tailed horned lizards and other affected species must be avoided where possible through a robust alternatives analysis and any remaining impacts should be minimized and mitigated. Unfortunately, the proposal to relocate flat-tailed horned lizards is not part of a comprehensive proposal but appears to be largely an experiment absent any scientific "controls" that may itself have significant impacts to this imperiled species. The DEIS fails to provide a draft of the relocation plan for public review thus undermining NEPA review. Relocation sites are not identified, nor is the impact to resident flat-tailed horned lizards at the relocation sites analyzed. An analysis of likely impacts from the relocation is particularly important based on data that indicates that food resources are a limiting factor in population numbers[12]. Relocating additional flat-tailed horned lizards into a habitat that is already sustaining its carrying capacity will be detrimental to the species. O2-22

Furthermore, mechanisms need to be included to assure that any and all mitigation acquisitions will be conserved in perpetuity for the conservation of the flat-tailed horned lizard. If those acquisitions are within existing Management Areas, higher levels of protection than are currently in place for Management Areas need to be put in place. NEPA mandates consideration of the relevant environmental factors and environmental review of "[b]oth *short- and long-term* effects" in order to determine the significance of the project's impacts. 40 C.F.R. § 1508.27(a) (emphasis added). BLM has clearly failed to do so in this instance with respect to the impact to the flat-tailed horned lizard.

The cumulative scenario in the DEIS fails to adequately identify and analyze the scope of the cumulative impacts to various resources across appropriate scales for each impact. While the DEIS looks at the nearby projects to some extent it ignores other scales of analysis such as across the flat-tailed horned lizard range. For example, the DEIS fails to look at cumulative impacts to the biological resources in the CDCA as a whole from multiple proposed industrial scale projects particularly how sprawling industrial sites could fragment habitats and change the quality of the CDCA overall. In addition, the DEIS should have considered the cumulative impacts to the flat-tailed horned lizard both within Imperial County and the species as a whole including the Coachella Valley and Arizona which are both areas where its habitat has become extremely constricted. Each of these scales of analysis would likely reveal different information about the cumulative impacts of this project. As discussed above, the flat-tailed horned lizard is subject to numerous ongoing and proposed impacts from development including renewable energy development and from off-road vehicle use. **O2-37**

Because the identification of plant communities and species on site is unfinished and incomplete, the cumulative impacts are also therefore inadequate. Similarly, because impacts to the bighorn were ignored, cumulative impacts to this endangered species were also ignored.

The DEIS also fails to consider all reasonably foreseeable impacts in the context of the cumulative impacts analysis. *See Native Ecosystems Council v. Dombek, et al,* 304 F.3d 886 (9th Cir. 2002) (finding future timber sales and related forest road restriction amendments were "reasonably foreseeable cumulative impacts"). The DEIS also fails to provide the needed analysis of how the impacts might combine or synergistically interact to affect the environment in this valley or region. *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004).

Cumulative Impacts Analysis: Cumulative impact is defined as the impact on the environment which results from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future action regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. § 1508.7.

Although the SA/DEIS identifies a substantial number of existing and proposed land use activities that have and would add to the cumulative loss of significant cultural and biological resources, the depth of the analysis appears insufficient to establish a clear condition and trend with regard to how imperiled certain at-risk resources are in the region.

Cumulative impacts on species at risk and their habitats is particularly important for this proposed project. The Flat-tailed Horned Lizard, currently proposed for listing under the Endangered Species Act, is considered to occur throughout the project area, although its population size has not been precisely determined. Similarly, the Peninsular Bighorn Sheep, federally listed as Endangered and State-listed as Threatened, has been observed on-site on one occasion. **O3-4**

Recommendation: A cumulative effects analysis of the impact of the past, present and reasonably foreseeable activities that have and will adversely impact at-risk biological resources, such as the Flat-tailed Horned Lizard and the Peninsular Bighorn Sheep, needs to be included. The cumulative impact analysis should reveal the condition and trend of these resources and whether or not the current situation is one in which additional impacts due to projects on public land would conform to BLM policy as expressed in Manuals 6500 (Wildlife Habitat Management) and 6840 (Special Status Species Management).

Cumulative Impacts: In order to properly site renewable energy projects, it is essential that a cumulative impacts analysis be conducted to fully evaluate the implications of this type of development on public lands. There are several wind and transmission projects in the vicinity of the Solar Two power plant that will contribute to overall cumulative impacts to sensitive resources in this area. A list of existing and future foreseeable projects is included in the DEIS, id. B.3-7 to B.3-10. In addition, the DEIS utilizes qualitative information about these existing and foreseeable projects to develop estimates and model impacts on key topics such as air quality and biological resources. More quantitative information is highly desirable, to supplement this quantitative material. **O4-9**

Moreover, additional evaluation is needed to understand the cumulative impacts on recreational resources, specifically the Juan Bautista de Anza National Historic Trail, see National Park Service comments dated May 4, 2010 on the Proposed Imperial Valley Solar Project Draft EIS, pg. 3. A comprehensive cumulative impacts analysis including the evaluation of such information strengthens this document including associated mitigation measures and contributes to more informed decision-making. **O4-10**

In addition to the proposed solar and wind projects, the draft EIS identifies 8 mixed use residential and commercial development projects, the pedestrian border fence, continued growth of use of open OHV areas, and several other projects that will also contribute to cumulative impacts, id. B.3-10. While these projects are not being permitted by the Bureau, all reasonable efforts must be made to obtain information regarding their potential impacts and construction timing so that a full picture of cumulative impacts can be presented in the final EIS. **O4-11**

The Yuha Desert, where the Project is to be located, is a pristine but extraordinarily sensitive landscape. Damage to it from this Project is likely to be irreversible. "Implementation of this [P]roject will forever change the landscape of this area,"[1] and also lead to "the permanent destruction of hundreds of cultural resources. . . ."[2] The environmental devastation that this Project will cause is permanent, but the Project's benefits are only temporary.[3] Nonetheless, the California Energy Commission ("CEC") and United States Bureau of Land Management ("BLM") are rushing through critical environmental reviews and omitting essential information for the sake of the Project applicant's arbitrary timetables. An applicant's supposed time constraints are not a recognized exception to the requirements of either the California Environmental Quality Act ("CEQA") or the National Environmental Policy Act ("NEPA"). It is crucial that a complete and thorough inquiry into the Project's impacts be made *before* the CEC and BLM commit themselves to allowing irreversible environmental damage.

The SA/DEIS fails to comply with CEQA and NEPA in seven distinct ways. First, it omits essential information and, as a result, fails as an informational document. Second, the SA/DEIS unlawfully defers the formulation of various studies and mitigation measures. Third, the assessment of the Project's environmental impacts is inadequate. Significant impacts are deemed insignificant and impacts that can be mitigated are mistakenly found to be unavoidable. Fourth, significant unstudied changes have been made to the Project since the SA/DEIS' release, and significant new information is planned to be added to the SA/DEIS at a future date, so the SA/DEIS must be recirculated and an additional public comment period provided. Fifth, the discussion of Alternatives is inadequate insofar as BLM declined to evaluate Site Alternatives on the sole basis that they are inconsistent with the *applicant's* purpose and need. Sixth, the SA/DEIS unlawfully segments the Project by failing to consider the impacts of the related Sunrise Powerlink project. Seventh, the Project applicant now proposes to satisfy the Project's water needs with well water, but such use of that water would violate the federal Safe Drinking Water Act because the underlying aquifer has been designated a "sole source aquifer" by the United States Environmental Protection Agency. **O6-2**

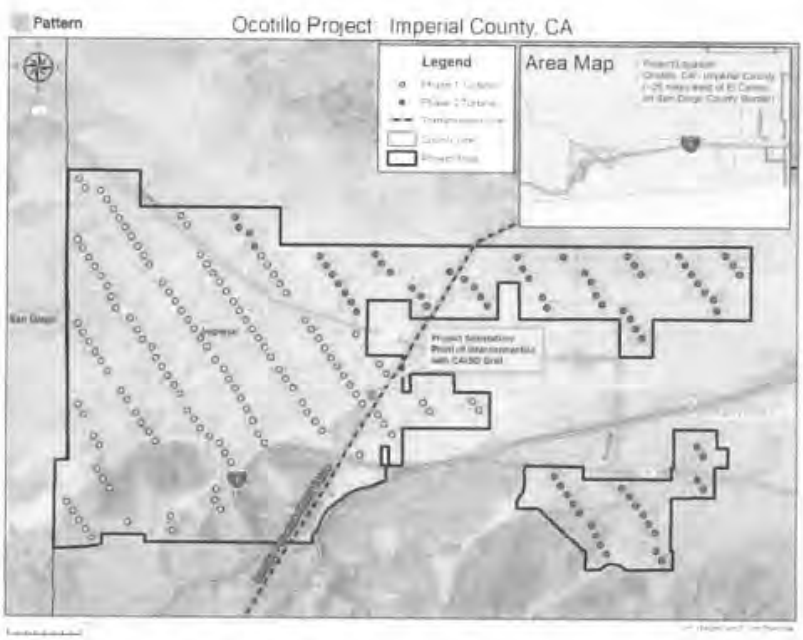
Both NEPA and CEQA require agencies to consider the cumulative impacts of their actions. The Guidelines state that "[a]n EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." Guidelines § 15130(a). NEPA similarly requires this discussion. 40 C.F.R. §§ 1508.7, 1508.27(b)(7). The Project will have numerous cumulative impacts that were not disclosed.

First, the Project will have cumulative impacts on the PBHS, but the EIR fails to identify these impacts, perhaps due to a mistaken belief that the Project will have *no* significant impacts on the PBHS. Exhibit 400 to CURE opening testimony, p. 9; SA/DEIS, p. C.2-70 through 73 (cumulative impacts section solely analyzing impacts on FTHL and ignoring impacts on PBHS). The Project's impacts on the FTHL cannot be mitigated, as detailed above, and, accordingly, the SA/DEIS' conclusion based on this premise – that impacts to the FTHL are not cumulatively "considerable" or "significant" – is unfounded. O6-11

Second, the Project will have cumulative growth inducing impacts. The SA/DEIS concludes that no significant growth-inducing impacts will occur because the size of the Project's workforce is modest. SA/DEIS, p. C.10-8. It then concludes that there will be no cumulative impacts because again the workforce is modest and the cumulative projects will "have beneficial public impacts" such as higher taxes and lower unemployment. SA/DEIS, p. C.10-20. This conclusion is in direct conflict with CEQA, which directs that "**it must not be assumed that growth in any area is necessarily beneficial . . . or of little significance to the environment.**" Guidelines § 15126.2(d). This conclusion also violates CEQA because it fails to consider the totality of the Project's cumulative growth-inducing impacts. The SA/DEIS only considers the growth-inducing impacts of other *solar projects* being considered in the area. SA/DEIS, p. C.10-20. Yet, as the SA/DEIS admits elsewhere, Project approval "could have the indirect effect of encouraging additional subsequent development. . . [b]ecause the relatively intact existing landscape would appear highly compromised after introduction" of the Project. SA/DEIS, p. C.13-22. The SA/DEIS must attempt to quantify the growth inducing impacts of all other types of projects that are likely to spring up in the Yuha Desert after Project approval, because these impacts are "reasonably foreseeable." Guidelines § 15355. O6-11

Cumulative Impacts

- The cumulative impacts analyses for Solar Two / IV Solar is inadequate
- Industrial wind energy projects, and their related transmission infrastructure, proposed west of Solar Two, will result in direct, indirect, and cumulative impacts to Golden Eagles, other birds, bats, bighorn sheep, the flat tailed horned lizard, visual, cultural, and recreational resources, wildlife corridors and currently unfragmented habitat and foraging areas for a variety of species.
- Among other impacts, industrial wind turbines require new graded pads, access roads, water use, erosion, dust issues and more. They also generate low frequency noise and vibrations which can interfere with ground dwelling species, their communication, alerts, and otherwise wellbeing.
- The necessary avoidance of the flight path due to a combination of tens of thousands of acres of industrial solar and wind turbine arrays will have a cumulative impact on the aerial operations and activities of law enforcement, including Homeland Security, and military and perhaps their communications and /or radar. O8-17
- The Plan of Development map below, submitted to BLM, shows the proposed 14,900 acre, 561 MW, Pattern Energy Ocotillo Express industrial wind energy project several miles west of IV Solar / Solar Two. Note the location of the community of Ocotillo where the proposed alternate water source is also located.
- Ocotillo will be surrounded by churning, humming, strobe flashing, view altering turbines and rows upon rows of rotating, buzzing, glint and glaring SunCathers, and the related transmission lines and substations.
- The proposed Ocotillo Express wind project location is between the Coyote Mountain Wilderness and the Jacumba Mountain Wilderness. These areas, including the valley between is occupied bighorn sheep habitat.



O8-17

- SDG&E has announced a new 14 MW solar project adjacent to their Imperial Valley Substation (SNL Financial 3-26-10) http://.snl.com/InterativeX/article.aspx?=1.
- The new 14-MW project is in addition to the proposed expansion of the IV Substation, the proposed connection of both IV Solar/Solar Two and the Sunrise Powerlink to the IV Substation
- This is considered new information along with the proposed adjustment of the IV Solar transmission line at the Substation.
- There are many other renewable energy project proposals in the area along with existing mining and other operations, including Zemer Energy Union Fenosa 1,000MW in Baja's La Rumorosa area. RETI maps showed potential cross-border power lines to export energy to the US grid.

Response: Section 2.10, Overview of the Cumulative Impacts Analysis, in the Final Environmental Impact Statement (FEIS) describes the rationale for identifying renewable energy and other development projects to be evaluated in the cumulative impacts analysis. Although all reasonable renewable energy projects known at the time the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) analyses were prepared were included in that analysis, it is also acknowledged that not all of the renewable energy projects identified may actually be constructed because they:

(1) Propose technologies at a larger scale than currently available;

(2) Require approvals from Federal and State permitting agencies that may not feasible; and/or

(3) Are largely competing for financing from the same limited sources.

Given these uncertainties, the list of cumulative projects evaluated in the SA/DEIS and the FEIS is broader than would likely actually be constructed and represents a conservative (worst case) identification of possible cumulative projects. As described in Section 2.10 in the FEIS, the analyses for the individual environmental parameters included identification of the specific cumulative projects that could potentially contribute to cumulative impacts for each specific environmental parameter.

Several projects were identified in comments on the SA/DEIS. However, these projects were announced subsequent to preparation and distribution of the SA/DEIS. Typically, analyses for an environmental document are based on information known at a certain time, which can be the date of the Notice of Intent (under the National Environmental Policy Act [NEPA]) and/or the Notice of Preparation (under the California Environmental Quality Act). The SA/DEIS analyses was based projects and information known about those projects in 2009. For projects announced after the preparation of the cumulative impacts analyses, there is little or no information related to those extent of projects or their potential environmental impacts. As a result, evaluation of those projects in the cumulative impact analyses would be speculative. It is expected that the environmental documentation for those projects would assess those projects' contributions to cumulative impacts, including consideration of the Imperial Valley Solar (IVS) project and the other known energy and development cumulative projects listed in the IVS project FEIS, as well as other relevant past, present and reasonably foreseeable projects known at the times those other cumulative impacts analyses are conducted for those projects.

In particular, the Solar Programmatic Environmental Impact Statement (Solar PEIS) initiated by the United State Department of Energy (DOE) is scheduled for completion in late 2011. Through that Solar PEIS, the DOE is considering whether to develop a solar energy program of environmental policies and mitigation strategies that would apply to the deployment of DOE supported solar energy projects on United States Bureau of Land Management (BLM) administered lands or other Federal, State, tribal or private lands. Until the Solar PEIS is completed and the BLM issues a Record of Decision concerning its content, the BLM will continue to process the IVS project and other active solar applications that have been filed pursuant to existing agency policies and procedures. Consideration of the IVS project is anticipated to be included in the PEIS as part of its cumulative analysis.

The level of analysis for cumulative impacts for an environmental document is commensurate with the level of information available regarding the range of projects that are under

consideration. Given that not all of the projects identified in the cumulative projects list have been evaluated to a level where the project specific impacts have been assessed and identified, the analyses in the SA/DEIS and FEIS identified the potential environmental impacts of the cumulative projects commensurate with the level of detail available for those projects at the time the analyses were completed. The cumulative analysis in each topical section identifies the IVS project impacts, the effects of the cumulative projects, and the potential contribution of the IVS project to cumulative impacts in addition to the impacts of the cumulative projects, consistent with the requirements of the NEPA.

The cumulative impact assessment of air quality and greenhouse gas (GHG) emissions clearly describes the procedure used to assess cumulative impacts. The air quality and GHG impacts of past, present and reasonably foreseeable projects are discussed in Section 4.4, Climate Change, in the FEIS, to the extent feasible given available data regarding the other cumulative projects.

The potential impacts of the IVS project to recreational resources are addressed in detail in Section 4.12, Recreation, in the FEIS. The analysis of the effects of the cumulative projects on recreation resources is also provided in Section 4.12. That analysis represents the level of detail available to describe the potential cumulative impacts to recreation resources from past, present and reasonably foreseeable projects including the IVS project.

The potential impacts of the IVS project to sensitive habitats, endangered species, and jurisdictional waters are addressed in detail in Section 4.3, Biological Resources, in the FEIS. The analysis of the effects of the cumulative projects on natural communities, endangered species, wildlife movement, and jurisdictional waters is also provided in Section 4.3 of the FEIS. Those analyses represent the level of detail available to describe the potential cumulative impacts to biological resources from past, present and reasonably foreseeable projects including the IVS project.

The use of groundwater from the Dan Boyer Water Company would not change the cumulative impact analyses prepared for the SA/DEIS and the FEIS. The Dan Boyer Water Company well, the anticipated source of short-term water for construction and operation, is a well that already has adjudicated rights to use the groundwater and the amount of groundwater proposed to be used by the IVS project would be within the limits set forth in the adjudication. Therefore, the groundwater used for the IVS project would not reduce groundwater resources beyond limits that are already established and would not contribute to cumulative impacts to groundwater.

The use of water by the identified past, present and reasonably foreseeable projects has been established using the best available information and adequately addressing the potential cumulative water impact associated with those projects.

It was asserted that construction of the IVS project would allow development and population growth in the areas to receive the electricity produced by the project. Electricity generated by the IVS project would address existing and currently forecasted demand by San Diego Gas and Electric (SDG&E) customers and is largely intended to replace other sources of electricity generated for SDG&E with a cleaner, renewable source of electricity. The generation of electricity by the IVS project will not, in and of itself, result in development beyond current levels forecast by the applicable Federal, State, regional, and local agencies. The IVS project is specifically intended to assist SDG&E in meeting State mandates to achieve 20 percent of electricity generation from renewable resources in the future.

D.4.5 California Desert Conservation Area Plan

These comments expressed concerns about the scope, nature, and specifics of the amendment to the California Desert Conservation Area Plan (CDCA Plan, 1980, as amended) required for the Imperial Valley Solar (IVS) project or the other Build Alternatives.

Comments: NA1-16, NA1-17, NA1-18, O2-2, O2-5, O2-6, O2-7, O2-9, O2-17, O4-9, P9-2, and P11-27.

III. Comments regarding Amendment to California Desert Conservation Plan.

A. The Amendment Should Be Rejected Because the Project Will Permanently and Adversely Affect Cultural and Biological Resources.

The California Desert Conservation Plan (herein "CDCA") lists certain criteria to be used when evaluating future applications for energy-related projects. One of the decision criteria is that sensitive resources should be avoided wherever possible. In this case, due to the significant and comprehensive presence of cultural resources throughout the project area, the project cannot be developed in a way that will avoid damage to sensitive cultural resources, or to the sensitive Flat-tailed Horned Lizard population. The analysis of this criteria in the DEIS, at p. A-9, fails to address impacts to the FTHL or cultural resources, which will not be avoided in project development. A major goal of the CDCA is to protect and preserve the sensitive resources in the desert environment. This proposed amendment is inconsistent with that goal and with the requirements of FLPMA. **NA1-16**

B. The Amendment Should Be Rejected Because the Project Does Not Conform to the Local Land Use Plan for Imperial County.

Another CDCA decision criteria requires "conformance to local plans wherever possible." Here, the applicable local Imperial County land use designation for the project area is "Open Space Preservation Zone." See DEIS, p. A-5. This designation does not allow use for electric power generation projects. DEIS, p. A-5. Page A-10 of the DEIS asserts that the project is in conformance with the Imperial County General Plan, but fails to acknowledge the lack of compliance with applicable zoning. Amendment of the CDCA to permit a large-scale power development in an area zoned by the local government for open space preservation is not appropriate. *See* DEIS, page C.8-18 ("the proposed project would not be consistent with the intent of the S-2 zone within the county's Land Use Ordinance"); *see also* 43 U.S.C. § 1712(c) ("land use plans of the Secretary . . . shall be consistent with State and local plans to the maximum extent he finds consistent with Federal law and the purposes of [FLPMA]"). **NA1-17**

C. The Plan Amendment Should Be Rejected Because This Large-Scale Solar Development, In Conjunction with the Cumulative Impacts of Nearby Developments, Will Unreasonably Shift the Multiple-Use Balance in the California Desert Conservation Area In Favor of Power Production and Could Result in Permanent Impairment of Resources In Violation of FLPMA.

The Plan Amendment process requires BLM to determine the environmental effects of granting the applicant's request and also to evaluate the effect of the proposed amendment on BLM's desert-wide obligation to achieve and maintain a balance between resource use and resource protection. Approving the plan amendment here would unreasonably shift the multiple use balance in favor of resource use/development. *See also* 43 U.S.C. § 1712(c)(1) (requiring the Secretary to use and observe the principles of multiple use and sustained yield when developing or revising land use plans). NA1-18

As proposed, the proposed project would cover approximately 6,185 acres (approximately 9.7 square miles) of Sonoran desert scrub that is prime habitat for the federally proposed threatened flat-tailed horned lizard ("FTHL") including foraging habitat for the federally and state listed endangered Peninsular bighorn sheep. Unfortunately, the DEIS for the proposed plan amendment and right-of-way application fails to provide adequate identification O2-2

and analysis of the significant impacts to the endangered Peninsular bighorn sheep, the flat-tailed horned lizard, rare plants, and other biological resources, fails to adequately address the significant cumulative and growth inducing impacts of the project, and lacks consideration of a reasonable range of alternatives. In addition, BLM has failed to fully examine the impact of the proposed plan amendment to the California Desert Conservation Act Plan ("CDCA Plan") along with other similar proposed plan amendments that which would result in industrial sites sprawling across the California Desert within habitat that should be protected to achieve the goals of the bioregional plan as a whole. O2-2

I. The BLM's Analysis of the Proposed Plan Amendment and Proposed Project Fail to Comply with FLPMA.

As part of FLPMA, Congress designated 25 million acres of southern California as the California Desert Conservation Area ("CDCA"). 43 U.S.C. § 1781(c). Congress declared in FLPMA that the CDCA is a rich and unique environment teeming with "historical, scenic, O2-5

archaeological, environmental, biological, cultural, scientific, educational, recreational, and economic resources." 43 U.S.C. § 1781(a)(2). Congress found that this desert and its resources are "extremely fragile, easily scarred, and slowly healed." *Id.* For the CDCA and other public lands, Congress mandated that the BLM "shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." 43 U.S.C § 1732(b).

The sum total of the plan amendment to the CDCA plan is one sentence: "Permission granted to construct solar energy facility (proposed SES Solar Two Project)." DEIS at A-6. Given the impact of the proposed project on other multiple uses of these public lands at the proposed site as well as other aspects of the bioregional planning, it appears that BLM may also need to amend other parts of the plan as well and should have looked at additional and/or different amendments as part of the alternatives analysis. For example, the project surveys again confirm and provide new information on the biological richness of the area and the relatively robust flat-tailed horned lizard population, the proposed project site as a potential connector between existing Yuha Basin Management Area and the West Mesa Management Area, which were specifically set up for conservation of flat-tailed horned lizard, and also show the utilization of the site by the federally and state endangered Peninsular bighorn sheep. In light of this information, the BLM should consider an alternative plan amendment that would designate this area as an Area of Critical Environmental Concern for habitat conservation or an expansion of the flat-tailed horned lizard management areas in conjunction with improvements to increase wildlife connectivity across Interstate 8. Based on the 2,000 - 5,000 animals (DEIS at C.2-22) that are estimated to be on the proposed project site, the site would serve flat-tailed horned lizard conservation at least as well as the existing Management Areas for the conservation of this species and would also provide connectivity values. This should have been considered as an alternative to the proposed large-scale industrial use, which could instead be sited on previously disturbed areas that provide little habitat values for imperiled wildlife. O2-5

As discussed further below regarding FLPMA, and in the section on NEPA and segmentation, the BLM should have taken a more comprehensive look at the plan amendment to determine: 1) whether industrial scale projects are appropriate for any of the public lands in this area; 2) if so, how much of the public lands are suitable for such industrial uses given the need to balance other management goals including flat-tailed horned lizard and Peninsular bighorn sheep conservation and recreational uses; and 3) the location of the public lands suitable for such uses, if any. Rather, BLM appears to have looked at this application and others in the area on BLM managed lands, as well as other proposed projects, in isolation. As a result, this piecemeal approach to project review threatens to undermine the "bioregional" approach in the CDCA Plan as a whole as well as violate the fundamental planning principles of FLPMA.

A. The DEIS Fails to Adequately Address the Plan Amendment in the Context of the CDCA Plan.

Unfortunately, the DEIS fails to adequately consider the impacts of the proposed project and plan amendment and reasonable alternatives in the context of FLPMA and the CDCA Plan. FLPMA requires that in developing and revising land use plans, the BLM consider many factors and "use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences . . . consider the relative scarcity of the values involved O2-6

and the availability of alternative means (including recycling) and sites for realization of those values." 43 U.S.C. § 1712(c). As stated clearly in the CDCA Plan:

> The goal of the Plan is to provide for the use of the public lands, and resources of the California Desert Conservation Area, including economic, educational, scientific, and recreational uses, in a manner which enhances wherever possible—and which does not diminish, on balance—the environmental, cultural, and aesthetic values of the Desert and its productivity.

CDCA Plan at 5-6. The CDCA Plan also provides several overarching management principles:

> MANAGEMENT PRINCIPLES
>
> The management principles contained in the law (FLPMA)—*multiple use, sustained yield, and the maintenance of environmental quality*—are not simple guides. Resolution of conflicts in the California Desert Plan requires innovative management approaches for everything from wilderness and wildlife to grazing and mineral development. These approaches include:
>
> —Seeking simplicity for management direction and public understanding, avoiding complication and confusing in detail which would make the Plan in comprehensive and unworkable.
>
> —Development of decision-making processes using appropriate guidelines and criteria which provide for public review and understanding. These processes are designed to help in allowing for the use of desert lands and resources while preventing their undue degradation or impairment.
>
> *—Responding to national priority needs for resource use and development, both today and in the future, including such paramount priorities as energy development and transmission, without compromising the basic desert resources of soil, air, water, and vegetation, or public values such as wildlife, cultural resources, or magnificent desert scenery. This means, in the face of unknowns, erring on the side of conservation in order not to risk today what we cannot replace tomorrow.*
>
> *—Recognizing that the natural patterns of the California Desert, its geological and biological systems, are the basis for planning*, and that human use patterns, from freeways to fence lines, define its boundaries. Only in this way can the public resources can be understood and protected by the Plan that can be publicly comprehended, accepted, and followed.

O2-6

CDCA Plan 1980 at 6 (first emphasis in original, second emphasis added).

The CDCA Plan anticipated that there would be multiple plan amendments over the life of the plan and provides specific requirements for analysis of Plan amendments. Those requirements include determining "if alternative locations within the CDCA are available which would meet the applicant's needs without requiring a change in the Plan's classification, or an amendment to any Plan element" and evaluating "the effect of the proposed amendment on BLM

management's desert-wide obligation to achieve and maintain a balance between resource use and resource protection." CDCA Plan at 121. Thus, BLM should have, at minimum, analyzed in the DEIS whether alternative locations were available that would not require a plan amendment, and how the proposed amendment would affect desert-wide resource protection—it failed on both counts.

The CDCA Plan includes the Energy Production and Utility Corridors Element which is focused primarily on utility corridors with brief discussion of powerplant siting. Even in 1980 the CDCA Plan contemplated that alternative energy projects would likely be developed in the future but did not expressly provide planning direction for solar energy production. Nonetheless, the overarching principles expressed in the Decision Criteria are also applicable to the proposed project here including minimizing the number of separate rights-of-way, providing alternatives for consideration during the processing of applications, and "avoid[ing] sensitive resources wherever possible." CDCA Plan at 93. Nothing in the DEIS shows that BLM considered the landscape level issues and management objectives or meaningful alternatives to the proposed plan amendment—including an alternative that would designate this area as an ACEC or a Management Area for flat-tailed horned lizard conservation. O2-6

In addition, BLM should have considered the impacts to existing land use plans for these public lands across several scales including, for example: in the western Imperial Valley; in the Imperial Valley as a whole; in the Salton Trough; and in the CDCA as a whole.

B. The DEIS Fails to Adequately Address Impacts to Multiple Use Class L Lands and Loss of Multiple Use in Favor of a Single Use for Industrial Purposes.

As FLPMA declares, public lands are to be managed for multiple uses "in a manner that will protect the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values." 43 U.S.C.§ 1701(a)(7) & (8). The CDCA Plan as amended provides for four distinct multiple use classes based on the sensitivity of resources in each area. The proposed project site is in MUC class L lands. DEIS at C.13-4. Under the CDCA Plan, Multiple-use Class L (Limited Use) "protects sensitive, natural, scenic, ecological, and cultural resources values. Public lands designated as Class L are managed to provide for generally *lower-intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished*." CDCA Plan at 13 (emphasis added). The proposed project is a high-intensity, single use of resources that will displace all other uses and that will significantly diminish (indeed, completely destroy) of over 6,000 acres of good-quality occupied flat-tailed horned lizard habitat among other impacts. On this basis as well as others the proposed project is inappropriate for a Limited Use area such as this one and the terms of the proposed plan amendment are inconsistent with the CDCA Plan. O2-7

Although solar development is a potentially allowable use in this area, the BLM must take into account all of the relevant multiple uses of the area that could be displaced before making a decision including, for example, the displacement of flat-tailed horned lizards, the displacement of Peninsular bighorn sheep from foraging habitat, destruction and fragmentation of high quality habitat, and impacts to water quality and groundwater resources, cultural resources, and native American values. O2-7

The DEIS acknowledges that "Under the proposed project an area of roughly 10 square miles, including over 5.6 miles of frontage on Highway I-8, would experience a dramatic visual transformation from a predominantly natural desert landscape to one of a highly industrial character." DEIS at C.13-23 (in the context of visual resources). In the DEIS this issue is looked at solely in the context of visual resources, however, and no where in the document does BLM look at the issue of industrialization in the context of biological resources, the CDCA Plan as a whole, or how transformation of this area will affect the overall landscape-wide bioregional planning approach.

The adoption of the proposed plan amendment will change the multiple-use character of these lands which currently provides habitat for imperiled species, recreational uses including a historic trail and other cultural resources, camping and off-road vehicle routes, in favor of a single use that will completely displace other uses on the proposed site. For example, the proposal would require changes in the route network resulting in several routes which would need to be moved—those changes to the route network are simply not addressed in the DEIS (nor are the likely direct, indirect and cumulative impacts of changing those route designations adequately identified or analyzed, as discussed in detail below). Any changes to routes would require BLM to amend the route designations in the area because these routes are part of a network that was adopted through a plan amendment. When BLM does consider these issues, as it must, in a revised or supplemental DEIS, a range of alternatives must be considered in addition to the fact that such changes will undoubtedly change use of the previously existing nearby routes, most likely causing increased use on other nearby routes. Even if BLM attempts to simply reroute along the fenceline for the proposed project a plan amendment would be required and BLM must then consider that new unauthorized routes to provide connections to the other routes, and/or entirely new unauthorized routes may be created by off-road vehicle users *to avoid the industrial site entirely*. There is no evidence that recreational off-road vehicle users will be content to drive for miles along a fence adjoining an industrial site rather than striking off cross-country to connect with more scenic routes. Past experience shows that the latter is quite

O2-9

understandably a much more likely outcome and BLM should recognize this in analyzing the impacts of this project on the existing route network and any proposal to amend that network.

O2-9

A. Purpose and Need and Project Description are Too Narrowly Construed and Unlawfully Segment the Analysis

1. Purpose and Need:

Agencies cannot narrow the purpose and need statement to fit only the proposed project and then shape their findings to approve that project without a "hard look" at the environmental consequences. To do so would allow an agency to circumvent environmental laws by simply "going-through-the-motions." It is well established that NEPA review cannot be "used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5; *Metcalf v. Daley*, 214 F.3d 1135, 1141-42 (9th Cir. 2000) ("the comprehensive 'hard look' mandated by Congress and required by the statute must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.") As Ninth Circuit noted an "agency cannot define its objectives in unreasonably narrow terms." *City of Carmel-by-the-Sea v. U.S. Dept. of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997); *Muckleshot Indian Tribe v. U.S. Forest Service*, 177 F. 3d 900, 812 (9th Cir. 1999). The statement of purpose and alternatives are closely linked since "the stated goal of a project necessarily dictates the range of 'reasonable' alternatives." *City of Carmel*, 123 F.3d at 1155. The Ninth Circuit recently reaffirmed this point in *National Parks Conservation Assn v. BLM*, 586 F.3d 735, 746-48 (9th Cir. 2009) (holding that "[a]s a result of [an] unreasonably narrow purpose and need statement, the BLM necessarily considered an unreasonably narrow range of alternatives" in violation of NEPA). O2-17

The purpose behind the requirement that the purpose and need statement not be unreasonably narrow, and NEPA in general is, in large part, to "guarantee[ ] that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). The agency cannot camouflage its analysis or avoid robust public input, because "the very purpose of a draft and the ensuing comment period is to elicit suggestions and criticisms to enhance the proposed project." *City of Carmel-by-the-Sea*, 123 F.3d at 1156. The agency cannot circumvent relevant public input by narrowing the purpose and need so that no alternatives can be meaningfully explored or by failing to review a reasonable range of alternatives.

The BLM's purpose and need for the SES Solar Two Project is "to respond to SES Solar Two, LLC's application under Title V of FLPMA (43 U.S.C. 1761) for a ROW grant to construct, operate, and decommission a solar thermal facility on public lands in compliance with FLPMA, BLM ROW regulations, and other Federal applicable laws", and also states that the "BLM authorities include:

- Executive order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the "production and transmission of energy in a safe and environmentally sound manner."
- The EPAct, which requires the Department of the Interior (BLM's parent agency) to approve at least 10,000 MW of renewable energy on public lands by 2015.
- Secretarial Order 3285, dated March 11, 2009, which "establishes the development of renewable energy as a priority for the Department of the Interior."

DEIS at A-12. The DEIS notes that an amendment to the CDCA Plan is needed in order to approve the project but does not clearly identify the plan amendment as a part of the project being evaluated. Rather, the DEIS states: "The BLM will decide whether to approve, approve with modification, or deny issuance of a ROW grant to SES Solar Two, LLC for the proposed SES Solar Two Project. The BLM's actions will also include consideration of amending the CDCA Plan concurrently." DEIS at A-12. BLM's purpose and need is very narrowly construed to the proposed project itself and an amendment to the Plan *for the project only*. The purpose and need provided in the DEIS is impermissibly narrow under NEPA for several reasons, most importantly because it foreclosed meaningful alternatives review in the DEIS. *See* DEIS at B.2-1 and discussion below regarding alternatives. Because the purpose and need and the alternatives analysis are at the "heart" of NEPA review and affect nearly all other aspects of the EIS, on this basis and others, BLM must revise and re-circulate the DEIS. O2-17

The DOE purpose and need statement provides:

> The EPAct of 2005 established a Federal loan guarantee program for eligible energy projects that employ innovative technologies. Title XVII of the EPAct of 2005 authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects, including those that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued".
>
> The two purposes of the loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. The purpose and need for action by DOE is to comply with its mandate under EPAct by selecting eligible projects that meet the goals of the Act.

DEIS at A-12. As the applicant admits the proposed project is experimental at the scale proposed: the applicant's objective is states: "To assist in meeting the requirement for additional

generating capacity, the applicant has developed solar technology which requires commercial-scale development to demonstrate its technical and commercial viability" DEIS at A-10. Thus, the proposed project appears to meet the DOE criteria because it is admittedly "new" — indeed, experimental — technology at the proposed scale, and the applicant hopes that it will assist in meeting the renewable generating capacity. However, by that same token, the DEIS fails to address the experimental nature of the proposed project[5] including the likelihood of success (or failure) and the consequences of failure (including technological failures and financial failures) and the full extent of the likely resulting impacts to public lands.

In discussing the cumulative scenario, the DOE loan guarantee program is also described as one of the incentive programs for funding renewable energy projects:

> Example[s] of incentives for developers to propose renewable energy projects on private and public lands in California, Nevada and Arizona, include the following:
>
> ● U.S. Treasury Department's Payments for Specified Energy Property in Lieu of Tax Credits under §1603 of the American Recovery and Reinvestment Act of 2009 (Public Law 1115) - Offers a grant (in lieu of investment tax credit) to receive funding for 30% of their total capital cost at such time as a project achieves commercial operation (currently applies to projects that begin construction by December 31, 2010 and begin commercial operation before January 1, 2017).
>
> ● U.S. Department of Energy (DOE) Loan Guarantee Program pursuant to §1703 of Title XVII of the Energy Policy Act of 2005 - Offers a loan guarantee that is also a low interest loan to finance up to 80% of the capital cost at an interest rate much lower than conventional financing. The lower interest rate can reduce the cost of financing and the gross project cost on the order of several hundred million dollars over the life of the project, depending on the capital cost of the project.

O2-17

DEIS at B.3-2 to 3.

The Center is well aware that deadlines for funding, particularly for the American Recovery and Reinvestment Act ("ARRA") funds, have driven the pace of the environmental review for this project and, while such funding mechanisms are important, deadlines cannot be used as an excuse for rushed and inadequate NEPA review. The BLM and DOE must be concerned with the adequate NEPA review and even if the agencies can properly have an objective of *timely* approval of projects they cannot properly have as purpose and need of the project a *rushed* inadequate environmental impact review.

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[5] As the BLM is aware, the largest installation of Stirling suncatchers is a 1.5 MW, 60 dish facility in Maricopa County, Arizona installed in January 2010. The proposed project is proposed to install 30,000 suncatchers (DEIS at B.1-20) approximately 500 times larger. http://www.stirlingenergy.com/pdf/2010_01_22.pdf

Moreover, in its discussion of the need for renewable energy production the DEIS fails to address risks associated with global climate change in context of including both the need for climate change mitigation strategies (e.g., reducing greenhouse gas emissions) and the need for climate change adaptation strategies (e.g., conserving intact wild lands and the corridors that connect them). All climate change adaptation strategies underline the importance of protecting intact wild lands and associated wildlife corridors as a priority adaptation strategy measure.

As the DEIS admits, building the proposed project at the proposed location "would permanently eliminate approximately 5,024.4 acres of Sonoran creosote bush scrub and approximately 1,038.7 acres of disturbed/developed Sonoran creosote bush scrub." DEIS p. C.2-29. In addition, "[g]rading would directly affect wildlife and other special status species by removal of shrubs and herbaceous vegetation, resulting in loss and fragmentation of cover, breeding, and foraging habitat." DEIS p. C.2-29. O2-17

The habitat fragmentation, loss of connectivity for terrestrial wildlife, and introduction of predators and invasive weed species associated with the proposed project in the proposed location are contrary to an effective climate change adaptation strategy that the agencies also claim to support. Siting the proposed project in the proposed location impacting major washes and occupied habitat of imperiled species could undermine a meaningful climate change adaptation strategy with a poorly executed climate change mitigation strategy. The way to maintain healthy, vibrant ecosystems is not to fragment them and reduce their biodiversity.

Cumulative Impacts: In order to properly site renewable energy projects, it is essential that a cumulative impacts analysis be conducted to fully evaluate the implications of this type of development on public lands. There are several wind and transmission projects in the vicinity of the Solar Two power plant that will contribute to overall cumulative impacts to sensitive resources in this area. A list of existing and future foreseeable projects is included in the DEIS, id. B.3-7 to B.3-10. In addition, the DEIS utilizes qualitative information about these existing and foreseeable projects to develop estimates and model impacts on key topics such as air quality and biological resources. More quantitative information is highly desirable, to supplement this quantitative material. O4-9

I feel this will also impact BLM lands adversaly- that BLM has a multiple use mandate, and this will take over all other uses at this site. These solar panels will permanently alter the ecosystem in this area (read the Draft EIS- impacts will last thousands of years), and this will become the dominant use of the land- all other uses (including those of wildlife and recreation) will be subsumed. P9-2

BLM CDCA Plan Amendment Issues

50. The Summary in Sec A.3 for Land use plan conformance and amendment raises troubling questions about how BLM language is to be interpreted. I reviewed the section of the SA/DEIS and compared that with text from BLM's 199 version of the 1980 CDCA Plan.

51. **What uses are categorically allowed in all Class L Multiple Use areas.?** It is extremely troubling to note that the A-8 text suggests that in BLMs' Class L lands that such intensive surface damaging industrial activities would be consistent with a Class L designation without any amendment to the CDCA Plan.. The SA/DEIS p. A-8 states that: "The proposed project does not require a change in the Multiple-Use Class classification for any area within the CDCA." Very specifically the BLM CDCA Plan makes the following statement defining Multiple Use Class L: P11-27

52. **MULTIPLE-USE CLASS L**

Multiple-Use Class L (Limited Use) protects sensitive, natural, scenic, ecological, and cultural resource values. Public lands designated as Class L are managed to provide for generally lower-intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished. (BLM CDCA Plan As Amended at p. 13, copied verbatim from Plan).

53. Please explain what it is that I do not understand about the nature of the activities proposed for the solar project including roads, buried piping, installation of SunCatcher units, construction of buildings, etc that is in any way protective of the sensitive natural, scenic, ecological, and cultural resource values that we hear about in public meetings , workshops and evidentiary hearings. What I have heard sounds like privatization , fencing to exclude all other uses, and carving up the land with more than 234 miles of scraped unpaved roads to access the intensive industrial facilities components. Massive industrial conversion of 6,500 acres for private use seems the antithesis of compliance with the language and intent of the Multiple-Use Class L designation.

54. If as other text on BLM 199 Amended CDCA Plan (at p. 13) suggests that 5,883,000 acres of BLM administered public lands (or 48.5% of CDCA lands) are Class L, should the public now be advised that 48.5% of BLM managed lands or almost 5.9 million acres are now fair game for intensive industrial development for "renewable energy" and could be considered sacrifice areas for disposal to private investors at the expense of the public treasure and at a use loss for the resource values that triggered the Class L designation?

55. Has the definition of Multiple Use Class L already been changed to allow for intensive industrial scale solar, or is it the intent of the CDCA Plan Amendment for this or another project to change the definition of Class L to allow industrial scale solar generating facilities in any and all Class L 5,883,000 acres of public lands managed by BLM in the CDCA? If the definition of Class L has been changed, when was it and by what means was that information conveyed to the public, not just industry. P11-27

56. Title VI of the FLPMA, under CDCA, provides for the immediate and future protection and administration of the public lands in the California desert within the framework of a program of multiple use and sustained yield, and maintenance of environmental quality. Multiple use includes the use of renewable energy resources, and through Title V of FLPMA, the BLM is authorized to grant ROWs for generation and transmission of electric energy. *The acceptability of use of public lands within the CDCA for this purpose is recognized through the Plan's approval of solar generating facilities within Multiple-Use Class L.* (SA/DEIS at p. A-9) (emphasis added)

57. But what does this mean? Has the definition of Class L already been changed? Or is it that the CDCA wide definition for Multiple Use Class L will be changed if the Plan is Amended for this project, even if the Amendment is to deny the siting of any future solar projects on the proposed IV Solar site? The language of any Plan Amendment is extremely important because the Plan covers more than 12 million acres of BLM managed lands in California. An error or omission in language could create loopholes of unimaginable magnitude and significance. (Imperial County spent more than 15 years and 8 lawsuits in state and federal court, because it ignored public concerns, and compounded that mistake in judgement by the addition of the letter "s" at the end of a single word. Relevant, of course, because that mistake was related to use of groundwater from a single well in Ocotillo, consequences to the groundwater basin locally were bad enough, but years in court for County vs the property owner all could have been avoided. That was one wells, but there was litigation related to impacts of export from a second well also.)

58. I spoke with Daniel Steward at the BLM EL Centro Field office this morning to try to understand answers. There were no answers, only encouragement to raise the issue in comments. I also spoke with Jim Stobaugh and understand that any Plan Amendment would be very site specific. Nevertheless, experience urges caution, because I am uncertain who the ultimate decision-maker or crafter of Plan Amendment text might be.

59. The SA/DEIS mentions site specific plan amendment when it states that "the proposed project would require a BLM ROW grant and a project-specific CDCA Plan Amendment." (C.8-1) But with more than 1 million acres of the CA desert proposed for solar and wind energy development, any Plan Amendment, no matter how site specific it is intended to be could, indeed would have implications far beyond the specific project site.

P11-27

Response: As described in Sections 1.2.1, and 2.2.1.2 and later analyzed in Section 4.9 in the Final Environmental Impact Statement (FEIS), the CDCA Plan, while recognizing the potential compatibility of solar generation facilities on public lands, requires that all sites associated with power generation or transmission not specifically identified in the CDCA Plan for a project site be considered through the Plan Amendment process.

In addition, the IVS project site is designated as Multiple-Use Class L (Limited Use) in the CDCA Plan. The CDCA Plan allows solar energy uses in that land use designation in the CDCA provided that NEPA requirements are met and the CDCA Plan is properly amended. The construction and operation of a solar generating project on the IVS project site would require the BLM to amend the CDCA to specifically allow a solar energy generating project within the Multiple Use Class L (Limited Use) designation on the IVS project site. Therefore, the amendment to the CDCA Plan pertains only to the IVS project site and is further limited by the accompanying right-of-way grant application.

The CDCA Plan amendment will not result in any changes to the Limited Use designation. The amendment will allow the solar use only on the IVS project site and will not result in any changes in lands use designations or authorized lands uses anywhere else in the CDCA. The CDCA Plan amendment would only apply the to approximately 6,100 ac of BLM-managed land being evaluated for the IVS project. As stated in the FEIS, the reason for the amendment is to specifically allow a solar power generation project on that 6,100 ac parcel which was not previously designated in the CDCA Plan. This amendment and the overall amendment process are consistent with the implementation of the CDCA Plan.

The CDCA Plan was adopted in 1980 and has since been amended many times. Frequently, long range plans that cover large geographic areas such as the California Desert are "living" documents intended to provide overall land use planning guidance and general regulation with more detailed land use information provided through amendments, special area plans, or other

more focused planning documents. James B. Ruch, the BLM California State Land Director in his letter presenting the CDCA Plan stated the following:

> "The California Desert Plan encompasses a tremendous area and many different resources and uses. The decisions in the Plan are major and important, but they are only general guides to site-specific actions. The job ahead of us now involves three tasks:
>
> - Site-specific plans, such as grazing allotment management plans or vehicle route designation;
> - On-the-ground actions, such as granting mineral leases, developing water sources for wildlife, building fences for livestock pastures or for protecting petroglyphs; and
> - Keeping people informed of and involved in putting the Plan to work on the ground, and in changing the Plan to meet future needs."

The CDCA Plan was initially prepared and continues to provide guidance concerning the use of the California desert public land holdings while balancing other public needs and protecting resources. Therefore, amendments to the CDCA Plan can be site specific or global depending on the nature of the amendment. In the case of the IVS project, the amendment is site specific. However, it should be noted that throughout the FEIS (in the land use, recreation and visual impacts analyses, for example), an adverse cumulative impact on desert lands is acknowledged on approximately 1 million acres of land that are proposed for possible solar and wind energy development in the southern California desert lands.

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D.5 Individual Responses to the Comment Letters/Emails

This section provides individual responses to individual comments not addressed by the common responses provided in Section D.4, Common Responses. Each comment is uniquely coded to the commenting party and the individual comment within that comment letter.

The following comment letters included comments that required individual responses which are provided in this section:

- F1 – United States Department of the Interior National Park Service (May 4, 2010)
- F2 – United States Environmental Protection Agency (June 14, 2010)
- NA1 – Quechan Indian Tribe (May 17, 2010)
- S1 – California Department of Transportation (May 27, 2010)
- O1 – Public Employees for Environmental Responsibility (PEER)
- O2 – Center for Biological Diversity (CBD)
- O4 – Natural Resource Defense Council and The Wilderness Society
- O6 – Backcountry Against Dumps (June 15, 2010)
- O8 – Backcountry Against Dumps (May 27, 2010)
- O9 – California Unions for Reliable Energy
- O10 – California Native Plant Society
- O11 – BLM California Desert District Advisory Council (email April 1, 2010)
- P2 – Anita Nicklen (email May 28, 2010)
- P7 – Brendan Hughes (email May 17, 2010)
- P10 – Denis Trafecanty (no date)
- P11 – Edie Harmon (email May 26, 2010)

The following comment letters did not include any comments that required individual responses so they are not discussed in this section:

- NA2 – Kwaaymii, Laguna Band of Indians (May 16, 2010)
- S2 – State of California Department of Parks and Recreation (May 28, 2010)
- L1 – City of El Centro (May 13, 2010)
- L2 – Imperial County (May 27, 2010)
- O3 – Defenders of Wildlife
- O5 – Anza Trail Coalition of Arizona
- O7 – Basin and Range Watch
- U1 – San Diego Gas & Electric (May 14, 2010)
- P1 – Edie Harmon and Donna Tisdale (email March 2, 2010)
- P3 – Kim Bauer (email April 17, 2010)
- P4 – Glenn Kirby (email April 24, 2010)
- P5 – Gregory Gandrud (email May 5, 2010)
- P6 – Cody Hanford (email May 13, 2010)
- P8 – Jamie Shores (email May 26, 2010)
- P9 – Patrick Donnelly (email May 26, 2010)
- P12 – Greg P. Smestad, Ph.D. (May 21, 2010)

D.5.1 F1 – Responses to Comments from the United States Department of the Interior National Park Service (May 4, 2010)

NPS is also very concerned about the cumulative effects that this and other planned renewable energy projects will have on the California desert, and specifically, other National Park units. The combined effect of these projects, proposed on vast tracts of relatively undisturbed open land, will result in fundamental changes in how the desert is experienced by the public. The cumulative effects of these projects will also result in substantial impacts to a wide range of environmental resources in the California desert. **F1-2**

F1-2 The National Park Service's concern for the cumulative impact of planned renewable energy projects in the California desert is acknowledged. Refer to Section D.4.4 earlier in this report for discussion regarding cumulative impacts.

D.5.2 F2 – Responses to Comments from the United States Environmental Protection Agency (June 14, 2010)

The DEIS also discusses two private inholdings, 640 acres and 160 acres, within the Project site. Through conversations with the Applicant and from the March 25th, 2010 transcript of the hearing before the California Energy Resources Conservation and Development Commission, it is our understanding that these inholdings are reasonably foreseeable parcels that are being pursued for purchase and incorporated into the site design. The FEIS should fully discuss the potential development of these inholdings and the potential additional SunCatchers that could be installed on each inholding. Placement of SunCatchers on these parcels, outside of drainages, could help alleviate the pressure to place SunCatchers within drainages on the currently accessible portion of the Project site. These foreseeable acquisitions could be used to balance additional energy output with the protection of high value drainages and avoidance of Waters throughout the site. The FEIS should also discuss the feasibility of using these reasonably foreseeable parcels as a location for components of the Main Services Complex. **F2-17**

F2-17 The referenced parcels are privately owned and, at this time, the owners of those parcels have not indicated any interest to the BLM regarding using those parcels for renewable energy uses. As a result, because those parcels are not under lands managed by the BLM, any renewable energy project on those lands would be outside the jurisdiction of the BLM. In addition, the applicant has no rights to those lands and is not considering pursuing the use of those parcels for its project. As a result, these parcels were not been included in any of the Build Alternatives considered in the SA/DEIS and the FEIS.

The FEIS should also incorporate alternatives to avoid the 2.33 acres of Waters that are estimated to be impacted by the proposed water line. The DEIS describes options to lay the line underground as well as span on existing bridge crossings (at pg. C.2-12); however, the DEIS indicates impacts remain undetermined (at pg. C.2-30). **F2-19**

F2-19 This comment raised concerns about the unknown quantity of impacts to Waters of the United States (waters of the U.S.) related to the Seeley Wastewater Treatment Plant (SWWTP) reclaimed water pipeline part of the project site as well as the lack of analysis of the potential interim water supply from the Dan Boyer Well. The applicant has quantified the waters of the U.S. that occur along the proposed pipeline alignment. The applicant plans to either span Waters of the U.S., or to use horizontal drilling to install the reclaimed water pipeline below waters of the U.S. Spanning of waters of the U.S. and subsurface installation of facilities below waters of the U.S. are not regulated pursuant to the Federal Clean Water Act (CWA). The reclaimed water pipeline in the IVS project will not result in any fill or discharge to waters of the U.S.

Refer to Chapter 4, Environmental Consequences, in the Final Environmental Impact Statement (FEIS) for analysis of proposed short-term use of water from the Dan Boyer Well.

Ephemeral Washes and Drainage

Natural washes perform a diversity of hydrologic and biogeochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. Ephemeral washes also provide habitat for breeding, shelter, foraging, and movement of wildlife. Many plant populations are dependent on these aquatic ecosystems and adapted to their unique conditions. The potential damage that could result from disturbance of flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems: adequate capacity for flood control, energy dissipation, and sediment movement, as well as impacts to valuable habitat for desert species.

The Project site provides forage, cover, roosting and nesting habitat for a variety of bird species. These waters also support the flat-tailed horned lizard (*Phrynosoma mcallii*) a species currently proposed for federal listing under the Endangered Species Act. In addition, Peninsula bighorn sheep (*Ovus Canadensis nelsoni*) which are federally-listed as endangered, were observed on the project site (at pg. C.2-24).

The FEIS should commit to the use of natural washes, in their present location and natural form and with adequate natural buffers, for flood control to the maximum extent practicable. Because placement of SunCatchers could result in erosion, migration of channels and local scour in excess of 5 feet in many cases (at pg. C.7-33), SunCatchers should not be placed in washes, to minimize direct and indirect impacts to the washes. The potential damage that could result from disturbance of flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems: adequate capacity for flood control, energy dissipation, and sediment movement, as well as impacts to valuable habitat for desert species. The FEIS should demonstrate that downstream flows will not be disrupted due to proposed changes to any natural washes nor the excavation of large amounts of sediment. F2-21

Further, additional evaluation and comparison of the impacts of spanning versus various at-grade crossings, such as Arizona crossings or low flow culverts, should be provided in the FEIS (at pg. C.7-13).

Recommendations:

- To minimize direct and indirect impacts, such as erosion, migration of channels, and local scour, do not place SunCatchers in washes.
- Commit to the use of natural washes, in their present location and natural form and including adequate natural buffers, for flood control to the maximum extent practicable.
- Demonstrate that downstream flows will not be disrupted due to proposed changes to any natural washes or the excavation of large amounts of sediment. F2-21
- Minimize the number of road crossings over washes in order to minimize erosion, migration of channels, and scour. Road crossings should be designed to provide adequate flow through during large storm events.
- Locate facilities outside of waters. Estimate acreages and number of species protected as a result of alternative design configurations.

F2-21 These comments raised concerns about the impacts to ephemeral washes and potential effects of impacts on ephemeral washes to Federally threatened or endangered species as well as the biodiversity and ecosystem stability the washes provide. The United States Army Corps of Engineers (Corps) has prepared an alternatives analysis pursuant to Federal Clean Water Act Section 404(b)(1) guidelines and the Agency Preferred Alternative (the IVS project with modifications) includes avoidance of impacts in the primary Waters of the U.S. washes. The reduction of impacts to washes under the Agency Preferred Alternative will result in reduced effects to biodiversity and ecosystem stability. There are no known Federally listed threatened or endangered species anticipated to be adversely affected by the IVS project.

EPA is also concerned about the indirect impacts to the Salton Sea. As mentioned above, the ephemeral waters traversing the Project site flow to the Westside Main Canal and Coyote Wash, tributaries to the New River, which drains to the Salton Sea. The DEIS fails to assess the indirect impacts to the Salton Sea from the proposed Project. Indirect effects could include, but are not limited to: 1) changes in hydrology and sediment transport into the New River and Salton Sea; 2) increases in volume and velocity of polluted stormwater from impervious surfaces on the Project site; 3) decrease in water quality from the impairment of ecosystem services such as water filtration, groundwater recharge, and attenuation of floods; 4) disruption of hydrological and ecological connectivity from upstream of the Project to the Salton Sea; and 5) decreases in biodiversity and ecosystem stability. Ensuring maximum avoidance of Waters and, thereby, reducing potential discharges into waters should reduce the indirect effects to the New River and Salton Sea. **F2-22**

Recommendation:

- Maximize avoidance of Waters to reduce potential discharges into waters, as described above, to reduce indirect effects to New River and Salton Sea, which are waters of the United States.

F2-22 Refer to response to comment F2-21, above.

Water Supply and Groundwater Resources

The DEIS proposes to supply water for the Project via a new 12-mile water line from the Seeley Wastewater Treatment Plant (SWWTP). The DEIS indicates that a Mitigated Negative Declaration (MND) had been prepared for the necessary improvements to the SWWTP to increase its capacity (at pg. C.7-28). The recent lack of adoption of the MND by the County Water District Board of Directors, as described on page 1-1 of the May 10th Supplement to the Imperial Valley Solar Application for Certification (Supplement), has raised concerns as to the viability of the SWWTP as a water source for the Project. The FEIS should include an update on the recent decision and a full evaluation of the environmental impacts from the proposed SWWTP upgrades if it is still considered to be a viable water source for the proposed Project.

F2-25

The DEIS indicates there is currently no backup water supply for the Project (at pg. C.7-40). The DEIS also indicates no groundwater would be used by the Project and, therefore, the effect on groundwater infiltration would be negligible (at pg. C.7-3). On May 10th, the Supplement was submitted to BLM and CEC which includes changes to the Project description and new analyses of project design modifications, and proposes a sole source aquifer as an alternative water supply for the Project. In light of the fundamental changes to the Project, the Supplement should be fully integrated into the FEIS and the FEIS should adequately respond to stakeholder comments.

Recommendations:

- Include an update on the proposed upgrades to the SWWTP and include a full evaluation of the environmental impacts from the proposed SWWTP.
- Fully integrate the recent Supplement into the FEIS.

F2-25

F2-25 Refer to Section D.4.2 for responses related to the project alternatives and to response to comment F2-24, above.

Newly Proposed Alternative Water Supply

The Supplement indicates the Project will rely on up to 50 acre-feet per year (afy) of withdrawals from an Alternative Water Supply (AWS) within the Ocotillo-Coyote Wells Groundwater Basin (OCWGB), a federally designated sole source aquifer, until water is made available from the upgraded SWWTF. The Supplement concludes the withdrawals from the AWS will have no significant impact on water levels in the area nor exacerbate overdraft of the OCWGB. It is our understanding from the Applicant that the AWS will result in no net increase in pumping. If this is so, this should be disclosed and adequately supported in the FEIS.

Information in the Supplement raises questions regarding whether adequate afy at the AWS is actually available. The AWS well is currently capped at a production rate of 40 afy, but the Project will require up to 50 afy. The Supplement does not provide information on how much of the 40 afy is already committed to other users. The most recent data provided in Appendix B in the URS Groundwater Evaluation Report (in the Supplement) indicate 42.1 afy was withdrawn from the AWS in 2004. This is the last year of withdrawal data provided in the Supplement. The Supplement appears to assume that Imperial County will allow additional withdrawals above the 40 afy, but there is no acknowledgement provided from the County. In fact, the opposite may be true. For example, the recently released draft Environmental Impact Report (DEIR) for the Coyote Wells (CW) project (aka, Wind Zero project) is proposed within the OCWGB and near the Boyer Well. The CW project intends to use up to 67 afy. The CW DEIR acknowledges the OCWGB is in an overdraft condition. It includes numerous groundwater mitigation measures not included in the Supplement. (See ftp://ftp.co.imperial.ca.us/icpds/eir/coyote-wells/19hydrology-water-quality.pdf.) It is not clear whether URS considered in its analysis the planned withdrawals by the CW project or the mitigation measures proposed for the CW project. F2-26

There are also questions concerning how long the AWS will be needed. The "Will Serve Letter" in Appendix A indicates the AWS will be required for six-to-eleven months, but the Supplement does not commit to a time frame for needing the water. Unanticipated delays in the upgrade of the SWWTF could occur.

Finally, the Supplement does not indicate whether the AWS withdrawals would impact nearby residential/private wells.

Recommendations:

- Confirm the AWS will result in no net increase in pumping from the OCWGB.
- Address the discrepancy between the current 40 afy cap on the AWS and the increased 50 afy demand, and provide documentation that the County supports additional withdrawals from the AWS.

- Because the OCWGB may already be in an overdraft condition, the FEIS should discuss the level of impact the AWS would have on the overdraft conditions in the OCWGB.
- Discuss the applicability of the mitigation measures included in the CW DEIR and whether the CW project water demand was considered in the Supplement's analysis.
- Address whether the AWS withdrawals would impact nearby residential/private wells.
- In light of the recommendations above, the FEIS should confirm the availability of a water supply for construction and operations of the Project and fully evaluate the environmental impacts associated with the ultimately proposed supply of water. F2-26

The FEIS should also further describe groundwater availability for this Project in light of other projects within the region, as well as the uncertainty regarding potential cumulative impacts on groundwater resources. Given the potential for adverse impacts from pumping groundwater, it is important that all monitoring and mitigation information be provided to the public and decision makers. The proposed Project would permanently eliminate thousands of acres of wildlife habitat. In the arid Mojave Desert, habitat and the springs are critically important for several special status species that rely on water sources and wetland vegetation communities. Our recommendations are further discussed in this letter's 'Cumulative Impacts' section.

F2-26 Refer to Chapter 2, Alternatives Including the Proposed Action, in the FEIS for a discussion regarding water sources for the project.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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COMMUNITIES AND ECOSYSTEMS DIVISION

FROM

DATE: June 2, 2010

NAME: Tom Plenys

TELEPHONE NO: 415-972-3238

FAX NO: (415) 947-8026

DEPARTMENT / OFFICE: Environmental Review Office

TO

NAME: Jim Abbott, Acting State Director, BLM
cc: Jim Stobaugh, Project Manager, BLM

SUBJECT: Errata to US EPA May 27th Imperial Valley Solar DEIS Comments

Includes: 1) Date stamp on cover page, 2) added word 'days' on cover page after '30' in 2nd paragraph and 3) enclosures to letter.
PDF of complete letter with enclosures emailed to Jim Stobaugh.

F2-41

F2-41 The Environmental Protection Agency (EPA) submitted a second copy of their comment letter with minor errata as noted on the cover sheet. Because the errata did not change any of the original comments, the entire second copy of the letter was coded as F2-41. The responses to the EPA comment letter are provided above and in Section D.4, Common Responses.

D.5.3 NA1 – Responses to Comments from the Quechan Indian Tribe (May 17, 2010)

In addition to the direct destruction of cultural resources that will result from the development of one million acres of land for solar and wind projects, there will also be indirect visual impacts. For example, the Tribe is concerned that certain ceremonial areas located in the Yuha, just south of the project area, would be affected by the view of this project. The cultural and ceremonial use of the landscape will be impaired when tens of thousands of solar pedestals are visible from these areas. **NA1-9**

NA1-9 This comment raised concerns that there would be indirect visual impacts to certain ceremonial areas. As discussed in the SA/DEIS and the FEIS, the project was determined to result in unavoidable adverse visual impacts which likely will also include areas identified as ceremonial areas. The adverse visual impacts of the project cannot be fully mitigated and cannot be avoided. However, the Programmatic Agreement discussed in detail in Section 4.5, Cultural Resources, in the FEIS provides an opportunity for Native American Tribes and other interested parties to consider the project impacts on cultural resources including ceremonial areas, and the mitigation to reduce those effects as feasible.

F. The Inadequate Cultural Resource Identification, Evaluation, and Mitigation Efforts Also Violate California Law.

CEQA requires development of appropriate mitigation measures. "Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way." CEQA Guidelines, § 15126.4(a). The DEIS fails to development appropriate mitigation measures relating to cultural resources. The only mitigation referenced is the Draft PA, which as discussed above, does not contain any actual mitigation measures or performance standards.

NA1-13

California law also favors the preservation of cultural resources in place and the avoidance of impacts to such resources. Appendix K to the CEQA Guidelines states that "public agencies should seek to avoid damaging effects on an archaeological resource whenever feasible." The commentary on Appendix K states that "an important principle in this appendix is the emphasis on avoidance of archaeological sites. . . where the proposed project includes a potential impact on a site, avoidance is suggested as a preferred mitigation measure where all other factors are equal." Here, hundreds of resources will be directly or indirectly impacted. Yet, the rush to issue certification and approve the right-of-way forecloses a meaningful opportunity to design the project in a way that will avoid resources or to consider whether an alternative location should be selected.

NA1-13 As a Federal agency, the BLM is not bound by the requirements of CEQA. However, the FEIS describes the Agency Preferred Alternative which was developed from the IVS project specifically to avoid areas of known cultural sensitivity with respect to sacred burial sites and certain drainages, while still accomplishing the majority of the project and meeting the BLM purpose and need. Because the BLM is not bound by the requirements of CEQA, no comment on the intent of meeting the requirements of Appendix K of the CEQA Guidelines is provided.

Refer also to response to comment NA1-12, above, regarding the status of the Programmatic Agreement and the formulation of mitigation measures addressing the project impacts on cultural resources.

G. The Staff Assessment Fails to Comport With CEQA Provisions Addressing Disposition of Discovered Human Remains.

The project area is known to contain sites containing human cremations of potentially historic origin. The full extent of the cremation sites is not currently known to the Quechan Tribe due to the lack of consultation and lack of a cultural resource report. CEQA Guidelines Section 15.064.5(d) states that "when an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resource Code 5097.98." Public Resource Code 5097.98 provides a process for identifying the most likely descendants of the remains and provides for inspections, consultations, and development of agreements with the most likely descendants for the appropriate treatment of the remains. It does not appear that the CEC or the applicant have complied with these provisions. Due to the lack of consultation, the Quechan Tribe lacks sufficient information at this time to know whether its people are the most likely descendants of the discovered remains. Further investigation and consultation with affected tribes (including the Quechan) is required before approving any project impacting these sacred cremation sites. **NA1-14**

NA1-14 Refer to response to comment NA1-13, above.

D.5.4 S1 – Responses to Comments from the California Department of Transportation (May 7, 2010)

Utility Encroachment:
Please refer to Caltrans Encroachment Permits Manual (http://www.dot.ca.gov/hq/traffops/developserv/permits/encroachment_permits_manual/index.html) for guidance on utility encroachment. The following information is contained in Chapter 600, Table 6.7 (page 6-35) of the Encroachment Permit Manual. Line supports for overhead lines crossing freeways must comply with these requirements, they:

1. Should have a minimum lateral clearance of 30' from the edge of a through lane and 30' from the edge of a ramp lane, when possible.
2. Shall be located outside the right-of-way (R/W) or between the R/W line and access control line if different. Any other placement must be approved by the Division of Design, Chief. S1-2
3. Should not be permitted in medians.
4. Should not be permitted on cut or fill slopes.
5. Shall not impair sight distances.
6. Shall be compatible with access requirements.

S1-2 It is acknowledged that any transmission lines crossing or within State highway right-of-way (ROW) must meet the requirement in the California Department of Transportation (Caltrans) Encroachment Permit Manual. The project applicant will coordinate with Caltrans as appropriate regarding transmission lines crossing or within State ROW.

Traffic:
Please refer to Caltrans Encroachment Permits Manual for guidance on Traffic Control. The following information is contained in Appendix E (page E-42) of the Encroachment Permit Manual. For placement of aerial lines, installation or removal of overhead conductors crossing a freeway require traffic control by the California Highway Patrol (CHP) and usually occur on weekend mornings. The CHP can perform a rolling break in traffic on most highways to allow S1-3

up to a five-minute clearing. These breaks are adequate for simple cable installation. Utility personnel carry the conductors across the freeway lanes and hoist them into place on the opposite side of the freeway. On larger conductor crossings such as transmission lines, 1" or greater in diameter, districts may determine that safety nets are needed to prevent transmission lines from falling on traffic during cabling installations. Temporary safety-net support poles are placed at protected locations outside shoulders and in medians. If locations for temporary supports are not available, the utility company may use K-rail and sand barrel crash cushions. After rope nets are strung during CHP traffic breaks other work is then allowed to proceed. Placement of the aerial line may be by helicopter. **S1-3**

S1-3 It is acknowledged that project related construction traffic on or that may affect State highway facilities will require a traffic control plan consistent with the requirements in the Caltrans Encroachments Permit Manual. The project applicant will coordinate with Caltrans as appropriate regarding the need for construction related traffic control on and crossing State highways.

Any work performed within Caltrans R/W must provide an approved final environmental document including the California Environmental Quality Act (CEQA) determination addressing any environmental impacts within the Caltrans' R/W, and any corresponding technical studies. If these materials are not included with the encroachment permit application, the applicant will be required to acquire and provide these to Caltrans before the permit application will be accepted. Identification of avoidance and/or mitigation measures will be a condition of the encroachment permit approval as well as procurement of any necessary regulatory and resource agency permits **S1-5**

S1-5 It is acknowledged that Caltrans will require final environmental documentation, including appropriate avoidance, minimization, and mitigation measures, as part of any encroachment permit application. Note that the final environmental documentation for the IVS project will consist of a Final Staff Assessment (FSA) prepared by the California Energy Commission to comply with the requirement of the California Environmental Quality Act (CEQA) and a Final Environmental Impact Statement (FEIS) prepared by the BLM to comply with the requirements of the National Environmental Policy Act (NEPA).

D.5.5 L2 – Responses to Comments from Imperial County (May 27, 2010)

5) In the event that an on-site water well is needed prior to construction or at any point during the operation of the facility, the County will be the CEQA "lead agency" for any required Conditional Use Permit for on-site water wells as well as CEQA "responsible agency" for other related environmental reviews, e.g. encroachment permits for local County road improvements, encroachment permits, needed for the approval of the IVSP proposal. **L2-6**

L2-6 None of the Build Alternatives would require the use of any new well or well water on the project site. Well water, from an off site well already permitted for the withdrawal of water, is proposed to be used during constriction an initial operations. Refer to Chapter 2, Alternatives Including the Proposed Action, for a description of that project feature. In addition, refer to Section D.4.2 for responses related to the project alternatives.

6) The project indentifies a single 175,000 gallon water tank along with portable fire extinguishers for fire protection. The County was not able to find within the DEIS the fire protection/emergency response plan, emergency fire access plan, the water lines, and hydrogen storage facility. **L2-7**

L2-7 The required components of the Fire Prevention Plan are described in Section 4.6, Fire and Fuels Management, in the FEIS.

The hydrogen storage project feature was modified after the publication of the SA/DEIS. That modification is described in Chapter 2, Alternatives Including the Proposed Action, and is evaluated further in Chapter 4, Environmental Consequences, in the FEIS. That evaluation is also summarized in Appendix B, Determination of NEPA Adequacy (DNA), in the FEIS. Section D.4.16, Determination of NEPA Adequacy, earlier in this responses to comments appendix, briefly describes the purpose and content of the DNA relative to modifications made to the Build Alternatives.

7) It is the County's understanding that the 30,000 dishes will utilize a closed-cycle heating/expansion system using Hydrogen gas as the fuel source. It is expected that there will be a significant amount of Hydrogen gas (195 cubic feet per dish, or 5,850,000 cubic feet at build-out), and that each dish will need to replace it's Hydrogen gas twice a year. The Hydrogen gas, which is highly explosive, will be produced, transported, stored, and handled during maintenance and replacement all on-site.

The project description states that there will be a two day supply of Hydrogen gas on-site at any given time. Based on 30,000 dishes that need to have their Hydrogen gas replaced twice a year and assuming that every day of the year the facility staff is replacing Hydrogen gas, a two day supply would be able to cover 164 dishes, at 195 cubic feet per dish the storage tank(s) would need to be able to hold 31,980 cubic feet of Hydrogen gas. The County did not find an analysis of an on-site "worst case" blast scenario and/or a proposed fire protection/emergency response plan to protect IVSP employees and all surrounding sensitive parties and wildlife. **L2-8**

8) The County Land Use Ordinance (LORS) identifies the land as Government Special Public (G/S Zone) and Open Space Preservation (S-2 Zone). In a previous letter to the CEC (August 2008), the County questioned the proponent's statement in their "*Executive Summary*", that "...According to Imperial County LORS, solar energy conversion is an **allowable use** for the Project Site..." (emphasis added). The proponents were to provide the authority for the above statement and we are awaiting the response.

Neither the County G/S Zone nor the S-2 Zone specifically identify a Suncatcher type solar thermal project as an allowed or conditionally allowed use. For projects or uses that are not listed in a given land use zone, the applicant has two options, go through a "change of zone" process or a "similarity of use" process. During the past couple of years, the County has held two similarity of use processes on solar projects. **L2-8**

The first similarity of use process was to allow a solar photovoltaic project in the S-2 Zone, and the other was to allow a Suncatcher type solar thermal test project on a G/S Zone. Both were found to be similar in use to their respective land use zones. However, the IVSP project has not been specifically considered as similar in either land use zone. In the case of the S-2 Zone, the solar projectwas photovoltaic flat panels not 40 foot high solar thermal dishes, while in this case of the G/S zone the project was a solar thermal dish project, but located on a college campus and only a relatively small 60 dish 1.5MW, test project. The similarity of uses did not cover the development of a 6,500 acre 30,000 Suncatcher type solar thermal project.

The County Land Use Ordinance would require that project to go through a "similarity of use" process to determine whether the Suncatcher type solar thermal project is consistent with similar uses in the given zones. Alternatively, the project proponent could request that the CEC exercise its authority to override local government laws, ordinances, regulations and standards (LORS). Pursuant to State Law, the "LORS Override" can be done only if the CEC finds that the facility is required by the public convenience, a necessity and that there are not any prudent and feasible alternatives

L2-8 Discussion of the worst-case release and explosion of the hydrogen on-site is provided in Section 4.11, Public Health and Safety, and Hazardous Materials, in the FEIS.

County Land Use Ordinances do not apply to lands under the jurisdiction of the BLM.

9) The IVSP, CEC and BLM staff have been previously informed that the solar project will also need to be reviewed by the Imperial County Airport Land Use Commission for a **L2-9**

L2-9 The project site is not within 20,000 feet of an existing airport. It is well outside the runway protection zones for the Imperial County Airport. Therefore, it is not expected that the Federal Aviation Administration (FAA) regulations (Code of Federal Regulations Part 77) would apply to the proposed project. Part 77 sets and implements standards for determining obstructions in navigable airspace and the requirements for notice to the FAA of certain proposed construction or alteration that may obstruct navigable airspace. Because the project site is not within 20,000 ft of an airport, it is not expected to obstruct any airspace and, therefore, would not require review by the Imperial County Airport Land Use Commission (ALUC). However, the ALUC had the opportunity to comment on the draft environmental document during the public review period and no comments were received from the ALUC. Therefore, no determination of consistency is expected to be required from the ALUC for the proposed project.

10) The project states that the applicant expects the construction period to be 44 months, but does not specify if that is for the entire project or just Phase I. **L2-11**

L2-11 As indicated in Chapter 2, Alternatives Including the Proposed Action, in the FEIS the construction and installation of the 30,000 SunCatchers for the Imperial Valley Solar (IVS) project will take approximately 40 months. This includes both Phases I and II.

12) The granting of easements on private lands to and from currently land-locked private parcels within the IVSP project needs to be addressed and it's the County position that all parcels requiring access have both "legal and physical access" prior to IVSP final approval by the CEC and BLM; **L2-13**

L2-13 Measure LAND-1 provided in Section 4.9, Land Use, in the FEIS addresses the private parcels and the application of the Subdivision Map Act.

13) As previously indicated to the CEC, BLM and IVSP staff, a CUP approval will be required from the Imperial County Planning Commission for the drilling and operation of a water well(s) on-site to supply the project site. Any water from the New River to the **L2-14**

L2-14 Refer to response to comment L2-6, above.

a water well(s) on-site to supply the project site. Any water from the New River to the site will also require biological studies to determine impacts to biological and wildlife habitat. **L2-15**

L2-15 This comment raised concerns about the lack of surveys for special-status species that could be affected by the diversion of reclaimed water from discharge into the New River from the Seeley Wastewater Treatment Plant (SWWTP) to provide water for the IVS project. It is unknown if the diversion would result in affects to downstream wetlands; however, analysis has indicated that the reduction of flows in the New River from the proposed new water use would not be substantial. Additionally, subsequent to the release of the SA/DEIS, focused surveys for Federally listed species have been conducted with negative results at the downstream areas in question.

Please provide the County with responses to the above concerns and other Imperial County Departments may also have project-related comments as well. **L2-16**

L2-16 Appendix D, Public Comments on the Draft Environmental Impact Statement (DEIS), in the FEIS includes responses to all substantive comments received by the United States Bureau of Land Management (BLM) on the DEIS.

D.5.6 O1 – Responses to Comments from Public Employees for Environmental Responsibility (April 20, 2010)

The **CEQA Objectives** statement does not include or imply an underlying purpose or need for the project, only development details. O1-4

O1-4 As a Federal agency, the BLM is not bound by the requirements of the California Environmental Quality Act (CEQA). Compliance with the requirements of CEQA for the IVS project including CEQA objectives is the responsibility of the California Energy Commission. Therefore, a CEQA objectives statement is not included in the FEIS because it is not required as part of the Federal National Environmental Policy Act (NEPA) compliance process. Refer to Chapter 1, Introduction and Purpose and Need, in the FEIS for the BLM's purpose and need for the project which is required information under NEPA.

Lack of a list of references. References made in text should be cited in a list of references O1-9

O1-9 The references used in the preparation of the SA/DEIS and the FEIS are provided in Chapter 9, References, in the FEIS.

Inadequate closure protocols and Surety bonding. p. E-11 states that "Laws, Ordinances, Regulations and Standards (LORS pertaining to facility closure are identified in the sections dealing with each technical area" (Sections C-1 through 15 and D-1 through 5). The promised discussions relating to closure protocols are largely missing from technical area assessments. Specific guidelines for achievement of "restoration" of land post-closure are lacking and the Surety Bonding does not protect the public from the abuses of mine reclamation bonding, which are well known.[4] Restoration in the sense of returning the land to its pre-development condition is probably impossible, as discussed below.

The level of Surety bonding is placed in the hands of the BLM Authorized Office. This is not adequate for the very complex matter of reclaiming severely disturbed arid lands. The cost, and therefore the level of bonding required, needs to be judged by an independent expert group fully knowledgeable of the problems involved, the time that will be required for the best possible results, the detailed nature of an adequate monitoring program and the actions required based on monitoring results, and the time interval over which restoration activities and monitoring are to be maintained specified. Responsibility for reclamation should be in the hands of independent land restoration specialists, not the BLM, which is insufficiently staffed (as is amply demonstrated by failure to enforce mandated mitigations in numerous projects, including, for example, transmission lines).[5] O1-10

O1-10 The project does not include a mine reclamation component.

p. B.2-2. Rejection of all offsite alternatives deemed unreasonable by the BLM because, as discussed below, none would accomplish the purpose and need for the proposed action. Considering that the BLM statement of Purpose and Need addresses only paper-work requirements, not real underlying purposes and needs as required by NEPA, this rejection is unreasonable.

p. B.2-2. Out of hand rejection of other generation technologies simply underscores impact issues of the proposed project. For example, this document does not demonstrate differences in greenhouse gas releases on any rigorous basis, including effects of release by land disturbance to create the facilities, the GHG cost of producing the hydrogen to be used by Solar Two, and the actual extensive use of natural gas as at existing concentrating solar power plants. O1-11

p. B.2-5. Alternatives Table 1. The statement "While it will very likely be possible to achieve 750 MW of distributed solar energy over the coming years, the limited numbers of existing facilities make it difficult to conclude with confidence that this much distributed solar will be available within the timeframe required for the SES Two project" is absurd on two counts: 1) there is no existing SunCatcher facility to rely on either; and 2) the only <u>requirement</u> that Solar Two meet the chosen timeframe is to qualify the

builders for free federal dollars. Moreover, distributed solar power does not require grid interconnection, except for local small plant operations, which is much more limited than remote power plants. **O1-11**

O1-11 The National Environmental Policy Act (NEPA) does not require the greenhouse gas (GHG) analysis and comparison suggested in this comment. Refer to Sections 3.4 and 4.4, Climate Change, in the FEIS for the GHG analysis conducted for the project.

Wind energy projects are already being pursued in counties north of Imperial and San Diego Counties. Refer also to Section 2.8.3, Other Alternatives Considered but Eliminated from Detailed Analysis, in the FEIS for discussion of why wind energy technologies were not considered as alternatives for the proposed project.

p. C.7-15. Further treatment of imported waste water is said to "demineralize" the water for mirror washing by RO. Tertiary treated water contains many contaminants in addition to "minerals" so the actual composition of the water after on-site treatment must be stated. **O1-20**

O1-20 The on-site treated water will meet all water requirements and will be collected in a sealed basin. Section 4.17, Hydrology, Water Use, and Water Quality, in the FEIS for the discussion of waste water treatment and requirements for the Build Alternatives.

D.1 – Facility Design

p. D.1-1 "The California Energy Commission staff concludes that the design, construction, and eventual closure of the project and its linear facilities would likely comply with applicable engineering laws, ordinances, regulations and standards. The proposed conditions of certification, below, would ensure compliance with these laws, ordinances, regulations and standards.

p. D.1.2 Notes Facility Design not intended as a CEQA or NEPA analysis. The LORS applied to engineering design and construction relate only to assurance of public safety--- thus have nothing to do with environmental impacts or reclamation upon closure.

D.1.3 Laws, Ordinances, Regulations and Standards

p. 5.3-2 [Note, inclusion of boiler plate statements/discussions without repagination in this SA/DEIS is confusing and unnecessary]. Applicable LORS: O1-22

Federal. Title 29 Code of Federal Regulations, Part 1910, Occupational Safety and Health Standards

State. 2007 California Building Standards Code (also known as Title 24, California Code of Regulations)

Local. Imperial County regulations and ordinances

General. American National Standards Institute, American Society of Mechanical Engineers, American Welding Society, American Society for Testing and Materials

O1-22 Decommissioning and closure are discussed in certain sections where it is relevant throughout the FEIS. For example, Sections 4.3.5.2 in Biological Resources and 4.16.4.2 in Visual Resources discuss the impacts of decommissioning and closure related to those types of resources.

C.2 – Biological Resources

p. C.2-28 Impact analysis characterizes "effects to plant communities as temporary or permanent, with a permanent impact referring to areas that are paved or otherwise precluded from **restoration to a pre-project state** [emphasis added]...Natural recovery rates from disturbance in these systems depend on the nature and severity of the impact. For example, creosote bushes can resprout a full canopy within five years after damage from heavy vehicle traffic (Gibson et al. 2004), but more severe damage involving vegetation removal and soil disturbance can take from 50 to 300 years for partial recovery; complete ecosystem recovery may require over 3,000 years (Lovich and Bainbridge 1999). In this analysis, an impact is considered temporary only if there is evidence to indicate that pre-disturbance levels of biomass, cover, density, community structure, and soil characteristics could be achieved within five years."

This statement means that disturbances from virtually all road-building, structure installation, including placement of SunCatchers, transmission and pipe lines, retention and evaporation basins disturbance will be "permanent" and thus "precluded from restoration to a pre-project state." O1-24

C.4 – Geology and Paleontology

p. C.4-1. It is stated that "Based on its independent research and review, "It is staff's opinion that the Stirling Energy Systems Solar Two Project will be designed and constructed in accordance with all applicable laws, ordinances, regulations, and standards and in a manner that both protects environmental quality and assures public safety."

This is not consistent with the biological opinion cited above, which indicates that virtually all development activities will result in non-temporary—i.e. permanent—impacts that degrade environmental quality.

p. C.4-1. The above staff opinion is also inconsistent with the following staff objective on the same page: "Staff's objective is to ensure that there will be no consequential adverse impacts to significant geological and paleontological resources during the project construction, operation, and closure of the proposed project."

There nothing relevant to application of LORS to "restoration" following closure in this section, and only indirect inferences can be made as in the above comments.

O1-24 The cited impacts are considered permanent due to the length of time (40 years) the project is expected to operate. The term used as a characterization of the impact does not indicate preclusion from restoration.

C.8 – Land Use, Recreation, and Wilderness
This section contains no information on application of LORS to post-closure "restoration"

C.12 – Transmission Line Safety and Nuisance
This section contains no information on application of LORS to post-closure "restoration"

C.14 – Waste Management
This section contains no information on application of LORS to post-closure "restoration"

Search of the technical sections did not yield substantive information pertaining to LORS application to facility closure as stated on p. E-11. Full discussion of compliance of closure protocols with applicable LORS should be provided.

O1-26

O1-26 There are no laws, ordinances, regulations, and standards (LORS) relevant to land use that would apply to site restoration. Transmission line safety would only be relevant if the transmission lines were excluded from the closure and remained active. The LORS for public health and safety regarding hazardous waste would be the same LORS as would apply for construction.

D.5.7 O2 – Responses to Comments from the Center for Biological Diversity (May 26, 2010)

Because the project approval process includes a quasi-judicial process in the California Energy Commission, the Center hereby incorporates by reference all of the materials before the California Energy Commission regarding the approval of this project. BLM is a party to the CEC process, which is being conducted in concert with the BLM approval process, and BLM has access to all of the documents (which are also readily accessible on the internet), therefore, BLM should incorporate all of the documents and materials from that process into the administrative record for the BLM decision as well. **O2-4**

O2-4 The BLM will prepare an administrative record that appropriately supports the Draft and Final Environmental Impact Statements. Refer to Section D.4.15, CEC Process, for discussion regarding the CEC process for complying with the requirements of CEQA.

BLM is required to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 CFR § 1502.15. The establishment of the baseline conditions of the affected environment is a practical requirement of the NEPA process. In *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988), the Ninth Circuit states that "without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA." Similarly, without a clear understanding of the current status of these public lands BLM cannot make a rational decision regarding proposed project. *See Center for Biological Diversity v. U.S. Bureau of Land Management, et al.*, 422 F. Supp. 2d 1115, 1166-68 (N.D. Cal. 2006) (holding that it was arbitrary and capricious for BLM to approve a project based on outdated and inaccurate information regarding biological resources found on public lands). **O2-19**

The DEIS fails to provide adequate baseline information and description of the environmental setting in many areas including in particular the status of rare plants, animals and communities.

O2-19 These comments expressed concern about the adequacy of the baseline biological resources and impacts assessment analysis. Additional biological resource surveys have been conducted, including focused surveys for special-status plant species, and additional FTHL surveys. The baseline data at present are current and address the biological components on the project site. The Agency Preferred Alternative (the IVS Project with modifications) has been designed with the baseline biological resources data taken into consideration to avoid and minimize effects on biological resources to the greatest extent feasible while still meeting the project purpose and needs.

The flat-tailed horned lizard is currently (once again) being considered for protection under the federal Endangered Species Act and is sorely in need of additional protections to stem population declines due to ongoing threats. These issues should have been fully explored in the baseline discussion. Although the DEIS admits that the "The 6,063-acre plant site and the 92.8-acre off-site transmission line provide suitable habitat and food source to support FTHLs (SES 2008a)." The DEIS briefly mentions the current status of the species but does not clarify the need for additional protective measures to ensure recovery. As detailed below in the section regarding the lizard, the baseline has significantly degraded over the more than 15 years since listing for this species was first proposed and the threats are increasing including the cumulative impacts from this and other renewable energy projects.

The DEIS also uses lack of the land use designation in the FTHL Management Area as a way of minimizing the importance of this area for flat-tailed horned lizard recovery but fails to explain the history of the current designation. The BLM codified a majority of the Management Areas as Areas of Critical Environmental Concern[6]. However, the FTHL Rangewide Management Strategy (2003) failed to include connectivity between the Management Areas, including the proposed project site. O2-20

The baseline descriptions in the DEIS are similarly inadequate for other species including PBS. It acknowledges the inadequacy of the botanical surveys and in fact proposes additional seasons surveys (both spring and late summer/fall) in order for more accurately evaluate the baseline for on-site plant resources as the basis for adequate impact analysis.

As discussed below, because of the deficiencies of the baseline data for the proposed project area, the DEIS fails to adequately describe the environmental baseline. Many of the rare and common but essential species and habitats have incomplete and/or vague on-site descriptions that make determining the proposed project's impacts difficult at best. Some of the rare species/habitats baseline conditions are totally absent, therefore no impact assessment is provided either. A supplemental document is required to fully identify the baseline conditions of the site, and that baseline needs to be used to evaluate the impacts of the proposed project. O2-20

O2-20 Refer to response to comment O2-19, above.

Birds

As the DEIS notes, the proposed project area is rich in bird resources. The Imperial Valley, which is directly adjacent to the site, is noted as an Important Bird Area[13]. Birds migrate to the Imperial Valley from San Diego County – a route that goes over the project site. The DEIS fails to evaluate the impact to this migratory pathway from the proposed project. O2-25

The DEIS fails to address the fatalities that have been documented to occur from birds running into mirrors[14]. Adjacent to the proposed project site are agricultural fields, which also attract birds. The DEIS does not quantify the number of birds (rare, migratory or otherwise) that use/traverse the project site (for example a mean daily count), nor does it evaluate the impact to birds. McCrary[15] estimated 1.7 birds deaths per week on a 32 ha site with mirrors and a power tower configuration. The proposed project site is over 2500 ha (over 78 times larger) and has a different kind of mirror and power plant configuration—the DEIS should have analyzed the likely impacts to birds from the proposed project mirror configuration in the suncatcher design. Lacking baseline data of mean daily count of birds on the project site, analysis of the impacts to birds is impossible. Based on the existing literature, the impact may be significant.

Migratory birds were noted to occur on the proposed site (DEIS at pg. C.2-37). Clearly the site is within a migratory pathway and the migratory elevation is a key issue that needs further analysis. Mirrors within migratory elevations will create impacts to migratory birds. It is possible that these impacts could be avoided or minimized if mirrors are properly sited. These analyses needed to be included in the DEIS and in this instance still need to be done. Detailed surveys must form the basis for the evaluation of impacts to biological resources as required by NEPA. The failure to provide the baseline data from which to make any impact assessment violates NEPA. This failure to analyze impacts is not only a NEPA violation, but for migratory birds, may also lead to a violation of the Migratory Bird Treaty Act, 16 U.S.C. §§ 703 -711, because migratory birds may be "taken" if the proposed project is constructed. **O2-25**

Additionally, two 2,500,000-gallonevaporation ponds are proposed to be constructed on site. While the ponds are proposed to be fenced and netted, they still have the potential to attract birds onto the site – an oasis in the desert - and into the mirrors. DEIS at C.2-29. The DEIS is unclear about the amount of time water may be retained in these basins and no discussion of this infrastructure is identified in the biological section of the DEIS, nor are impacts analyzed or minimization measures identified. Examples of minimization could include requiring covered or contained infrastructure, which would not only eliminate bird (and other wildlife) attraction, but would reduce evaporation and therefore water use in this arid environment. Alternatively, the pools could be required to be emptied in a less than 24 hour period so they would not be an attractant to birds (including ravens).

O2-25 This comment raised concerns about the lack of analysis about the potential for the evaporation ponds to attract birds. The expressed concern was that the attraction of the ponds would result in a risk of avian injury and mortality from increased collisions with the SunCatchers. The project applicant has proposed measures to reduce the attractiveness of the evaporation ponds to wildlife. The transmission line towers in the immediate project area and proposed for connection of the IVS project to the Imperial Valley Substation are no taller than 110 feet (ft). Bird kills from collisions are more typical with structures that are greater than 300 ft tall. The SunCatchers will be 36 ft tall. Additionally, on completion of project construction, the reduced amount of habitat on the project site would result in the attraction of bird species that are adapted to living under disturbed conditions and in close proximity to development.

Burrowing Owls

The DEIS notes that "Three active burrowing owl burrows were located on the project site, one along the transmission line corridor, one near the off-site reclaimed waterline, and four at adjacent off-site locations (SES 2008a)" for a total of nine active burrowing owl burrows. C.2-26. Preliminary results from the 2006-7 statewide census identified that Imperial county was a strong-hold for Western burrowing owls.[16] However, the DEIS fails to evaluate the potential impact of the proposed project on the regional distribution of owls. O2-26

While "passive relocation" does minimize immediate direct take of burrowing owls, ultimately the burrowing owls' available habitat is reduced, and "relocated" birds are forced to compete for resources with other resident burrowing owls and may move into less suitable habitat, ultimately resulting in "take".

5. Badger and Desert Kit Foxes

Badgers and desert kit foxes were identified in the project area during surveys. DEIS C.2-38-39. Literature on the highly territorial badger indicates that badger home territories range from 340 to 1,230 hectares[17]. Therefore, the proposed project could displace *at least* one badger territory. While surveys prior to construction are clearly essential, even passive relocation of badgers into suitable habitat may result "take". Excluding badger from the site is likely to cause badgers to move into existing badger's territory. The same scenario of passive relocation for kit fox may also result in take. Studies need to be provided on both on- and off-site badger and kit fox territories if animals are to be passively relocated in order to increase chances of persistence. At a minimum, the revised or supplemental DEIS should identify suitable habitat nearby if the project is relying on passive relocation as a mitigation strategy. O2-26

O2-26 This comment suggested that the passive relocation planned for western burrowing owl, American badger, and desert kit fox would constitute "take" of these species by forcing them into areas already occupied, thus resulting in take as a result of competition for resources. Passive relocation of western burrowing owls in the Imperial Valley is an accepted mitigation measure. The BLM listed as sensitive western burrowing owls in the Imperial Valley have adapted to dynamic agricultural practices and frequent disturbances related to such practices. Approximately 71 percent of the western burrowing owls in California occur in the Imperial Valley and their population densities are much higher in the agricultural areas of the Imperial Valley than elsewhere. American badger and desert kit fox are not Federally listed as threatened or endangered, and are not listed as BLM sensitive animal species. Therefore, the passive relocation of the western burrowing owl, American badger, and/or the desert kit fox would not result in "take" as defined by the United States Fish and Wildlife Service or the California Department of Fish and Game.

7. Decommissioning and Reclamation Plan

Desert lands are notoriously hard to revegetate or rehabilitate[20] and revegetation never supports the same diversity that originally occurred in the plant community prior to disturbance[21]. The task of revegetating over six square miles will be a Herculean effort that will require significant financial resources. In order to assure that the ambitious goals of the revegetation effort is met post project closure, it will be necessary to bond the project, so that all revegetation obligations will be met and assured. The bond needs to be structured so that it is tied to meeting the specific revegetation criteria. O2-28

The project will cause permanent impacts to the on-site plant communities and habitat for wildlife despite "revegetation". Revegetation criteria are lacking in the DEIS. If criteria are based on the agency's regulations identified in any of the bioregional plans for the CDCA (NECO, NEMO, WEMO)[22] those rehabilitation strategies[23] only requires 40% of the original density of the "dominant" perennials and only 30% of the original cover. Dominant perennials are further defined as "any combination of perennial plants that originally accounted cumulatively for at least 80 percent of relative density".[24] These requirements fail to truly "revegetate" the plant communities to their former diversity and cover even over the long term. The Decommissioning and Reclamation Plan is not available for public review, and analysis is the DEIS states "The applicant's data response (2008f)) does not provide sufficient information to guide the decommissioning of the project disturbance area, nor does it provide adequate information regarding the funding needed for those activities". DEIS at C.2-51. This clearly fails to adhere to BLM's own regulations 43 CFR 3809.550 et seq. that require a more detailed reclamation plan and a cost estimate. O2-28

O2-28 This comment raised concern about the level of effort that would be required to adequately restore the desert vegetation communities on the project site after decommissioning of the plant. Specifically, the commenter expressed concern about the funding of such an effort, the lack of criteria in the SA/DEIS, and that the applicable *California Desert Conservation Area Plan* (CDCA Plan) criteria are not stringent enough to result in restoration of the desert vegetation communities that would be affected by the IVS project. The BLM will require that the applicant provide bonding to fund future reclamation efforts. The applicant is preparing a reclamation plan that will have more stringent criteria than the CDCA Plan and will be subject to BLM review and approval before the BLM considers approval of the right-of-way grant.

The FSA/DEIS here fails to adequately identify and analyze the potential growth inducing impacts in the area. For example, it is possible that if the Seeley water reclamation project does go forward it could act as a magnet for other industrial development in the area along with the new energy infrastructure for the proposed project. O2-39

O2-39 The proposed improvements and upgrades to the Seeley Wastewater Treatment Plant are being addressed in a separate Environmental Impact Report (EIR) being prepared under the requirements of the California Environmental Quality Act (CEQA) by the

Seeley County Water District. That EIR will address the potential impacts, including potential growth inducing impacts, of those plant upgrades. Those improvements do not require action by the BLM and, therefore, are outside the purview of the BLM.

D.5.8 O4 – Responses to Comments from the Natural Resource Defense Council and The Wilderness Society (May 26, 2010)

Our principal concerns with the impacts of the Solar Two project at this time relate to three biological resources: Peninsular bighorn sheep which are federally endangered; the flat-tailed horned lizard, currently proposed for federal listing as threatened; and water resources and the habitat values associated with these resources in a desert environment, see "U.S. Army Corps of Engineers Public Notice/Application No.: SPL-2008-01244-MLM, pg. 11". In addition, we have identified several other issues requiring more robust analysis, namely the use of hydrogen and the potential for project phasing.

Biological Resources: The DEIS treatment of the observance of federally endangered bighorn sheep on the project site is particularly deficient. Merely attributing the occurrence of a ewe group of bighorn sheep to a "transient occurrence" without further investigation and analysis is inadequate, id. ES-21. The DEIS indicates that the project site provides marginal foraging habitat, id. C.2-18. Under varying precipitation conditions and levels of vegetation growth, marginal foraging habitat may supply an important part of the sheep's diet and could continue to attract foraging activity on an ongoing basis.

The document indicates that Department of Fish and Game biologists, and biologist for the project applicant "have speculated that the bighorn sheep sited at the project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site," id. C.2-24. While OHV activity in the area can certainly affect movement patterns of sheep, this is not the only possible explanation for the presence of the ewe group on the site, and the DEIS must not assume that it is. The final EIS must analyze avoidance, minimization and mitigation measures based on the assumption that bighorn sheep will continue to use the site on an ongoing basis for forage as their previous visitation suggests rather than simply dismiss their presence as an anomaly. For example, we would suggest consideration of concrete measures to mitigate for loss of habitat, such as purchase of replacement lands, as well as ongoing monitoring on the site to ensure that any subsequent usage by the sheep is well-documented and any necessary modifications to operations are made. **O4-3**

A second species of concern found on the project site is the flat-tailed horned lizard. As noted above, this species is currently being considered for listing as federally threatened, id. ES-12. Estimates of population in the project area vary widely from 2,000 to 5000, id. C.2-22. Greater specificity regarding this population is needed to fully understand possible impacts to this species especially in the context of the pending listing.

O4-3 Refer to response to comment O4-4, below.

The third area of concern related to biological resources is the impacts to water resources, in particular jurisdictional water of the United States and the state of California and biological values **O4-4**

associated with those waters. The Army Corps of Engineers has published detailed comments on the impacts that the proposed project and alternatives identified in this DEIS would have on the Westside Main Canal and the Coyote Wash, water resources which are deemed jurisdictional waters of the United States. Given the scarcity of such water resources in the desert environment; it is critical that the BLM fully consider the comments provided by the Army Corps. The D EIS includes the alternatives proposed by the Army Corps which supports a robust and full analysis of real alternatives.

In addition to the alternatives analyzed in the DEIS, we understand that a variation on the project has been proposed to the Army Corp based on their concerns – this new proposal apparently would reduce the 750 MW proposal to a 709 MW facility. This modification may reduce impacts to water resources and must be presented to the public along with a full analysis of its impacts in order to permit its selection.

Water resources are also important with regard to the project's on-site water use -- an important factor to analyze in the review of all solar projects proposed for desert environments. The DEIS does not indicate what source of water will be used if the upgrades to the Seeley Wastewater Treatment Plant are not complete prior to water being needed at the project site for construction, operations and maintenance – and in fact we understand that they will not. O4-4

We understand through documents available on the California Energy Commission website that the applicant has obtained purchase rights to 40 acre feet per year of water under an existing permit for water from a single source aquifer (see Supplement to the Imperial Valley Solar Application for Certification dated May 2010). These documents indicate that there will be no change in use at the well which has been operated by the Dan Boyer Water Company as a source for commercial water under a permit since the 1950s. CEC staff are still in the process of reviewing these supplemental materials. Regardless of the CEC determination, the issue of interim water use must be acknowledged and addressed in the final EIS as well.

Of significant concern overall regarding impacts to biological resources is the statement that, "With implementation of staff's proposed conditions of certification, staff is still uncertain if construction and operation of the proposed SES Solar Two Project would comply with all federal state and local LORS relating to biological resources," id. ES-23. The DEIS indicates that this uncertainty is due to the lack of information regarding impacts to, and mitigation for, impacts to waters of the U.S. id. ES-23. We expect to see greater certainty related to impacts to these waters of the U.S. and by association overall biological resources in the final EIS. In addition, we note that plant surveys have been deemed insufficient by staff and per staff recommendations in the DEIS are to be completed in the spring and fall of 2010 id. C.2-3

O4-4 This comment raised concerns about the unknown quantity of impacts to Waters of the United States (waters of the U.S.) related to the Seeley Wastewater Treatment Plant (SWWTP) reclaimed water pipeline part of the project site as well as the lack of analysis of the potential interim water supply from the Dan Boyer Well. The applicant has quantified the waters of the U.S. that occur along the proposed pipeline alignment. The applicant plans to either span Waters of the U.S., or to use horizontal drilling to

install the reclaimed water pipeline below waters of the U.S. Spanning of waters of the U.S. and subsurface installation of facilities below waters of the U.S. are not regulated pursuant to the Federal Clean Water Act (CWA). The reclaimed water pipeline in the IVS project will not result in any fill or discharge to waters of the U.S.

Refer to Chapter 4, Environmental Consequences, in the Final Environmental Impact Statement for analysis of proposed short-term use of water from the Dan Boyer Well.

D.5.9 O6 – Responses to Comments from the Backcountry Against Dumps (June 15, 2010)

The Project "would substantially degrade the existing visual character and quality of the site and its surroundings. . . ." SA/DEIS, p. C.13-1. The SA/DEIS claims that "these impacts are . . . unavoidable." SA/DEIS, p. C.13-1. This portion of the impact assessment is deficient because (1) the specific nature and magnitude of the aesthetic and visual impacts are undisclosed and unknown; (2) some of the adopted mitigation measures could have significant impacts, but these impacts are undisclosed; and (3) it is unclear whether or not the project transmission line will be relocated or not. (As previously mentioned, the SA/DEIS also unlawfully defers formulation of the glare mitigation plan, so it is impossible to tell whether the plan actually will mitigate the potentially significant glare impacts.)

First, the discussion of aesthetic impacts is insufficient because it does not even attempt to ascertain what the *actual* aesthetic impacts of the Project will be. The Project applicant failed to include information about the Project's visual impacts on the Jacumba Wilderness, Coyote Mountain Wilderness, Painted Gorge, and Yuha Basin, and "fast-track time constraints" apparently prevented CEC and BLM from creating their own simulations, so the analysis of impacts on these areas is limited at best. SA/DEIS, pp. C.13-10, C.13-18. Staff simply assumed that the Project would have the same impacts as the Plaster City facility.6 *Id.* The contrast in the depth of analysis of aesthetic impacts to these areas *vis-à-vis* those areas that the Project applicant *has* provided information about is striking. The public is prevented from ascertaining anything about the nature of these aesthetic impacts beyond that they will be sizeable. Because the SA/DEIS fails to include simulations of these viewpoints, it is also impossible for members of the public to suggest methods of avoiding or mitigating these impacts. O6-6

Second, the mitigation measures themselves could have significant impacts, but these impacts were not disclosed. The Guidelines specify that "[i]f a mitigation measure would cause one or more significant effects . . . , the[se] effects shall be discussed. . . ." Guidelines § 15126.4(a)(1)(D). The SA/DEIS requires the applicant to submit and implement "a glare mitigation plan that minimizes visibility of the" Project by "utilizing . . . 20-foot tall slatted fencing, . . ; earth berms; and/or an increase in the setbacks of the" Project from I-8. These mitigation measures, which themselves involve the construction of enormous structures, could have significant visual and other impacts, but these impacts are not disclosed or analyzed.

Finally, mitigation measure VIS-3 is unclear. One the one hand, the SA/DEIS' summary of this measure states that it would require, "**[i]f feasible**, re-alignment of the segment of the project transmission line paralleling I[-]8 to be set back from the roadway at least ½ mile." SA/DEIS, p. C.13-18. But the measure itself contains no such "if feasible" language and instead states that "the applicant **shall** set back the transmission line. . . ." SA/DEIS, p. C.13-44. This example illustrates why it is impermissible to rely on undeveloped mitigation measures – the public cannot tell if it is feasible to relocate the transmission line or not. If not, the magnitude of visual impacts will be different than what the SA/DEIS assumes. O6-6

O6-6 This comment raised concerns about that mitigation measures that themselves could have impacts from the construction of structures such as the 20-foot tall fencing. As discussed in the SA/DEIS and the FEIS, Measure VIS-1 provides that BLM would

have approval over the surface treatment of structures and coloring of security fencing with vinyl or other non-reflective coating; or with slats or similar semi-opaque, non-reflective material, to blend to the greatest feasible extent with the background soil. BLM staff will review and approve a specific Surface Treatment Plan. In addition, refer to Section D.4.12.3 for other responses related to visual resources.

The discussion of land use impacts is inadequate because (1) the Project has numerous undisclosed inconsistencies with the Imperial County General Plan; and (2) because the SA/DEIS contains conflicting information regarding whether or not land use impacts will in fact be significant.

CEQA requires EIRs to "discuss any inconsistencies between the proposed project and applicable general plans and regional plans." Guidelines § 15125(d). In conflict with this requirement, the SA/DEIS fails to disclose two such inconsistencies. First, the Project is inconsistent with General Plan Objective 2.6, which requires "alternative resource production to be in energy zoned areas to minimize off-site impacts and lessen need for more transmission corridors." SA/DEIS, p. C.8-23. The Project is inconsistent with this requirement because it "would not be [located] in an energy zoned area." *Id.* The SA/DEIS' conclusion that the Project *is* consistent because the project site "consists of undeveloped desert land" is unreasonable; the "off-site impacts" required to be "minimize[d]" under this Objective are likely to be *more*, not *less*, serious in pristine "undeveloped" areas. **O6-10**

Second, the Project is inconsistent with the Ocotillo/Nomiragee Community Area Plan, which directs that "most private enterprises or land uses are not allowed in" areas under the Open Space designation, such as the Project site. The SA/DEIS concludes that "[a]lthough the proposed project would not be allowed under this area plan's open space classification," the Project is nonetheless consistent with this plan because "BLM jurisdiction . . . supersedes Imperial County's area plans. . . ." SA/DEIS, p. C.8-27. In essence, the SA/DEIS claims that the Project is consistent with the Area Plan because it will lead to the abolishment of it. Such a finding is contrary to the purposes of disclosing these inconsistencies, in conflict with Guidelines section 15125(d), and contrary to both CEQA and NEPA.

O6-10

The SA/DEIS is also inadequate because it contains conflicting statements regarding whether or not there will be a significant Land Use impact. The Project does not comply with the site's zoning designation. The Executive Summary states that, even though the Project fails to comply with all applicable laws, ordinances, regulations, and statutes ("LORS"), nonetheless all land use impacts are less than significant under CEQA after mitigation. SA/DEIS, p. ES-17. Yet the Land Use discussion itself states that such impacts "would be significant and unavoidable." SA/DEIS, p. C.8-30; *see also* SA/DEIS, p. C.8-49 ("the inconsistency with the S-2 zoning designation is a significant and unavoidable impact under CEQA." These conflicting statements within the SA/DEIS must be resolved.

O6-10 Federal preemption of local plans occurs under the hierarchy of government powers. This comment refers to CEQA requirements which are the responsibility of the California Energy Commission, a State agency, and not the BLM, a Federal agency responsible for compliance with the National Environmental Policy Act and not CEQA. The BLM has no land use or other authority over lands in private ownership; those lands in and near the IVS project site are under the land use jurisdiction of Imperial County. Therefore, the characterization of the IVS project is correct with regard

consistency. However, more properly stated, the proposed IVS project in consideration of the LORS does not create an inconsistency. Section 4.9, Land Use, in the FEIS identifies three unavoidable adverse impacts related to land use and recreational opportunities as well as cumulative impacts.

CEQA requires agencies to consider the environmental impacts of "the whole of [their] action" so as to ensure "that environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences." Guidelines § 15378(a); *Bozung v. Local Agency Formation Com.* (1975) 13 Cal.3d 283-84; *see also Plan for Arcadia, Inc. v. City Council of Arcadia* (1974) 42 Cal.App.3d 712, 726 (CEQA's requirements "cannot be avoided by chopping up proposed projects into bite-size pieces which, individually considered, might be found to have no significant effect on the environment or to be only ministerial").

O6-15

NEPA also requires that connected actions be considered together in the same EIS. *See* 40 C.F.R. § 1508.25; *Thomas v. Peterson*, 753 F.2d 754, 758-759 (9th Cir. 1985) ("*Thomas*"). Connected actions are those that (1) "[a]utomatically trigger" other actions potentially requiring EISs; (2) "cannot or will not proceed unless other actions are taken previously or simultaneously;" or (3) are "interdependent parts of a larger action and depend on the larger action for their justification." 40 C.F.R. § 1508.25. Courts commonly apply an "independent utility" test to "determine whether multiple actions are so connected as to mandate consideration in a single EIS." *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 969 (9th Cir. 2006). In applying this test, courts have consistently "held that approval of access roads across federal lands requires federal agencies to analyze impacts of the road as well as the activities for which the road is being constructed." *Sierra Club v. U.S. Department of Energy*, 255 F. Supp. 2d 1177, 1184 (D. Colo. 2002) (*Sierra Club v. DOE*) (holding that a road easement granted by the Department of Energy was connected for NEPA purposes to the mining activities it enabled); *see also Thomas*, 753 F.2d at 758-59 (holding that a road approved for construction by the Forest Service was connected to the timber sales that could not proceed without it).

O6-15

Here, phase II of the Project is dependant on construction of the Sunrise Powerlink Project. SA/DEIS, p. B.1-19. The Sunrise Powerlink Project is currently under challenge in both state and federal court. Until Sunrise Powerlink is completed, this entire Project cannot proceed. Accordingly, "whole . . . action" would include both of these "connected" Projects; their environmental impacts should be considered in the same document. Guidelines § 15378(a); 40 C.F.R. § 1508.25. Here, however, staff simple declined to "independently review th[e] related [Sunrise Powerlink] project." SA/DEIS, p. B.1-19. Because the SA/DEIS fails to include an assessment of the environmental impacts of the entirety of the Project, it violates both CEQA and NEPA.

O6-15 As discussed in Chapter 2.0, Alternatives Including the Proposed Action, in the FEIS, Phase II of the IVS project would require operation of the Sunrise Powerlink or provision of additional transmission capacity within the existing San Diego Gas and Electric (SDG&E) system. The IVS project is not solely dependent on the Sunrise Powerlink project and inclusion of that facility in the IVS project description evaluated in the FEIS is not warranted.

D.5.10 O8 – Responses to Comments from the Backcountry Against Dumps (May 27, 2010)

Alternative Drainage Avoidance:

- The Army Corps Least Environmentally Damaging Practicable Alternative analysis must be completed before the close of public comment and / or project approval so those decisions and proposed mitigation measures can be reviewed by the decision makers and the public.
- All washes should be avoided, they are nature's storm channels that serve multiple services and species.
- A hybrid of Alternative Figures 1 B & 1C should also be considered for a much reduced project size and degree of impacts to critical water ways and sensitive resources.
- I personally visited the project site on April 25th, in the company of other witnesses, and found flood debris lodged about 3 feet up in Smoke Trees in one of the many desert washes. There was obvious evidence of flooding in excess of 1 foot in many of the desert washes.
- This flood level evidence is contrary to testimony of the applicant witness Dr Chang where he stated that his *modeling* showed flood waters were not expected to exceed approximately 1 foot. When I approached Dr. Chang after his testimony to inform him our information, he just smiled and said "that's interesting".
- Those who know this desert, and others know, too, that desert storms can be unpredictable and devastating. Many of us have seen white caps on flood waters in local desert washes. It is awe inspiring and can be very dangerous.

O8-6

Smoke Tree flood debris near top right of cane. Photo by Tom Budlong, taken on-site 4-25-10).

The photo below shows aerial view of flood damage to Ocotillo from Hurricane Kathleen in 1976 that took out sections of I-8 and the railroad near Ocotillo. Sections of Ocotillo neighborhoods stand starkly vacant in the flood path. Ocotillo sits approximately 3 miles west of the project site. (photo source: http://commons.wikimedia.org/wiki/File:Damage_from_hurricane_kathleen.JPG) **O8-6**

O8-6 This comment questioned the results of the Howard Chang hydrology analysis and is duly noted by the BLM. No response is necessary.

SunCatcher questions / issues:

- CEQA / NEPA Document still shows the old SunCatcher design
- SunCatchers have new design which qualifies as new information at this late date. Even the photos show the old design which is now a misrepresentation.
- New design is just being tested in AZ with 60 new SunCatchers
- Suncatchers are now 5,000 pounds lighter: http://www.sandia.gov/news/resources/news_releases/new-suncatcher-power-system-unveiled-at-national-solar-thermal-test-facility-july-7-2009/
- How will that impact their stability and function during high wind and violent weather events like the chubasco that impacted the proposed site and surrounding area in September 2009 and Hurricane Kathleen that struck the area in 1976? O8-7
- Do Suncatchers generate more noise or vibrations in certain weather conditions above and beyond the noise generated by the motors?
- Operation noise level was reported as 75 db by applicant witnesses at the May 24-25 hearings. This was compared to a passing car at 100ft. However, the baseline ambient noise levels on the site, away from the adjacent roadways, and passing vehicles, is much less.
- My visits to the site have been very quiet and enjoyable with minimal noise trespass throughout the majority of the site, unless one strays closer to I-8.
- What is the maximum wind / sand storm and / or seismic event that Suncatchers can survive in-tact?
- Where is the on-site weather station / anemometer that document the types of wind that the SunCather will need to tolerate?

O8-7 It is not unusual that design features of a project are modified and refined over time. For example, the SunCatcher features have been refined by the applicant but continue to function the same way as described in the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS). Because the project would be constructed of components nearly identical to those considered in the SA/DEIS and would function in the same way, the refinements would not be sufficient to trigger the need for additional analysis or recirculation of the environmental document.

As described in the SA/DEIS, during wind or sand storms, the SunCatchers will be in the down position to protect the mirrors and minimize the risk of damage to the SunCatchers themselves. This should not change substantially based on changes in the weight of the SunCatchers. Similarly, in very windy conditions, the SunCatchers will be in the down position and would not be expected to generate noise or vibration that would affect off site sensitive receptors.

Finally, it should be noted that no facility can be designed to withstand all wind or sand storm events or seismic events totally undamaged. Engineering and construction to

achieve 100 percent avoidance of any damage at all due to any possible event is unrealistic and would be prohibitively costly.

The existing and historic weather information used for the FEIS analysis is from the El Centro Weather Station. There has also been an existing weather station on the IVS project site at the Imperial Valley Substation for over a year.

Sunrise Powerlink is a "Connected Action" and must be included in review

- **ES-39** states that the Sunrise Powlerink is required for Phase II.
- **Project Overview Map (Supplemental Figure 1-3)** does not show the Sunrise Powerlink alignment through the project even though this project was considered a "Connected Action" in the Sunrise Powerlink EIR/EIS
- **D.5.2.1 Transmission System Engineering:** Staff analysis states that under CEQA, the CEC must review "whole of the action". Since SES Solar Two/IV Solar relies on Sunrise Powerlink, that should be considered as part of the "whole action".
- Under **Transmission Line Safety and Nuisance, ES-39** erroneously states that *"each line would traverse undisturbed desert land with no nearby residents..."*. **O8-10**
- The Sunrise Powerlink traverses, public land including Cleveland National Forest, the McCain Valley Resource and Conservation Area and McCain Valley Recreation Area, private and conserved lands, and organic farmland.
- Sunrise Powerlink is the subject of unresolved CEQA & NEPA legal challenges.
- San Diego County has formally asked the PUC to reopen and amend the Sunrise CEQA document to address unsecured water sources and temporary construction and lay down yards that are in different places than reported in the FEIR/EIS and were not property analyzed.

- San Diego County staff has informed this author that they do not intend to issue permits for those uses on land under County jurisdiction until they are proven compliant with CEQA
- Congressman Filner sent a letter to the Secretary of Interior on April 13,2010 expressing his concerns with BLM feeling compelled to short circuit NEPA for reasons that are not in the public interest.
- Congressman Filner also expressed concern with David Hayes current position at Department of Interior and former employment as lobbyist for Sempra and SDG&E, and potential for undue pressure to approve these projects. See letter at : http://protectourcommunities.org/wp-content/uploads/2009/05/13-apr-10_congressman-bob-filner_ltr-to-doi-sec-salazar.pdf
- The PUC released the Sunrise Powerlink Project Modification Report (5-14-10) with public comment ending June7. http://www.cpuc.ca.gov/environment/info/aspen/sunrise/sunrise.htm
- An agency memorandum will be prepared by CPUC and BLM to document the changes presented in the final PMR document and to determine whether additional CEQA/NEPA review is required.
- A determination will be made on the need to reopen the CEQA/NEPA process.
- The US Forest Service has not yet approved the Sunrise Powerlink route through the Cleveland National Forest.
- On May 15, 2010 the US Forest Service announced a 45-day comment period to determine if a Supplemental EIS is needed. http://www.fs.fed.us/r5/cleveland/projects/sunrise-powerlink/index.shtml

O8-10

O8-10 The environmental review of the Sunrise Powerlink project by the BLM and California Public Utilities Commission (CPUC) is complete. SDG&E received a Certificate of Public Convenience and Necessity from the CPUC for the Sunrise Powerlink project. Therefore, the project is already approved. The Sunrise Powerlink is independent of the IVS project and will be built regardless of whether or not the IVS project is approved for implementation.

Lack of need for project:

- The PUC's Assigned Administrative Law Judge proposed decision on Sunrise Powerlink denied the CPCN stating that

  "The proposed decision denies San Diego Gas & Electric Company's (SDG&E) application for a certificate of public convenience and necessity (CPCN) to build the Sunrise Powerlink Transmission Project (Sunrise) for the following reasons:

  - *"It is not needed to meet SDG&E's renewable portfolio standard (RPS) obligation of 20% by 2010;*
  - *Assuming a 20% RPS, it is not economic and will potentially generate significant ratepayer costs;*
  - *It will have many significant and unmitigable impacts on the environment; and*
  - *Other alternatives will meet SDG&E's eventual reliability needs more economically and with fewer significant and unmitigable impacts on the environment."* (http://docs.cpuc.ca.gov/efile/PD/93071.pdf) "

O8-11

- Sunrise FEIS/EIR selected the Environmentally Superior New In-Area All-Source Alternative: Description: One baseload and four peaking gas-fired power plants with fossil fuel fired distributed generation facilities (about 800 MW) plus San Diego County renewable generation (about 200MW).

- SCE has demonstrated that 200 MW of renewable energy can be achieved by using existing warehouse type rooftops. SDG&E can do the same.

O8-11

- The BLM selected the so-called Environmentally Superior Southern Route which required a Plan Amendment to the just revised Eastern San Diego County Resource Management Plan. They violated the Administrative Procedure Act by using the Sunrise EIR/EIS to amend that RMP.

O8-11 Refer to response to comment O8-10, above.

Flora / Fauna

- Fall surveys are required for full compliance. 2010 Fall bloom should be exceptional due to a wet year after numerous dry years. The Fall survey is now proposed to take place *after* public review which eliminates any review and comment on impacts and proposed mitigation.

O8-19

- Any historic information for bloom after the 1976 Hurricane Kathleen should be incorporated since many desert plants can remain dormant unless and until the right amount of rain falls at the right time. See photo below of desert Prickly Poppy bloom after Hurricane Kathleen.
- Jim Andre, a rare plant expert and director of UC Riverside's Sweeney Granite Mountains Desert Research Center in the Mojave National Preserve, has stated 40 % of desert plants bloom in the fall.
- The presence of bighorn sheep on-site cannot be dismissed by stating they were flushed out by OHV activity. Flushed out from where? Wilderness and protected areas?
- What does this say about BLM management abilities?
- Previous BLM plans for the area recognized the project site as bighorn habitat.
- The on-site presence of pregnant females during lambing season begs further investigation.

O8-19

- What are the potential impacts of having power collected from the SunCatchers to go through a 600 V underground power lines which apparently will collect from the units leaving much of the area not only disturbed by roads, but also by the underground powerlines .
- What are the potential adverse impacts of this amount of cumulative disturbances, from multiple projects, to the soils used by burrowing small mammals and lizards. This disturbance is in addition to the 27 miles of paved arterial roads, 14 miles of unpaved perimeter roads, and approximately 234 miles of unpaved access roads associated with the proposed IV Solar site (SA/DEIS ES-5) for a total of 275 miles of roads.
- Cumulative impacts to bighorn sheep habitat and corridors
- Indirect and cumulative impacts associated with noise and vibrations that travel through the soil and air.
- We disagree with applicant expert's position that I-8 represents a barrier for FTHL.

- We regularly see FTHL sitting on and crossing two lane paved roads. I-8 is two rows of two lanes with a break in the middle. There is nothing to stop or prevent FTHL from crossing.
- Further destroying / fragmenting their habitat is totally unnecessary and should be rejected

O8-19

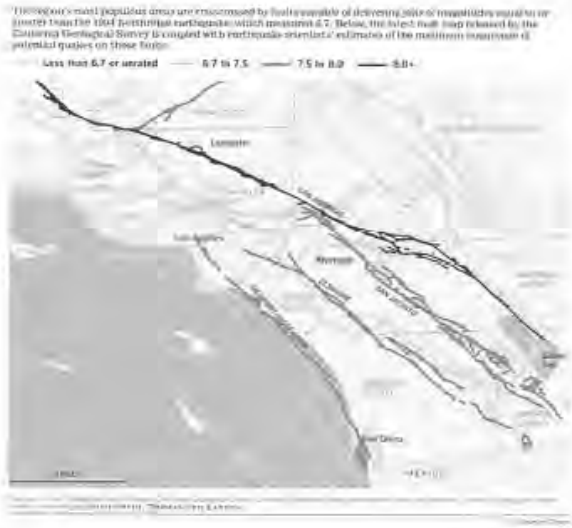
O8-19 This comment questioned the conclusion in the SA/DEIS that Interstate 8 (I-8) functions as a barrier for FTHL, and stated that the commenter regularly observes FTHL crossing roads. Paved roads can attract FTHL after sunset if they are radiating more heat than natural substrates; however, crossing two heavily travelled two-lane sections of I-8 poses a substantial daunting challenge for FTHL and the BLM considers I-8 to function as a barrier to FTHL movements.

This comment asked about the effects of the disturbances associated with underground power lines. The impacts associated with underground power lines are construction impacts. The impacts from all construction activities associated with the project, including underground facilities, are evaluated throughout Section 4.0, Environmental Consequences, in the FEIS in the discussions related to construction impacts.

Seismic activity / impacts need to be revised

to address 7.2 quake on Easter Sunday, 2010 and the historic 7.8 quake in 1892--both on the Laguna Salada Fault. New maps show 7.5 to 8.0 maximum magnitude in the same fault area. This is new information.

- See this link regarding the release of the new map that shows the 50 new surface faults discovered. The graphic below was included in the linked LA Times story that ran on April 28, 2010 http://www.fox5sandiego.com/news/la-me-california-faults-20100428,0,6209734.story.
- **The new USGS Uniform Earthquake Rupture Forecast map shows the estimates of the maximum magnitude of potential quakes on the known faults. It rates the fault systems that generated the 1892 and 2010 quakes, referenced above, at 7.5 to 8.0.**
- One of the earthquake scientists interviewed reminded folks that the map's limitations include not showing most "blind thrust" faults, which produce quakes that don't break the surface. The magnitude 6.7 quake that struck Northridge in 1994 occurred on a blind thrust system that killed more than 70 people and caused about $20 billion in damage.



O8-20

Omission of 7.8 earthquake in 1892, with local ground fissures, rock slides, and impacts on hot springs is a major flaw in this Seismic Impact waiver request. The 1892 earthquake occurred on

the same Laguna Salada fault that the 7.2 quake occurred *after* release of the DSEIS on Easter Sunday, April 4, 2010. This is new information.

- A recirculated SA/DEIS needs to address April 4, 2010 7.2 quake on the Laguna Salada fault which is known to be unpredictable with numerous historic seismic events recorded over several centuries. A 20 foot or so displacement in the Ocotillo area was reported from a previous quake.
- The photos below were released by Dr. Francisco Suarez Vidal to Dr. Victor M Ponce on April 28, 2010. They show the ground displacement at the Laguna Salada Fault, in Baja California, as a result of the April 4, 2010, 15:40 PDT earthquake with epicenter near Guadalupe Victoria, south of Mexicali.
- The photos are included in Dr. Ponce's comments on the proposed Campo Regional Landfill: http://comments.sdsu.edu./earthquake_1004041540.html http://comments.sdsu.edu.
- Preliminary field measurements by CICESE researchers have documented (a) a vertical displacement of 0.4 m, (b) a horizontal displacement of 2 m, and (c) a longitudinal length of fracture of close to 100 km.

O8-20

O8-20 The analysis of potential seismic issues at the project site is not based on individual events such as the April 4, 2010 earthquake on the Laguna Salada fault. Earthquakes and earth movement are continuous in California as a result of its location at the meeting of two tectonic plates. It would not be possible to prepare any geological or

seismic analysis in California that includes every single seismic event because these events occur continuously. For example, before and since the April 4, 2010 earthquake, there were and have been hundreds or thousands of additional events in the same geographic area and likely generated on the same fault. As a result, seismic studies consider the potential for ground shaking and seismic surface rupture based on past records of seismic activity and the locations of known faults in relationship to a project site. Nonetheless, regardless of the occurrence of individual seismic events or the locations of known faults with past surface ruptures or blind faults with no evidence of surface rupture, all buildings and structures in California must be designed and constructed consistent with the 2007 (or more recent) California Building Standards Code (CBSC) in Title 24, California Code of Regulations, which includes specific codes for all aspects of building and structure design and construction including standards related to the potential for seismic shaking, liquefaction, local subsidence, and other soil conditions. Considering the April 4, 2010 earthquake on the Laguna Salada fault would not substantively change the analysis in the Final Environmental Impact Statement which clearly indicates that the site is subject to seismic shaking and possibly soil liquefaction and local subsidence or the project mitigation which clearly requires design and construction of the project be consistent with all applicable parts of the CBSC in Title 24. Therefore, because the analysis and conclusions would not change based on consideration of the April 4, 2010 earthquake, it is not necessary to revise the analysis to reflect that earthquake or to recirculate the environmental document.

O8-21

- Table 1 of the Landmark Geotech investigation (8-3-09)Seeley Water Reclamation Facility, LCI Report No. LE09142, dated 8-13-09, shows a maximum7.0 magnitude quake on the Laguna Salada Fault System.
- This is outdated information since the 7.2 quake hit that fault on April 4, 2010. Land ruptures/fissures occurred in the Seeley area as a result of this recent quake, including I-8. Sections of Drew Road in Seeley is still closed
- Table 1 also shows an incorrect 7.0 1891 quake as the largest historic quake on that fault when the USGS reports a 7.8 quake on Feb 23 1892.
  http://earthquake.usgs.gov/earthquakes/states/events/1892_02_24.php
  http://www.energy.ca.gov/sitingcases/solartwo/documents/applicant/2010-05-10_Applicant_Supplement_to_the_AFC_TN-56589.pdf
- Page 20 of the Phase I Environmental Site Assessment for the Seeley Waste Water Treatment Facility states that a "use of a treatment pond built on the SW corner of the property in 1989 was discontinued after one year due to a landslide into the New River and piping failure due to the landslide.
- This raises issues with seismic impacts and soil stability at the project site itself , the Seeley facility, and impacts to groundwater wells in Ocotillo which would be subject to collapse during a severe seismic event. Residents of Ocotillo informed us that they experienced some well problems/ impacts after the recent quake event.

O8-21 Refer to response to comment O8-20, above.

Recreation resources / Impacts:

- The dismissal of impacts to Wilderness and recreation resources due to the availability of other similar resources does not acknowledge the undue burden placed on the small communities whose businesses rely on tourism traffic generated, by those specific areas, to survive. Tourists may go to much more distant areas to avoid the industrialized area altogether.
- There will be cumulative impacts to recreation from multiple renewable energy and transmission projects proposed for public lands in the area/region.
- Our families, and many others, currently use and enjoy the project site and surrounding public lands for a variety of recreation past times.
- The project area should remain Limited Use with public access and should be removed from any future development plans / proposals.

O8-24

O8-24 As discussed in Section 4.14, Special Designations, in the FEIS, there are no wilderness areas near or in the immediate vicinity of the project site. As a result, it is not expected that the IVS project would adversely impact the visitor experience at wilderness areas further from the project site. Section 4.12, Recreation, in the FEIS, acknowledges that the IVS project will disrupt a highly active recreational area and would adversely affect users of those recreational lands. The FEIS further acknowledges this as an unavoidable adverse impact of the IVS project and that the IVS project and other cumulative projects will result in an unavoidable cumulative adverse impacts on recreation resources.

Noise & Vibrations

may interfere with burrowing and other wildlife. OHV use next door is not 24/7. Most weekdays, nights, and all summer, the area is quiet.

Ecosystem Services have economic value.

Ecosystem Services and their economic value and place in land use planning:
A recent report published by Wild Connections is intended for use by the BLM and other agencies as a resource to more adequately represent the value of ecosystem services in land management planning such as the IV Solar/ Solar Two, the Sunrise Powerlink, the ECO Substation, Tule Wind and Energia Sierra Juarez projects under current review. These critical ecosystem service values are generally ignored or vastly undervalued. **Here is the Conclusion and Recommendations section of the Wild Connections report:**
"In the past, ecosystem services were left out of the economic analyses when land use planning was conducted. There are likely two reasons for this, first, the economic models used were based on neoclassical economic assumptions that gave little value to the environment and the services it provides; and second, ecosystems services were difficult to quantify economically. Over the last thirty years both of these reasons have been challenged and are no longer valid. Numerous studies point to the importance of ecosystem services for human survival and numerous studies have also been conducted to economically quantify the value of these services. This study has analyzed the problems inherent in the present economic models and has established conservative economic values for a wide range of ecosystem services. These

O8-25

economic values have been applied to the Pike San Isabel National Forest as a demonstration that the value of these services can be established and therefore incorporated into the land use planning process. It is no longer possible or prudent to ignore the enormous benefits ecosystems provide for humans.

The following conclusions can be reached from the material presented in this paper:

1. Traditional economic models used in land use planning are flawed and therefore their results should be interpreted with great caution.

2. The economic value of ecosystem services has been ignored in the land use planning process.

3. Ecosystem services do have economic value.

4. The economic value of ecosystem services can be measured and is available in the professional literature (Appendix A).

5. The total economic value of ecosystem services is substantial (Tables 5 and 6)

Recommendations:

1. Land use agencies must create new economic models.

2. These models must deal with the flawed assumptions and statistical problems inherent in input/output models.

3. The new models must also include the economic value of ecosystem services.

4. Recursive models are necessary to assess the long term impact of land use change. Models that simply reflect the present, fail to anticipate the long term consequences of land use decisions.

5. Appropriate negative multipliers must be established and used when they will accurately reflect the long term impacts of land use change.

6. Models that can result in economic values that are less than $0 are necessary in order to show the possible impacts of land use change on ecosystem services and therefore show the true costs of losing and replacing those services.

The importance of these recommendations cannot be underestimated. Unless the changes outlined above are incorporated in the land use planning process, economic analyses conducted in the future will continue to be inaccurate. These recommendations are not only academically important, they are critical to the decision making process because if ecosystem services are ignored, human survival is compromised."

The full report is available in electronic format (PDF) at www.wildconnections.org/library.html

O8-25

O8-25 Refer to response to comment O8-24, above.

D.5.11 O9 – Responses to Comments from the California Unions for Reliable Energy (May 27, 2010)

elimination of the SWWTP outflow of freshwater into the New River which discharges into the Salton Sea is a potentially significant impact.

Reduction in flows to the Sea may also result in potentially significant impacts on air quality. According to the Salton Sea Authority, as inflows are reduced, the Sea's elevation drops and sediments become exposed.[23] Because the Sea is shallow (comparable to a forty foot puddle 1/8 of an inch deep), it doesn't take much drop in elevation to expose a large amount of sediments. Thus, the proposal to eliminate the SWWTP freshwater flow into the New River which discharges into the Salton Sea may result in potentially significant air quality impacts that must be analyzed in a revised DEIS.

The Salton Sea National Wildlife Refuge was established in 1930 to preserve wintering habitat for waterfowl and other migratory birds. The SWWTP's proposed reduction in the flow of water to the Salton Sea may potentially increase the salinity in the sea, resulting in significant impacts to beneficial uses of the sea, potentially significant impacts to wildlife and/or take of state- and federally-protected species. These potentially significant impacts must also be analyzed in a revised DEIS.

In sum, eliminating the outflow from the SWWTF in order to provide water to the Project will reduce the freshwater flow into the New River. This may result in potentially significant impacts to the river, wetlands, the Salton Sea, biological resources, and air quality. O9-10

A hydrologic study and surveys for special-status species are planned or underway. Upgrades to the SWWTP are part of the Project and should have been studied in the DEIS. The DEIS fails to analyze these significant environmental impacts because it relies upon and incorporates a Mitigated Negative Declaration ("MND") that was drafted and circulated by the Seeley County Water District ("SCWD"). After the DEIS was released for public review, the SCWD abandoned the proposed MND, realizing belatedly that the MND failed to analyze many potentially significant environmental impacts. Two weeks after the DEIS was published, the BLM and Energy Commission prepared an appendix to the DEIS that was published on the Energy Commission website but was not published in the Federal Register or on the BLM website. The Appendix disclosed that the MND was not approved by the SCWD and that additional studies must be prepared, including surveys for a number of endangered and special status species and a study of the impacts of the facility on adjacent wetlands and the New River.

The BLM NEPA handbook instructs BLM to evaluate whether studying connected actions in a single NEPA document would improve the

quality of analysis and efficiency of the NEPA process, and provide a stronger basis for decision-making.[24] The inclusion of the modification to the SWWTP in the Project's DEIS will undoubtedly result in a more integrated, logical and efficient analysis of the direct, indirect and cumulative impacts of the Project. Moreover, the BLM is legally required under NEPA to study the potentially significant environmental impacts of the SWWTP modifications as a connected action to the Project in the DEIS. As such, the SWWTP modifications must be studied as direct, indirect and cumulative impacts of the Project in the DEIS.

O9-10

O9-10 The proposed improvements and upgrades to the Seeley Wastewater Treatment Plant are being addressed in a separate Environmental Impact Report (EIR) being prepared under the requirements of the California Environmental Quality Act (CEQA) by the Seeley County Water District. That EIR will address the potential impacts, including potential growth inducing impacts, of those plant upgrades. Those improvements do not require action by the BLM and, therefore, are outside the purview of the BLM.

B. SOIL AND WATER CONDITIONS IN THE REGIONAL WATERSHED

The Project is within the Salton Sea Watershed and soil and water conditions on the Project site directly affect this watershed. Soil and water impacts were identified and analyzed by independent expert hydrologists Dr. Chris Bowles and Chris Campbell. Their testimony is attached to this comment and their opinions are incorporated in the soil and water sections of this comment letter.

As California's largest lake, the Salton Sea supports a multitude of recreational uses and a National Wildlife Refuge and is a critical stop on the Pacific Flyway for migrating birds, including several state- and federal-listed endangered and threatened species. Since the Sea has no outlets, salts concentrate in it and thus the sea is dependent on the continued inflow of freshwater to support it. Currently, the Sea is 25 percent saltier than the ocean, with salinity increasing at approximately 1 percent per year.

O9-14

The desert washes impacted by the Project provide critical ecological functions such as sediment transport and deposition, energy dissipation and groundwater recharge for the Salton Sea Transboundary Watershed. As explained by the EPA, these important services will be lost or degraded by the Project development.[38] The DEIR failed to adequately describe the soil and water conditions on the Project in order to provide a baseline to evaluate the Project's impacts.

a. Cryptobiotic Crusts

Notably, the DEIS failed to include any analysis of surface soils, including identification of the presence of cryptobiotic crusts on the Project site. It is highly likely that cryptobiotic crust is widespread across the site.[39] Cryptobiotic crust is a highly specialized community of cyanobacteria, mosses, and lichen and are prevalent in the project area.[40] The living organisms present in the desert soils create a surface crust of soil particles bound together by organic material. The thickness of these crusts can reach up to 10 cm. The crusts are important members of the desert ecosystem and

contribute to the well-being of other plants by stabilizing sand and dirt, promoting moisture retention, and fixing atmospheric nitrogen.[41] Because of their thin, fiberous nature, cryptobiotic soils are extremely fragile systems. Some species in the soil can recover within a few years of disturbance, but slow growing species may require more than a century to recover.[42]

Disruption of the crust will result in decreased organism diversity, soil nutrients, stability, and organic matter.[43] The crusts significantly aid infiltration of precipitation, and anthropogenic disturbance can dramatically increase surface runoff and increase the rate of soil loss by an order of magnitude.[44] Wind erosion is substantially more prevalent with disruption of the crust. Crusts that may remain intact downstream of the project site will inevitably be buried through windblown and water transported erosion.[45] O9-14

The BLM must establish the extent of cryptobiotic crust in the affected environment in order to analyze the effect that elimination of this crust will have on the hydrology of the Project site. This information and analysis must also be disclosed to the public, and the Project's impacts on the regional watershed must be analyzed as required by NEPA.

O9-14 This comment stated that the environmental document failed to adequately analyze the soil and water conditions on the IVS project site to establish baseline data. The geology, hydrology, and biology sections of the Staff Assessment/Draft Environmental Impact Statement identify and describe the baseline conditions for soils and water on and in the vicinity of the IVS project site. Refer also to response to comment O9-40, below, for a discussion regarding potential project effects on the Salton Sea and to Section 4.18 for responses related to water resources.

F. BURROWING OWLS ON PROJECT SITE

The burrowing owl is listed as a Bureau of Land Management Sensitive species. Burrowing owl nesting habitat consists of open areas with burrows. Habitats include dry open rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub with gullies, washes, arroyos, and edges of human disturbed lands.[55] The Imperial Valley is regarded as a population stronghold for the burrowing owl, and it currently has one of the largest and most dense populations throughout the species' range.[56] O9-22

The DEIS fails to provide reliable information on the presence and abundance of owls within the Project area. According to the DEIS, information on owl presence and abundance in the Project area was achieved through incidental observations. Protocol surveys (or any focused surveys) for burrowing owls were never conducted. By not requiring any surveys for burrowing owl, the public is denied any opportunity to understand the extent of important biological resources on the Project site. O9-22

O9-22 This comment raised concern about the lack of surveys for the western burrowing owl (*Athene cunicularia* var. *hypugaea*) in the SA/DEIS. The applicant conducted the western burrowing owl surveys pursuant to the California Burrowing Owl Consortium guidelines.

C. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO GOLDEN EAGLE AND MAY NOT COMPLY WITH THE BALD AND GOLDEN EAGLE PROTECTION ACT

O9-31

The USFWS requires a take permit to be issued for "take" of bald or golden eagles where the taking is associated with, but not the purpose of, the activity, and cannot be practicably avoided.[98] Take includes causing a decrease in golden eagle productivity by substantially interfering with normal breeding, feeding, or sheltering behavior.[99] The DEIS concludes the Imperial Valley Solar Project site provides suitable foraging habitat for golden eagles. According to the applicant's survey data, jackrabbits and ground squirrels (i.e., the preferred prey) are present on the Project site and appear to be relatively abundant. The DEIS further concludes the loss of foraging habitat for golden eagles may require a permit for take under the Bald and Golden Eagle Protection Act. Despite these conclusions, the DEIS lacks any discussion on the actions that will be taken to determine whether the Project will require mitigation and issuance of a take permit for impacts to golden eagle foraging habitat. The DEIS lacks any information, or a determination, on the significance of Project impacts on golden eagles. O9-31

O9-31 This comment raised concern about the potential for the project to result in take of the golden eagle (*Aquila chrysaetos*). There are only five recorded observations of golden eagle in the Imperial Valley. Golden eagles likely occur to the west of the project site in the Coyote Mountains area. It is highly unlikely that golden eagles would nest on the project site. The probability of golden eagle flying over the project site is low. The site could provide low to moderate forage habitat for the golden eagle. Golden eagle has

not been observed on or over the project site. Implementation of the Imperial Valley Solar (IVS) project would not constitute take of the golden eagle and the Federal Bald and Golden Eagle Protection Act would, therefore, not be applicable to the IVS project.

D. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO COLORADO DESERT FRINGE-TOED LIZARD

The Applicant has indicated the Project site has suitable habitat for the FTHL, which is described as sparsely vegetated desert scrub areas with fine, wind-blown sand deposits and shifting sand substrate. Habitat for the Colorado Desert fringe-toed lizard (listed as BLM Sensitive and a California Species of Special Concern) is similar to that of the FTHL. It is described as "fine, loose, wind-blown sand dunes, dry lakebeds, sandy beaches or riverbanks, desert washes, and sparse desert scrub."[100] According to the California Natural Diversity Database, there are several documented occurrences of Colorado Desert fringe-toed lizards within 10 miles of the Project site. Therefore, the DEIS must adequately disclose and analyze the Project's potentially significant impacts on the Colorado Desert fringe-toed lizard. O9-32

O9-32 This comment raised concern about the lack of analysis of the potential impacts of the IVS project on the fringe-toed lizard (*Uma inornata*). The project site is not within the historic range of the fringe-toed lizard, which is known from the Coachella Valley. The fringe-toed lizard was not known to occur in the Yuha Desert and, therefore, was not included in the impacts assessment.

d. Climate Change

The DEIS failed to consider the role that climate change may have in shaping the significance of the Project impacts on the hydrologic conditions on the Project site. Climate change can have an influential role in shaping the project's impacts on the environment in terms of hydrologic response and soil erosion.[113] Provided that intense summer storms are responsible for a majority of the runoff that occurs at the project site, the Nature Conservancy would suggest that summer rainfall in southeastern California may increase by as much as 50% by 2080 in the summer, which could be accompanied by significant increases in rainfall intensity and erosivity (Angel et al., 2005).[114] O9-38

These significant increases in rainfall quantity, intensity, and erosivity would have a profound impact on the landscape, especially on the morphology of the washes where solar dishes are proposed.[115] The impacts to the landscape would, in turn, significantly impact the structural stability and flood preparedness of the solar dishes placed in the washes, and coupled with increased sedimentation from the solar arrays, subsequent and significant water quality impacts to downstream impaired water bodies would ensue.

Project design and best management practices must be analyzed in the DEIS to deal with these future changes in the climate. O9-38

O9-38 The comment asserts that "…summer rainfall in southeastern California may increase by as much as 50% by 2080…" There is no requirement for an environmental document to attempt to speculate on weather patterns 70 years in the future or to speculate or attempt to analyze the secondary effects of weather changes in the future on a proposed project. The FEIS analysis is based on known weather patterns and historical precipitation for the southern California desert. Sections 3.4 and 4.4 in the FEIS discuss climate change.

D. THE DEIS FAILS TO DESCRIBE ENFORCEABLE MITIGATION FOR IMPACTS TO WESTERN BURROWING OWL

The project would result in permanent loss of 6,185 acres that is currently used by burrowing owls for nesting and foraging. Although habitat loss has been identified as one of the primary threats to California's burrowing owl population, and although the Project would contribute incrementally to this significant loss, the DEIS provides no mitigation for the Project's impacts to burrowing owl habitat, such as land acquisition. Further, the compensatory mitigation required for impacts to flat-tailed horned lizard habitat will not necessarily compensate for impacts to burrowing owls, because (a) compensatory mitigation for the FTHL may simply entail FTHL management actions (e.g., fencing, signage, habitat restoration) that would do very little to offset impacts to burrowing owls; and (b) the DEIS provides no mechanism for assuring compensatory mitigation will provide suitable habitat for burrowing owls.[126] O9-46

Condition of Certification BIO-16 provides mitigation measures for Project impacts to burrowing owls. BIO-16 measure #1 requires the applicant to "[c]omplete a pre-construction survey for burrowing owls for any areas subject to disturbance from construction no less than 30 days prior to the start of initial ground disturbance activities. If burrowing owls are

present within 500 feet of the project site or linear facilities, then the CDFG burrowing owl guidelines (CDFG 1995) shall be implemented."

BIO-16 lacks certainty due to the failure to define "disturbance." Besides earth moving activities, burrowing owls may be disturbed by Project factors such as noise, night lighting, and altered hydrology.[127] The mitigation measure also needs to specify the areas where burrowing owl surveys are required. The mitigation measure lacks any performance standards, including the methods for conducting the pre-construction survey, the minimum level of effort required, the qualifications of the surveyor(s), and whether it will be permissible for the applicant to conduct burrowing owl surveys concurrent with other pre-construction survey activities.

Condition BIO-16's requirement to have the applicant implement CDFG burrowing owl guidelines if burrowing owls are present within 500 feet of the project site or linear facilities is unnecessarily vague and thus lacks feasibility. First, according to CDFG burrowing owl guidelines, a site should be assumed occupied if at least one burrowing owl has been observed occupying a burrow within the last three years. Because a burrowing owl was detected along the proposed transmission line within the last three years, the DEIS—by definition—requires the applicant to implement CDFG mitigation guidelines regardless of future survey results. As a result, the proposed condition permits an uncertain outcome for what CDFG defines as a certain impact. Second, if surveys are limited to areas exposed to ground disturbance, there will be no mechanism for obtaining information on owl presence within 500 feet of the project site or linear facilities. O9-46

O9-46 Refer to response to comment O9-22, above.

E. THE DEIS FAILS TO DESCRIBE ADEQUATE MITIGATION FOR IMPACTS TO NESTING BIRDS

According to the DEIS, if an active nest is discovered during the preconstruction surveys, a buffer zone would be established around the nest. Scientific literature does not support the ability of a pre-construction nesting bird survey to serve as an *effective* technique in protecting all (or even most) nesting birds from take.[128] Rather, research indicates nest finding is labor intensive and can be extremely difficult due to the tendency of many species to construct well-concealed or camouflaged nests.[129] As a result, most studies that involve locating bird nests employ a variety of search techniques.[130] These include flushing an adult from the nest, watching parental behavior O9-47

(e.g., carrying nest material or food), and systematically searching nesting substrates.[131]

Moreover, there have not been any studies that have attempted to quantify the effort required to locate all bird nests within an area. This lack of information, in conjunction with imperfect nest detection rates, makes it impossible to evaluate how effective pre-construction nest surveys are in preventing direct impacts to nesting birds.[132] However, knowledge that nest detection is difficult and labor intensive suggests two pre-construction surveys are inadequate for large project areas.[133] As a result of data gaps, the DEIS has no basis to conclude the proposed pre-construction nest surveys will protect desert nesting birds from direct project impacts. O9-47

O9-47 This comment raises concerns that the adequacy of pre-construction surveys for nesting birds is not scientifically supported and would not prevent impacts to nesting birds. The intent of pre-construction nesting surveys is to identify all active nests within the survey area to avoid direct impacts. The use of accepted techniques and qualified biologists will be used to avoid and minimize project effects to nesting birds to the greatest extent feasible and no nesting birds will be intentionally taken.

D.5.12 O10 – Responses to Comments from the California Native Plant Society (May 27, 2010)

Mirror Washing: According the Applicant, all 30,000 Suncatchers' mirrors will be washed periodically with a dilute biodegradable soap. Biodegradable does not equate to non-toxic and although the applicant has stated that it is likely that the wash water and soap will not reach the soil and that the soap will biodegrade, no data or studies have been submitted to support this claim. The soap has not been identified nor has any material safety data been provided. While it may be possible that the wash water will not reach the ground during mirror washing activities, we feel the assumption that the soap will biodegrade before causing harm is false. The pan evaporation rate at the project site is an estimated 140 inches per year. The applicant provided no evidence that the soap will actually biodegrade in such a dry environment and it might be entirely possible that the soap will accumulate on the mirrors, un-degraded, until a storm event provides enough water to wash the soap from the mirrors and onto the ground, as well as onto any cryptobiotic crust and or plants beneath the mirrors. Soaps by nature are antibacterial and cryptobiotic crusts at the project site are expected to contain bacterial components. Soil crusts are only metabolically active when wet. **O10-3**

We feel that the analysis of impacts from mirror washing activities are inadequate and additional analysis should be conducted.

O10-3 The on-site treated water will meet all water requirements and will be collected in a sealed basin. Section 4.17, Hydrology, Water Use, and Water Quality, in the FEIS for the discussion of waste water treatment and requirements for the Build Alternatives.

Dust Suppression: The Imperial Valley Air Pollution Control District (IVAPCD) Rule 804, Open Areas, requires rural open areas of 3.0 acres and contains at least 1,000 square feet of disturbed area to have a stabilized surface. The applicant plans on using dust suppressants to control fugitive dust. However, no information has been provided as to the specific suppressant to be used. Some suppressants are hygroscopic; they use moisture to help bind dust particles, which inhibits fugitive dust. If the dust suppressant that the Applicant intends to use is a hygroscopic material and since the project site has a pan evaporation rate of 140 inches per year, the Applicant has not shown any evidence that hygroscopic suppressants will be effective at the project site. **O10-6**
We believe that additional analysis of dust suppression materials and methods should be conducted, including identification of dust suppression materials, so that impacts to onsite and offsite plant communities are known.

O10-6 The fugitive dust control measure provided in Section 4.2, Air Quality, in the FEIS identifies Soiltac™ or a product with same or better performance as the chemical dust suppressant proposed to be used. Soiltac™ is a copolymer soil stabilizer.

D.5.13 O11 – Responses to Comments from the BLM California Desert District Advisory Council (April 1, 2010)

Dear California Energy Commission,
I am attempting to participate in the public process surrounding the Imperial Valley Solar project (formerly SES Solar Two).

I believe I'm not alone in the opinion that the single most important document for this project (or any other renewable energy project, for that matter) is a clear map of the site.

This project is entering the all-important public comment phase, yet the project's Documents Page on the CEC Siting Cases website still does not have a simple project map -- see:
http://www.energy.ca.gov/sitingcases/solartwo/documents/index.html

I'm certain that the Commission also believes in the importance of having a project map that is easily accessible to the public, because the above Documents page template prominently features a tab for "Figures & Maps". Yet, for the Imperial Valley Solar project, there is none yet available. **011-1**

How can a proposal for a project this large in size not have a site map readily available during the public comment period?

Sadly, even the 1500+ page Staff Assessment and DEIS and Draft CDCA Plan Amendment document does not have a map that clearly illustrates the potential impacts to lands, activities, and route network that would be displaced or eliminated by the project -- despite over 250 references to the word "map" in the document.

I would greatly appreciate that more attention be paid to providing clear site maps to the public so we can better assess the impacts of projects such as Imperial Valley Solar.

Thank you for your kind consideration of my comments as we move forward during these exciting and pivotal times.

O11-1 Figures 1 through 4 were added to CEC Website and the SA/DEIS provided figures at the end of the alternatives and cumulative projects discussions. These figures were included in the SA/DEIS from the time of its posting on the CEC website at the beginning of the public review period for the SA/DEIS in February 2010.

D.5.14 P2 – Responses to Comments from Anita Nicklen (May 28, 2010)

I wanted to inform you that I submitted my comments, but it seems that there is problem with this email that I used, can you please let me know what to do to make sure the BLM gets them. By the way, I sent the same email to you, I don't know if you received it. Thanks. anita
caivspp@blm.org

Technical details of permanent failure:
Google tried to deliver your message, but it was rejected by the recipient domain. We recommend contacting the other email provider for further information about the cause of this error. The error that the other server returned was: 550 550 ... Relaying Denied. Please check mail before sending. (state 14). P2-1

ocultar detalles 26 may (1 día antes)

P2-1 This email was received by the BLM El Centro Field Office when Ms. Nicklen resubmitted it as shown on the copy of her email transmittal dated 5/28/10 and as acknowledged by the response from Ms. Simmons of the BLM in her email to Ms. Nicklen.

D.5.15 P7 – Responses to Comments from Brendan Hughes (May 17, 2010)

Also, a CDCA plan amendment should be made to place this area off-limits to development. | P7-2

P7-2 Three No Action Alternatives were analyzed in detail in the SA/DEIS and the FEIS. A ban on development in the California Desert Conservation Area (CDCA) would be counter to the mandates for the BLM to accommodate renewable energy project on BLM managed lands. As noted in the project description in the SA/DEIS and the FEIS, the Build Alternatives would all require an amendment to the CDCA Plan (1980, as amended) to allow for a solar project on the project site. This type of amendment is consistent with the CDCA Plan and the overall process for ensuring consistency between the CDCA Plan and its protections and guidance for managing those lands, and lands uses proposed on BLM managed lands.

D.5.16 P10 – Responses to Comments from Denis Trafecanty (No Date)

8. As I indicated in my public comments on May 24th, there is plenty of disturbed land about 80 miles west of El Centro in San Diego. Southern California Edison has found this out in Riverside and San Bernardino counties. It's called "In Basin Renewables and Distributed Generation". Recently when an issue came up regarding building power lines over public lands in a Senate Appropriations Committee meeting, Senator Alexander from Tennessee stated that we aren't **P10-8**

P10-8 Other renewable energy projects are being pursued in eastern San Diego independently of the proposed IVS project.

D.5.17 P11 – Responses to Comments from Edie Harmon (May 26, 2010)

3. I am concerned that the project applicant is rushing consideration for this process, with the end result that the public feels that it is being inadequate time to review the various aspects of the project and being left only with information from the project applicant without enough time for staff input from CEC or BLM before the public is expected to submit comments. In reviewing CEQA and NEPA documents for about 30 years, I have never before seen such a chaotic and time pressured process, or reviewed any project which would so irreparably alter the surface of such a large areas. There have been times during the workshops and even during parts of the evidentiary hearings that it seemed as if decisions have been already made and public input intended to be ignored. Not a good perception for members of the public who have attended most if not all the public participation opportunities in Imperial County. P11-2 P11-2

P11-2 The SA/DEIS was released for public review for a 90-day period. While the standard review period is usually 45 days, because of the technical complexity of the project, the comment period was longer than the minimum required.

Obtaining and analyzing information takes time and often cannot be rushed

14. Changing project components and piecemealing review by withholding important information and analysis until after public comment is contrary to the intent of CEQA and NEPA. The public should not be forced to conduct its own research to ferret out information to analyze the accuracy and/or reliability of information provided in the last weeks before comments are due. I have decades of documents related to groundwater use and I have internet access to the very latest monitoring data from USGS (as does the applicant), but I am not paid to do an environmental analysis that should have provided more than outdated and inaccurate information to the CEC and BLM. P11-8

15. Could the CEC or BLM staff ever have found some of the information that I have provided, or would they even have known that such information was available and should be considered? Should staff for BLM, CEC or its hopefully 3rd party consultants on topics other than cultural resources been required to ferret out essential information withheld by the applicant? After more than 30 years of reviewing information on groundwater I can see how woefully inadequate and erroneous some of the information provided by the applicant was, but that leaves me wondering about the adequacy and accuracy of information on other topics. Rushing the review to meet the applicant's funding motivated deadlines could leave the public with a monument to ill advised project approvals. And located adjacent to an Interstate, it would be a lasting monument to flaws in the permitting and approvals processes. Any project requiring 6,500 acres most of it public lands with majority of public financing must take longer than what is customary for CEQA and/or NEPA review. P11-8

P11-8 Refer to response to comment P11-2, above.

27. The BLM lands are "Limited use" lands, in part to restrict vehicle travel to the approved routes of travel. This designation was made after the initial portrayal of these lands as the "Plaster City Area of Critical Environmental Concern" (ACEC) in the 1980 BLM Draft EIS for the California Desert Conservation Area (CDCA) to protect what in 1980 was known to be an extremely important area for prehistoric cultural resources, cremation sites and Native American values. It is my understanding that the ACEC designation as an ACEC for the entire project area was not included in the final determination or Record of Decision (ROD), in part because identification of an area with such easy access near lands identified for OHV activity would have increased the likelihood of damage and vandalism if the cultural resource values were known. (Conversations with many BLM staff locally , and BLM staff involved in the Section 106 consultation with Native American Tribes. I am participating in the consultation process.) **P11-15**

P11-15 Previous decisions regarding the boundaries of Areas of Environmental Concern (ACECs) are not relevant to the IVS project because there are no ACECs on or in the immediate vicinity of the IVS project site.

Alternatives

45. SA/DEIS fails as an informational document because the Alternatives discussion really only considers variations in the size and placement of SunCatcher units on the site under NEPA of at off site locations under CEQA in addition to the Np Action/No Project Alternative. See Sections starting with B.2.6. There was no consideration of alternative measures or technologies recommended by the public as measures which could accomplish the energy and GHG emissions goals of the proposed project. CEQA and NEPA provide opportunities for considering alternative measures, solutions, or locations to solve a problem even if they are not part of the project as described by a project applicant.
46. Here Alternatives analysis other than the No Action alternatives seem to be driven by the profit motives of the project applicant. The SA/DEIS Alternatives discussion is from the perspective of applicant financial motives, when there must be some analysis of what the same amount of taxpayer funding could accomplish if the same amount of funding were to be made available for community based solutions which would reduce electrical demands on the system. **P11-25**
47. Please add an analysis of public generated recommendations for alternatives to the proposed industrial scale privatization of public lands to solve the energy and emissions problems.
48. And please add to the analysis the savings in fossil fuels that will accrue when the speed limit is reduced to 55 mph as under President Carter. Surely there is abundant data indicating the success of that effort in the past.

P11-25 The alternatives considered in the FEIS are based on the BLM project purpose and need. While the reduction of greenhouse gas (GHG) emissions is a benefit of renewable energy projects, it is not part of the BLM purpose and need. Therefore, alternatives specifically intended to result in GHG reductions or fossil fuel consumption reductions were not considered as alternatives in the FEIS evaluation.

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D.4.6 Air Quality

These comments relate to the attainment status in the project area and other air quality-related issues.

Comments: F2-31, F2-32, S2-5, O2-35, P11-14, and P11-16.

Air Quality

EPA agrees with the statement on page C.1-26 that a solar renewable energy project with a 30 to 40 year life in a setting likely to continue to be impacted by both local and upwind emission sources, should address its contribution to the potential ongoing nonattainment of the particulate matter (PM) 10 microns (PM_{10}), $PM_{2.5}$ and ozone standards.

Recommendations:

- Imperial County was designated nonattainment for the 2006 $PM_{2.5}$ standard in October 2009. The air quality analysis should be revised to take into account this designation.
- Footnote 6 on page C.1-41 should be updated to reflect EPA's final action on Imperial County's finding of attainment for the 1997 8-hour ozone standard, dated 12/3/2009; see 74 FR 63309. F2-31
- For page C.1-41, please note that, on December 22, 2009, EPA Region 9 Acting Regional Administrator Laura Yoshii formally non-concurred on CARB's May 21, 2009 exceptional events requests.
- Table 5 (at pg. C.1-12), Table 12 (at pg. C.1-21) and Table 13 (at pg. C.1-24) should be updated to include ozone.
- The FEIS and Record of Decision should incorporate requirements related to revised fugitive dust rules from Imperial County that are expected to be released in the coming months, as appropriate.

Mitigation Measures

EPA commends BLM for incorporating fugitive dust control measures to limit PM_{10} impacts, and we appreciate the additional mitigation measures to address ozone precursors that are discussed on pages C.1-22 and C.1-25. We also were pleased at the inclusion of mitigation measure AQ-SC2 which would require the development of an Air Quality Construction Mitigation Plan (AQCMP) as well as engine requirements for diesel equipment specified by mitigation measure AQ-SC5.

EPA supports incorporating mitigation strategies to reduce or minimize fugitive dust emissions as well as more stringent emission controls for PM and ozone precursors for construction-related activity. All applicable state and local requirements and the additional and/or revised measures listed below should be included in the FEIS in order to reduce impacts associated with PM and toxic emissions from construction-related activities: F2-32

Recommendations:

Due to the serious nature of the PM_{10}, $PM_{2.5}$ and 8-hour ozone conditions in the Salton Sea Air Basin, EPA recommends that the best available control measures (BACM) for these pollutants be implemented at all times and that the FEIS incorporate the AQCMP. These measures should also be incorporated into the ROD. We recommend that all applicable requirements under local rules and the following additional measures be incorporated into the AQCMP.

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing, and phase grading operations, where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage, and limit speeds to 15 miles per hour (mph) or lower. Limit speed of earth-moving equipment to 10 mph, 5 mph on unpaved roads and unsealed site areas.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling from heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform at California Air Resources Board (CARB) and/or EPA certification, where applicable, levels and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. CARB has a number of mobile source anti-idling requirements. See their website at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable, to reduce emissions of diesel particulate matter and other pollutants at the construction site.

Administrative controls:

- Identify all commitments to reduce construction emissions and incorporate these reductions into the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Prepare an inventory of all equipment prior to construction, and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.) Meet CARB diesel fuel

F2-32

requirement for off-road and on-highway (i.e., 15 ppm), and where appropriate use alternative fuels such as natural gas and electric.

- Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

F2-32

impact in terms of erosion and air pollution that would potentially result from construction of the project.

S2-5

F. The DEIS Fails to Adequately Identify, Analyze and Off-set Impacts to Air Quality and GHG Emissions.

Federal courts have squarely held that NEPA requires federal agencies to analyze climate change impacts. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 508 F.3d 508 (9th Cir. 2007). As most relevant here, NEPA requires consideration of greenhouse gas emissions ("GHG emissions") associated with all projects and, in order to fulfill this requirement the agencies should look at all aspects of the project which may create greenhouse gas emissions including operations, construction, and life-cycle emissions

O2-35

from materials. Where a proposed project will have significant GHG emissions, the agency should identify alternatives and/or mitigation measures that will lessen such effects.

As part of the NEPA analysis federal agencies must assess and, wherever possible, quantify or estimate GHG emissions by type and source by analyzing the direct operational impacts of proposed actions. Assessment of direct emissions of GHG from on-site combustion sources is relatively straightforward. For many projects, as with the proposed project, energy consumption will be the major source of GHGs. The indirect effects of a project may be more far-reaching and will require careful analysis. Within this category, for example, the BLM should evaluate, GHG and GHG-precursor emissions associated with construction, electricity use, fossil fuel use, water consumption, waste disposal, transportation, the manufacture of building materials (lifecycle analysis), and land conversion. Moreover, because many project may undermine or destroy the value of carbon sinks, including desert soils, projects may have additional indirect effects from reduction in carbon sequestration, therefore both the direct and quantifiable GHG emissions as well as the GHG effects of destruction of carbon sinks should be analyzed.

The discussion of greenhouse gas emissions ("GHG") in the DEIS notes that the solar generation itself will produce no GHGs "but there is direct and indirect gasoline and diesel fuel use in the maintenance vehicles, offsite delivery vehicles, staff and employee vehicles, and the two diesel-fueled emergency engines. Another GHG emission source for this proposed project is SF6 from electrical equipment leakage." DEIS, Greenhouse Gas Appendix, A-1-7. There is no discussion of reducing these sources by using alternative fuels or highly efficient vehicles and equipment. **O2-35**

The GHG emissions from the construction phase of the project are stated to be over 31,000 metric tons CO2 equivalent (Greenhouse gas table 2, DEIS A-1-6). Again, there is no discussion of reducing these emissions by using more efficient equipment or vehicles.

Moreover, leakage of SF6 is of particular concern as it is many times more potent greenhouse gas than CO2—indeed, its potential as a GHG has been estimated at 23,900 times that of CO2 (for a 100 year time horizon) and it can persist in the atmosphere far longer than CO2 as well—up to 3,200 years.[28] The DEIS fails to state the actual amount of SF6 that is estimated to leak from equipment and provides only that 271.83 MTCO2E is expected in emissions each year. No information is provided on the calculation. Moreover, the DEIS does not analyze any alternatives to avoid or minimize the long-term emissions of this powerful GHG from operations and no mitigation measures are provided.

The DEIS also fails to adequately address other air quality issues most importantly PM10 both during construction and operation which is of particular concern in this area which is already in serious nonattainment. It is clear that on site grading and roads between the suncatcher components will increase bare soils and increase PM10 may be introduced into the air

by wind and that the use of the roads between the suncatchers will lead to additional PM 10 emissions from the site.

The DEIS also fails to analyze the impacts to air quality and GHG emissions should a fire occur due to the extensive on-site hydrogen system. Of particular concern is that plans to minimize air quality impacts from construction, operations, and decommissioning are all deferred to later development with no clear standards.

BLM fails to identify any significant GHG emissions and therefore does not provide for avoidance, minimization, or mitigation. BLM has also failed to include the loss of carbon sequestration from soils in its calculations or to provide a lifecycle analysis of GHG emissions that include manufacturing and disposal. Moreover, it is undisputed that in the near-term GHG emissions will increase emissions during construction, and in the manufacturing and transportation of the components. BLM fails to consider any alternatives to the project that would minimize such emissions or to require that these near-term emissions be off set in any way. **O2-35**

Although the proposed project may reduce GHG's overall it is admittedly experimental and will cause GHG emissions that are not accounted for or off-set, BLM completely fails to explore this aspect of the impacts of the project in the DEIS in violation of NEPA.

26. Although the Staff may conclude that conversion of such acreage under FLPMA is consistent with applicable laws, ordinances, regulations and statues, (ES-32), it would create an significant and unavoidable impact, the negative effects which would be disproportionately felt is rural communities already suffering from adverse health impacts of air pollution. (See Exhibits 569, 570 and 571 related to Imperial County and EPA concerns about poor air quality and heath issues in Imperial County from a community leader, an elected official, and from US EPA..) **P11-14**

28. "Approximately 27 miles of paved arterial roads, 14 miles of unpaved perimeter roads, and approximately 234 miles of unpaved access routes would be constructed on the SES Solar Two Project site. " (SA/DEIS ES-5) The project would not be able to operate if wind speeds exceed 35 mph. (ES-6) However, a major concern about the use of unpaved roads is the amount of dust that would be generated as surfaces are continually broken down by vehicular use for construction and maintenance. Increasing the travel speed on the unpaved roads from 15 mph to 25 mph as requested by the applicant on May 24, 2010 at the Evidentiary Hearing for the **P11-16**

purposes of reducing the time spent on travel thorough the site would appear to increase the amount of dust generated. Ultimately, during periods of higher winds, this would result in additional particulates reaching residents to the east, as I have seen when visiting friends in El Centro. I have observed clouds of sand blowing down the streets of El Centro with severely limited visibility, much worse than the dust storms where I live south of Ocotillo. (See Exhibits 569, 570, 571 to read of concerns about Imperial County air quality issues.) **P11-16**

Response: The Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) was published in February 2010. The discussion on attainment status in Section 3.2, Air Quality, in the Final Environmental Impact Statement (FEIS) on attainment status was updated to reflect status updates since February 2010. The updated statuses provided in Table 3-2 in the FEIS are provided here in Table D-2.

Table D-2 Federal and State Attainment Status for the Project Site in Imperial County

Pollutant	Federal Attainment Status (Table Note 1)	State Attainment Status (Table Note 1)
O_3	Nonattainment (changed from Moderate Nonattainment)	Moderate Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
PM_{10}	Serious Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment (changed from Attainment)	Nonattainment (changed from Attainment)

Table Sources: California Air Resources Board (ARB 2009) and the United States Environmental Protection Agency (EPA *2009).*

Table Note 1: Attainment = Attainment or Unclassified.

Table Key: CO = carbon monoxide; NO_2 = nitrogen dioxide; O_3 = ozone; PM_{10} = particulate matter less than 10 microns in size; $PM_{2.5}$ = particulate matter less than 2.5 microns in size; SO_2 = sulfur dioxide.

These changes do not have a substantial effect on the analyses provided in Sections 3.2 and 4.2, Air Quality, in the FEIS.

The footnote on page C.1-41 in Section C-1 Air Quality in the SA/DEIS is updated by reference to read “U.S. EPA determined on 12/3/09 that Imperial County is approved as attainment of the 1997 Federal 8-hour ozone standard.” This change does not have a substantial effect on the analyses provided in Sections 3.2 and 4.2 in the FEIS.

Air Quality Table 4 in Section C-1 of the SA/DEIS lists ozone (O_3) air quality monitoring data for the project vicinity. Air Quality Tables 5, 12, and 13 in Section C-1 in the SA/DEIS do not include O_3 because those tables provide data for the criteria pollutant modeling, which does not include O_3.

All applicable rules for control of fugitive dust emissions are included in Section 4.2 in the FEIS. Compliance with those rules during project construction and operation will be accomplished by implementing Measures AQ-SC3 and AQ-SC7. It is not appropriate to speculate on future rules in an FEIS. The incorporation of the best available control measures (BACM) is specified in the Imperial County Air Pollution Control District (ICAPCD) rules and, therefore, is included in the FEIS.

Emissions of SF_6 are quantified in Section 4.4, Climate Change, in the FEIS. The project-related emissions are no more than for any other type of electrical power plant, as they are from high voltage equipment. This is the only greenhouse gas (GHG) that is the same as traditional

electrical power plants. All the other GHG emissions for the project are either tremendously reduced or nonexistent for a solar power plant. Section 4.4 discusses construction and operational GHG emissions and climate change impacts.

Refer also to Section D.4.8, Climate Change, for additional comments and responses related to climate change.

Sections 3.11 and 4.11, Public Health and Safety, and Hazardous Materials, in the FEIS discuss potential risks and hazardous associated with the on-site hydrogen system, including fires.

D.6 Responses Without Graphical Interface Comments

This section contains the text from Section D.4, Common Responses, without the graphical interface inserts of individual comments.

D.6.1 Common Responses

A number of the comments received on the IVS project and the DEIS discussed the same issues or environmental concerns. Rather than repeat responses over and over again, Common Responses were prepared that address those comments, and the responses to those comments refer the reader to the applicable Common Response.

In addition, some comments raised issues that are not environmental issues within the context of the National Environmental Policy Act (NEPA) or are outside the authority and jurisdiction of the BLM. Consistent with requirements of NEPA, the BLM has only addressed comments that raise substantive environmental issues under NEPA. However, all the comments received on the DEIS are included in this appendix.

The Common Responses are listed briefly below and are provided in full in the following sections:

- Section D.4.1, Non-NEPA/BLM Issues
- Section D.4.2, Project Alternatives
- Section D.4.3, Purpose and Need
- Section D.4.4, Cumulative Impacts
- Section D.4.5, California Desert Conservation Area Plan
- Section D.4.6, Air Quality
- Section D.4.7, Biological Resources
- Section D4.8, Climate Change
- Section D.4.9, Cultural Resources

- Section D.4.10, Public Health and Safety and Hazardous Materials
- Section D.4.11, Bonds Required of the Applicant
- Section D.4.12, Visual Resources
- Section D.4.13, Water Resources
- Section D.4.14, NEPA Process and Issues
- Section D.4.15, CEC Process
- Section D.4.16, Determination of NEPA Adequacy

Each of those sections lists the unique letter/number code for each comment for which the common response applies.

The following sections contain:

- A list of the comments received on the SA/DEIS related to the topic or environmental parameter noted in the section title (such as air quality or biological resources)
- The language of each of those comments, from the written comment letters/emails
- The common response that addresses the issue or issues raised in those comments

D.6.1.1 Non-NEPA/BLM Issues

The following comments do not raise issues under the National Environmental Policy Act (NEPA) or that are outside the authority of the United States Bureau of Land Management (BLM).

Comments: NA1-3, NA1-4, NA2-1, S1-1, S1-6, L1-1, L2-12, U1-1, O1-1, O1-2, O1-3, O1-5, O1-6, O1-7, O1-13, O1-14, O1-15, O1-16, O2-1, O2-21, O2-36, O2-38, O2-40, O2-42, O4-1, O4-2, O4-7, O6-17, O7-1, O9-1, P3-1, P4-1, and P6-1.

Response: These comments do not raise environmental issues under the National Environmental Policy Act (NEPA), provide general comments or statements without raising a specific environmental question, and/or represent an opinion of the commenter that does not raise issues under NEPA. In compliance with NEPA, the BLM prepared a Final Environmental Impact Statement (FEIS) and that FEIS will be available to the public for 30 days. After

publication of the FEIS and after consideration of the comments received on the SA/DEIS, including comments regarding the IVS project, possible BLM actions related to a right-of-way grant or an amendment to the *California Desert Conservation Area Plan* (CDCA Plan, 1980, as amended), or environmental issues, the BLM may select an alternative and set forth its approval in a Record of Decision (23 Code of Federal Regulations [CFR] 771.127) along with a summary of the adverse impacts of the project and avoidance, minimization, and mitigation measures incorporated into the Agency Preferred Alternative to complete the environmental process under NEPA.

D.6.1.2 Project Alternatives

These comments raised questions regarding the description of the Imperial Valley Solar (IVS) project, the alternatives to the project, and other possible alternatives for consideration. This section responds to those questions and discusses and clarifies issues concerning the project and the alternatives to the project evaluated in the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) and the Final Environmental Impact Statement (FEIS). Responses to comments on the purpose and need for the project are discussed later in Section D.4.3, Purpose and Need.

Comments: F1-6, F2-1, F2-2, F2-3, F2-7, F2-14, F2-16, F2-39, F2-40, NA1-2, S2-2, O1-11, O1-15, O1-16, O2-17, O2-41, O3-3, O4-2, O6-13, O6-14, O9-50, P1-1, P7-7, P10-6, O1-8, O1-12, O2-2, O2-3, O2-5, O2-9, O2-10, O6-2, and P11-25.

Response: The responses to the questions and comments related to the project alternatives are provided in the following sections.

Scope and Range of Alternatives Considered

For an adequate NEPA analysis, for "…the alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of implementing an alternative." (United States Bureau of Land Management [BLM] *National Environmental Policy Act Handbook H-1790-1* [January 30, 2008]). In order to establish the reasonable range of alternatives to be considered, the defined project purpose and need functions as the first and most important screening tool. For the project, the applicant's purpose is to implement a profitable solar energy-providing enterprise. The BLM's purpose for the project is to specifically respond to Imperial Valley Solar, LLC's application under Title V of the Federal Land Policy and Management Act (FLPMA; 43 United States Code [USC] 1701) for a right-of-way (ROW) grant to construct, operate, maintain, and decommission a solar energy generation facility on public lands in compliance with FLPMA, BLM right-of-way regulations, and other

applicable Federal laws. The United States Army Corps of Engineers (Corps) and the California Energy Commission (CEC) also have agency specific purpose and need statements for the project.

For BLM, the range of alternatives is based on the applicant's proposed project, alternatives that would reduce or avoid adverse impacts of the applicant's project, appropriate No Action Alternatives. The alternatives considered by the BLM must involve an action on the part of the BLM. For this project, those actions are to approve or disapprove a ROW grant for the use of the project site for the proposed project and to amend or not amend the California Desert Conservation Area Plan (CDCA Plan, 1980 as amended) to allow or not allow solar on the IVS project site. Some of the comments on the SA/DEIS suggested the BLM should be proactive about the placement of these types of facilities on BLM jurisdictional lands and that lands outside the California desert should be considered for the IVS project. However, the BLM's role in managing its lands includes facilitating land uses on those lands while appropriately balancing and responding to multiple interests concerning Federal mandates, collaborating agencies' directives', and BLM's own interests. As a result, the alternatives considered in the SA/DEIS and the FEIS focus on alternatives which would require an action by the BLM and which respond to the specific application for a ROW grant received by the BLM for the IVS project.

Agency Preferred Alternative

The BLM must identify the Agency Preferred Alternative no later than as part of the Record of Decision (ROD) and potentially as early as in the DEIS. The BLM did not identify an Agency Preferred Alternative in the SA/DEIS but has identified the Agency Preferred Alternative in the FEIS. The 709 MW Alternative is the Agency Preferred Alternative. The 709 MW Alternative is the IVS project (750 MW) with modifications. Those modifications are specifically to remove SunCatchers from within certain drainages on the site and to move the Main Services Complex out of drainages. The Agency Preferred Alternative also includes four applicant proposed modifications that are also included in all the other Build Alternatives. Those modifications, which were incorporated in the Build Alternatives after the SA/DEIS was published, were minor realignments of the transmission line and the water line, changes in the hydrogen storage system on the site, and use of an alternative water source (a private off site water well) during construction and initial operations. The Agency Preferred Alternative, the other Build Alternatives with the applicant-proposed modifications, and the No Action Alternatives evaluated in the FEIS are described in detail in Chapter 2, Alternatives Including the Proposed Action, in the FEIS.

Alternatives Evaluation and Rejection

The SA/DEIS included a substantial discussion regarding alternatives which were considered but not carried forward for detailed evaluation in the SA/DEIS. The alternatives considered and the reasons why they were not carried forward are described in detail in Section 2.8.3, Other Alternatives Considered but Eliminated from Detailed Analysis, in the FEIS and are described briefly below.

Alternative Sites

Several comments on the SA/DEIS suggested that alternative sites for the project be considered, in particular sites that are closer to urban areas. The SA/DEIS considered three alternative sites for the project: the Mesquite Lake, Agricultural Lands and South of Highway 98 Alternatives. Section 2.3.8 details why those alternative sites were not carried forward for detailed analysis. In addition, it is important to note that those three sites are not on BLM managed lands and, therefore, would require no action by the BLM. As a result, the BLM did not consider those three sites in the SA/DEIS or in the FEIS under the requirements of NEPA. Those sites were assessed in the SA/DEIS under the requirements of CEQA only.

Additional sites closer to urban areas or on previously disturbed lands were not considered in the SA/DEIS because the consideration of the three alternative sites described above was adequate in identifying and considering alternative sites. Alternative sites on other BLM managed lands were not considered because the BLM is responding to the specific individual application for the specific parcel identified in the applicant's ROW grant application. In addition, there are a very large number of other renewable energy projects for which applications for the use of BLM-managed lands have been submitted to the BLM. As a result, other BLM-managed lands in the general area of the project site are already subject to consideration of applications for other projects and, therefore, would not be considered by the BLM to be available for alternative projects until those applications are considered and either approved or denied by the BLM. Finally, many of the areas that have previously been disturbed or are closer to urban areas are not within the jurisdiction of the BLM and, therefore, would require no action by the BLM.

Alternative Strategies

Two alternative energy production strategies were suggested in the comment letters: promoting energy conservation through education and fossil fuel consumption reduction through lower speed limits. While both of these could result in a decrease in demand for electricity and fossil fuels, the reduction amount is unpredictable because both strategies are based on assumptions of behavioral change. As a result, there is no way to quantify these strategies. These strategies

are also outside the jurisdiction and authority of the BLM. Therefore, because these strategies do not meet the BLM's purpose and need regarding renewable energy on BLM-managed lands and they are outside the jurisdiction and authority of the BLM, they are not considered viable alternatives to the project.

Several comments noted that the SunCatcher technology proposed for the IVS project is a relatively new technology. New technologies are allowed in renewable energy projects on BLM managed lands. The demand for renewable energy across the globe is requiring advancements in the field. Therefore, the IVS project would not be the only renewable energy project benefitting from recent technological advancements.

Suggested Alternatives

Other alternatives were suggested in the comment letters. One proposed avoidance of the Juan Bautista de Anza National Historic Trail (Anza Trail) corridor and the other proposed a jurisdictional waters avoidance alternative. The Anza Trail corridor is extensive across southern California and its actual alignment is uncertain in many areas, including on and in the vicinity of the IVS project site. To entirely avoid the inferred alignment of the Anza Trail Corridor, the IVS project would likely need to be moved completely away from the project vicinity. The 300 MW Alternative evaluated in the SA/DEIS and the FEIS moves the project features further away from the inferred alignment of the Anza Trail Corridor on the IVS project site. Several alternatives already considered in the SA/DEIS avoid many of the major and minor drainages on the project site. These include the 300 MW Alternative, Drainage Avoidance # 1 Alternative, and Drainage Avoidance #2 Alternative. In addition, all three No Action Alternatives evaluated in the SA/DEIS and the FEIS would avoid impacts to the inferred alignment of the Anza Trail corridor and all the drainages on the site.

It should be noted that the Agency Preferred Alternative includes avoidance of many of the major drainages on the project site.

Another suggestion was to consider distributed solar technology. However, that technology was already considered in the SA/DEIS and FEIS, but was rejected as shown in this text from the SA/DEIS: "The conclusion of this section is that, while it will very likely be possible to achieve 750 MW of distributed solar energy over the coming years, the very limited numbers of existing facilities make it difficult to conclude with confidence that it will happen within the timeframe required for the IVS project. As a result, this technology is eliminated from detailed analysis in this SA/DEIS." In addition, the distributed solar technology is dependent on many variables outside the control and authority of the BLM. Therefore, given the directive for the BLM to implement substantial renewable energy projects on BLM managed lands by 2015, this

technology alternative was not carried forward for detailed analysis in the SA/DEIS and the FEIS.

In June 2009, the United States Department of Energy (DOE) Solar Energy Technologies Program initiated a *Solar Vision Study* (refer to Chapter 9, References, in the FEIS). That study is guided by the following goals:

- To evaluate the technical, economic, and environmental feasibility of meeting or offsetting 10 to 20 percent of electricity demand from solar energy technologies by 2030
- To identify the technology research, development, demonstration, and deployment and policy options necessary to achieve the first goal

During the past year, the study was conducted through a collaborative process, engaging a broad mix of perspectives from the private sector, universities, national laboratories, not-for-profits, and state and local interests. The primary technologies examined in that report are solar photovoltaics, concentrating solar power, and solar heating and cooling technologies.

Exploring high solar penetration cases for the United States grid will help identify synergies, constraints, and operational issues that analyses of incremental changes may miss. It also allows exploration of the resource, technology, materials, finance, and other factors that may constrain large-scale deployment of solar technologies in the longer-term future, especially beyond 2030. In addition, the *Solar Vision Study* is providing information for inclusion in and is being conducted in coordination with the DOE's *Renewable Electricity Futures (REF) Study*. The REF Study is exploring the potential for meeting 60 to 80 percent of the grid's power requirements by 2050 through a mix of renewable energy technologies. That study, which will be finalized soon after anticipated release of the Imperial Valley FEIS, underscores the need for both distributed and centralized solar power generation facilities in the United States in order to achieve the identified renewable energy goals.

D.6.1.3 Purpose and Need

These comments requested that the purpose and need be broadened and that additional alternatives be identified based on the broader purpose and need.

Comments: F2-38, O3-2, O4-8, O6-2, P11-21, and P11-23

Response: The responses to the questions and comments related to the project purpose and need are provided in the following sections.

Broader Purpose and Need

These comments requested that the project purpose be substantially expanded to address more broad and less specific purposes in order to allow for consideration of a broader range of alternatives. The purpose and need for the project provided Chapter 1.0, Introduction and Purpose and Need, in the Final Environmental impact Statement (FEIS) is based on two key considerations:

- The potential action the BLM could or would take on the specific project, the Imperial Valley Solar (IVS) project
- The response of the BLM in meeting specific directives regarding the implementation of renewable energy projects on Federally managed lands

Clearly, the primary action that BLM is considering is related to responding to a specific right-of-way (ROW) grant application from the project applicant to construct and operate a specific solar project on a specific site managed by the BLM. As a result, the BLM determined that a key purpose of this project was to determine whether to approve, approve with conditions, or deny that ROW application for the 750 megawatt (MW) IVS project. In addition, the BLM considered several other Build Alternatives on the same site and three No Action Alternatives as described in detail in Chapter 2.0, Alternatives Including the Proposed Action, in the FEIS.

The suggestion that the project purpose should be expanded to "…focus on the need to generate...greater amounts of electrical energy from renewable energy sources so that dependency on carbon based fuels is reduced…" is outside the purview of the BLM. The need for increased energy from renewable sources is not the responsibility of the BLM. However, the BLM can respond, within the context of specific directives under which it operates, to those needs by considering ROW grant applications for projects that would produce renewable energy on Federally managed lands. As a result, the BLM purpose for the IVS project responds in part to specific directives related to renewable energy production:

- Executive Order 13212 (May 18, 2001) which mandates that Federal agencies act expediently and in a manner consistent with applicable laws to increase the "…production and transmission of energy in a safe and environmentally sound manner."
- The Energy Policy Act, which requires the Department of the Interior (BLM's parent agency) to approve at least 10,000 MW of renewable energy on public lands by 2015.

- Secretarial Order 3285 (March 11, 2009) which "…establishes the development of renewable energy as a priority for the Department of the Interior…"

As noted above, these directives give the BLM the authority to act expediently in increasing the production of renewable energy within the bounds of its other authorities regarding the management of Federal lands. The BLM is not in the business of developing and operating energy production facilities; its responsibilities are to consider and grant (or deny) ROW to any qualified individual, business, or government entity and to direct and control the use of rights-of-way on public land in a manner that:

- Protects the natural resources associated with public lands and adjacent lands, whether private or administered by a government entity;
- Prevents unnecessary or undue degradation to public lands;
- Promotes the use of rights-of-way in common considering engineering and technological compatibility, national security, and land use plans; and
- Coordinates, to the fullest extent possible, all BLM actions under the regulations in this part with state and local governments, interested individuals and appropriate quasi-public entities.

As directed by Secretarial Order 3285, the BLM has identified renewable energy projects on Federally managed lands as a priority throughout the lands it manages. As a result, the BLM is considering ROW grants for various renewable energy projects throughout California and other western states. Each of these projects is considered by the BLM on its own merits and with consideration of the impacts of each specific project on a specific site. Therefore, the purpose and need for each project, including the IVS project, are specific to each project within the broader scope of the directives prioritizing renewable energy development on Federally managed lands. Further, the FEIS does consider other possible energy projects in the cumulative impacts analyses provided in Chapter 4.0, Environmental Consequences.

The BLM believes that the purpose and need for the IVS project, as discussed in Section 1.0 in the FEIS, is consistent with the directives described above and the requirements of Title V of the Federal Land Policy and Management Act (FLPMA; 43 United States Code [USC] 1701) and satisfies the requirements of the National Environmental Policy Act (NEPA). Therefore, the BLM purpose and need for this project were not revised in response to these comments.

One comment related to whether the reduction of greenhouse gases (GHGs) is a goal and, if so, what the effects of other energy conservation or generation options (speed limit reductions, use of rooftop photovoltaic) would be related to GHG. The reduction of greenhouse gas is not a

specific goal or purpose of the project. However, GHG would be reduced as a result of the Build Alternatives as discussed in Section 4.4, Climate Change, in the FEIS. However, that analysis does not compare the reductions of GHG under the IVS project with possible reductions from other energy conservation generation options as that type of analysis is outside the scope of the analysis in the FEIS for the IVS project. While the reduction of GHG is a benefit of the IVS project, the BLM is not charged with any responsibility for the reduction of GHG in its directives related to renewable energy projects, including the IVS project.

Increase the Range of Alternatives Consistent with a Broader Purpose and Need

As discussed in detail in Chapter 2.0 in the FEIS, the following Build Alternatives, which all meet the BLM purpose and need, were evaluated in detail in the FEIS:

- IVS Project: 750 MW Alternative
- 709 MW Alternative: Agency Preferred Alternative
- 300 MW Alternative
- Drainage Avoidance #1 Alternative
- Drainage Avoidance #2 Alternative

In addition, the following No Action Alternatives, which do not meet the BLM purpose and need, were evaluated in detail in the FEIS:

- No Action Alternative: No ROW Grant and No CDCA Plan Amendment
- No Action Alternative: No ROW Grant and Amend the CDCA Plan for No Solar
- No Action Alternative: No ROW Grant and Amend the CDCA Plan for Other Solar

Chapter 2.0 of the FEIS also discusses alternative sites that were considered by the California Energy Commission (CEC) under the requirements of the California Environmental Quality Act (CEQA) only because those sites are not on BLM land and would not require any action by the BLM. A large number of other alternatives was also considered but was not carried forward for detailed evaluation in the FEIS as explained in Chapter 2.0.

Refer also to Chapter 2.0, Alternatives Including the Proposed Action, in the FEIS for additional discussion of alternatives considered in the FEIS and why other alternatives were either not considered or were considered but not carried forward for detailed analyses in the FEIS.

D.6.1.4 Cumulative Impacts

The comments regarding the cumulative impacts analyses discussed several topics, as addressed below.

Comments: F1-2, F1-7, F1-15, F2-1, F2-6, F2-20, F2-25, F2-34, L2-5, O2-2, O2-3, O2-11, O2-12, O2-22, O2-37, O3-4, O4-9, O4-10, O4-11, O6-2, O6-11, and O8-17.

Response: Section 2.10, Overview of the Cumulative Impacts Analysis, in the Final Environmental Impact Statement (FEIS) describes the rationale for identifying renewable energy and other development projects to be evaluated in the cumulative impacts analysis. Although all reasonable renewable energy projects known at the time the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) analyses were prepared were included in that analysis, it is also acknowledged that not all of the renewable energy projects identified may actually be constructed because they:

(1) Propose technologies at a larger scale than currently available;

(2) Require approvals from Federal and State permitting agencies that may not feasible; and/or

(3) Are largely competing for financing from the same limited sources.

Given these uncertainties, the list of cumulative projects evaluated in the SA/DEIS and the FEIS is broader than would likely actually be constructed and represents a conservative (worst case) identification of possible cumulative projects. As described in Section 2.10 in the FEIS, the analyses for the individual environmental parameters included identification of the specific cumulative projects that could potentially contribute to cumulative impacts for each specific environmental parameter.

Several projects were identified in comments on the SA/DEIS. However, these projects were announced subsequent to preparation and distribution of the SA/DEIS. Typically, analyses for an environmental document are based on information known at a certain time, which can be the date of the Notice of Intent (under the National Environmental Policy Act [NEPA]) and/or the Notice of Preparation (under the California Environmental Quality Act). The SA/DEIS analyses was based projects and information known about those projects in 2009. For projects

announced after the preparation of the cumulative impacts analyses, there is little or no information related to those extent of projects or their potential environmental impacts. As a result, evaluation of those projects in the cumulative impact analyses would be speculative. It is expected that the environmental documentation for those projects would assess those projects' contributions to cumulative impacts, including consideration of the Imperial Valley Solar (IVS) project and the other known energy and development cumulative projects listed in the IVS project FEIS, as well as other relevant past, present and reasonably foreseeable projects known at the times those other cumulative impacts analyses are conducted for those projects.

In particular, the Solar Programmatic Environmental Impact Statement (Solar PEIS) initiated by the United State Department of Energy (DOE) is scheduled for completion in late 2011. Through that Solar PEIS, the DOE is considering whether to develop a solar energy program of environmental policies and mitigation strategies that would apply to the deployment of DOE supported solar energy projects on United States Bureau of Land Management (BLM) administered lands or other Federal, State, tribal or private lands. Until the Solar PEIS is completed and the BLM issues a Record of Decision concerning its content, the BLM will continue to process the IVS project and other active solar applications that have been filed pursuant to existing agency policies and procedures. Consideration of the IVS project is anticipated to be included in the PEIS as part of its cumulative analysis.

The level of analysis for cumulative impacts for an environmental document is commensurate with the level of information available regarding the range of projects that are under consideration. Given that not all of the projects identified in the cumulative projects list have been evaluated to a level where the project specific impacts have been assessed and identified, the analyses in the SA/DEIS and FEIS identified the potential environmental impacts of the cumulative projects commensurate with the level of detail available for those projects at the time the analyses were completed. The cumulative analysis in each topical section identifies the IVS project impacts, the effects of the cumulative projects, and the potential contribution of the IVS project to cumulative impacts in addition to the impacts of the cumulative projects, consistent with the requirements of the NEPA.

The cumulative impact assessment of air quality and greenhouse gas (GHG) emissions clearly describes the procedure used to assess cumulative impacts. The air quality and GHG impacts of past, present and reasonably foreseeable projects are discussed in Section 4.4, Climate Change, in the FEIS, to the extent feasible given available data regarding the other cumulative projects.

The potential impacts of the IVS project to recreational resources are addressed in detail in Section 4.12, Recreation, in the FEIS. The analysis of the effects of the cumulative projects on recreation resources is also provided in Section 4.12. That analysis represents the level of detail

available to describe the potential cumulative impacts to recreation resources from past, present and reasonably foreseeable projects including the IVS project.

The potential impacts of the IVS project to sensitive habitats, endangered species, and jurisdictional waters are addressed in detail in Section 4.3, Biological Resources, in the FEIS. The analysis of the effects of the cumulative projects on natural communities, endangered species, wildlife movement, and jurisdictional waters is also provided in Section 4.3 of the FEIS. Those analyses represent the level of detail available to describe the potential cumulative impacts to biological resources from past, present and reasonably foreseeable projects including the IVS project.

The use of groundwater from the Dan Boyer Water Company would not change the cumulative impact analyses prepared for the SA/DEIS and the FEIS. The Dan Boyer Water Company well, the anticipated source of short-term water for construction and operation, is a well that already has adjudicated rights to use the groundwater and the amount of groundwater proposed to be used by the IVS project would be within the limits set forth in the adjudication. Therefore, the groundwater used for the IVS project would not reduce groundwater resources beyond limits that are already established and would not contribute to cumulative impacts to groundwater.

The use of water by the identified past, present and reasonably foreseeable projects has been established using the best available information and adequately addressing the potential cumulative water impact associated with those projects.

It was asserted that construction of the IVS project would allow development and population growth in the areas to receive the electricity produced by the project. Electricity generated by the IVS project would address existing and currently forecasted demand by San Diego Gas and Electric (SDG&E) customers and is largely intended to replace other sources of electricity generated for SDG&E with a cleaner, renewable source of electricity. The generation of electricity by the IVS project will not, in and of itself, result in development beyond current levels forecast by the applicable Federal, State, regional, and local agencies. The IVS project is specifically intended to assist SDG&E in meeting State mandates to achieve 20 percent of electricity generation from renewable resources in the future.

D.6.1.5 California Desert Conservation Area Plan

These comments expressed concerns about the scope, nature, and specifics of the amendment to the California Desert Conservation Area Plan (CDCA Plan, 1980, as amended) required for the Imperial Valley Solar (IVS) project or the other Build Alternatives.

Comments: NA1-16, NA1-17, NA1-18, O2-2, O2-5, O2-6, O2-7, O2-9, O2-17, O4-9, P9-2, and P11-27.

Response: As described in Sections 1.2.1, and 2.2.1.2 and later analyzed in Section 4.9 in the Final Environmental Impact Statement (FEIS), the CDCA Plan, while recognizing the potential compatibility of solar generation facilities on public lands, requires that all sites associated with power generation or transmission not specifically identified in the CDCA Plan for a project site be considered through the Plan Amendment process.

In addition, the IVS project site is designated as Multiple-Use Class L (Limited Use) in the CDCA Plan. The CDCA Plan allows solar energy uses in that land use designation in the CDCA provided that NEPA requirements are met and the CDCA Plan is properly amended. The construction and operation of a solar generating project on the IVS project site would require the BLM to amend the CDCA to specifically allow a solar energy generating project within the Multiple Use Class L (Limited Use) designation on the IVS project site. Therefore, the amendment to the CDCA Plan pertains only to the IVS project site and is further limited by the accompanying right-of-way grant application.

The CDCA Plan amendment will not result in any changes to the Limited Use designation. The amendment will allow the solar use only on the IVS project site and will not result in any changes in lands use designations or authorized lands uses anywhere else in the CDCA. The CDCA Plan amendment would only apply the to approximately 6,100 ac of BLM-managed land being evaluated for the IVS project. As stated in the FEIS, the reason for the amendment is to specifically allow a solar power generation project on that 6,100 ac parcel which was not previously designated in the CDCA Plan. This amendment and the overall amendment process are consistent with the implementation of the CDCA Plan.

The CDCA Plan was adopted in 1980 and has since been amended many times. Frequently, long range plans that cover large geographic areas such as the California Desert are “living” documents intended to provide overall land use planning guidance and general regulation with more detailed land use information provided through amendments, special area plans, or other more focused planning documents. James B. Ruch, the BLM California State Land Director in his letter presenting the CDCA Plan stated the following:

> “The California Desert Plan encompasses a tremendous area and many different resources and uses. The decisions in the Plan are major and important, but they are only general guides to site-specific actions. The job ahead of us now involves three tasks:

- Site-specific plans, such as grazing allotment management plans or vehicle route designation;
- On-the-ground actions, such as granting mineral leases, developing water sources for wildlife, building fences for livestock pastures or for protecting petroglyphs; and
- Keeping people informed of and involved in putting the Plan to work on the ground, and in changing the Plan to meet future needs."

The CDCA Plan was initially prepared and continues to provide guidance concerning the use of the California desert public land holdings while balancing other public needs and protecting resources. Therefore, amendments to the CDCA Plan can be site specific or global depending on the nature of the amendment. In the case of the IVS project, the amendment is site specific. However, it should be noted that throughout the FEIS (in the land use, recreation and visual impacts analyses, for example), an adverse cumulative impact on desert lands is acknowledged on approximately 1 million acres of land that are proposed for possible solar and wind energy development in the southern California desert lands.

D.6.1.6 Air Quality

These comments relate to the attainment status in the project area and other air quality-related issues.

Comments: F2-31, F2-32, S2-5, O2-35, P11-14, and P11-16.

Response: The Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) was published in February 2010. The discussion on attainment status in Section 3.2, Air Quality, in the Final Environmental Impact Statement (FEIS) on attainment status was updated to reflect status updates since February 2010. The updated statuses provided in Table 3-2 in the FEIS are provided here in Table D-3.

These changes do not have a substantial effect on the analyses provided in Sections 3.2 and 4.2, Air Quality, in the FEIS.

The footnote on page C.1-41 in Section C-1 Air Quality in the SA/DEIS is updated by reference to read "U.S. EPA determined on 12/3/09 that Imperial County is approved as attainment of the 1997 Federal 8-hour ozone standard." This change does not have a substantial effect on the analyses provided in Sections 3.2 and 4.2 in the FEIS.

Table D-3 Federal and State Attainment Status for the Project Site in Imperial County

Pollutant	Federal Attainment Status (Table Note 1)	State Attainment Status (Table Note 1)
O_3	Nonattainment (changed from Moderate Nonattainment)	Moderate Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
PM_{10}	Serious Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment (changed from Attainment)	Nonattainment (changed from Attainment)

Table Sources: California Air Resources Board (ARB 2009) and the United States Environmental Protection Agency (EPA *2009).*

Table Note 1: Attainment = Attainment or Unclassified.

Table Key: CO = carbon monoxide; NO_2 = nitrogen dioxide; O_3 = ozone; PM_{10} = particulate matter less than 10 microns in size; $PM_{2.5}$ = particulate matter less than 2.5 microns in size; SO_2 = sulfur dioxide.

Air Quality Table 4 in Section C-1 of the SA/DEIS lists ozone (O_3) air quality monitoring data for the project vicinity. Air Quality Tables 5, 12, and 13 in Section C-1 in the SA/DEIS do not include O_3 because those tables provide data for the criteria pollutant modeling, which does not include O_3.

All applicable rules for control of fugitive dust emissions are included in Section 4.2 in the FEIS. Compliance with those rules during project construction and operation will be accomplished by implementing Measures AQ-SC3 and AQ-SC7. It is not appropriate to speculate on future rules in an FEIS. The incorporation of the best available control measures (BACM) is specified in the Imperial County Air Pollution Control District (ICAPCD) rules and, therefore, is included in the FEIS.

Emissions of SF_6 are quantified in Section 4.4, Climate Change, in the FEIS. The project-related emissions are no more than for any other type of electrical power plant, as they are from high voltage equipment. This is the only greenhouse gas (GHG) that is the same as traditional electrical power plants. All the other GHG emissions for the project are either tremendously reduced or nonexistent for a solar power plant. Section 4.4 discusses construction and operational GHG emissions and climate change impacts.

Refer also to Section D.4.8, Climate Change, for additional comments and responses related to climate change.

Sections 3.11 and 4.11, Public Health and Safety, and Hazardous Materials, in the FEIS discuss potential risks and hazardous associated with the on-site hydrogen system, including fires.

D.6.1.7 Biological Resources

The comments regarding biological resources addressed a number of specific topics. The individual comments by topic and the topic specific responses are provided in the following sections.

Botanical Surveys

Comments: F2-30, O2-24, O6-8, O8-19, O9-21, O10-2, and P7-4.

Response: These comments raised concerns about the adequacy of the botanical surveys conducted for the Imperial Valley Solar (IVS) project site in 2007 and 2008. The United States Bureau of Land Management (BLM) shared those concerns and the applicant conducted additional surveys in spring 2010. The applicant will also conduct late summer/early fall surveys in 2010 to address any special-status species expected to occur following monsoonal storm events that typically occur in the late summer/early fall. Late summer/early fall storms typically result in blooming of plant species that may not occur during spring.

Two rounds of surveys were conducted in spring 2010 by botanists familiar with desert flora and pursuant to accepted survey methodology. The resumes of the botanists conducting botanical surveys were reviewed by BLM biologists. Three special-status species were observed during those spring surveys: brown turbans (*Malperia tenuis*), Harwood's milk vetch (*Astragalus insularis* var. *harwoodii*), and Wiggins' croton (*Croton wigginsii*). Brown turbans is not Federally listed as threatened or endangered and is not on the BLM sensitive plant species list. Brown turbans is listed by the California Native Plant Society (CNPS) as 2.3 (rare, threatened, or endangered in California, but more common elsewhere/not very threatened in California [low degree/immediacy of threats or no threats known]). Harwood's milk vetch is not Federally listed as threatened or endangered and is not listed as a BLM sensitive plant species. Harwood's milk vetch is listed by the CNPS as 2.2 (rare, threatened, or endangered in California, but more common elsewhere [fairly threatened in California moderate degree/immediacy of threat]). Wiggins' croton is not Federally listed as threatened or endangered, but is listed as a BLM sensitive plant species. Wiggins' croton is listed as 2.2 by the CNPS.

Avoidance of Aquatic Resources

Comments: F2-5, F2-9, F2-12, F2-13, F2-14, F2-15, F2-16, F2-18, F2-20, F2-23, S2-3, O2-34, O4-3, O4-4, O6-9, O8-6, 09-17, O9-23, O9-52, O9-53, O9-54, and O9-55.

Response: These comments raised concerns about the lack of avoidance of jurisdictional waters of the United States (waters of the U.S.) as well as lack of compliance with the Federal Clean Water Act (CWA) Section 404(b)(1) Guidelines. Subsequent to the completion of the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS), the applicant conducted an alternatives analysis pursuant to the CWA Section 404(b)(1) Guidelines. Those Guidelines state that "…no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." (40 Code of Federal Regulations (CFR) Section 230.10, Subdivision (a)).

The United States Army Corps of Engineers (Corps) has prepared a 404(b)(1) Alternatives Analysis for the proposed IVS project. The preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) has been identified by the Corps. It identifies a modification of the IVS project (the 750 MW Alternative) with reduced impacts to aquatic resources compared to the proposed action. That alternative is identified in the Final Environmental Impact Statement (FEIS) as the 709 MW Alternative (Agency Preferred Alternative). The applicant has reduced the number of SunCatchers to be placed in Waters of the U.S. with emphasis on avoiding those Waters of the U.S. on the site which are considered to have the highest functions and values. The draft LEDPA differs from the proposed action (the 750 MW Alternative) with incorporation of the following modified project features and avoidance and minimization measures:

- Reduction in the number of SunCatchers placed in waters of the U.S. to completely avoid the primary washes identified as drainages I, K, and C, and avoidance of the northern reaches of drainages D, E, and G. This project design feature eliminates 1,163 SunCatchers that would otherwise be placed in waters of the U.S., reducing permanent impacts to waters of the U.S. from 177.4 acres (ac) under the proposed action to 39.1 ac under the Agency Preferred Alternative.

- Reduction in the number of east-west roads to minimize the area of roads in drainages and the number of drainage crossings.

- Minor realignments of the water line from the project site to the Seeley Wastewater Treatment Plant (SWWTP) to eliminate temporary impacts during construction to waters of the U.S.

- Reduction in the width of maintenance roads from 15 to 10 feet (ft) wide.
- Removal of spur roads to individual SunCatchers.
- Removal of sediment entrapment basins.
- Relocation of the Main Services Complex out of waters of the U.S.
- Replacement of culverts with precast concrete arches to reduce fill of waters of the U.S.
- Removal of SunCatchers from the northern reaches of Drainages E and G to reduce impacts to waters of the U.S. as well as to provide additional wildlife corridors within the project site.

The Agency Preferred Alternative/draft LEDPA is a reduced impact version of the proposed action. The impacts of the Agency Preferred Alternative have been analyzed pursuant to NEPA in the DEIS and this FEIS. Refer also to Appendix B, Determination of NEPA Adequacy (DNA), for a summary of that analysis.

Effects of Climate Change on the Flat-Tailed Horned Lizard

Comments: O2-22 and O3-11.

Response: These comments raised concerns about the lack of analysis about potential effects of global climate change on the flat-tailed horned lizard (FTHL) specifically and special-status species in general. Because the long term effects of climate change cannot be quantified, it is impossible to provide a quantifiable analysis of the potential effects that climate change could have on FTHL and other special-status species.

Refer also to Sections 3.3 and 4.3, Climate Change, in the FEIS, and Section D.4.8, Climate Change, below for additional discussion regarding climate change.

Flat-Tailed Horned Lizard Connectivity

Comments: F2-28, NA1-11, O2-3, O2-22, O6-8, O7-7, O9-20, and O9-30.

Response: These comments relate to project effects on the connectivity of FTHL habitat, with emphasis on ensuring connectivity between the Yuha FTHL Management Area (MA) south of the IVS project site and the West Mesa FTHL MA north of the IVS project site. Although the IVS project site is somewhat isolated by existing barriers to FTHL movement, specifically Interstate

8 (I-8) adjacent to the south boundary of the project site and Evan Hewes Highway and the railroad to the north, the IVS project site could provide some connectivity between FTHL populations and the two MAs. The applicant has proposed alternatives to eliminate SunCatcher placements in the primary washes of the site, which would generally support potential FTHL movement north or south through the IVS project site. Refer to Section D.4.7.2, Avoidance of Aquatic Resources, above, for additional discussion regarding avoidance of drainages on the IVS project site in the Agency Preferred Alternative.

Flat-Tailed Horned Lizard Mitigation

Comments: F2-28, F2-29, NA1-11, S2-3, O2-3, O2-22, O2-31, O2-37, O3-5, O3-7, O3-10, O4-3, O6-8, O7-7, O8-19, O9-4, O9-28, O9-29, O9-43, and P7-3.

Response: These comments raised concerns about the adequacy of the proposed measures to address take of FTHL and the adequacy of the analysis of cumulative impacts, habitat fragmentation, and population densities in the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS). The applicant has proposed to offset project related impacts to and loss of FTHL by implementing measures pursuant to the Flat-Tailed Horned Lizard Rangewide Management Strategy (Strategy). The Strategy was published by the FTHL Interagency Coordinating Committee (ICC) to ensure FTHL and its habitats are managed appropriately. The ICC consists of the United States Fish and Wildlife Service (USFWS), California Department of Fish and Game, BLM, United States Marine Corps, United States Navy, and Arizona Game and Fish.

Pursuant to the Strategy, the applicant will provide the BLM with funds to acquire 6,619.9 acres (ac) of land for preservation of FTHL habitat. In addition to habitat acquisition, as part of the USFWS conferencing, additional conservation measures will be required. The Strategy has been the guiding document for mitigation for FTHL take within the known range of FTHL in the United States. The Strategy has been accepted as suitable for guiding FTHL mitigation within FTHL range. The species is currently proposed for listing pursuant to the Federal Endangered Species Act. If listed, it is unknown at this time if the USFWS would adopt the current Strategy as appropriate mitigation guidelines for unavoidable adverse impacts to FTHL. The USFWS is a coordinating agency for the Strategy. Implementation of measures in accordance with the Strategy is currently accepted to offset impacts to FTHL.

As noted, the Strategy was designed to offset impacts to FTHL. Indirect impacts and fragmentation were also considered in the preparation of the Strategy and the measures to offset impacts to FTHL.

FTHL population densities on the IVS project site were estimated based on extrapolation of data from the Yuha FTHL MA. The Yuha FTHL MA is comprised of better FTHL habitat than on the IVS project site and along the alignment of the water pipeline. The Yuha FTHL MA has one of the densest known populations of FTHL in the Yuha Desert. The BLM considers the population density estimates for the IVS project site extrapolated from known densities in the Yuha FTHL MA as acceptable for purposes of impact analysis.

Flat-Tailed Horned Lizard Relocation

Comments: F2-28, NA1-11, NA1-15, O2-10, O2-16, O2-22, O3-5, O3-7, O6-8, O7-7, O7-8, O9-43, and P11-31.

Response: These comments raised concerns about the concept of relocation or translocation of FTHL encountered during construction and operation of the IVS project. The common theme of these comments is that relocation/translocation of FTHL to offsite recipient areas is not a proven measure and could result in negative effects on the relocated FTHL and/or to FTHL in the offsite recipient areas. The SA/DEIS discussed relocation/translocation as a potential component of FTHL avoidance, minimization, and mitigation measures. However, the USFWS, as part of its conferencing process, has deemed relocation/translocation as inadequate and the BLM has incorporated a modified Measure BIO-9 in the project. That modified measure requires that FTHL encountered during construction and operations be moved immediately "…out of harm's way…" without any requirement to relocate FTHL to offsite recipient areas.

Peninsular Bighorn Sheep

Comments: F2-27, F2-29, S2-3, O2-3, O2-16, O2-23, O3-6, O3-7, O3-8, O3-9, O3-10, O4-3, O6-8, O7-9, O9-5, O9-19, O9-24, O9-25, O9-26, O9-27, O9-48, P7-3, P9-1, P10-1, and P10-9.

Response: These comments raised concerns about the Peninsular bighorn sheep (PBS), including concerns regarding the adequacy of the analysis of the IVS project effects on PBS, loss of migratory and forage habitat for PBS, claims of PBS observations on the IVS project site by members of the general public, the adequacy of the analysis of the use of drainages by PBS, PBS habitat fragmentation, and the adequacy of measures to offset project impacts to PBS. BLM maintains that the March 2009 sighting of PBS on the project site was unusual and transitory, and remains the only documented observation of PBS that far east of its Federally designated critical habitat. There are vast expanses of desert floor Sonoran desert creosote bush habitat adjacent to the existing PBS MAs. The IVS project site is over 6 miles (mi) from Federally designated PBS critical habitat and would not be considered a migratory corridor because the IVS project site is not surrounded by typical PBS habitat. There are PBS MAs north

and south of the Coyote Mountains Area, but the IVS project site is east of there and it is highly unlikely that PBS would circumvent much more efficient routes to other areas occupied by or suitable for occupation by PBS. The IVS project site is in proximity to developed agricultural lands to the east and is bounded to the north by Evan Hewes Highway and the railroad tracks, and to the south by I-8. The IVS project site could provide some temporary forage habitat to displaced PBS, but does not function as primary forage habitat or a migration corridor for PBS. With incorporation of the project avoidance, minimization, and mitigation measures, the IVS project may affect, but will not adversely affect, PBS.

Soils

Comments: O2-27, O7-4, O9-14, O9-15, O9-16, O9-18, O9-39, O10-4, and O10-5.

Response: There are very limited areas on the project site that currently support biotic crusts. Much of the site was used for gravel mining in the past and the site is currently used for some recreation uses which may have disturbed or continue to disturb biotic crusts on the site. There are also limited areas on the site that support physical crusts. Therefore, as a result of the limited amounts of these types of soils on the site, the Build Alternatives are not expected to result in substantial adverse impacts to biotic or physical crusts.

Rare Plants Mitigation

Comments: F2-20, F2-30, O9-21, O9-44, and O9-45.

Response: These comments raised concerns about the adequacy of the proposed mitigation for rare plants and non-listed rare plants. Specifically, the commenter indicated that a 50-foot buffer was inadequate to protect rare plants and that the project would fail to protect non-listed rare plants. A total of 5 special-status plant species were found during spring 2010 botanical surveys. One plant, Wiggins' croton (*Croton wigginsii*) is listed as BLM sensitive and CNPS 2.2. The remaining 4 special-status species plants which are listed by the CNPS, but have no other Federal or State status, are Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*) (CNPS 2.2), brown turbans (*Malperia tenuis*) (CNPS 2.3), Utah milk vineweed (*Funastrum utahense*), and Thurber's pilostyles (*Pilostyles thurberi*) (CNPS 4.3). To address special-status species that may occur on the project site after late summer/early fall monsoonal rainstorms typical in the project area, botanical surveys are scheduled for fall 2010. There are 2 special-status species with the potential to occur on the project site that are targets of the late summer/early fall 2010 botanical surveys: Abram's spurge (*Chamaesyce abramsiana*) (CNPS 2.2) and curly herissantia (*Herrisantia crispa*) (CNPS 2.3). Neither of these has Federal or State status and neither is

listed as BLM sensitive. If project impacts to special-status plants are unavoidable, the applicant will be responsible for 2:1 mitigation as indicated in the project mitigation measures.

Salton Sea

Comments: F2-22, F2-24, O1-25, O9-3, O9-40, and O10-5.

Response: These comments stated that the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) did not analyze the potential effects the project would have on the Salton Sea National Wildlife Refuge. The specific concerns noted were the reduction in available water for the Refuge and increased salt and sediment into that watershed. The reduction of water available for the Refuge would be related to the operations of the Seeley Wastewater Treatment Plant (SWWTP) and how much water is released from the SWWTP into the New River. The IVS project and the other Build Alternatives propose to treated water from the SWWTP during operations and construction when that water becomes available. The Seeley County Water District is currently preparing an Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA) to assess the affects of proposed upgrades to the SWWTP to increase the amount of treated water produced at that facility. Those upgrades are outside the jurisdiction of the BLM and, therefore, are not considered in the FEIS for the IVS project. In regard to increased salt and sediment loads in the watershed, the IVS project has been designed to maintain the existing pre-project sediment transport conditions and will not result in any changes in downstream hydrology or sediment loads.

D.6.1.8 Climate Change

These comments raised questions regarding climate change.

Comments: F2-33, O2-35, O8-14, and O9-38.

Response: The effects of climate change on the IVS project, the Agency Preferred Alternative, and the other Build Alternatives are difficult to predict. One primary affect of climate change is sea level rise, which, given the location of the IVS project site well away from the coast and the Pacific Ocean, it is unlikely that sea level rises would pose much of a threat to any solar project on the IVS project site. Another principal affect of climate change is the potentially greater incidence of wild fires. Given the desert location of the project and the limited vegetation on the site, it is unlikely that increased wildfires as a result of climate change will pose a threat substantially different than the existing risks associated with wildfires as discussed in Sections 3.6 and 4.6, Fire and Fuels Management, in the FEIS. None of the other recognized potential

effects of climate change are expected to pose much of a threat to the IVS project site or a solar project on that site.

When the amount of sunlight arriving at the IVS facility is reduced, the amount of electricity produced will also be reduced. This reduction in electrical production will result in a transfer of electrical power from somewhere else in the grid. However, given the gradual replacement of coal, natural gas, and other carbon-based fuel fired power plants with clean renewable energy sources, such as hydro, wind, and solar powered plants, the likelihood that this power transfer will result in a "…gas plant having to kick it up a notch…" is diminishing. The backup to the IVS power plant is the entire existing power grid as well as future clean energy projects as they come on line.

D.6.1.9 Cultural Resources

The comments regarding cultural resources addressed several topics as discussed below.

Archaeological Studies

Comments: NA1-7, O6-7, O9-6, O9-33, and O9-49.

Response: Archaeological studies of the surface of the Imperial Valley Solar (IVS) project site (footprint) were prepared by the consultant for the applicant, and deemed adequate by the United States Bureau of Land Management (BLM). A copy of that technical report was provided to interested tribes for comment. As part of good faith and reasonable identification efforts, government-to-government consultation is on-going, including providing for additional site visits seeking comments regarding National Register of Historic Places (National Register) evaluations. The National Register evaluations, in consultation with consulting parties and Tribes, will be completed where feasible prior to the Record of Decision (ROD).

Cumulative Impacts on Cultural Resources

Comments: F1-7, NA1-8, O4-10, and O6-7.

Common Response: The cumulative impacts analysis in the Final Environmental Impact Statement (FEIS) discusses the effects of reasonably foreseeable future projects. Refer to Section 2.10, Overview of the Cumulative Impacts Analysis, for a list of reasonably foreseeable future projects considered in the analysis of the potential for the IVS project to contribute to cumulative adverse impacts on cultural resources. The cumulative impacts analysis for cultural resources is provided in Section 4.5.5, Cumulative Impacts, in the FEIS. That analysis indicates

that the construction of the IVS project and other foreseeable cumulative projects will contribute to permanent long term adverse effects on cultural resources.

Government-to-Government Consultation

Comments: F2-36, F2-37, NA1-7, NA1-14, O6-7, O9-13, O9-33, and P11-19.

Response: Government-to-government consultation is ongoing, and is summarized in Section 7.0, Native American Consultation. That consultation includes discussions of resources on a landscape level and potential visual effects to those resources. The Tribes participating in this consultation process have been informed that the IVS project will have an adverse effect on cultural resources. Efforts are being made to avoid all known habitation sites and human remains locations through project modifications and design refinements.

The ongoing government-to-government consultation has not yet identified specific traditional cultural properties (TCP) that are eligible for the National Register in the project area of potential effects (APE). In an effort to identify TCPs in the APE that are eligible for the National Register, if any, meetings, requests to interview tribal elders, and field visits continue.

Identification of Cultural Resources

Comments: NA1-5, NA1-6, NA1-7, NA1-12, O4-6, O6-7, O9-6, O9-49, P7-1, and P7-5.

Response: As part of a good faith and reasonable effort to identify historic properties in the project APE, the BLM has required the preparation of a Class III Inventory. This report was provided to interested Tribes for comment. Based on the consultation process and comments from Tribes and other interested parties, the BLM will make determinations of eligibility and effect for individual resources. On an undertaking wide context, the BLM has determined that the IVS project will have an adverse effect on historic properties and mitigation is required prior to construction. Preliminary mitigation measures are described in the FEIS, and in the draft Programmatic Agreement (PA) provided in Appendix G, Draft Programmatic Agreement, in the FEIS.

Juan Batista de Anza National Historic Trail and the Yuha Geoglyphs

Comments: F1-1, F1-3, F1-4, F1-5, F1-6, F1-7, F1-8, F1-10, F1-11, F1-14, F1-16, O2-8, O4-10, O5-1, O5-2, O5-3, O6-3, O7-5, O9-51, P5-1, P12-3, P12-4, and P12-5.

Response: The Juan Batista de Anza National Historic Trail (Anza Trail) corridor is on and near the Imperial Solar (IVS) project site. Although a corridor (not a trail) for the Juan Bautista de

Anza National Historic Trail (Anza Trail) is designated within the boundary of the IVS project site, that corridor alignment it is currently not marked on the project site with Trail signage. The public currently has access to the IVS project site via designated BLM roads.

As of June 2010, no physical evidence for the presence of the Anza Trail or campsite within the IVS project site has been observed. There is ongoing analysis of using remote sensing imagery to try to determine if the Anza Trail is on the IVS project site.

Visitors walking, hiking, or biking on the Anza Trail will hear noise associated with the construction and operation of the IVS project and the other Build Alternatives. However, because these trail users would be transient (traveling through the area) and are already exposed to noise sources such as traffic noise on Interstate 8 (I-8) and other nearby roads, the exposure to IVS project related noise is not expected to substantively affect their visitor experiences. In addition, because much of the inferred trail corridor alignment is this area is on local roads, drivers traveling on the trail would also be transient and would not be expected to be sensitive to noise associated with the construction and operation of the IVS project and the other Build Alternatives. In summary, because the trail visitors would be transient and would be exposed to the IVS project noise for only limited periods of time, the BLM does not believe that it is not necessary to conduct additional noise analysis or noise contour maps at the inferred alignment of the Anza Trail corridor in the project area.

The BLM has determined the IVS project and the other Build Alternatives will have an adverse effect on historic properties. Impacts to the Anza Trail corridor would be substantial. Measures to address project impacts to the Anza Trail are provided in Section 4.5, Cultural Resources, in the FEIS, and the draft Programmatic Agreement (PA) included as Appendix G in the FEIS.

Diary entries authored by Father Pedro Font and Captain Juan Bautista de Anza are included in Section 3.5, Cultural Resources in the FEIS.

Visual impacts to the Yuha Geoglyphs south of the IVS project site would be adverse. However, that impact would not be substantial due to the greater distance between that resource and the IVS project site. Project mitigation will require that all exterior lighting be designed so that lamps and reflectors are not visible from beyond the IVS project site boundary, lighting does not cause excessive reflected glare, direct lighting does not illuminate the nighttime sky except for required Federal Aviation Administration (FAA) aircraft safety lighting, and illumination of the IVS project site and the immediate vicinity is minimized.

Mitigation and the Programmatic Agreement

Comments: F2-35, NA1-7, NA1-12, NA1-13, NA1-20, and O9-49.

Response: Preliminary mitigation measures are included in the FEIS, and will be adopted in the ROD. A draft PA is included in Appendix G in the FEIS, with execution of the PA expected prior to the publication of the ROD.

The draft PA stipulates ongoing consultation with tribes, including participation in construction monitoring. The draft PA further requires that development and implementation of an Historic Properties Treatment Plan(s) must take place prior to ground-disturbing activities that have the potential to adversely affect historic properties. The PA stipulates treatment measures to be implemented, regardless of which alternative is selected.

D.6.1.10 Public Health and Safety, and Hazardous Materials

This section responds to comments related to the proposed use and storage of hydrogen on the IVS project site.

Comments: L2-8, O2-29, and O4-5.

Response: As described in Section 2.15 in Appendix B, Determination of NEPA Adequacy, in the FEIS, analysis was conducted assuming a worst case release of all the hydrogen on site. It was assumed that a hydrogen release would form a vapor cloud and detonate causing an unconfined vapor cloud explosion. The distance to an overpressure of 1.0 pounds per square inch (psi) was then determined. That is an overpressure that could cause some damage to structures and injury to exposed members of the general population. The maximum distance to this level of impact was estimated to be 0.13 mile. There are no public receptors at this distance from the project site and in general such overpressures would be confined to the project site depending on the location of the cloud at detonation. It is nearly impossible to detonate hydrogen in an unconfined cloud. Hydrogen also disperses very rapidly due to its low density relative to air. The release scenarios considered in the worst case analysis are very conservative in that a release would almost certainly occur over a period of time resulting in substantial dispersion of the hydrogen while the cloud was forming. Actual experience with hydrogen releases have not resulted in unconfined cloud explosions. It is widely believed that unconfined hydrogen will not detonate without a high explosive initiating event. Measure HAZ-2 was expanded to include a Risk Management Plan that would be reviewed by Imperial County. As a result, it is not anticipated a fire would escape from the site.

D.6.1.11 Bonds Required of the Applicant

This section responds to comments regarding bonds that will be required of the applicant.

Comments: O1-10, O1-21, and P10-7.

Response: As the steward for the management of Federal public lands, the United States Bureau of Land Management (BLM) has a fiscal responsibility to ensure that projects it approves on those lands do not result in financial liabilities for American taxpayers. As part of the right-of-way (ROW) grant application process, the BLM will identify specific financial resources that must be placed in bonds by the applicant and that would be available to the BLM in the event the project applicant fails to live up to the project construction, operation, and decommissioning requirements; financial; environmental protection; and other commitments and responsibilities associated with the project. As a result, as part of the execution and approval of the ROW grant for the IVS project, the BLM will require the applicant to provide bonds to cover the three major project phases (construction, operations, decommissioning). Those funds would be used by the BLM in the event the project applicant does not meet the defined project obligations and the BLM has to step in return the project site to its pre-project condition. This can include decommissioning of project equipment, demolition and removal of project structures, remediation of any hazardous materials contamination, repair/restoration of drainages and natural topography, revegetation, etc. The value of the bond for each of those three phases will be developed by the BLM and incorporated in the project conditions detailed in the ROW grant.

D.6.1.12 Visual Resources

The comments on the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) identified concerns regarding visual impacts including dark skies, light/glare, and desert views. These comments are addressed in the following sections.

Impacts to Dark Skies

Comments: F1-12 and O5-2.

Response: These comments raised concerns about potential project related light impacts to dark night skies in the area. To address the potential construction and operation light impacts to dark skies and campers in the Yuha Desert Area of Critical Environmental Concern (ACEC) and the Juan Batista de Anza National Historic Trail (Anza Trail), Measure VIS-2 was incorporated in the IVS project. That measure specifically requires:

VIS-2 **Temporary and Permanent Exterior Lighting.**To the extent feasible, consistent with safety and security considerations, the project owner will design and install all permanent exterior lighting and all temporary construction lighting such that a) lamps and reflectors are not visible from beyond the project site, including any off-site security buffer areas; b) lighting does not cause excessive reflected glare; c) direct lighting does not illuminate the nighttime sky, except for required FAA aircraft safety lighting; and will employ on-demand lighting technology such as a radar-triggered audio-visual warning system; d) illumination of the project and its immediate vicinity is minimized, and e) the plan complies with local policies and ordinances. The project owner will submit to BLM's Authorized Officer for review and approval and simultaneously to Imperial County for review and comment a lighting mitigation plan that includes the following:

A. The locations and directions of light fixtures will take the lighting mitigation requirements into account;

B. The lighting design will consider setbacks of project features from the site boundary to aid in satisfying the lighting mitigation requirements;

C. The lighting will incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated;

D. Light fixtures that are visible from beyond the project boundary will have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the project boundary, except where necessary for security;

E. All lighting will be of minimum necessary brightness consistent with operational safety and security; and

F. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) will have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied.

Based on compliance with this measure, the project construction and operation lighting will substantially minimize impacts related to light effects on dark skies.

Glint/Glare Impacts

Comments: F1-13, NA1-6, NA1-10, S1-4, L2-10, O7-6, and O8-18.

Response: These comments raised concerns about glint/glare from the SunCatchers and cumulative glint/glare impacts associated with other solar development projects. Measure TRANS-4 specifically requires that:

TRANS-4 The project owner shall prepare and implement a SunCatcher Mirror Positioning Plan that would avoid the potential for human health and safety and significant visual distractions from solar radiation exposure.

This plan will be coordinated with the Federal Aviation Administration (FAA), the California Department of Transportation (Caltrans), the California Highway Patrol (CHP), and Imperial County and will be updated on an annual basis for the first five years and at 2-year intervals after that. The project applicant will be specifically required to coordinate with the FAA on the placement of the SunCatchers, pursuant to the FAA regulations in the Code of Federal Regulations Part 77.

Measure VIS-6 specifically requires:

VIS-6 **Reflective Glare Mitigation.**The project owner will develop and implement a glare mitigation plan that minimizes visibility of the SunCatcher mirrors to both east- and west-bound traffic on I-8 using one or more measures, which may include but are not limited to 20-foot tall slatted fencing, particularly at the eastern and western boundaries near the highway; earth berms, and/or an increase in the setbacks of the SunCatcher units from the road; and must include a SunCatcher Mirror Positioning Plan (MPP) describing how the outermost rows of SunCatchers could be positioned to avoid or minimize the most intensive potential glare incidents on motorists as called for under Measure TRANS-4. The MPP will include a glare complaint resolution form to be distributed to the BLM and the NPS.

Based on implementation on the SunCatcher Mirror Positioning Plan and the glare mitigation plan, the project related glare/glint impacts will be substantially reduced.

After the publication of the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS), the applicant prepared a Glint and Glare Study (Power Engineers, April 26, 2010 and errata dated May 21, 2010) to specifically respond to two key questions regarding visual effects associated with the SunCatcher mirrors:

(1) **Will a 20-foot (ft) high fence or earth berm reduce glint and glare for off site viewers?** Based on the study, it was determined that a 20 ft high fence or berm would provide minimal benefits in terms of screening any off site views from glint and glare. The analysis determined that most glint occurs when the SunCatchers are in the offset tracking position. The applicant has determined that the offset tracking position can be adjusted by computers to a setting where the glint to off site viewers would be substantially reduced.

(2) **Will highway travelers experience a flashing effect while driving next to rows of SunCatchers?** It is possible that in rare circumstances, motorists may experience a flashing effect in their peripheral vision. The analysis determined that most of the potential for flashing effects occurs when the SunCatchers are in the offset tracking position. The applicant has determined that the offset tracking position can be adjusted by computers to a setting where the flashing effect to motorists would be substantially reduced.

In summary, the IVS project will result in changes in light, glint, and glare on and around the project site. However, based on mitigation included in the IVS project and adjustments to the offset tracking position of the SunCatchers, those impacts can be substantially reduced.

The potential for cumulative glint/glare impacts as a result of other cumulative projects and the IVS project is discussed in Section 4.16, Visual Resources, in the FEIS. That analysis determined that the IVS project in combination with past and foreseeable future projects would contribute to substantial visual changes in the area. If those other projects include solar or other technologies which potentially create glint and glare, there could be a cumulative increase in the overall amount of glint and glare in the area.

Some comments raised concerns about the impacts of glint/glare from an elevated view from a low-flying plane and visual impacts to the military's low level training routes in the area. As noted above, Measure TRANS-4 provides for a SunCatcher Positioning Plan and the project owner would coordinate with the FAA during the development of that plan. Compliance with the plan would substantially reduce glint/glare impacts on aircraft.

Impacts on Views

Comments: NA1-9, S2-4, L2-3, O5-2, O6-6, O7-5, O7-6, O8-18, O8-22, P7-1, and P7-6.

Response: Some comments raised concerns about the aesthetic impacts on desert lands, impacts to viewsheds including from Evan Hewes Highway, scenic views of the Anza Trail, and impacts to visual resources along Interstate 8. As discussed in the SA/DEIS and the FEIS,

Measure VIS-5 would provide improvements to benefit visitors of the Anza Trail and the Yuha Desert ACEC. The project applicant will contribute funds to the National Park Service (NPS) for improvements for the Anza Trail and funds to BLM for improvements to the Yuha Desert ACEC. Those improvements could include, but not be limited to, interpretive displays or exhibits, improvements to use areas, mounted telescopes, or other improvements to be determined by the NPS and BLM.. Measure VIS-4 provides for the setback of the SunCatcher units from roads and measures to minimize views of the SunCatchers with fencing, and/or berms. Measures VIS-6 and TRANS-4 would provide for a glare mitigation plan and a SunCatcher Positioning Plan to avoid or minimize potential glare to motorists, and Measure VIS-7 would provide for the re-vegetation of staging areas in the project area.

One comment was regarding the impact of 500 miles of unpaved and paved access roads on the IVS project site. As discussed in the SA/DEIS and the FEIS, some roads would be paved to reduce fugitive dust; unpaved roads will be treated with polymeric stabilizers to stabilize the surfaces of those roads. The grading/blading of roads would be conducted to specifically limit the removal of terrain undulations as feasible, ground disturbance activities would be minimized wherever possible, and paved roads would be constructed as close to the existing topography as possible. Because the roads would be developed as close to the existing topography, the views of the roads from off site locations may be obscured by the irregular terrain of the project site, the low rises adjacent to the highway, fencing, and intervening structures on the site.

Some comments raised concerns of the views of the project site from nearby wilderness areas (Jacumba Wilderness, Coyote Mountains Wilderness) and other special land use designations (Painted Gorge, Yuha Basin/Yuha Desert ACEC). As discussed in the SA/DEIS and the FEIS, the visibility and prominence of the IVS project at background distances is limited. The project contrast would be due primarily to color and texture contrast; at background distances the mirror reflections would often resemble the surface of a lake. The overall line and form contrast would be very weak due to the oblique viewing angle and low overall visual magnitude within the field of view. Project contrast would be seen, but would not attract attention. As a result, no KOPs in those areas were identified or analyzed.

The view from the vicinity of the Yuha Geoglyphs, along the Anza Trail, at a distance of approximately 3 mi, the IVS project would be very evident but would exhibit a moderate degree of contrast. Color and texture contrast could be moderately high, but form and line contrast would be weak due to the level, oblique angle of view and the small part of the field of view occupied by the IVS project. Similarly, the visual dominance of the IVS project would be moderate in scale at this distance and from other principal destinations in the Yuha Desert ACEC, such as Yuha Well, fossil shell beds, and segments of the Anza Trail south of the Yuha Geoglyphs, and along Highway 98 and the surrounding areas, the IVS project would not be

visible due to intervening terrain of washes and low hills. In the context of high viewer sensitivity, the impacts of the IVS project at this distance would be adverse, but not substantial.

Some comments raised concerns about why there were no views of the Key Observation Points (KOPs) on Evan Hewes Highway or from the Coyote Mountains Wilderness or Painted Gorge areas. As discussed in the SA/DEIS and the FEIS, foreground views of the IVS project from Evan Hewes Highway would experience strong visual dominance and visual change by the IVS project. Views of the mountains would be obstructed from this location. Therefore, all views in the foreground and the near-middle-ground distance zones to at least 1 mile away would experience strong project dominance and visual change, which would result in a substantial adverse visual impact.

D.6.1.13 Water Resources

The comments received regarding water resources concern three primary issues: the modification to the project to use well water for construction and initial operations, water supply, and water pollution/quality impacts to surface water and groundwater, as discussed in the following sections.

Comments: F2-6, S2-5, L2-4, L2-5, O1-18, O1-19, O1-25, O2-33, O6-9, O6-16, O7-2, O7-3, O8-15, O9-3, O9-11, O9-14, O9-34, O9-35, O9-36, O9-37, O9-41, P11-12, P11-24, P11-35, and P11-38.

Temporary Use of Well Water for Construction and Initial Operations

As discussed in Section D.4.16, below, and in detail in the Final Environmental Impact Statement (FEIS) in Chapter 4, Environmental Consequences, and in Appendix B, Determination of NEPA Adequacy (DNA), the Imperial Valley Solar (IVS) project, the Agency Preferred Alternative, and the other Build Alternatives were modified after the publication of the SA/DEIS to use an off site well as a temporary water source during construction and initial operations. The use of water from the existing permitted Dan Boyer Water Company well to provide water to the site is proposed until the Seeley Wastewater Treatment Plant (SWWTP) can provide the water to the site.

It is expected that the IVS project would require water from the Dan Boyer Water Company well for 6 months to 3 years. The water would be transported to the IVS project site in 7,000 gallon water trucks. Based on the expected construction demand of approximately 50 acre-feet-per-year (afy) on average, it is anticipated that up to 13 truck trips would be required per day. If the well water supply is used during initial project operation, a maximum of 7 truck trips per day

would be required to supply the approximate 33 afy demand for operations. Once on site, the water would be stored for construction and/or operations use.

The analysis of the use of the well water is described in detail in the DNA in Appendix B in the FEIS.

Water Supply

The water needs for the IVS project are described above. The Dan Boyer Water Company is a private water purveyor located at 1108 Imperial Avenue in Ocotillo, approximately 3.5 miles (mi) southwest of the IVS project site and 7 mi by road as shown on figures provided in Chapter 2, Alternatives Including the Proposed Action, in the FEIS. The Company operates State well #16S/9E-36G4 with a current permitted pumping rate of 40 afy. The well water is potable and permitted for use by construction or personal consumption. Historically, the well has typically extracted over 100 afy for uses such as construction, dust control, and personal use. The Dan Boyer Water Company had indicated its intent to temporarily furnish well water to the IVS project.

The source of water for the Dan Boyer Water Company well is the Ocotillo Wells, which is a United States Environmental Protection Agency (EPA)-designated sole source aquifer. The water supply capability of Ocotillo Wells is described in the Supplement to the Imperial Valley Solar (Formerly Solar Two) Application for Certification (URS, May 2010).

Erosion, Soil Runoff, and Hydromodification

The SunCatchers would be mounted on a pedestal foundation. Those foundations would consist of a metal fin-pipe hydraulically driven into the ground. This type of foundation requires no concrete, generates no spoils, and can be completely removed when the project is decommissioned. The metal fin-pipe foundation eliminates conventional drilling techniques that would generate soil cuttings, require dust suppression, and require the trucking and disposal of the cuttings. However, when conditions are not conducive to the use of the metal fin-pipe foundation, the foundation would consist of rebar-reinforced concrete constructed below grade.

Although the SunCatcher arrangement would be designed to fit the local contours of the site, the density of dishes and the arrangement in straight parallel rows would result in many SunCatchers being installed into flood hazard areas and channels. It is estimated, using a rough grading plan and flood hazard information provided by the applicant, that approximately 5,150 SunCatchers would be placed in flood hazard areas, including active channels. The actual number of SunCatchers subject to flooding is expected to be higher considering the flood-prone areas not mapped on the soil and water resources figure in the SA/DEIS.

Based on the information from the applicant, the total land area disturbed by the construction of the SunCatcher field would be approximately 3,160 square feet per SunCatcher, including the SunCatcher installation, road construction, clearing, and grading. Assuming a minimum of 5,150 SunCatchers in flood hazard areas, the total construction disturbance for the 30,000 SunCatcher array would be at least 374 acres (ac) in floodplains. Approximately 164 ac of this would be permanent disturbance in the form of roads and SunCatcher foundations. The actual floodplain disturbance is expected to be greater due to features placed in flood hazard areas not mapped by the applicant.

During operation, disturbed and cleared areas, primarily within the SunCatcher field, would be subject to increased erosion potential due to the removal of vegetation, the removal of desert pavement, the disturbance of the surface crust, and the placement of SunCatcher foundation poles in the flow path. The result of surface disturbances and the presence of SunCatchers in the flow path could be long-term erosional degradation of the soil surface within the SunCatcher array and in the intervening undisturbed areas, as well as increased sediment discharge off-site across Dunaway Road and toward the east where the Westside Main Canal and New River flow.

SunCatcher foundation poles in the flow path would create local areas of flow turbulence, resulting in local stream scour around the foundation poles. Scour such as this occurs on bridge piers, resulting in the need to bury bridge piers to a depth below the depth of scour to ensure stability. SunCatchers subject to scour could also become unstable if the scour is deep enough to undermine the structural foundation, resulting in collapse and potentially damaging and polluting the ground surface with mirror fragments and other SunCatcher debris.

The SunCatcher foundations will be buried to a sufficient depth to protect against 5 feet (ft) of scour. Using hydraulic information from the HEC-RAS analysis for the project, and the assumption of a 2-ft diameter foundation, that total 100-year scour at SunCatchers would be 5 ft or less in most, but not all, cases. Scour depth is estimated to be deeper than 5 ft in several areas, and if long-term stream degradation and debris accumulation on SunCatcher foundations is considered, the scour depth could be greater than 5 ft in many cases.

Sediment basins are proposed as mitigation for potential excess sediment production which could result from increased sediment transport capacity in the SunCatcher arrays. These basins are designed by a regional equation rather than a site-specific sediment transport analysis. Because of the lack of precision in this form of analysis, the capacity of these basins to function as intended is not known. Because the basins are designed for two years of annual sediment production, they may serve the intended purpose on small floods, but could be overwhelmed by the much larger sediment transport volume of larger floods, with the resulting effect of increased

sediment deposition downstream if sediment transport from the SunCatcher fields has been increased through vegetation clearing and grading of surface irregularities.

On an average annual basis, with smaller floods occurring, the basins may function as intended to remove sediment. However, this too could have an adverse impact after a long series of small floods if the basins remove too much sediment from the system.

Artificial removal of sediment from a stream bed otherwise in equilibrium usually results in a lowering of the downstream bed. The result would be an alteration of downstream channel morphology from wide sandy washes with shallow banks to deeper channels with steeper banks. This could have an adverse effect on local riparian resources, increase the bank erosion potential, as well as affect in-stream man-made structures. Flow cascading into unprotected basins could create cuts that would migrate upstream along the channels.

Preliminary analysis determined that sediment transport capacity in on-site drainages would likely be increased by the project, with possible adverse effects. In the absence of a detailed, site-specific sediment transport analysis specifically addressing these issues, these stream morphology impacts are considered a substantial adverse impact of the project as described in the FEIS.

Aquifer Contamination from Evaporation Ponds

On-site concrete-lined evaporation ponds will be used as storage reservoirs for construction water trucked in from the off site well and then via the pipeline from the SWWTP. Water quality impacts could occur to groundwater through infiltration of the treated water from the SWWTP. The Colorado River Regional Water Quality Control Board (RWQCB) will require monitoring of groundwater during this period. Compliance with Measure SOIL&WATER-3 in the FEIS will ensure no adverse impacts to groundwater from storage of construction runoff in the evaporation ponds.

The reverse osmosis (RO) water treatment system would produce water with a high concentration of total dissolved solids, as well as other contaminants. These waste waters would be discharged into one of two concrete-lined evaporation ponds at the Main Services Complex for drying. After a pond is filled it would be allowed to dry while the other pond is filled. The dry cake from the evaporation process would be removed and exported by truck to a waste disposal facility. Potential impacts include groundwater degradation from infiltration at the ponds, and surface water degradation from spills and mishandling of the dry cake.

This discharge of wastes to the evaporation ponds would be subject to waste discharge requirements from the RWQCB. The California Water Code (CWC) Section 13260–13269; 23

CCR Chapter 9 requires the filing of a Report of Waste Discharge (ROWD) and provides for the issuance of Waste Discharge Requirements with respect to the discharge of any waste that can affect the quality of the waters of the State. An ROWD would be filed for the RO unit discharge waste. Subject to verification by the RWQCB, the RO unit and evaporation ponds would be constructed and monitored in accordance with RWQCB requirements. Measures SOIL&WATER-3 and SOIL&WATER-7 in the FEIS would ensure no adverse water quality impact from the RO water treatment system.

D.6.1.14 NEPA Process and Issues

The responses to comments related to the NEPA process for the IVS project are provided in the following sections.

709 MW Alternative: Agency Preferred Alternative

Comments: F2-6 and O6-2.

Response: These comments question whether the modifications to the IVS project included in the Agency Preferred Alternative are adequately evaluated under the requirements of the National Environmental Policy Act (NEPA). As described in Section 2.0, Alternatives Including the Proposed Action, the Agency Preferred Alternative is the Imperial Valley Solar (IVS) project with modifications. Those modifications are described and evaluated in Chapter 4, Environmental Consequences, in the Final Environmental Impact Statement (FEIS). That evaluation, which is summarized in Appendix B, Determination of NEPA Adequacy (DNA), in the FEIS, determined that the applicant-proposed modifications are within the range of the alternatives (specifically the IVS project) and that impacts documented in the Staff Assessment/ Draft Environmental Impact Statement (SA/DEIS) and the existing NEPA analyses are adequate to document the impacts of the Agency Preferred Alternative (the IVS project with modifications). Refer also to Section D.4.16, Determination of NEPA Adequacy, later in this response to comments appendix for additional discussion regarding the modifications which are part of the Agency Preferred Alternative and the analysis of the potential effects of those modifications.

Subsequent Environmental Documentation, Adequacy of Resource Inventories, Lack of Additional Studies, Adequacy of Impacts Analysis

Comments: F2-9, F2-10, L2-2, L2-16, O2-4, O2-12, O2-13, O2-14, O2-15, O2-30, O2-32, O6-2, O6-3, O6-4, O6-5, O6-12, O8-2, O9-2, O9-8, O9-56, O9-58, P10-2, P11-5, and P11-13.

Response: The Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) was prepared based on available technical information. Since then, additional information has been provided by the applicant and the CEC. The CEC will be separately preparing and publishing a Supplemental Staff Assessment incorporating some of that information and addressing modifications to the IVS project since the SA/DEIS was published.

The NEPA process, like the CEQA process, was designed to provide information, but also to examine impacts and alternatives with that examination potentially helping to identify ways to improve a project while further minimizing the project impacts. The information disclosure and sharing process inherent with NEPA does not exist in a vacuum and frequently improvements, additional mitigation, and/or project design features are added to a proposed project as a result of comments received on a Draft EIS. Consistent with these tenets of NEPA, the United States Bureau of Land Management (BLM) has prepared a Final Environmental Impact Statement (FEIS) addressing the Agency Preferred Alternative (which is the IVS project with modifications) and which includes results of additional biological resources surveys and other information completed since the SA/DEIS was prepared. The BLM's position is that the SA/DEIS and the FEIS contain sufficient information, including information regarding resources on the BLM-managed lands on the IVS project site, and analyses to understand and document the effects of the IVS project, the Agency Preferred Alternative, the other Build Alternatives, and the No Action Alternatives and, therefore, recirculation of the environmental document is not required. Refer also to Section 4.21, Determination of NEPA Adequacy, for the documentation of the analyses of the project modifications and the conclusion that the NEPA information and analyses in the FEIS are adequate for the Agency Preferred Alternative.

Mitigation

Comments: O2-30, O2-32, O6-2, and O6-4.

Response: The SA/DEIS and the FEIS include extensive mitigation addressing the potential adverse project impacts. Many of these are measures that have been used extensively throughout the State and, therefore, are anticipated to effectively address the adverse project impacts. In addition, many of the measures include standards or other requirements that, if not met, would trigger the need for additional mitigation. BLM's position is that the mitigation as

presented in the SA/DEIS and the FEIS is adequate to address the potential adverse project impacts and includes sufficient standards and other requirements to ensure that the impacts are properly mitigated.

Many of the mitigation measures require the preparation of detailed plans during final design and prior to any activity on the project site. This is consistent with the requirements of NEPA because these measures identify the impacts intended to be addressed by those plans and key activities that would be included in those plans to mitigate the identified impacts.

In summary, BLM's position is that the existing mitigation in the FEIS is adequate to address the adverse project impacts. Where there are adverse impacts that mitigation cannot entirely mitigate, these impacts have been identified as unavoidable adverse impacts of the IVS project and the other Build Alternatives.

Fast Tracking/Project Applicant's Schedule

Comments: O8-4 and O8-9.

Response: The fast track schedule for the IVS FEIS is based on The Energy Policy Act and Secretarial Order 3285 (dated March 11, 2009) and not on the applicant's schedule. These directives are discussed in Chapter 1 of the FEIS as part of BLM's purpose and need for the project. The BLM has committed to meeting the goals in these directives and fast tracking some of the renewable energy projects will allow the BLM to meet those goals. The fast tracking included preparation of the joint SA/DEIS with the CEC. The fast track schedule is not in any way dependent on or in response pressure from the applicant.

D.6.1.15 California Energy Commission Process

These comments raised questions regarding the California Energy Commission's (CEC) process for complying with the requirements of CEQA and CEC requirements for the IVS project.

Comments: O2-4, P10-2, P11-3, P11-7, P11-10, and P11-11.

Response: The evidentiary hearing process is a California Energy Commission (CEC) process and is outside the purview or control of the United States Bureau of Land Management (BLM). The conduct of those meetings, including providing call-in opportunities, is entirely up the CEC. It should be noted that the meetings were held in El Centro so interested members of the general public had the opportunity to attend those meetings in person rather than by calling in. All of the CEC methods for public participation or pending decisions are explained in detail on

the CEC website. The CEC use of its website and docketing to provide access to the public for materials related to a proposed project is also a standard CEC process and, again, is outside the purview or control of the BLM. It is also very easy to enroll in the CEC's notification process regarding new information and updates as they are posted on the CEC websites and dockets.

The BLM believes the opportunities for public participation under the National Environmental Policy Act (NEPA) were adequate and included opportunities to review the draft Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) on either the BLM or CEC websites and that the additional information provided by the applicant was readily available on the CEC website.

There was no intent to piecemeal the project. The information provided at the CEC evidentiary hearings was in addition to the information provided in the SA/DEIS and on the CEC and BLM websites. Some of that information has also been provided in supplemental information posted by the CEC on its website. The BLM has documented analysis of the modified project components based on the minor changes in the project description in Chapter 4, Environmental Consequences, in the FEIS, which is also summarized in Appendix B, Determination of NEPA Adequacy (DNA). Refer also to Section 4.21, Determination of NEPA Adequacy, for additional discussion of the analysis of the proposed modifications.

Any comments or issues related to CEQA, as noted in comment P11-11, are not within the purview of the BLM and are comments that will be addressed by the CEC.

D.6.1.16 Determination of NEPA Adequacy

These comments raised questions regarding the adequacy of the NEPA analysis of the applicant proposed modifications to the Build Alternatives and of the Agency Preferred Alternative.

Comments: F2-26, O2-18, O6-2, O6-9, O6-12, O8-4, O8-15, O9-9, O9-11, O9-57, P11-6, and P11-39.

Response: As described in the Final Environmental Impact Statement (FEIS), the Imperial Valley Solar (IVS) project and the other Build Alternatives include specific modifications to minimize project impacts and to incorporate modifications from the applicant. Those modifications are described and evaluated in Chapter 4, Environmental Consequences, in the FEIS. Appendix B, Determination of NEPA Adequacy (DNA), in the FEIS summarizes the evaluations of each of those modifications and the determinations that they are within the range of the alternatives and impacts documented in the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) and the FEIS, and that the NEPA analyses in the SA/DEIS and FEIS are

adequate to document the impacts of the Build Alternatives with those modifications. These modifications are considered part of the Build Alternatives and not connected actions.

The project modifications analyzed in Chapter 4 and documented in Appendix B in the FEIS for all the Build Alternatives are:

- Two minor shifts in the transmission line. The western transmission line alignment modification would occur over a 750 ft long span which would be shifted approximately 120 ft southeast of the original alignment in the IVS project. The second modification (north of the Imperial Valley San Diego Gas and Electric (SDG&E) Substation) would occur over a 1,025 ft long span which would be shifted approximately 300 ft east of the original alignment in the IVS project.

- Two minor shifts in the water pipeline between the project site and the Seeley Wastewater Treatment Plant (SWWTP) to follow the Evan Hewes Highway right-of-way (ROW) where feasible.

- Modifications in the onsite hydrogen storage system. The IVS project proposed a centralized hydrogen gas supply, storage, and distribution system. Modifications proposed to this system would require the amount of hydrogen stored for each SunCatcher to be increased from 3.4 to 11 standard cubic feet (scf). To support this increase in hydrogen storage for each SunCatcher, the high pressure supply tanks and low pressure dump tanks at each compressor group would accommodate 29,333 scf and 9,900 scf, respectively. In addition, each of the 30 high pressure tanks that supply hydrogen to the power conversion units within a group of 12 SunCatchers under the current design will have a capacity of 489 scf.

- An alternative water supply for initial construction and operations. This alternative water supply would be provided through the Dan Boyer Water Company in Ocotillo. That water source is potable and permitted for use by construction or personal consumption. It is expected that the Build Alternatives would require this temporary water supply for between 6 months and 3 years. Water would be transported to the project site by 7,000 gallon (gal) water trucks. It is anticipated that up to 13 truck trips per day would be required during construction and up to 7 truck trips per day would be required during operation until treated water from the SWWTP becomes available.

  The alternative water source is not expected to adversely affect the Ocotillo-Coyote Wells sole source aquifer because it is a currently permitted well and the applicant will use only the amount of water currently permitted to be drawn from that well.

Because that amount is currently permitted, it is assumed not to result in adverse impacts to the sole source aquifer. Appendix B, Determination of NEPA Adequacy (DNA), in the FEIS discusses the use of the alternative water source in greater detail.

D.6.1.17 No Response Necessary

These comments made statements or other comments which did not require a specific response.

Comments: F2-4, F2-8, F2-10, F2-11, NA1-1, NA1-19, S2-1, S2-6, L2-1, L2-17, O1-17, O1-23, O3-1, O4-12, O6-1, O8-3, O8-8, O8-23, O8-26, O8-27, O9-12, O9-18, O9-42, O10-1, P7-8, P11-28, P11-33, P11-40, P12-2, P12-6, P12-7, and P12-8.

Response: Noted. No response necessary.

D.6.2 Individual Responses to the Comment Letters/Emails

This section provides individual responses to individual comments not addressed by the common responses provided in Section D.4, Common Responses. Each comment is uniquely coded to the commenting party and the individual comment within that comment letter.

The following comment letters included comments that required individual responses which are provided in this section:

- F1 – United States Department of the Interior National Park Service (May 4, 2010)
- F2 – United States Environmental Protection Agency (June 14, 2010)
- NA1 – Quechan Indian Tribe (May 17, 2010)
- S1 – California Department of Transportation (May 27, 2010)
- O1 – Public Employees for Environmental Responsibility (PEER)
- O2 – Center for Biological Diversity (CBD)
- O4 – Natural Resource Defense Council and The Wilderness Society
- O6 – Backcountry Against Dumps (June 15, 2010)

- O8 – Backcountry Against Dumps (May 27, 2010)
- O9 – California Unions for Reliable Energy
- O10 – California Native Plant Society
- O11 – BLM California Desert District Advisory Council (email April 1, 2010)
- P2 – Anita Nicklen (email May 28, 2010)
- P7 – Brendan Hughes (email May 17, 2010)
- P10 – Denis Trafecanty (no date)
- P11 – Edie Harmon (email May 26, 2010)

The following comment letters did not include any comments that required individual responses so they are not discussed in this section:

- NA2 – Kwaaymii, Laguna Band of Indians (May 16, 2010)
- S2 – State of California Department of Parks and Recreation (May 28, 2010)
- L1 – City of El Centro (May 13, 2010)
- L2 – Imperial County (May 27, 2010)
- O3 – Defenders of Wildlife
- O5 – Anza Trail Coalition of Arizona
- O7 – Basin and Range Watch
- U1 – San Diego Gas & Electric (May 14, 2010)
- P1 – Edie Harmon and Donna Tisdale (email March 2, 2010)
- P3 – Kim Bauer (email April 17, 2010)
- P4 – Glenn Kirby (email April 24, 2010)
- P5 – Gregory Gandrud (email May 5, 2010)

- P6 – Cody Hanford (email May 13, 2010)
- P8 – Jamie Shores (email May 26, 2010)
- P9 – Patrick Donnelly (email May 26, 2010)
- P12 – Greg P. Smestad, Ph.D. (May 21, 2010)

D.6.2.1 F1 – Responses to Comments from the United States Department of the Interior National Park Service (May 4, 2010)

F1-2 The National Park Service's concern for the cumulative impact of planned renewable energy projects in the California desert is acknowledged. Refer to Section D.4.4 earlier in this report for discussion regarding cumulative impacts.

D.6.2.2 F2 – Responses to Comments from the United States Environmental Protection Agency (June 14, 2010)

F2-17 The referenced parcels are privately owned and, at this time, the owners of those parcels have not indicated any interest to the BLM regarding using those parcels for renewable energy uses. As a result, because those parcels are not under lands managed by the BLM, any renewable energy project on those lands would be outside the jurisdiction of the BLM. In addition, the applicant has no rights to those lands and is not considering pursuing the use of those parcels for its project. As a result, these parcels were not been included in any of the Build Alternatives considered in the SA/DEIS and the FEIS.

F2-19 This comment raised concerns about the unknown quantity of impacts to Waters of the United States (waters of the U.S.) related to the Seeley Wastewater Treatment Plant (SWWTP) reclaimed water pipeline part of the project site as well as the lack of analysis of the potential interim water supply from the Dan Boyer Well. The applicant has quantified the waters of the U.S. that occur along the proposed pipeline alignment. The applicant plans to either span Waters of the U.S., or to use horizontal drilling to install the reclaimed water pipeline below waters of the U.S. Spanning of waters of the U.S. and subsurface installation of facilities below waters of the U.S. are not regulated pursuant to the Federal Clean Water Act (CWA). The reclaimed water pipeline in the IVS project will not result in any fill or discharge to waters of the U.S.

Refer to Chapter 4, Environmental Consequences, in the Final Environmental Impact Statement for analysis of proposed short term use of water from the Dan Boyer Well.

F2-21 These comments raised concerns about the impacts to ephemeral washes and potential effects of impacts on ephemeral washes to Federally threatened or endangered species as well as the biodiversity and ecosystem stability the washes provide. The United States Army Corps of Engineers (Corps) has prepared an alternatives analysis pursuant to Federal Clean Water Act Section 404(b)(1) guidelines and the Agency Preferred Alternative (the IVS project with modifications) includes avoidance of impacts in the primary Waters of the U.S. washes. The reduction of impacts to washes under the Agency Preferred Alternative will result in reduced effects to biodiversity and ecosystem stability. There are no known Federally listed threatened or endangered species anticipated to be adversely affected by the IVS project.

F2-22 Refer to response to comment F2-21, above.

F2-25 Refer to Section D.4.2 for responses related to the project alternatives and to response to comment F2-24, above.

F2-26 Refer to Chapter 2, Alternatives Including the Proposed Action, in the FEIS for a discussion regarding water sources for the project.

F2-41 The Environmental Protection Agency (EPA) submitted a second copy of their comment letter with minor errata as noted on the cover sheet. Because the errata did not change any of the original comments, the entire second copy of the letter was coded as F2-41. The responses to the EPA comment letter are provided above and in Section D.4, Common Responses.

D.6.2.3 NA1 – Responses to Comments from the Quechan Indian Tribe (May 17, 2010)

NA1-9 This comment raised concerns that there would be indirect visual impacts to certain ceremonial areas. As discussed in the SA/DEIS and the FEIS, the project was determined to result in unavoidable adverse visual impacts which likely will also include areas identified as ceremonial areas. The adverse visual impacts of the project cannot be fully mitigated and cannot be avoided. However, the Programmatic Agreement discussed in detail in Section 4.5, Cultural Resources, in the FEIS provides an opportunity for Native American Tribes and other interested parties to

consider the project impacts on cultural resources including ceremonial areas, and the mitigation to reduce those effects as feasible.

NA1-13 As a Federal agency, the BLM is not bound by the requirements of CEQA. However, the FEIS describes the Agency Preferred Alternative which was developed from the IVS project specifically to avoid areas of known cultural sensitivity with respect to sacred burial sites and certain drainages, while still accomplishing the majority of the project and meeting the BLM purpose and need. Because the BLM is not bound by the requirements of CEQA, no comment on the intent of meeting the requirements of Appendix K of the CEQA Guidelines is provided.

Refer also to response to comment NA1-12, above, regarding the status of the Programmatic Agreement and the formulation of mitigation measures addressing the project impacts on cultural resources.

NA1-14 Refer to response to comment NA1-13, above.

D.6.2.4 S1 – Responses to Comments from the California Department of Transportation (May 7, 2010)

S1-2 It is acknowledged that any transmission lines crossing or within State highway right-of-way (ROW) must meet the requirement in the California Department of Transportation (Caltrans) Encroachment Permit Manual. The project applicant will coordinate with Caltrans as appropriate regarding transmission lines crossing or within State ROW.

S1-3 It is acknowledged that project related construction traffic on or that may affect State highway facilities will require a traffic control plan consistent with the requirements in the Caltrans Encroachments Permit Manual. The project applicant will coordinate with Caltrans as appropriate regarding the need for construction related traffic control on and crossing State highways.

S1-5 It is acknowledged that Caltrans will require final environmental documentation, including appropriate avoidance, minimization, and mitigation measures, as part of any encroachment permit application. Note that the final environmental documentation for the IVS project will consist of a Final Staff Assessment (FSA) prepared by the California Energy Commission to comply with the requirement of the California Environmental Quality Act (CEQA) and a Final Environmental Impact Statement

(FEIS) prepared by the BLM to comply with the requirements of the National Environmental Policy Act (NEPA).

D.6.2.5 L2 – Responses to Comments from Imperial County (May 27, 2010)

L2-6 None of the Build Alternatives would require the use of any new well or well water on the project site. Well water, from an off site well already permitted for the withdrawal of water, is proposed to be used during constriction an initial operations. Refer to Chapter 2, Alternatives Including the Proposed Action, for a description of that project feature. In addition, refer to Section D.4.2 for responses related to the project alternatives.

L2-7 The required components of the Fire Prevention Plan are described in Section 4.6, Fire and Fuels Management, in the FEIS.

The hydrogen storage project feature was modified after the publication of the SA/DEIS. That modification is described in Chapter 2, Alternatives Including the Proposed Action, and is evaluated further in Chapter 4, Environmental Consequences, in the FEIS. That evaluation is also summarized in Appendix B, Determination of NEPA Adequacy (DNA), in the FEIS. Section D.4.16, Determination of NEPA Adequacy, earlier in this responses to comments appendix, briefly describes the purpose and content of the DNA relative to modifications made to the Build Alternatives.

L2-8 Discussion of the worst-case release and explosion of the hydrogen on-site is provided in Section 4.11, Public Health and Safety, and Hazardous Materials, in the FEIS.

County Land Use Ordinances do not apply to lands under the jurisdiction of the BLM.

L2-9 The project site is not within 20,000 feet of an existing airport. It is well outside the runway protection zones for the Imperial County Airport. Therefore, it is not expected that the Federal Aviation Administration (FAA) regulations (Code of Federal Regulations Part 77) would apply to the proposed project. Part 77 sets and implements standards for determining obstructions in navigable airspace and the requirements for notice to the FAA of certain proposed construction or alteration that may obstruct navigable airspace. Because the project site is not within 20,000 ft of an airport, it is not expected to obstruct any airspace and, therefore, would not require

review by the Imperial County Airport Land Use Commission (ALUC). However, the ALUC had the opportunity to comment on the draft environmental document during the public review period and no comments were received from the ALUC. Therefore, no determination of consistency is expected to be required from the ALUC for the proposed project.

L2-11 As indicated in Chapter 2, Alternatives Including the Proposed Action, in the FEIS the construction and installation of the 30,000 SunCatchers for the Imperial Valley Solar (IVS) project will take approximately 40 months. This includes both Phases I and II.

L2-13 Measure LAND-1 provided in Section 4.9, Land Use, in the FEIS addresses the private parcels and the application of the Subdivision Map Act.

L2-14 Refer to response to comment L2-6, above.

L2-15 This comment raised concerns about the lack of surveys for special-status species that could be affected by the diversion of reclaimed water from discharge into the New River from the Seeley Wastewater Treatment Plant (SWWTP) to provide water for the IVS project. It is unknown if the diversion would result in affects to downstream wetlands; however, analysis has indicated that the reduction of flows in the New River from the proposed new water use would not be substantial. Additionally, subsequent to the release of the SA/DEIS, focused surveys for Federally listed species have been conducted with negative results at the downstream areas in question.

L2-16 Appendix D, Public Comments on the Draft Environmental Impact Statement (DEIS), in the FEIS includes responses to all substantive comments received by the United States Bureau of Land Management (BLM) on the DEIS.

D.6.2.6 O1 – Responses to Comments from Public Employees for Environmental Responsibility (April 20, 2010)

O1-4 As a Federal agency, the BLM is not bound by the requirements of the California Environmental Quality Act (CEQA). Compliance with the requirements of CEQA for the IVS project including CEQA objectives is the responsibility of the California Energy Commission. Therefore, a CEQA objectives statement is not included in the FEIS because it is not required as part of the Federal National Environmental Policy Act (NEPA) compliance process. Refer to Chapter 1, Introduction and Purpose and Need, in the FEIS for the BLM's purpose and need for the project which is required information under NEPA.

O1-9 The references used in the preparation of the SA/DEIS and the FEIS are provided in Chapter 9, References, in the FEIS.

O1-10 The project does not include a mine reclamation component.

O1-11 The National Environmental Policy Act (NEPA) does not require the greenhouse gas (GHG) analysis and comparison suggested in this comment. Refer to Sections 3.4 and 4.4, Climate Change, in the FEIS for the GHG analysis conducted for the project.

Wind energy projects are already being pursued in counties north of Imperial and San Diego Counties. Refer also to Section 2.8.3, Other Alternatives Considered but Eliminated from Detailed Analysis, in the FEIS for discussion of why wind energy technologies were not considered as alternatives for the proposed project.

O1-20 The on-site treated water will meet all water requirements and will be collected in a sealed basin. Section 4.17, Hydrology, Water Use, and Water Quality, in the FEIS for the discussion of waste water treatment and requirements for the Build Alternatives.

O1-22 Decommissioning and closure are discussed in certain sections where it is relevant throughout the FEIS. For example, Sections 4.3.5.2 in Biological Resources and 4.16.4.2 in Visual Resources discuss the impacts of decommissioning and closure related to those types of resources.

O1-24 The cited impacts are considered permanent due to the length of time (40 years) the project is expected to operate. The term used as a characterization of the impact does not indicate preclusion from restoration.

O1-26 There are no laws, ordinances, regulations, and standards (LORS) relevant to land use that would apply to site restoration. Transmission line safety would only be relevant if the transmission lines were excluded from the closure and remained active. The LORS for public health and safety regarding hazardous waste would be the same LORS as would apply for construction.

D.6.2.7 O2 – Responses to Comments from the Center for Biological Diversity (May 26, 2010)

O2-4 The BLM will prepare an administrative record that appropriately supports the Draft and Final Environmental Impact Statements. Refer to Section D.4.15, CEC Process, for discussion regarding the CEC process for complying with the requirements of CEQA.

O2-19 These comments expressed concern about the adequacy of the baseline biological resources and impacts assessment analysis. Additional biological resource surveys have been conducted, including focused surveys for special-status plant species, and additional FTHL surveys. The baseline data at present are current and address the biological components on the project site. The Agency Preferred Alternative (the IVS Project with modifications) has been designed with the baseline biological resources data taken into consideration to avoid and minimize effects on biological resources to the greatest extent feasible while still meeting the project purpose and needs.

O2-20 Refer to response to comment O2-19, above.

O2-25 This comment raised concerns about the lack of analysis about the potential for the evaporation ponds to attract birds. The expressed concern was that the attraction of the ponds would result in a risk of avian injury and mortality from increased collisions with the SunCatchers. The project applicant has proposed measures to reduce the attractiveness of the evaporation ponds to wildlife. The transmission line towers in the immediate project area and proposed for connection of the IVS project to the Imperial Valley Substation are no taller than 110 feet (ft). Bird kills from collisions are more typical with structures that are greater than 300 ft tall. The SunCatchers will be 36 ft tall. Additionally, on completion of project construction, the reduced amount of habitat on the project site would result in the attraction of bird species that are adapted to living under disturbed conditions and in close proximity to development.

O2-26 This comment suggested that the passive relocation planned for western burrowing owl, American badger, and desert kit fox would constitute “take” of these species by forcing them into areas already occupied, thus resulting in take as a result of competition for resources. Passive relocation of western burrowing owls in the Imperial Valley is an accepted mitigation measure. The BLM listed as sensitive western burrowing owls in the Imperial Valley have adapted to dynamic agricultural practices and frequent disturbances related to such practices. Approximately 71 percent of the western burrowing owls in California occur in the Imperial Valley and their population densities are much higher in the agricultural areas of the Imperial Valley than elsewhere. American badger and desert kit fox are not Federally listed as threatened or endangered, and are not listed as BLM sensitive animal species. Therefore, the passive relocation of the western burrowing owl, American badger, and/or the desert kit fox would not result in “take” as defined by the United States Fish and Wildlife Service or the California Department of Fish and Game.

O2-28 This comment raised concern about the level of effort that would be required to adequately restore the desert vegetation communities on the project site after

decommissioning of the plant. Specifically, the commenter expressed concern about the funding of such an effort, the lack of criteria in the SA/DEIS, and that the applicable *California Desert Conservation Area Plan* (CDCA Plan) criteria are not stringent enough to result in restoration of the desert vegetation communities that would be affected by the IVS project. The BLM will require that the applicant provide bonding to fund future reclamation efforts. The applicant is preparing a reclamation plan that will have more stringent criteria than the CDCA Plan and will be subject to BLM review and approval before the BLM considers approval of the right-of-way grant.

O2-39 The proposed improvements and upgrades to the Seeley Wastewater Treatment Plant are being addressed in a separate Environmental Impact Report (EIR) being prepared under the requirements of the California Environmental Quality Act (CEQA) by the Seeley County Water District. That EIR will address the potential impacts, including potential growth inducing impacts, of those plant upgrades. Those improvements do not require action by the BLM and, therefore, are outside the purview of the BLM.

D.6.2.8 O4 – Responses to Comments from the Natural Resource Defense Council of the Wilderness Society (May 26, 2010)

O4-3 Refer to response to comment O4-4, below.

O4-4 This comment raised concerns about the unknown quantity of impacts to Waters of the United States (waters of the U.S.) related to the Seeley Wastewater Treatment Plant (SWWTP) reclaimed water pipeline part of the project site as well as the lack of analysis of the potential interim water supply from the Dan Boyer Well. The applicant has quantified the waters of the U.S. that occur along the proposed pipeline alignment. The applicant plans to either span Waters of the U.S., or to use horizontal drilling to install the reclaimed water pipeline below waters of the U.S. Spanning of waters of the U.S. and subsurface installation of facilities below waters of the U.S. are not regulated pursuant to the Federal Clean Water Act (CWA). The reclaimed water pipeline in the IVS project will not result in any fill or discharge to waters of the U.S.

Refer to Chapter 4, Environmental Consequences, in the Final Environmental Impact Statement for analysis of proposed short-term use of water from the Dan Boyer Well.

D.6.2.9 O6 – Responses to Comments from the Backcountry Against Dumps (June 15, 2010)

O6-6 This comment raised concerns about that mitigation measures that themselves could have impacts from the construction of structures such as the 20-foot tall fencing. As discussed in the SA/DEIS and the FEIS, Measure VIS-1 provides that BLM would have approval over the surface treatment of structures and coloring of security fencing with vinyl or other non-reflective coating; or with slats or similar semi-opaque, non-reflective material, to blend to the greatest feasible extent with the background soil. BLM staff will review and approve a specific Surface Treatment Plan. In addition, refer to Section D.4.12.3 for other responses related to visual resources.

O6-10 Federal preemption of local plans occurs under the hierarchy of government powers. This comment refers to CEQA requirements which are the responsibility of the California Energy Commission, a State agency, and not the BLM, a Federal agency responsible for compliance with the National Environmental Policy Act and not CEQA. The BLM has no land use or other authority over lands in private ownership; those lands in and near the IVS project site are under the land use jurisdiction of Imperial County. Therefore, the characterization of the IVS project is correct with regard consistency. However, more properly stated, the proposed IVS project in consideration of the LORS does not create an inconsistency. Section 4.9, Land Use, in the FEIS identifies three unavoidable adverse impacts related to land use and recreational opportunities as well as cumulative impacts.

O6-15 As discussed in Chapter 2.0, Alternatives Including the Proposed Action, in the FEIS, Phase II of the IVS project would require operation of the Sunrise PowerLine or provision of additional transmission capacity within the existing San Diego Gas and Electric (SDG&E) system. The IVS project is not solely dependent on the Sunrise PowerLine project and inclusion of that facility in the IVS project description evaluated in the FEIS is not warranted.

D.6.2.10 O8 – Responses to Comments from the Backcountry Against Dumps (May 27, 2010)

O8-6 This comment questioned the results of the Howard Chang hydrology analysis and is duly noted by the BLM. No response is necessary.

O8-7 It is not unusual that design features of a project are modified and refined over time. For example, the SunCatcher features have been refined by the applicant but continue

to function the same way as described in the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS). Because the project would be constructed of components nearly identical to those considered in the SA/DEIS and would function in the same way, the refinements would not be sufficient to trigger the need for additional analysis or recirculation of the environmental document.

As described in the SA/DEIS, during wind or sand storms, the SunCatchers will be in the down position to protect the mirrors and minimize the risk of damage to the SunCatchers themselves. This should not change substantially based on changes in the weight of the SunCatchers. Similarly, in very windy conditions, the SunCatchers will be in the down position and would not be expected to generate noise or vibration that would affect off site sensitive receptors.

Finally, it should be noted that no facility can be designed to withstand all wind or sand storm events or seismic events totally undamaged. Engineering and construction to achieve 100 percent avoidance of any damage at all due to any possible event is unrealistic and would be prohibitively costly.

The existing and historic weather information used for the FEIS analysis is from the El Centro Weather Station. There has also been an existing weather station on the IVS project site at the Imperial Valley Substation for over a year.

O8-10 The environmental review of the Sunrise Powerlink project by the BLM and California Public Utilities Commission (CPUC) is complete. SDG&E received a Certificate of Public Convenience and Necessity from the CPUC for the Sunrise Powerlink project. Therefore, the project is already approved. The Sunrise Powerlink is independent of the IVS project and will be built regardless of whether or not the IVS project is approved for implementation.

O8-11 Refer to response to comment O8-10, above.

O8-19 This comment questioned the conclusion in the SA/DEIS that Interstate 8 (I-8) functions as a barrier for FTHL, and stated that the commenter regularly observes FTHL crossing roads. Paved roads can attract FTHL after sunset if they are radiating more heat than natural substrates; however, crossing two heavily travelled two-lane sections of I-8 poses a substantial daunting challenge for FTHL and the BLM considers I-8 to function as a barrier to FTHL movements.

This comment asked about the effects of the disturbances associated with underground power lines. The impacts associated with underground power lines are construction impacts. The impacts from all construction activities associated with the

project, including underground facilities, are evaluated throughout Section 4.0, Environmental Consequences, in the FEIS in the discussions related to construction impacts.

O8-20 The analysis of potential seismic issues at the project site is not based on individual events such as the April 4, 2010 earthquake on the Laguna Salada fault. Earthquakes and earth movement are continuous in California as a result of its location at the meeting of two tectonic plates. It would not be possible to prepare any geological or seismic analysis in California that includes every single seismic event because these events occur continuously. For example, before and since the April 4, 2010 earthquake, there were and have been hundreds or thousands of additional events in the same geographic area and likely generated on the same fault. As a result, seismic studies consider the potential for ground shaking and seismic surface rupture based on past records of seismic activity and the locations of known faults in relationship to a project site. Nonetheless, regardless of the occurrence of individual seismic events or the locations of known faults with past surface ruptures or blind faults with no evidence of surface rupture, all buildings and structures in California must be designed and constructed consistent with the 2007 (or more recent) California Building Standards Code (CBSC) in Title 24, California Code of Regulations, which includes specific codes for all aspects of building and structure design and construction including standards related to the potential for seismic shaking, liquefaction, local subsidence, and other soil conditions. Considering the April 4, 2010 earthquake on the Laguna Salada fault would not substantively change the analysis in the Final Environmental Impact Statement which clearly indicates that the site is subject to seismic shaking and possibly soil liquefaction and local subsidence or the project mitigation which clearly requires design and construction of the project be consistent with all applicable parts of the CBSC in Title 24. Therefore, because the analysis and conclusions would not change based on consideration of the April 4, 2010 earthquake, it is not necessary to revise the analysis to reflect that earthquake or to recirculate the environmental document.

O8-21 Refer to response to comment O8-20, above.

O8-24 As discussed in Section 4.14, Special Designations, in the FEIS, there are no wilderness areas near or in the immediate vicinity of the project site. As a result, it is not expected that the IVS project would adversely impact the visitor experience at wilderness areas further from the project site. Section 4.12, Recreation, in the FEIS, acknowledges that the IVS project will disrupt a highly active recreational area and would adversely affect users of those recreational lands. The FEIS further acknowledges this as an unavoidable adverse impact of the IVS project and that the

IVS project and other cumulative projects will result in an unavoidable cumulative adverse impacts on recreation resources.

O8-25 Refer to response to comment O8-24, above.

D.6.2.11 O9 – Responses to Comments from the California Unions for Reliable Energy (May 27, 2010)

O9-10 The proposed improvements and upgrades to the Seeley Wastewater Treatment Plant are being addressed in a separate Environmental Impact Report (EIR) being prepared under the requirements of the California Environmental Quality Act (CEQA) by the Seeley County Water District. That EIR will address the potential impacts, including potential growth inducing impacts, of those plant upgrades. Those improvements do not require action by the BLM and, therefore, are outside the purview of the BLM.

O9-14 This comment stated that the environmental document failed to adequately analyze the soil and water conditions on the IVS project site to establish baseline data. The geology, hydrology, and biology sections of the Staff Assessment/Draft Environmental Impact Statement identify and describe the baseline conditions for soils and water on and in the vicinity of the IVS project site. Refer also to response to comment O9-40, below, for a discussion regarding potential project effects on the Salton Sea and to Section 4.18 for responses related to water resources.

O9-22 This comment raised concern about the lack of surveys for the western burrowing owl (*Athene cunicularia* var. *hypugaea*) in the SA/DEIS. The applicant conducted the western burrowing owl surveys pursuant to the California Burrowing Owl Consortium guidelines.

O9-31 This comment raised concern about the potential for the project to result in take of the golden eagle (*Aquila chrysaetos*). There are only five recorded observations of golden eagle in the Imperial Valley. Golden eagles likely occur to the west of the project site in the Coyote Mountains area. It is highly unlikely that golden eagles would nest on the project site. The probability of golden eagle flying over the project site is low. The site could provide low to moderate forage habitat for the golden eagle. Golden eagle has not been observed on or over the project site. Implementation of the Imperial Valley Solar (IVS) project would not constitute take of the golden eagle and the Federal Bald and Golden Eagle Protection Act would, therefore, not be applicable to the IVS project.

O9-32 This comment raised concern about the lack of analysis of the potential impacts of the IVS project on the fringe-toed lizard (*Uma inornata*). The project site is not within the historic range of the fringe-toed lizard, which is known from the Coachella Valley. The fringe-toed lizard was not known to occur in the Yuha Desert and, therefore, was not included in the impacts assessment.

O9-38 The comment asserts that "…summer rainfall in southeastern California may increase by as much as 50% by 2080…" There is no requirement for an environmental document to attempt to speculate on weather patterns 70 years in the future or to speculate or attempt to analyze the secondary effects of weather changes in the future on a proposed project. The FEIS analysis is based on known weather patterns and historical precipitation for the southern California desert. Sections 3.4 and 4.4 in the FEIS discuss climate change.

O9-46 Refer to response to comment O9-22, above.

O9-47 This comment raises concerns that the adequacy of pre-construction surveys for nesting birds is not scientifically supported and would not prevent impacts to nesting birds. The intent of pre-construction nesting surveys is to identify all active nests within the survey area to avoid direct impacts. The use of accepted techniques and qualified biologists will be used to avoid and minimize project effects to nesting birds to the greatest extent feasible and no nesting birds will be intentionally taken.

D.6.2.12 O10 – Responses to Comments from the California Native Plant Society (May 27, 2010)

O10-3 The on-site treated water will meet all water requirements and will be collected in a sealed basin. Section 4.17, Hydrology, Water Use, and Water Quality, in the FEIS for the discussion of waste water treatment and requirements for the Build Alternatives.

O10-6 The fugitive dust control measure provided in Section 4.2, Air Quality, in the FEIS identifies Soiltac™ or a product with same or better performance as the chemical dust suppressant proposed to be used. Soiltac™ is a copolymer soil stabilizer.

D.6.2.13 O11 – Responses to Comments from the BLM California Desert District Advisory Council (April 1, 2010)

O11-1 Figures 1 through 4 were added to CEC Website and the SA/DEIS provided figures at the end of the alternatives and cumulative projects discussions. These figures were

included in the SA/DEIS from the time of its posting on the CEC website at the beginning of the public review period for the SA/DEIS in February 2010.

D.6.2.14 P2 – Responses to Comments from Anita Nicklen (May 28, 2010)

P2-1 This email was received by the BLM El Centro Field Office when Ms. Nicklen resubmitted it as shown on the copy of her email transmittal dated 5/28/10 and as acknowledged by the response from Ms. Simmons of the BLM in her email to Ms. Nicklen.

D.6.2.15 P7 – Responses to Comments from Brendan Hughes (May 17, 2010)

P7-2 Three No Action Alternatives were analyzed in detail in the SA/DEIS and the FEIS. A ban on development in the California Desert Conservation Area (CDCA) would be counter to the mandates for the BLM to accommodate renewable energy project on BLM managed lands. As noted in the project description in the SA/DEIS and the FEIS, the Build Alternatives would all require an amendment to the CDCA Plan (1980, as amended) to allow for a solar project on the project site. This type of amendment is consistent with the CDCA Plan and the overall process for ensuring consistency between the CDCA Plan and its protections and guidance for managing those lands, and lands uses proposed on BLM managed lands.

D.6.2.16 P10 – Responses to Comments from Denis Trafecanty (No Date)

P10-8 Other renewable energy projects are being pursued in eastern San Diego independently of the proposed IVS project.

D.6.2.17 P11 – Responses to Comments from Edie Harmon (May 26, 2010)

P11-2 The SA/DEIS was released for public review for a 90-day period. While the standard review period is usually 45 days, because of the technical complexity of the project, the comment period was longer than the minimum required.

P11-8 Refer to response to comment P11-2, above.

P11-15 Previous decisions regarding the boundaries of Areas of Environmental Concern (ACECs) are not relevant to the IVS project because there are no ACECs on or in the immediate vicinity of the IVS project site.

P11-25 The alternatives considered in the FEIS are based on the BLM project purpose and need. While the reduction of greenhouse gas (GHG) emissions is a benefit of renewable energy projects, it is not part of the BLM purpose and need. Therefore, alternatives specifically intended to result in GHG reductions or fossil fuel consumption reductions were not considered as alternatives in the FEIS evaluation.

D.4.7 Biological Resources

The comments regarding biological resources addressed a number of specific topics. The individual comments by topic and the topic specific responses are provided in the following sections.

D.4.7.1 Botanical Surveys

Comments: F2-30, O2-24, O6-8, O8-19, O9-21, O10-2, and P7-4.

Sensitive Plant Species and Vegetation

The DEIS indicates that CEC staff and BLM are concerned that special status plant species may have been overlooked due to inconsistent site surveys and varying levels of botanical expertise (at pg. ES-22, C.2-3 and C.2-20). The DEIS concludes that survey results were not considered adequate to assess presence or absence of a species within the project area.

It is EPA's understanding that the proposed Project will clear vegetation along 130 foot wide parallel rows of SunCatchers. Alternating 72 foot wide rows would be left undisturbed (at pg. C.7-34). The FEIS should further discuss how these cleared rows will increase the potential for sediment transfer in the cleared areas as mentioned on page C. 7-34. The DEIS also indicates that while grading would not occur on the entire site, grading would directly affect wildlife and other special status species by removal of shrubs and herbaceous vegetation, resulting in loss and fragmentation of cover, breeding, and foraging habitat. Severe damage involving vegetation removal and soil disturbance can take from 50 to 300 years for partial recovery; complete ecosystem recovery may require over 3,000 years (at pg. C.2-28). Further, during construction, wildlife could be crushed or entombed in dens or burrows, and could collide with vehicles (at pg. C.2-29). In light of these impacts, EPA has concerns as the vegetation removal and placement of facilities in the washes would have indirect effects that have not been fully assessed (at pg. C.2-2).

Recommendations: F2-30

- Incorporate BIO-19 into the FEIS and ROD which requires botanical surveys to be conducted and avoidance of rare plants during project construction and operation.
- Further discuss and quantify the expected direct and indirect effects of vegetation removal and placement of facilities under each alternative.
- Discuss and propose mitigation measures for the increased sediment transfer likely to result from the cleared rows between SunCatchers.
- Discuss the impacts associated with pile driving the SunCatcher pedestals into the ground and include mitigation measures to ensure maximum avoidance of sensitive species on site during construction.
- Discuss the impacts associated with connecting the SunCatchers by gas and electrical transmission lines buried in two foot wide trenches. Include mitigation measures to ensure maximum avoidance of sensitive species on site during construction.
- Discuss alternatives to any proposed vegetation mowing that would result from a maintenance regime. Excess mowing may suppress vegetation through carbohydrate starvation, reducing its water use, and discouraging reproduction by seed. Mowing is likely to promote proliferation of non-native invasive weeds as well.
- Mitigation measures that result from consultation with the US Fish and Wildlife Service to protect sensitive biological resources should be included in the FEIS and, ultimately, the ROD.

3. Rare and Special Status Plants

As noted repeatedly in the DEIS (Biological Resources Table 2), inadequate surveys were done to evaluate the on-site rare and special status plants. As with the bighorn, absent the basic data on on-site resources, impact analysis is impossible, as is appropriate avoidance, minimization and mitigation strategies. **O2-24**

The SA/DEIS fails to disclose potentially significant impacts to the Peninsular bighorn sheep ("PBHS") and the FTHL. Both PBHS and FTHL have been "observed on [the] project site" SA/DEIS, pp. C.2-16, C.2-18. PBHS is listed under the federal Endangered Species Act (61 FR 13134, 13136) and a proposed listing of FTHL is currently under review. SA/DEIS, p. C.2-40 (detailing process that led to a federal court order requiring USFWS to consider listing FTHL). The SA/DEIS also fails to disclose significant impacts to special-status plant species. The deficiencies are exemplified by the SA/DEIS' statement that the significance of biological impacts is "to be provided," in violation of both CEQA and NEPA. ES-15.

Although PBHS was observed on the Project site, the SA/DEIS claims that PBHS' use of the project site "is transitory at best" and that therefore impacts to PBHS would be less than significant. SA/DEIS, p. C.2-40. This conclusion is based solely upon BLM's and the applicant's "speculat[ion] that the [PBHS] sited [*sic*] at the Project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site." SA/DEIS, p. C.2-24. This is "pure speculation" that "is contradicted by the evidence regarding known [PBHS] behavior." Testimony of Dr. Vernon Bleich on behalf of California Unions for Reliable Energy ("CURE"), Exhibit 400 to opening testimony for CURE, p. 4. It is quite likely that PBHS appear in the Project vicinity on a regular basis. In fact, just three days ago (May 24, 2010), a group of five adult PBHS ewes were seen about 4-5 miles west of the Project site. Comment letter by Denis Trafecanty, sent May 27, 2010, p. 1.

As Dr. Bleich testified, on behalf of California Unions for Reliable Energy ("CURE"), "the SA fails to adequately analyze the *potential reason(s)* that PBHS were using [the Project site] and, as a result," its conclusions that PBHS' appearance was a mere coincidence are "indefensible." *Id.* at 1, 5. The SA/DEIS also fails to identify or mitigate impacts to forage habitat, and fails to identify and mitigate the loss of 6,063 acres of bighorn sheep habitat within the CTCRA. *See generally id.* 5-9. The SA/DEIS' "fail[ure] to adequately identify the[se] significant impacts" is unlawful. *Id.* at 1. **O6-8**

Furthermore, consultation with the Fish and Wildlife Service regarding the Project's impacts on PBHS is required. The Endangered Species Act specifies that "[t]he agency taking the action must assess the project's effects on endangered or threatened species and consult with the FWS to assure the project's compliance with the ESA." *Sierra Club v. Marsh*, 816 F.2d 1376 (9th Cir. 1987). "The consultation process is triggered when a federal agency . . . undertakes *any* activity which *could* impact an endangered species or threaten its critical habitat." *Florida Key Deer v. Stickney,* 864 F.Supp. 1222, 1228 (S.D. Fla. 1994) (*citing* 16 U.S.C. § 1536(a)(2)) (emphasis in original). Here, as discussed above, the Project "could" affect the PBHS. Thus, consultation with FWS is mandated.

Scott Cashen, an expert biologist, testified as to the Project's undisclosed impacts on special status plant species and the FTHL. Exhibit 429 to opening testimony for CURE. In his professional opinion, the SA/DEIS contains "inadequate information on the presence of special-status plant species within the Project area" and "as a result . . . the SA/DEIS cannot conclude [that] proposed mitigation

would reduce Project impacts" on these species "to less than significant levels." *Id.* at 2; *see also* mitigation measure BIO-19, SA/DEIS pp. C.2-97 through 100. The size of the buffer zone for special-status plant species is unknown and likely insufficient.[7] *Id.* at 2-3. Mr. Cashen also testified that the proposed mitigation measures to mitigate impact to *non*-listed species are unenforceable and that impacts to these species would be significant as well. *Id.* at 3-4. Unless all required plant surveys are completed *before* the mitigation measures are adopted, it is impossible to tell whether the mitigation measures will be effective. *Id.* at 5. Moreover, fall surveys for special-status plant species have not yet been prepared. *Id.* at 6. Because of these informational inadequacies, the SA/DEIS is legally deficient.

With regard to the FTHL, the SA/DEIS contains no conclusion regarding the Project's impacts. "[S]taff is in the process of evaluating if the use of compensation funds is sufficient for CEQA mitigation." SA/DEIS, p. C.2-61. As discussed above, the DEIS *itself* is required to include this information. There is a "possibility that *thousands* of FTHL will die as a result of the Project"; a population of this size is "roughly half the size of the population within the entire West Mesa MA." Exhibit 429 to opening testimony for CURE, pp. 8-9. Additionally, "the loss of 6.063 acres of habitat" that would accompany the Project "represents a tremendous impact" on the FTHL, which "is proposed for listing due to habitat loss." These impacts must be mitigated *before* the Project is approved, not after.

The Project also "would cause considerable fragmentation to the remaining FTHL habitat." *Id.* at 9. Nonetheless, "[t]he SA/DEIS proposed no mitigation for impacts to FTHL movement between MAs." *Id.* at 11. The SA/DEIS' conclusion that such mitigation is infeasible is unsupported by the record. *Id.* There is no basis to assume that a corridor underneath I-8 would be impractical. *Id.* Additionally, the SA/DEIS contemplates that the FTHL "would be moved out of harm's way," SA/DEIS at C.2-55, but this strategy "only partially addresses the[FTHL's] survivorship" and, accordingly, only partially mitigates this impact. Exhibit 429 to opening testimony for CURE, p. 12. CEQA requires these potentially significant impacts to be mitigated and the SA/DEIS' failure to do so is unlawful. O6-8

Finally, the compensatory mitigation measure, BIO-10, also fails to fully mitigate habitat loss. This measure would allow current habitat to be replaced by "poor quality habitat." SA/DEIS, p. C.2-85. As such, the SA/DEIS fails to "prevent[] a net loss of FTHL habitat," as claimed. Exhibit 429 to opening testimony for CURE, p. 14.

Flora / Fauna

- Fall surveys are required for full compliance. 2010 Fall bloom should be exceptional due to a wet year after numerous dry years. The Fall survey is now proposed to take place *after* public review which eliminates any review and comment on impacts and proposed mitigation. O8-19

- Any historic information for bloom after the 1976 Hurricane Kathleen should be incorporated since many desert plants can remain dormant unless and until the right amount of rain falls at the right time. See photo below of desert Prickly Poppy bloom after Hurricane Kathleen.
- Jim Andre, a rare plant expert and director of UC Riverside's Sweeney Granite Mountains Desert Research Center in the Mojave National Preserve, has stated 40 % of desert plants bloom in the fall.
- The presence of bighorn sheep on-site cannot be dismissed by stating they were flushed out by OHV activity. Flushed out from where? Wilderness and protected areas?
- What does this say about BLM management abilities?
- Previous BLM plans for the area recognized the project site as bighorn habitat.
- The on-site presence of pregnant females during lambing season begs further investigation.

O8-19

- What are the potential impacts of having power collected from the SunCatchers to go through a 600 V underground power lines which apparently will collect from the units leaving much of the area not only disturbed by roads, but also by the underground powerlines .
- What are the potential adverse impacts of this amount of cumulative disturbances, from multiple projects, to the soils used by burrowing small mammals and lizards. This disturbance is in addition to the 27 miles of paved arterial roads, 14 miles of unpaved perimeter roads, and approximately 234 miles of unpaved access roads associated with the proposed IV Solar site (SA/DEIS ES-5) for a total of 275 miles of roads.
- Cumulative impacts to bighorn sheep habitat and corridors
- Indirect and cumulative impacts associated with noise and vibrations that travel through the soil and air.
- We disagree with applicant expert's position that I-8 represents a barrier for FTHL.

E. RARE PLANTS ON PROJECT SITE

The DEIS acknowledges that the types and quantities of rare plants had not been determined at the time that the DEIS was published due to the inadequacy of the Applicant's botanical survey efforts. The DEIS proposed that surveys be conducted for special status plants in the spring and fall of 2010. As a result, DEIS correctly concludes the applicant's botanical surveys have not provided an adequate basis for analyzing potential Project impacts.

O9-21

Although the SA/DEIS attempts to analyze the impacts and formulate mitigation measures before adequate survey data are obtained, the analysis and mitigation may change after the additional survey efforts are better able to identify impacts to rare plants. The baseline data that makes up the affected environment should be shared with the public and the public should have the opportunity to comment. Without this information, the affected environment is inadequately defined in the DEIS.

Inadequate Plant Studies: We agree that the plant surveys conducted in 2007 and 2008 are not adequate to determine the presence or absence of special plant species.

CNPS believes that the applicant should not have developed it's list of possible listed species from known occurrences in the immediate area of the project. We feel that the list should have been compiled from known occurrences from the entire Colorado Basin, a much larger geographical area. We believe a list of sensitive species from the entire Colorado Basin, excluding terrain types such as rocky slopes, would contain approximately 65 species and would be the minimum adequate list for the project.

O10-2

The problem with the Applicant's method of using sensitive species known to occur in the project area is that Imperial County is not documented well. Imperial and San Diego Counties are approximately the same size. However, the California Consortium of Herbaria contains 117,000 specimens – meaning that the county has been widely surveyed over many years, wet and dry. In contrast, Imperial County has only 9,800

specimens in the California Consortium of Herbaria. It's reasonable to conclude that any existing database could not reliably predict the presence of special status species in Imperial County or that such databases could render accurate lists. The result is that surveys might not be scheduled and conducted at time when sensitive species, especially annuals, would be present.

We argue that the Applicant's special status species lists are of unknown reliability and cannot fulfill their intended use since they apparently were not derived from sensitive species known to occur in the entire Colorado Basin. We also argue that the 2008 botany survey reports are of limited value for the same reasons and may be inadequate. O10-2

We believe that additional surveys should be conducted taking into account the entire Colorado Basin so that project impacts are known.

Additionally, the executive summary indicates that BLM declared special-status plant surveys to be inadequate. This is unacceptable for inclusion into a Draft Environmental Impact Statement. How can decisions be made by land managers and interested parties if the information provided is inadequate? This Draft EIS should not be allowed to move forward until complete information is provided by qualified individuals in the field. P7-4

Response: These comments raised concerns about the adequacy of the botanical surveys conducted for the Imperial Valley Solar (IVS) project site in 2007 and 2008. The United States Bureau of Land Management (BLM) shared those concerns and the applicant conducted additional surveys in spring 2010. The applicant will also conduct late summer/early fall surveys in 2010 to address any special-status species expected to occur following monsoonal storm events that typically occur in the late summer/early fall. Late summer/early fall storms typically result in blooming of plant species that may not occur during spring.

Two rounds of surveys were conducted in spring 2010 by botanists familiar with desert flora and pursuant to accepted survey methodology. The resumes of the botanists conducting botanical surveys were reviewed by BLM biologists. Three special-status species were observed during those spring surveys: brown turbans (*Malperia tenuis*), Harwood's milk vetch (*Astragalus insularis* var. *harwoodii*), and Wiggins' croton (*Croton wigginsii*). Brown turbans is not Federally listed as threatened or endangered and is not on the BLM sensitive plant species list. Brown turbans is listed by the California Native Plant Society (CNPS) as 2.3 (rare, threatened, or endangered in California, but more common elsewhere/not very threatened in California [low degree/immediacy of threats or no threats known]). Harwood's milk vetch is not Federally listed as threatened or endangered and is not listed as a BLM sensitive plant species. Harwood's milk vetch is listed by the CNPS as 2.2 (rare, threatened, or endangered in California, but more common elsewhere [fairly threatened in California moderate degree/immediacy of threat]). Wiggins' croton is not Federally listed as threatened or endangered, but is listed as a BLM sensitive plant species. Wiggins' croton is listed as 2.2 by the CNPS.

D.4.7.2 Avoidance of Aquatic Resources

Comments: F2-5, F2-9, F2-12, F2-13, F2-14, F2-15, F2-16, F2-18, F2-20, F2-23, S2-3, O2-34, O4-3, O4-4, O6-9, O8-6, 09-17, O9-23, O9-52, O9-53, O9-54, and O9-55.

We are particularly concerned about the potential impact of the proposed Project to waters of the United States, which serves as the primary basis for our "EO" rating. The Project proposes discharges of dredged or fill material that would eliminate 165 acres of jurisdictional desert streams and tributaries to the New River and the Salton Sea. As proposed, these discharges may result in substantial and unacceptable impacts to "aquatic resources of national importance" (ARNI). Further, the Project proposes placement of approximately 5,000 of the Project's 30,000 SunCatchers within areas subject to flash flooding and erosion. These placements raise environmental as well as engineering and financial sustainability concerns due to increased erosion, migration of channels, local scour, and potential destabilization and damage to valuable facilities and equipment. Through continued coordination on the Project, we have been encouraged by recently proposed design modifications which, if developed and approved, could reduce impacts to aquatic resources. **F2-5**

Given the numerous outstanding concerns that have been raised by EPA as well as many other stakeholders on the Project as proposed, EPA strongly encourages BLM to address comments provided on the subject DEIS in the FEIS. The FEIS should also demonstrate that the proposed Project is the *Least Environmentally Damaging Practicable Alternative* (LEDPA), and identify measures that could mitigate the impacts. It should include a robust discussion of all avoidance and mitigation measures proposed for the Project and include an outline of the requirements of a compensatory mitigation plan. **F2-9**

Aquatic and Biological Resources

Compliance with Clean Water Act Section 404

The DEIS discloses that 878 acres of ephemeral waters of the United States (Waters) are located on the Project site (at pg. ES-29). These Waters are within the Salton Sea Transboundary Watershed and flow to the Westside Main Canal and Coyote Wash, tributaries to the New River which drains to the Salton Sea. These Waters provide sediment transport and deposition downstream, energy dissipation, ground water recharge, hydrologic and geochemical connectivity, as well as ecosystem connectivity to the New River and the Salton Sea. **F2-12**

According to the DEIS, the Project, as proposed by the Applicant, would result in a loss of approximately 165 acres of Waters that would be subject to permanent impacts, 5 acres of temporary impacts, and 13 acres of indirect impacts (at pg. C.2-2). The aquatic ecosystem will be dramatically altered by this Project through direct habitat loss and degradation, changes to

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hydrological processes, likely increase in the velocity and volume of stormwater flows, sedimentation, and a potential increase in the discharge of pollutants from Project construction and operation. In addition, the proposed Project will degrade the functions of waters through the placement of road crossings, SunCatchers and fencing. The permanent loss of approximately 19% of all on-site waters, in addition to indirect impacts, is likely to: F2-12

- destroy habitat for wildlife;
- cause a potentially irreversible loss of biodiversity and ecosystem stability; and,
- degrade water quality, modifying sediment transport and flows.

The purpose of Section 404 of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of waters by prohibiting discharges of dredged or fill material that would result in avoidable or significant adverse impacts on the aquatic environment. EPA's *Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials* (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the CWA (Guidelines) provide the standards by which proposed discharges must be evaluated. The burden to demonstrate compliance with the Guidelines rests with the permit Applicant. The Guidelines contain four main requirements that must be met to obtain a Section 404 permit:

a) Section 230.10(a) prohibits a discharge if there is a less environmentally damaging practicable alternative to the proposed Project.

b) Section 230.10(b) prohibits discharges that will result in a violation of water quality standards or toxic effluent standards, jeopardize a threatened or endangered species, or violate requirements imposed to protect a marine sanctuary. F2-13

c) Section 230.10(c) prohibits discharges that will cause or contribute to significant degradation of waters. Significant degradation may include individual or cumulative impacts to human health and welfare; fish and wildlife; ecosystem diversity, productivity and stability; and recreational, aesthetic or economic values.

d) Section 230.10(d) prohibits discharges unless all appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

Requirements 230.10(a) and 230.10(d) are discussed further below.

Recommendation:

- Discuss and demonstrate compliance with the Guidelines in the FEIS.

Analysis of Alternatives – 40 CFR 230.10(a)

In order to comply with the Guidelines, the Applicant must comprehensively evaluate a range of alternatives to ensure that the *"preferred"* alternative is the *Least Environmentally Damaging Practicable Alternative* (LEDPA). Identification of the LEDPA is achieved by performing an alternatives analysis that estimates the direct, indirect, and cumulative impacts to jurisdictional waters resulting from a set of on- and off-site project alternatives. Project F2-14

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alternatives that are not practicable and do not meet the project purpose are eliminated. The LEDPA is the remaining alternative with the fewest impacts to aquatic resources, so long as it does not have other significant adverse environmental consequences. Only when this analysis has been performed can the applicant and the permitting authority be assured that the selected alternative is the LEDPA (40 CFR 230.10(a)).

Over the course of the past several months, we have been working collaboratively with the Corps, fellow resource and regulatory agencies, and the Applicant on the proposed Project. On April 28, 2010, EPA met with the Applicant and the Corps to discuss new alternatives proposed by the Applicant to reduce impacts to aquatic resources. We appreciate the Applicant's effort toward compliance with the Guidelines. On May 12, 2010, EPA submitted comments to the Corps identifying our concerns with the Public Notice (Permit for Application). Given the importance of the desert ephemeral washes, which are tributaries to the New River and the Salton Sea, and the limited information currently available regarding the Project—particularly related to practicable alternatives with fewer impacts to aquatic resources—EPA determined that the project **may result** in substantial and unacceptable impacts to "aquatic resources of national importance" (ARNI), and identified the permit action as a candidate for elevation to the Corps' and EPA's respective headquarters.[1] The ephemeral waters at the Project site have been designated as ARNI due the hydrologic, biogeochemical, and habitat functions that directly affect the integrity and functional condition of waters downstream at the New River and the Salton Sea.

Based on our review of the DEIS and the Public Notice, additional information, including an offsite alternatives analysis, analysis of impacts associated with site design (*e.g.*, perimeter fencing and roads), and onsite alternative designs (*e.g.*, future development of in holdings, additional avoidance through removal of SunCatchers in drainages, alternative locations of substation, maintenance buildings, holding areas and assembly tents) is necessary in order to ensure authorization of the LEDPA. F2-14

At this time, the DEIS and the Public Notice provide minimal consideration of practicable alternatives in light of costs, logistics, and existing technology as required under the Guidelines, and, as a result, we cannot determine the extent to which each alternative is practicable and should be considered as the LEDPA. The DEIS presents four on-site alternatives including the Applicant's proposed 750 MW full build-out alternative, two 'Drainage Avoidance' alternatives, and a 300 MW reduced project size alternative. Additionally, the DEIS contains an evaluation of three off-site alternatives; however, these off-site alternatives are included for CEQA purposes only and are eliminated from further consideration under NEPA for their failure to meet BLM's purpose and need for the proposed Project (at pg. B.2-2). A full analysis of off-site alternatives is an integral component of the CWA 404 analysis. We strongly recommend off-site alternatives be given full consideration under NEPA and to demonstrate compliance with the Guidelines. The DEIS indicates that all three of the off-site alternatives would have less severe cultural and visual impacts than would occur at the proposed site, and two of the three alternative sites (located on disturbed lands) would also have reduced impacts to

[1] This letter follows the field level procedures outlined in the August 1992 Memorandum of Agreement between the EPA and the Department of the Army, Part IV, paragraph 3(a) regarding section 404(q) of the Clean Water Act.

biological resources (at pg. B.2-1). As previously mentioned, EPA supports the consideration of off-site alternatives on disturbed lands, including fallow agricultural lands, and other candidate parcels that are currently under consideration by BLM as a Solar Energy Study area.

As part of determining the LEDPA, the FEIS should further justify the elimination of the 300 MW Phase I as a practicable alternative. Based on the information in the DEIS, it appears that the Phase I alternative may be practicable and less environmentally damaging to jurisdictional waters when compared to the proposed Project alternative. It is our understanding that the Applicant has a Power Purchase Agreement with SDG&E to provide 300 MW of power once on-line. The FEIS should confirm that this is the case. In light of the contingency of Phase II of the Project upon the Sunrise Powerlink Transmission Line (SPTL) (at pg. B.1-19), it appears that the 300 MW alternative may have been considered by the Applicant or SDG&E to have independent utility. Additionally, SPTL appears to be further delayed based on the recent decision by the Cleveland National Forest Service Supervisor to open up the project for further public review. The FEIS should also discuss the implications to the proposed Project if the SPTL is not built. As such, a single 300 MW plant would be considered an on-site *less environmentally damaging, practicable alternative*, pursuant to the Guidelines. Finally, the FEIS should analyze a 300 MW alternative in a design configuration that avoids all impacts to Waters on-site. F2-14

Recommendation:

- EPA recommends that BLM include analyses of on- and off-site alternatives in the FEIS to support the identification of the LEDPA. Sufficient detail should be provided to allow for meaningful comparisons.

Minimize Potential Adverse Impacts, and Mitigation – 40 CFR 230.10(d)

Pursuant to the Guidelines, mitigation of project impacts begins with the avoidance and minimization of direct, indirect, and cumulative impacts to the aquatic ecosystem, followed by compensatory measures if a loss of aquatic functions and/or acreage is unavoidable. Compensatory mitigation is, therefore, intended only for unavoidable impacts to waters after the LEDPA has been determined. For this reason, it would be premature to examine in detail any mitigation proposal before compliance with 40 CFR 230.10(a) is established. F2-15

The DEIS has not clearly demonstrated that all practicable measures to minimize unavoidable impacts to potential waters of the United States have been incorporated into the proposed project design. For example, according to an April 26, 2010 *Preliminary Draft 404B-1 Alternatives Analysis For the Imperial Valley Solar Project*, all on-site design alternatives utilize the same location and footprint for the Main Service Complex, which results in 18 acres of permanent impacts to Waters. The FEIS should evaluate alternative locations, as well as the reconfiguration or redesign of building footprints within the Main Service Complex, to avoid jurisdictional waters. The FEIS should also discuss alternate designs that reduce the size of holding areas, and consider minimizing the number of temporary assembly tents required to outfit the facility. We note that the DEIS appears to indicate that only one assembly building is necessary (at pg. C.7-14). F2-16

Similarly, the FEIS should fully describe the potential for avoiding redundancy of arterial and perimeter roads, as well as further elimination of SunCatchers in drainages, which could result in avoidance of jurisdictional waters. The FEIS should provide additional details, including acres of Waters avoided, as a result of these avoidance measures. Avoidance of sensitive plant species should be an important consideration in the design and configuration of the SunCatcher layouts as well. F2-16

Further, the proposed Project places 5,000 SunCatchers within areas subject to flash flooding and erosion (at pg. ES-28). The DEIS later indicates that this may be an underestimate of the actual number of SunCatchers that will be subject to flooding (at pg. C.7-13). SunCatchers within the floodplain could be subject to destabilization by stream scour (at pg. C.7-1). Additionally, impacts to soils related to wind erosion and runoff erosion are potentially significant, as are impacts to surface water quality from sedimentation and the introduction of foreign materials, including potential contaminants, to the project area (at pg. C.7-64). For all of the above reasons, the FEIS should fully utilize the inherent flexibility of the SunCatcher technology to fully avoid all impacts to jurisdictional waters. The FEIS should incorporate evaluation of alternative SunCatcher designs that are currently under discussion through the CWA 404 process. F2-18

Finally, the DEIS provides no assessment of the cumulative impacts on waters of the United States that are likely to result from the proposed Project and other proposed energy-related projects in the area. In short, the Project, as proposed, does not comply with EPA's Guidelines, nor with the Corps' and EPA's regulations governing mitigation under Section 404 of the CWA.[2] F2-20

Recommendations:

- Discuss the steps that will be taken to avoid and minimize impacts to waters of the United States. To the extent any aquatic features that could be affected by the Project are determined not to constitute waters of the United States, EPA recommends that the FEIS characterize the functions of such features and discuss potential mitigation. F2-20
- Include in the FEIS a mitigation plan for unavoidable impacts to waters of the United States, as required by Corps and EPA regulations.

The DEIS does not provide detailed information about the effects of fencing on drainage systems. The DEIS does indicate that appropriate fencing is still being determined in coordination with regulatory and resource agencies to protect sensitive ecological areas and address storm flows in washes (at B.1-6). In this region, storms can be sudden and severe, resulting in flash flooding. Fence design must address hydrologic criteria, as well as security performance criteria. The National Park Service recently published an article[3] on the effects of the international boundary pedestrian fence on drainage systems and infrastructure. We recommend that BLM review this article to ensure that such issues are adequately addressed with this Project. F2-23

Recommendation:

- Provide more detailed information about fencing and potential effects of fencing on drainage systems within the FEIS. Ensure that the fencing proposed for this Project will meet appropriate hydrologic performance standards. F2-23

Biologically, the loss of over 6,000 acres of habitat for the proposed-endangered Flat-tailed Horned Lizard should be considered significant and will require costly mitigation according to formulas derived as part of the Flat-tailed Horned Lizard Conservation Strategy. The loss of over 6,000 acres of habitat for burrowing owls (a California Species of Special Concern), likewise will need to be mitigated. The presence of individuals of the State- and federally-listed endangered Peninsular Range population of the Desert Bighorn Sheep will also require mitigation as a result of this project. Some 312 acres of desert washes and waterways would be impacted by the proposed project and require mitigation under the U.S. Army Corps of Engineers and California Department of Fish and Game guidelines. Numerous other sensitive plant and animal species will also need to be mitigated. S2-3

2. Surface Water Impacts:

The SA/DEIS identifies impacts to surface drainages and washes on the proposed project site. However, the DEIS is confusing about the actual impact. At C.2-2 the DEIS states that the project impact "would amount to a loss of approximately 165 acres of permanent impacts, 5 acres of temporary impacts, and 13 acres of indirect impacts to Waters of the U.S. and approximately 312 acres of permanent impacts to jurisdictional state waters." However at C.2-56 the SA/DEIS states "Construction of the SES Solar Two would result in permanent impacts to 840 acres of jurisdictional state waters." At C.7-2 the DEIS states that "The U.S. Army Corps of Engineers has determined that 840 acres of the project site are jurisdictional waters of the U.S. under Clean Water Act (CWA) Section 404, all of which would be permanent impacts." The substantial inconsistency in the numbers of acres of impacts to onsite waters in the documents suggests that a comprehensive review of the actual impacts was not completed.

O2-34

Furthermore, the DEIS notes that "The mitigation requirements for the CWA 404 permit are currently unresolved." DEIS at C.2-2. While it is understandable that the mitigation is unresolved due to the apparent lack of clarity on the actual impacts, the DEIS fails to inform the public and decision makers as to the actual impact and the feasibility of mitigating those impacts. The Army Corps has proposed alternatives that significantly change the impact not only to waters of the U.S., but also the biological resources (DEIS at C.2-2). While the DEIS generally recognizes that either of these alternatives would reduce the impacts to the biological species and on-site drainages, the alternatives analysis does not quantify how much the impacts would be reduced. As stated in the DEIS, "Currently, staff's proposed conditions of certification would not be sufficient to mitigate the potential impacts to biological resources to less than significant levels under CEQA until conditions required by the USACE for a federal Clean Water Act 404(1)(b) Impact Analysis are known." DEIS at C.2-64, C.2-66, C.2-68. Clearly not enough information has been provided to identify impacts, much less appropriate mitigations. On this basis as well the DEIS fails as an informational document.

Our principal concerns with the impacts of the Solar Two project at this time relate to three biological resources: Peninsular bighorn sheep which are federally endangered; the flat-tailed horned lizard, currently proposed for federal listing as threatened; and water resources and the habitat values associated with these resources in a desert environment, see "U.S. Army Corps of Engineers Public Notice/Application No.: SPL-2008-01244-MLM, pg. 11". In addition, we have identified several other issues requiring more robust analysis, namely the use of hydrogen and the potential for project phasing.

Biological Resources: The DEIS treatment of the observance of federally endangered bighorn sheep on the project site is particularly deficient. Merely attributing the occurrence of a ewe group of bighorn sheep to a "transient occurrence" without further investigation and analysis is inadequate, id. ES-21. The DEIS indicates that the project site provides marginal foraging habitat, id. C.2-18. Under varying precipitation conditions and levels of vegetation growth, marginal foraging habitat may supply an important part of the sheep's diet and could continue to attract foraging activity on an ongoing basis.

The document indicates that Department of Fish and Game biologists, and biologist for the project applicant "have speculated that the bighorn sheep sited at the project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site," id. C.2-24. While OHV activity in the area can certainly affect movement patterns of sheep, this is not the only possible explanation for the presence of the ewe group on the site, and the DEIS must not assume that it is. The final EIS must analyze avoidance, minimization and mitigation measures based on the assumption that bighorn sheep will continue to use the site on an ongoing basis for forage as their previous visitation suggests rather than simply dismiss their presence as an anomaly. For example, we would suggest consideration of concrete measures to mitigate for loss of habitat, such as purchase of replacement lands, as well as ongoing monitoring on the site to ensure that any subsequent usage by the sheep is well-documented and any necessary modifications to operations are made. O4-3

A second species of concern found on the project site is the flat-tailed horned lizard. As noted above, this species is currently being considered for listing as federally threatened, id. ES-12. Estimates of population in the project area vary widely from 2,000 to 5000, id. C.2-22. Greater specificity regarding this population is needed to fully understand possible impacts to this species especially in the context of the pending listing.

The third area of concern related to biological resources is the impacts to water resources, in particular jurisdictional water of the United States and the state of California and biological values O4-4

associated with those waters. The Army Corps of Engineers has published detailed comments on the impacts that the proposed project and alternatives identified in this DEIS would have on the Westside Main Canal and the Coyote Wash, water resources which are deemed jurisdictional waters of the United States. Given the scarcity of such water resources in the desert environment; it is critical that the BLM fully consider the comments provided by the Army Corps. The D EIS includes the alternatives proposed by the Army Corps which supports a robust and full analysis of real alternatives.

In addition to the alternatives analyzed in the DEIS, we understand that a variation on the project has been proposed to the Army Corp based on their concerns – this new proposal apparently would reduce the 750 MW proposal to a 709 MW facility. This modification may reduce impacts to water resources and must be presented to the public along with a full analysis of its impacts in order to permit its selection.

Water resources are also important with regard to the project's on-site water use -- an important factor to analyze in the review of all solar projects proposed for desert environments. The DEIS does not indicate what source of water will be used if the upgrades to the Seeley Wastewater Treatment Plant are not complete prior to water being needed at the project site for construction, operations and maintenance – and in fact we understand that they will not. O4-4

We understand through documents available on the California Energy Commission website that the applicant has obtained purchase rights to 40 acre feet per year of water under an existing permit for water from a single source aquifer (see Supplement to the Imperial Valley Solar Application for Certification dated May 2010). These documents indicate that there will be no change in use at the well which has been operated by the Dan Boyer Water Company as a source for commercial water under a permit since the 1950s. CEC staff are still in the process of reviewing these supplemental materials. Regardless of the CEC determination, the issue of interim water use must be acknowledged and addressed in the final EIS as well.

Of significant concern overall regarding impacts to biological resources is the statement that, "With implementation of staff's proposed conditions of certification, staff is still uncertain if construction and operation of the proposed SES Solar Two Project would comply with all federal state and local LORS relating to biological resources," id. ES-23. The DEIS indicates that this uncertainty is due to the lack of information regarding impacts to, and mitigation for, impacts to waters of the U.S. id. ES-23. We expect to see greater certainty related to impacts to these waters of the U.S. and by association overall biological resources in the final EIS. In addition, we note that plant surveys have been deemed insufficient by staff and per staff recommendations in the DEIS are to be completed in the spring and fall of 2010 id. C.2-3

project." SA/DEIS, p. C.7-3. Yet the Project applicant has recently modified the Project so as to satisfy its water needs with groundwater. This substantial change must be recognized in the DEIS.

The DEIS' failure to acknowledge that the Project will use groundwater leads to the second inadequacy: the availability of this water, and the impacts of its use, are unknown because neither has been studied. As a result, it is impossible for members of the public to determine whether the Project's water needs can actually be satisfied in this manner. The environmental impacts of such use also have yet to be ascertained. CEC staff has noted that "the amount of water identified for project use . . . exceeds the permitted amount of groundwater extraction for the well." Staff Comments on Schedule Impacts of AFC Supplement, received May 17, 2010, p. 1. Furthermore, it is unknown how long groundwater will be used. The DEIS must be revised to include this critical information. O6-9

Third, the impacts that the Project will have on waters of the United States is unknown. The Project has the potential to cause massive amounts of runoff and erosion. Whether or not these impacts will be significant has yet to be determined because the Project applicant failed to include sufficient information in its application "to resolve uncertainties regarding the ability of the applicant-proposed measures to reduce sedimentation and stream morphology impacts to less than significant." The Project's consistency with section 404 of the Clean Water Act "cannot [be] determine[d] at this time." SA/DEIS, p. C.7-66.[8] This information must also be included in the SA/DEIS.

Alternative Drainage Avoidance:

- The Army Corps Least Environmentally Damaging Practicable Alternative analysis must be completed before the close of public comment and / or project approval so those decisions and proposed mitigation measures can be reviewed by the decision makers and the public.
- All washes should be avoided, they are nature's storm channels that serve multiple services and species.
- A hybrid of Alternative Figures 1 B & 1C should also be considered for a much reduced project size and degree of impacts to critical water ways and sensitive resources.
- I personally visited the project site on April 25th, in the company of other witnesses, and found flood debris lodged about 3 feet up in Smoke Trees in one of the many desert washes. There was obvious evidence of flooding in excess of 1 foot in many of the desert washes.
- This flood level evidence is contrary to testimony of the applicant witness Dr Chang where he stated that his *modeling* showed flood waters were not expected to exceed approximately 1 foot. When I approached Dr. Chang after his testimony to inform him our information, he just smiled and said "that's interesting".
- Those who know this desert, and others know, too, that desert storms can be unpredictable and devastating. Many of us have seen white caps on flood waters in local desert washes. It is awe inspiring and can be very dangerous.

O8-6

Smoke Tree flood debris near top right of cane. Photo by Tom Budlong, taken on-site 4-25-10).

The photo below shows aerial view of flood damage to Ocotillo from Hurricane Kathleen in 1976 that took out sections of I-8 and the railroad near Ocotillo. Sections of Ocotillo neighborhoods stand starkly vacant in the flood path. Ocotillo sits approximately 3 miles west of the project site. (photo source: http://commons.wikimedia.org/wiki/File:Damage_from_hurricane_kathleen.JPG)

O8-6

d. Indirect Effects on Washes

The DEIS identified 183 acres of direct impacts to waters of the United States. However, indirect impacts must also be identified and mitigated. The DEIS failed to properly analyze indirect impacts to Waters of the United States. O9-17

V. THE DEIS MUST DISCLOSE AND ANALYZE ALL POTENTIALLY SIGNIFICANT IMPACTS OF THE PROPOSED ACTION

The environmental consequences of a proposed action must be described in the DEIS. This section forms the scientific and analytic basis for the comparisons of the proposed action and alternatives. NEPA regulations require that this section of an EIS describe any direct, indirect and cumulative adverse environmental effects which cannot be avoided should the proposal be implemented; the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented.[57] The DEIS must also describe possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.[58] O9-23

The DEIS fails to analyze a number of potentially significant biological, cultural, visual, and hydrological impacts from the proposed action. The DEIS also fails to examine the conflicts between the proposed action and the Clean Water Act.

B. THERE HAS BEEN NO OFFSITE ALTERNATIVES ANALYSIS AS REQUIRED BY THE CLEAN WATER ACT

The DEIS disclosed that BLM eliminated all offsite alternatives from further study because they would be inconsistent with BLM's purpose and need for the action under consideration and, because the offsite alternatives O9-52

are not under BLM jurisdiction, BLM would have no discretionary approval authorities for those alternatives.[141]

BLM's interpretation of its responsibility to study alternatives is not only inconsistent with the plain language of the regulations implementing NEPA, but it violates the requirements of the Clean Water Act.

NEPA regulations require that all reasonable alternatives should be evaluated, including reasonable alternatives not within the jurisdiction of the lead agency.[142] An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable.[143]

More importantly, the BLM has a separate mandate to analyze a reasonable off-site alternative: the Clean Water Act. For non-water dependent projects such as the proposed action, the Clean Water Act presumes that a practicable alternative exists and the burden to clearly demonstrate otherwise is on the applicant.[144] Practicable is defined as "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."[145] The presumption that a practicable alternative exists is very strong.[146] Moreover, all such practicable alternatives that do not involve a discharge into a special aquatic site are presumed to have less adverse impacts, unless clearly demonstrated otherwise.[147] Because this Project is clearly not water-dependent, the BLM has a legal obligation to study one or more offsite alternatives that do not involve a discharge of dredge or fill into waters of the United States. O9-52

VIII. THE PROPOSED PROJECT DOES NOT COMPLY WITH SECTION 404 (b) OF THE CLEAN WATER ACT

The Project, as described in the DEIS, violates Section 404(b) of the Clean Water Act which prohibits avoidable discharges of dredge or fill into waters of the United States. The Project will result in the placement of SunCatcher units and related infrastructure directly into the desert streams O9-53

on the Project site. As the EPA stated in its May 12 letter to the USACE regarding the Imperial Valley Project,

> *[T]he 878 acres of jurisdictional desert streams on the project site are a critical part of the Salton Sea Transboundary Watershed…the streams at this project site perform critical hydrologic, biogeochemical and habitat functions directly affecting the integrity and functional condition of the New River and Salton Sea, both listed as impaired water bodies under the Clean Water Act. As proposed, the Project's discharges may result in substantial and unacceptable impacts to aquatic resources of national importance.*

O9-53

Therefore the DEIS must be revised to include an analysis of this reasonable alternative.

A. THE BLM MAY ONLY APPROVE THE LEAST ENVIRONMENTALLY DAMAGING PRACTICABLE ALTERNATIVE

The Project as described in the DEIS would place SunCatcher units and road crossings directly into ephemeral washes that have been determined to be waters of the U.S. and waters of the state. Approximately 840 acres of the Project site are waters of the U.S. subject to USACE jurisdiction under Section 404 of the Clean Water Act. According to USACE's notice, SunCatcher units, support buildings and road crossings directly impact 165 acres the washes.

The Clean Water Act implementing regulations are clear: "No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."[148]

O9-54

As discussed above, there is a presumption of a less damaging alternative that does not involve the release of dredge and fill into waters of the United States if the Project is not water dependent, such as this Project. The burden to clearly demonstrate otherwise is on the applicant. Under the Corps' Clean Water Act Guidelines, a Section 404 permit cannot be issued "unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge [of fill material] on the aquatic ecosystem."[149]

Because there is a presumption that a less damaging practicable alternative than the Project as proposed exists and should be implemented, the Corps must identify the least environmentally damaging practicable alternative ("LEDPA").[150] In recent testimony at the Energy Commission, the Applicant concluded that there is a less environmentally damaging alternative that is practicable and distinct from the proposed project. The Applicant submitted a revised Project design for a 706 Mw project. The Applicant's proposal does not even come close to reducing Project impacts to ensure no overall net loss of wetland functions and values to comply with the unambiguous mandate to only permit the LEDPA. Regardless, this alternative was not analyzed in the DEIS. O9-54

B. THE LEAST ENVIRONMENTALLY DAMAGING ALTERNATIVE IS A HYBRID OF DRAINAGE AVOIDANCE ALTERNATIVE 1 AND 2

Even if the BLM and the other agencies could mitigate the Project's significant impacts and ensure consistency with applicable laws, **which they cannot**, the Project Applicant has failed to set forth the LEDPA to date. The DEIS has been developed in the absence of the LEDPA determination and the DEIS does not provide sufficient data to derive the LEDPA because the DEIS largely dismisses the Project's impacts on the hydrological values in the Project area. For example, as mentioned above, the technical analysis failed to account for key components of the landscape (i.e., desert pavement, cryptobiotic crusts) as they influence soil and water processes. Moreover, the DEIS did not address offsite impacts (i.e., impacts to water quality in the Westside Main Canal, New River and Salton Sea), and did not address the long-term impacts of the project under a changing climate. O9-55

However, even without a complete analysis, it is clear that the proposed Project would result in significant impacts by changing the hydrologic processes on and off the site. The Project will increase soil erosion, causing adverse changes to the morphology of the washes, and create hazards by placing the solar dishes directly in the washes, resulting in additional downstream hazards from chemicals that would be released when solar dishes are damaged in flood events. The Project also will significantly impact the biological resources in the Project area including the plants and animals that rely upon the New River and Salton Sea. These species include federally endangered peninsular bighorn sheep, federally-proposed threatened flat-tailed horned lizard, a variety of sensitive rare plant species, burrowing owl, federally endangered Yuma clapper rail and many others.

Drainage Avoidance Alternative 1 and 2, while reducing some environmental impacts, do not go far enough to establish the LEDPA because another alternative would be practicable and economically feasible and would further reduce environmental impacts, as described below. When the effects of the Project on the hydrology and biological values are taken into account, a hybrid alternative that combines elements of Drainage Avoidance Alternative #1 and Drainage Avoidance Alternative #2 is warranted. Therefore, the LEDPA is a hybrid alternative that limits the Project output to 300 Mw and is configured to avoid the major washes with a reduced project footprint.

Practicable is defined in the EPA's Clean Water Act regulations as "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." The presumption of a practicable alternative is very strong. The presumption for a non-water dependent project that a practicable alternative exists requires that an applicant make a persuasive showing concerning the lack of alternatives.

A 300 Mw alternative is practicable when cost, existing technology and logistics are taken into account. The clearest and most convincing evidence of this is the agreement the Applicant has entered into with San Diego Gas and Electric ("SDG&E") regarding the sale of power generated by the Project. SDG&E has a contract to purchase 300 Mw, an option to purchase an additional 300 Mw and a right of first refusal on the final 150 Mw. Therefore, the Applicant has contractually committed itself to license and operate the Project with no reasonable expectation that it would sell anything more than 300 Mw of power. If the Applicant believed that the Project would not be viable at 300 Mw alone, then it would not go to all the trouble of licensing the Project when it only has a Power Purchase Agreement ("PPA") for 300 Mw. Therefore, the Applicant has demonstrated that this Project is warranted even if only 300 Mw is developed. O9-55

It is commonplace for Applicants to argue that mitigation and alternatives are infeasible and that the approval of scaled-down alternatives would result in the Project not being economically or logistically viable. However, the Applicant's commitment to develop the Project even if it only has a guarantee of 300 Mw is clear evidence that a 300 Mw Project is capable of being accomplished even if cost, existing technology and logistics are taken into account.

A recent solar power plant licensing case, the Beacon Solar Energy Project ("Beacon"), sheds light on one methodology that the USACE could employ in evaluating the feasibility of different Project alternatives. In Beacon, the Energy Commission established a framework for analyzing the

feasibility of a Project alternative to use a different cooling technology. The Applicant claimed that the cooling technology was not financially viable.

Energy Commission staff approached the feasibility analysis by establishing reasonable benchmarks for the expected rate of return on investment, or "internal rate of return (IRR)." Staff determined that for solar plants around 250 Mw the "upper end of profitability" is 14% and that "a fair representative of the marketplace" is an 8% IRR. Staff concluded that "economic feasibility for solar energy power plants appears to be achieving an internal rate of return (annualized net profit margin) of 11% or more."

Because the Energy Commission is the entity that most often is called upon to conduct feasibility assessments for power plant permitting in California, the BLM should carefully evaluate the Commission's methodology and 11% rule of thumb and require the Applicant to provide the expected IRR for both the project as proposed, for a 300 Mw project (using the SDG&E power purchase agreement price), or a 706 Mw project (the maximum size described by the Applicant as the LEDPA). O9-55

A 300 Mw alternative that blends the benefits of reducing impacts to the washes (Drainage Avoidance Alternative #1) with the benefits of reducing impacts to cultural and biological resources (Drainage Avoidance Alternative #2) should be developed because it would be practicable for the Applicant and would be least environmentally damaging to the environment compared to the Proposed action.

Response: These comments raised concerns about the lack of avoidance of jurisdictional waters of the United States (waters of the U.S.) as well as lack of compliance with the Federal Clean Water Act (CWA) Section 404(b)(1) Guidelines. Subsequent to the completion of the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS), the applicant conducted an alternatives analysis pursuant to the CWA Section 404(b)(1) Guidelines. Those Guidelines state that "…no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." (40 Code of Federal Regulations (CFR) Section 230.10, Subdivision (a))

The United States Army Corps of Engineers (Corps) has prepared a 404(b)(1) Alternatives Analysis for the proposed IVS project. The preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) has been identified by the Corps. It identifies a modification of the IVS project (the 750 MW Alternative) with reduced impacts to aquatic resources compared to the proposed action. That alternative is identified in the Final Environmental Impact

Statement (FEIS) as the 709 MW Alternative (Agency Preferred Alternative). The applicant has reduced the number of SunCatchers to be placed in Waters of the U.S. with emphasis on avoiding those Waters of the U.S. on the site which are considered to have the highest functions and values. The draft LEDPA differs from the proposed action (the 750 MW Alternative) with incorporation of the following modified project features and avoidance and minimization measures:

- Reduction in the number of SunCatchers placed in waters of the U.S. to completely avoid the primary washes identified as drainages I, K, and C, and avoidance of the northern reaches of drainages D, E, and G. This project design feature eliminates 1,163 SunCatchers that would otherwise be placed in waters of the U.S., reducing permanent impacts to waters of the U.S. from 177.4 acres (ac) under the proposed action to 39.1 ac under the Agency Preferred Alternative.
- Reduction in the number of east-west roads to minimize the area of roads in drainages and the number of drainage crossings.
- Minor realignments of the water line from the project site to the Seeley Wastewater Treatment Plant (SWWTP) to eliminate temporary impacts during construction to waters of the U.S.
- Reduction in the width of maintenance roads from 15 to 10 feet (ft) wide.
- Removal of spur roads to individual SunCatchers.
- Removal of sediment entrapment basins.
- Relocation of the Main Services Complex out of waters of the U.S.
- Replacement of culverts with precast concrete arches to reduce fill of waters of the U.S.
- Removal of SunCatchers from the northern reaches of Drainages E and G to reduce impacts to waters of the U.S. as well as to provide additional wildlife corridors within the project site.

The Agency Preferred Alternative/draft LEDPA is a reduced impact version of the proposed action. The impacts of the Agency Preferred Alternative have been analyzed pursuant to NEPA in the DEIS and this FEIS. Refer also to Appendix B, Determination of NEPA Adequacy (DNA), for a summary of that analysis.

D.4.7.3 Effects of Climate Change on the Flat-Tailed Horned Lizard

Comments: O2-22 and O3-11.

1. Flat-tailed Horned Lizard

Declines in populations of and habitat for the flat-tailed horned lizard were noted for decades resulting in a proposed listing of the species in 1993. Several legal challenges have resulted in the U.S. Fish and Wildlife Service currently reviewing data to determine if the species needs federal Endangered Species Act protection[7]. Threats to the flat-tailed horned lizard are abundant from its small geographic range, it specialized and highly fragmented habitat, its sensitivity to anthropogenic effects, its narrow breadth of diet (almost exclusively harvester ants), and the lowest rates of reproduction of all known horned lizards[8]. All of these factors highlight the potential risk of local and regional extinctions for this species. **O2-22**

In the more than 15 years since this listing was first proposed in 1993, the threats to the flat-tailed horned lizard have only increased. Clearly the lizard is still in decline, and the Flat-tailed Horned Lizard Management Areas, the voluntary conservation agreement that has been in place since 1997 and the Rangewide Management Strategy (2003) are not sufficient to protect the survival of the species or contribute to its recovery. Moreover, threats to the species are increasing.

Damage to habitat from off-road vehicles has continued in all flat-tailed horned lizard areas, including the Yuha Desert, Coachella Valley, West and East Mesas, near the Algodones Dunes, and near Yuma as well as in other flat-tailed horned lizard habitat. There is increasing ORV use of designated routes as well as increased route proliferation in many areas both within the FTHL Management areas and in lizard habitat outside of these areas. These ongoing and increased impacts remain one of the greatest threats to species survival. Off-road vehicle use and route proliferation both causes direct loss of habitat and increasingly fragments remaining habitats. Habitat fragmentation is a significant factor in decreasing flat-tailed horned lizard survival and may preclude recovery in many areas. A study of flat-tailed horned lizards and other species within a conservation areas found that edge effects from roads had a significant impact on flat-tailed horned lizard populations up to 150 m from roads (as well as impacts from increased predation). Barrows et al. (2006); *see also* Barrows and Allen (2009) (discussion of habitat loss and high degree of fragmentation in remaining habitats).

Several renewable energy projects are proposed within flat-tailed horned lizard habitat including the proposed project here which includes thousands of acres of flat-tailed horned lizard habitat and the Ocotillo Express wind project proposal which would cover over 6,000 acres, including many acres of flat-tailed horned lizard habitat. This project could also further fragment the remaining habitat for the species and could block gene flow between the West Mesa and Yuha Desert area populations. In addition, there are at least another five pending right of way applications for both solar and wind projects covering more than 20,000 acres in areas that may include significant lizard habitat some of them adjacent to the management areas.[9] Each of the proposed energy projects will require a new gen-tie power lines that will likely impact lizard habitat and many may also require new substations and other infrastructure that may directly affect lizard habitat. Moreover, these large-scale, single-use projects will displace other multiple uses on public lands and increase the pressure on the FTHL Management areas and other lizard habitat from ORV use. O2-22

Loss of habitat due to urban sprawl development and farming was the largest historic threat to the flat-tailed horned lizard. One new sprawl development proposal that may impact flat-tailed horned lizards and their habitat in Imperial County is the Travertine Point which proposes 12,000 housing units on nearly 5,000 acres adjacent to the Salton Sea.[10] In addition, the renewable energy projects, as discussed above, represent another kind of sprawl development that threatens the survival of the species through direct loss of habitat as well as increasing fragmentation of habitat. For this reason, the Center and other conservation groups have advocated for siting the new renewable energy projects on previously degraded sites in the desert habitats (including fallowed farmlands) and alternative siting should have been more fully considered here.

The flat-tailed horned lizard has largely been extirpated from the Coachella Valley outside of existing conservation areas and the little remaining habitat in Coachella Valley continues to be lost to sprawl development. Problems with small reserve size, invasive weeds, loss of sand sources, and boundary effects suggest the current Coachella Valley reserve will not

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The Sunrise Powerlink powerline project would also directly impact lizard habitat. This project, if built, will also increase the likelihood that other proposed energy projects will be built in areas that will directly affect the lizard including the proposed project and other such as the Ocotillo wind project and the associated gen-tie lines and substations. Powerlines also provide perches for raptors which then prey on the flat-tailed horned lizards, putting further unnatural predation pressures on this declining species (Barrows, pers. communication).

On-going and increasing impacts to flat-tailed horned lizard habitat near the US-Mexican border in CA and AZ are also of concern particularly off-road vehicle use by border patrol agents (and others). Border Patrol 'tire drags' of dirt roads in lizard habitat are also a problem and continue to kill or injure lizards. The spread of non-native mustards and other invasive plants may also threaten flat-tailed horned lizard habitat viability. Even if exotic plant species do not directly change the habitat character or decrease food sources, many of these invasive weed plants can support and spread fire that could kill or injure lizards in an area where fire would naturally be an extremely rare occurrence (Brooks et al. 2004). The proposed project with its large hydrogen reserves and piping system would also greatly increase the likelihood of fire and the impacts to the lizard and other wildland resources should have been considered in the DEIS but were not. O2-22

Many of the existing and proposed development projects including the proposed project as well as ORV use will increase the likelihood of predation of flat-tailed horned lizards further diminishing their numbers and ability to survive. Barrows et al. (2006) found a significant increase predation in their study of boundary effects. Increased development provides new roosting and nesting sites for predators including for example shrikes and kestrels which are known predators of the flat-tailed horned lizard. It is well established that increases in subsidies from human activities which provide additional water sources and food/trash also increase other potential predators such as ravens.

The flat-tailed horned lizard as all other species, will be affected by climate change. The Service is well aware of the threats to species due to climate change and in turn the threats to biodiversity across in many diverse ecosystems. In its most recent 2007 report, the Intergovernmental Panel on Climate Change (IPCC) expressed in the strongest language possible its finding that global warming is occurring: "Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level" (IPCC 2007: 30). The international scientific consensus of the IPCC is that most of the recent warming observed has been caused by human activities (IPCC 2007). The U.S. Global Change Research Program also stated that "global warming is unequivocal and primarily human-induced" (UCGCRP: 12). One

of the most troubling recent findings is that the concentration of atmospheric carbon dioxide, the biggest contributor to global warming, has been rapidly increasing throughout the 2000s and is generating stronger-than-expected and sooner-than-predicted climate forcing (Raupach et al. 2007).

The global average temperature has risen by approximately 0.74° C ± 0.18° C (1.33° F ± 0.32° F) during the past 100 years (1906-2005) (Trenberth et al. 2007) in response to rapidly increasing greenhouse gas concentrations. Atmospheric concentration of carbon dioxide has increased by 36% since 1750 to a level that has not been exceeded during the past 650,000 years and likely not during the past 20 million years (Denman et al. 2007). The rate of increase in the atmospheric carbon dioxide concentration is accelerating, with especially rapid increases observed in the 2000s. The emissions growth rate rose from 1.1% per year from 1990-1999 to 3.5 % per year from 2000-2007 (McMullen and Jabbour 2009). The emissions growth rate since 2000 has even exceeded that of the most fossil-fuel intensive IPCC SRES emissions scenario, A1FI (McMullen and Jabbour 2009, Richardson et al. 2009). During the past 50 years, carbon dioxide sinks on land and in the oceans have become less efficient in absorbing atmospheric carbon dioxide, which is contributing to the observed rapid rise (Canadell et al. 2007). The atmospheric concentration of methane, another important greenhouse gas, has increased by about 150% since 1750, continues to increase, and has not been exceeded during the past 650,000 years (Forster et al. 2007). Similarly, the atmospheric concentration of nitrous oxide has increased by about 18% since 1750, continues to increase, and has not been exceeded during at least the last 2000 years (Forster et al. 2007). With atmospheric carbon dioxide at ~390 ppm and worldwide emissions continuing to increase, rapid and substantial reductions are clearly needed immediately. **O2-22**

As scientific understanding of global warming has advanced, so too has the urgency of the warnings from scientists about the consequences of our greenhouse gas emissions for biodiversity loss. Significant and wide-ranging ecological impacts of climate change have been well-documented by thousands of peer-reviewed papers. These impacts include changes in distribution, phenology, physiology, demographic rates, abundance, and genetics (see Lovejoy and Hannah (2005), Parmesan (2006), Hartley et al. (2006) for a small sampling of comprehensive reviews). Studies that have forecast species extinction risk under projected climate conditions have predicted catastrophic species losses during this century. Under a mid-level emissions scenario, Thomas et al. (2004) predicted that climate change will commit 15-37% of species to extinction by 2050. The IPCC found that 20 to 30% of plant and animal species will face an increasingly high risk of extinction as global mean temperatures exceed 2 to 3°C above pre-industrial temperatures (Parry et al. 2007). *If current carbon pollution trends continue, the IPCC estimated that climate change will threaten up to 70% of plant and animals with extinction by 2100* (Parry et al. 2007). Therefore, immediate reduction of greenhouse gas pollution is critical to slow global warming and ultimately stabilize the climate system before we commit a significant portion of the world's species to extinction.

Threats to the flat-tailed horned lizard from climate change are significant for several reasons. First, a recent study shows that desert areas may be some of the first affected by increasing temperature and that the changes may be more rapid in these ecosystems making adaptation more difficult. Second, the existing and likely increasing fragmentation of the

lizard's habitat by the proposed project and others will make any adaptation through movement across the landscape far more difficult. Thus, the flat-tailed horned lizard although adapted to hot desert environments may nonetheless be significantly impacted by climate change due to its loss of habitat and the constraints on adaptation.

While the FTHL Rangewide Management Strategy (2003) established Management Areas for the conservation and recovery of the flat-tailed horned lizard, it fails to include connectivity corridors that will help to ensure genetic viability of the core Management Areas. The proposed project site clearly supports significant populations of flat-tailed horned lizard – an estimated 2000 – 5000 animals or 0.32-0.81 lizards/acre which provides an important linkage between the adjacent management areas (Yuha and West Mesa). When last surveyed these two "conserved" areas provided only somewhat higher densities than those estimated at the proposed project site,[11] which also shows the importance of preserving the habitat here.

Impacts to the flat-tailed horned lizards and other affected species must be avoided where possible through a robust alternatives analysis and any remaining impacts should be minimized and mitigated. Unfortunately, the proposal to relocate flat-tailed horned lizards is not part of a comprehensive proposal but appears to be largely an experiment absent any scientific "controls" that may itself have significant impacts to this imperiled species. The DEIS fails to provide a draft of the relocation plan for public review thus undermining NEPA review. Relocation sites are not identified, nor is the impact to resident flat-tailed horned lizards at the relocation sites analyzed. An analysis of likely impacts from the relocation is particularly important based on data that indicates that food resources are a limiting factor in population numbers[12]. Relocating additional flat-tailed horned lizards into a habitat that is already sustaining its carrying capacity will be detrimental to the species. O2-22

Furthermore, mechanisms need to be included to assure that any and all mitigation acquisitions will be conserved in perpetuity for the conservation of the flat-tailed horned lizard. If those acquisitions are within existing Management Areas, higher levels of protection than are currently in place for Management Areas need to be put in place. NEPA mandates consideration of the relevant environmental factors and environmental review of "[b]oth *short- and long-term* effects" in order to determine the significance of the project's impacts. 40 C.F.R. § 1508.27(a) (emphasis added). BLM has clearly failed to do so in this instance with respect to the impact to the flat-tailed horned lizard.

The SA/DEIS addresses the need to address the effects of climate change largely through reduction of greenhouse gases and development use of renewable energy sources. The BLM has failed to analyze the impacts climate change will have on species, and the resources required ensure sufficient habitat as the species adapt. O3-11

Recommendation: BLM should expand the analysis of the effects of the proposed project and each alternative on biological resources and their ability to adapt to climate change, such as occupation and use of habitat on a regional scale that may be essential in sustaining at-risk species. Such an expanded analysis should include cumulative effects and mitigation measures, including those associated with climate change.[2] O3-11

Response: These comments raised concerns about the lack of analysis about potential effects of global climate change on the flat-tailed horned lizard (FTHL) specifically and special-status species in general. Because the long term effects of climate change cannot be quantified, it is

impossible to provide a quantifiable analysis of the potential effects that climate change could have on FTHL and other special-status species.

Refer also to Sections 3.3 and 4.3, Climate Change, in the FEIS, and Section D.4.8, Climate Change, below for additional discussion regarding climate change.

D.4.7.4 Flat-Tailed Horned Lizard Connectivity

Comments: F2-28, NA1-11, O2-3, O2-22, O6-8, O7-7, O9-20, and O9-30.

Additionally, over 6,000 acres of Flat-Tailed Horned Lizard (FTHL) habitat would be permanently impacted by the proposed Project (at pg. C.2-60). Long-term impacts may occur as a result of permanent loss of habitat, increased predation, and habitat fragmentation. Approximately 50% of the historical range of FTHL in California has been destroyed mainly by agricultural and urban development (at pg. C.2-71). Although FTHL is not currently listed, UFWS was recently instructed by federal district court to reinstate the proposal to list FTHL under the Endangered Species Act (ESA). EPA appreciates the extensive discussion on the impacts to FTHL as well the proposed mitigation measures and compensatory mitigation for approximately 6,600 acres of habitat, as directed by the FTHL Rangewide Management Strategy. The DEIS indicates that if listing of FTHL species should take place during the construction or operation of the Project, the potential take and loss of habitat for the FTHL would need to be addressed by the BLM, in conferencing with the USFWS (at pg. C.2-1).

F2-28

F2-28

Cumulative impacts on flat-tailed horned lizard habitat also deserve additional attention. DEIS, Biological Resources, page C.2-21 acknowledges that "the FTHL populations have declined throughout their range because of loss and degradation of habitat caused by urbanization, agricultural development, military activities, recreational OHV use, and Border Patrol and illegal drive-through traffic." The *Flat-tailed Horned Lizard Rangewide Management Strategy*, page 45, confirms that it is necessary to "maintain or establish effective habitat corridors between naturally adjacent populations." The DEIS fails to adequately address how the development of approximately one million acres of renewable energy projects in this area will impact the FTHL and its habitat.

NA1-11

NA1-11

Nonetheless, even the inadequate information provided in the DEIS shows that the proposed plan amendment and right-of-way application should be denied because the proposed project will result in significant impacts to a breeding population of flat-tailed horned lizards, which are proposed to be listed under the Endangered Species Act ("ESA"). In addition to direct impacts to the flat-tailed horned lizard, the proposed project is in an area that links the northern and southern populations and management areas for this imperiled species – areas which were set aside for the conservation and recovery of the species. Although the DEIS acknowledges that this site includes documented foraging area for the federally and state endangered Peninsular bighorn sheep (DEIS at C.2-39), the DEIS improperly ignored potential impacts to the bighorn from the loss of this foraging area. Alternative siting, which the BLM failed to adequately address in the DEIS, could significantly reduce the impacts to both of these species, their occupied habitat, and other special status species including potentially rare plants. The Center urges the BLM to revise the DEIS to adequately address these and other issues detailed below and re-circulate the DEIS or a supplemental DEIS for public comment. O2-3

In the sections that follow, the Center provides detailed comments on the ways in which the DEIS fails to adequately identify and analyze many of the impacts that could result from the proposed project, including but not limited to: impacts to biological resources, growth inducing impacts alternatives and cumulative impacts. In addition, if undertaken as proposed, this industrial project is inconsistent with local planning and zoning laws, the Endangered Species Act ("ESA"), the Federal Land Policy Management Act ("FLPMA"), the California Desert Conservation Act ("CDCA"), and other laws, ordinances, regulations and standards.

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Furthermore, mechanisms need to be included to assure that any and all mitigation acquisitions will be conserved in perpetuity for the conservation of the flat-tailed horned lizard. If those acquisitions are within existing Management Areas, higher levels of protection than are currently in place for Management Areas need to be put in place. NEPA mandates consideration of the relevant environmental factors and environmental review of "[b]oth *short- and long-term* effects" in order to determine the significance of the project's impacts. 40 C.F.R. § 1508.27(a) (emphasis added). BLM has clearly failed to do so in this instance with respect to the impact to the flat-tailed horned lizard.

The SA/DEIS fails to disclose potentially significant impacts to the Peninsular bighorn sheep ("PBHS") and the FTHL. Both PBHS and FTHL have been "observed on [the] project site" SA/DEIS, pp. C.2-16, C.2-18. PBHS is listed under the federal Endangered Species Act (61 FR 13134, 13136) and a proposed listing of FTHL is currently under review. SA/DEIS, p. C.2-40 (detailing process that led to a federal court order requiring USFWS to consider listing FTHL). The SA/DEIS also fails to disclose significant impacts to special-status plant species. The deficiencies are exemplified by the SA/DEIS' statement that the significance of biological impacts is "to be provided," in violation of both CEQA and NEPA. ES-15.

Although PBHS was observed on the Project site, the SA/DEIS claims that PBHS' use of the project site "is transitory at best" and that therefore impacts to PBHS would be less than significant. SA/DEIS, p. C.2-40. This conclusion is based solely upon BLM's and the applicant's "speculat[ion] that the [PBHS] sited [*sic*] at the Project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site." SA/DEIS, p. C.2-24. This is "pure speculation" that "is contradicted by the evidence regarding known [PBHS] behavior." Testimony of Dr. Vernon Bleich on behalf of California Unions for Reliable Energy ("CURE"), Exhibit 400 to opening testimony for CURE, p. 4. It is quite likely that PBHS appear in the Project vicinity on a regular basis. In fact, just three days ago (May 24, 2010), a group of five adult PBHS ewes were seen about 4-5 miles west of the Project site. Comment letter by Denis Trafecanty, sent May 27, 2010, p. 1.

As Dr. Bleich testified, on behalf of California Unions for Reliable Energy ("CURE"), "the SA fails to adequately analyze the *potential reason(s)* that PBHS were using [the Project site] and, as a result," its conclusions that PBHS' appearance was a mere coincidence are "indefensible." *Id.* at 1, 5. The SA/DEIS also fails to identify or mitigate impacts to forage habitat, and fails to identify and mitigate the loss of 6,063 acres of bighorn sheep habitat within the CTCRA. *See generally id.* 5-9. The SA/DEIS' "fail[ure] to adequately identify the[se] significant impacts" is unlawful. *Id.* at 1. **O6-8**

Furthermore, consultation with the Fish and Wildlife Service regarding the Project's impacts on PBHS is required. The Endangered Species Act specifies that "[t]he agency taking the action must assess the project's effects on endangered or threatened species and consult with the FWS to assure the project's compliance with the ESA." *Sierra Club v. Marsh*, 816 F.2d 1376 (9th Cir. 1987). "The consultation process is triggered when a federal agency . . . undertakes *any* activity which *could* impact an endangered species or threaten its critical habitat." *Florida Key Deer v. Stickney,* 864 F.Supp. 1222, 1228 (S.D. Fla. 1994) (*citing* 16 U.S.C. § 1536(a)(2)) (emphasis in original). Here, as discussed above, the Project "could" affect the PBHS. Thus, consultation with FWS is mandated.

Scott Cashen, an expert biologist, testified as to the Project's undisclosed impacts on special status plant species and the FTHL. Exhibit 429 to opening testimony for CURE. In his professional opinion, the SA/DEIS contains "inadequate information on the presence of special-status plant species within the Project area" and "as a result . . . the SA/DEIS cannot conclude [that] proposed mitigation

would reduce Project impacts" on these species "to less than significant levels." *Id.* at 2; *see also* mitigation measure BIO-19, SA/DEIS pp. C.2-97 through 100. The size of the buffer zone for special-status plant species is unknown and likely insufficient.[7] *Id.* at 2-3. Mr. Cashen also testified that the proposed mitigation measures to mitigate impact to *non*-listed species are unenforceable and that impacts to these species would be significant as well. *Id.* at 3-4. Unless all required plant surveys are completed *before* the mitigation measures are adopted, it is impossible to tell whether the mitigation measures will be effective. *Id.* at 5. Moreover, fall surveys for special-status plant species have not yet been prepared. *Id.* at 6. Because of these informational inadequacies, the SA/DEIS is legally deficient.

With regard to the FTHL, the SA/DEIS contains no conclusion regarding the Project's impacts. "[S]taff is in the process of evaluating if the use of compensation funds is sufficient for CEQA mitigation." SA/DEIS, p. C.2-61. As discussed above, the DEIS *itself* is required to include this information. There is a "possibility that *thousands* of FTHL will die as a result of the Project"; a population of this size is "roughly half the size of the population within the entire West Mesa MA." Exhibit 429 to opening testimony for CURE, pp. 8-9. Additionally, "the loss of 6.063 acres of habitat" that would accompany the Project "represents a tremendous impact" on the FTHL, which "is proposed for listing due to habitat loss." These impacts must be mitigated *before* the Project is approved, not after.

The Project also "would cause considerable fragmentation to the remaining FTHL habitat." *Id.* at 9. Nonetheless, "[t]he SA/DEIS proposed no mitigation for impacts to FTHL movement between MAs." *Id.* at 11. The SA/DEIS' conclusion that such mitigation is infeasible is unsupported by the record. *Id.* There is no basis to assume that a corridor underneath I-8 would be impractical. *Id.* Additionally, the SA/DEIS contemplates that the FTHL "would be moved out of harm's way," SA/DEIS at C.2-55, but this strategy "only partially addresses the[FTHL's] survivorship" and, accordingly, only partially mitigates this impact. Exhibit 429 to opening testimony for CURE, p. 12. CEQA requires these potentially significant impacts to be mitigated and the SA/DEIS' failure to do so is unlawful. O6-8

Finally, the compensatory mitigation measure, BIO-10, also fails to fully mitigate habitat loss. This measure would allow current habitat to be replaced by "poor quality habitat." SA/DEIS, p. C.2-85. As such, the SA/DEIS fails to "prevent[] a net loss of FTHL habitat," as claimed. Exhibit 429 to opening testimony for CURE, p. 14.

The Flat-tailed horned lizard (FTHL) is proposed for Federal listing, and adding fragmentation of its habitat to the list of threats would not be wise. This project lies in a poor location, a connectivity corridor between the Yuha Basin management area and West Mesa management area to the north. Currently, there are highways, roads, and rail tracks that act as filters, but not barriers, to lizard movement and population connection. On May 24 and 24, 2010, Cunningham visited the project site and determined that Highway 8 was not a barrier to FTHL crossing. The roadway is low, often a few feet above desert ground level, and has no barrier fencing to prevent lizard access. The entire road adjacent to the project has habitat on both sides. Mortality would occur on the road, but not prevention of crossing. Thus it is not a barrier.

Adding a much wider industrial project into the broad corridor area of the flat desert between management areas would add a greater hindrance of chainlink fencing that would collect debris, increase disturbance, roads and driving during construction, operation, and maintenance. Mortality would increase greatly because of the size of the project. O7-7

The applicant indicates that the Coyote Wash underpassing on Highway 8 would be adequate to maintain connectivity after the project is built. But on a site visit, we determined that this is much too small to guarantee movement and genetic connectivity north and south of the project site.

This case is similar to the Ridgecrest Solar Power Project (RSPP) in Kern County, California, where the project would block a 13-mile wide flat gap between mountain ranges, thus cutting off connectivity for Mojave ground squirrels. Staff has recommended against the project because this connectivity cannot be mitigated under NEPA and CEQA.

D. MOVEMENT CORRIDOR FOR FLAT TAILED HORNED LIZARD

The Project's biological impacts were identified and analyzed by independent biologist Scott Cashen. His testimony is attached to this comment and his opinions herein. According to biologist Scott Cashen,[52] maintenance of corridors is essential to the long-term conservation of the FTHL. The DEIS fails to adequately describe the FTHL movement corridor that is part of the affected environment.

The flat-tailed horned lizard ("FTHL") is proposed for listing under the Endangered Species Act because of population declines associated with widespread habitat loss, fragmentation, and degradation. The Project will be a significant contributor to the continued decline of the species. Mitigation for impacts to the FTHL is governed by the FTHL Rangewide Management Strategy ("RMS").[53] According to the RMS, "[s]ignatory agencies incorporate RMS measures into their land management plans."[54] O9-20

The RMS implements a conservation strategy based on establishment of five, relatively large, reserves (i.e., Management Areas ("MA")). The RMS identifies lands between the Yuha Desert and West Mesa MAs as potential habitat corridors that should be maintained. This is the area proposed for the Project site.

According to the RMS:

1. *Planned actions provide guidance for managers to maintain sufficient habitat to provide for interchange of FTHLs between MAs, where habitat corridors persist. In this way, those naturally adjoining populations of FTHLs will be able to interbreed, helping to maintain genetic vigor, and natural recolonization could occur in the case of extirpation from local populations.*

2. *Activities in potential habitat corridors between MAs and the RA shall be regulated or mitigated so that at least occasional interchange of FTHLs occurs among adjacent populations. Potential habitat corridors include lands between West Mesa and Yuha Desert MAs.* O9-20

Activities inherent in Project construction and operation would function as a barrier to FTHL movement that is unmitigated in the DEIS. The Project will almost completely isolate the Yuha Desert MA from the other MAs. The DEIS failed to identify this important movement corridor as a critical part of the Project's affected environment.

b. Loss of Connectivity Between Reserves

The applicant identified interference with the movement of FTHL between the West Mesa and Yuha Desert MAs as a significant impact. However, the DEIS failed to identify this significant impact. Presently, FTHL will cross roads and culverts to get to the Project site and move between MAs. The DEIS does not propose any mitigation or avoidance to maintain connectivity through the Project site. O9-30

Response: These comments relate to project effects on the connectivity of FTHL habitat, with emphasis on ensuring connectivity between the Yuha FTHL Management Area (MA) south of the IVS project site and the West Mesa FTHL MA north of the IVS project site. Although the IVS project site is somewhat isolated by existing barriers to FTHL movement, specifically Interstate 8 (I-8) adjacent to the south boundary of the project site and Evan Hewes Highway and the railroad to the north, the IVS project site could provide some connectivity between FTHL populations and the two MAs. The applicant has proposed alternatives to eliminate SunCatcher placements in the primary washes of the site, which would generally support potential FTHL movement north or south through the IVS project site. Refer to Section D.4.7.2, Avoidance of Aquatic Resources, above, for additional discussion regarding avoidance of drainages on the IVS project site in the Agency Preferred Alternative.

D.4.7.5 Flat-Tailed Horned Lizard Mitigation

Comments: F2-28, F2-29, NA1-11, S2-3, O2-3, O2-22, O2-31, O2-37, O3-5, O3-7, O3-10, O4-3, O6-8, O7-7, O8-19, O9-4, O9-28, O9-29, O9-43, and P7-3.

Additionally, over 6,000 acres of Flat-Tailed Horned Lizard (FTHL) habitat would be permanently impacted by the proposed Project (at pg. C.2-60). Long-term impacts may occur as a result of permanent loss of habitat, increased predation, and habitat fragmentation. Approximately 50% of the historical range of FTHL in California has been destroyed mainly by agricultural and urban development (at pg. C.2-71). Although FTHL is not currently listed, UFWS was recently instructed by federal district court to reinstate the proposal to list FTHL under the Endangered Species Act (ESA). EPA appreciates the extensive discussion on the impacts to FTHL as well the proposed mitigation measures and compensatory mitigation for approximately 6,600 acres of habitat, as directed by the FTHL Rangewide Management Strategy. The DEIS indicates that if listing of FTHL species should take place during the construction or operation of the Project, the potential take and loss of habitat for the FTHL would need to be addressed by the BLM, in conferencing with the USFWS (at pg. C.2-1).

F2-28

F2-28

Proposed designs for the Project should avoid and minimize impacts to all federally threatened and endangered species, as well as BLM species of concern and State species of concern. In addition to bighorn sheep and FTHL, the site of the proposed Project includes sensitive species such as the American badger and the Western burrowing owl, among others. Any mitigation measures that result from consultation with the USFWS to protect sensitive biological resources should be included in the FEIS and, ultimately, the ROD. The FEIS should also clearly articulate under which alternatives sensitive biological resources, including the bighorn sheep, FTHL and American badger, would be least impacted and to what extent impacts can be mitigated.

Recommendations:

- EPA recommends BLM include the outcome of further discussions with, and future determinations or biological analyses by, the U.S. Fish and Wildlife Service in the FEIS pertaining to the Peninsular bighorn sheep and FTHL. Additionally, the FEIS should provide analysis of impacts on, and mitigation for, covered species, including:
    - Baseline conditions of habitats and populations of the covered species;
    - A clear description of how avoidance, mitigation, and conservation measures will protect and encourage the recovery of the covered species and their habitats in the project area;
    - Monitoring, reporting, and adaptive management efforts to ensure species and habitat conservation effectiveness. F2-29
- Incorporate complete information on the compensatory mitigation proposals (including quantification of acreages, estimates of species protected, costs to acquire compensatory lands, etc.) and analyze the environmental and economic trade-offs of acquiring the off-site lands versus reducing the size of on-site alternatives for equivalent protection.
- The FEIS should provide additional information to substantiate the finding that it is unlikely that FTHL would use the culverts to move between the Yuha Desert FTHL Management Area and the proposed Project site due to the long distance between these areas and lack of light along the length (at pg. C.2-22)
- The FEIS should consider establishing a corridor on the eastern portion of the site to facilitate surface flows and allow FTHL movement between zones consistent with the FTHL Rangewide Management Plan.
- The FEIS should also clearly articulate under which alternatives sensitive biological resources, including the Peninsular bighorn sheep and FTHL, would be least impacted and to what extent impacts can be mitigated.
- A clear commitment to implement mitigation measures to avoid and minimize adverse effects to the habitat of the Peninsular bighorn sheep, FTHL and other sensitive species should be made in the FEIS and, ultimately, the ROD.

Cumulative impacts on flat-tailed horned lizard habitat also deserve additional attention. DEIS, Biological Resources, page C.2-21 acknowledges that "the FTHL populations have declined throughout their range because of loss and degradation of habitat caused by urbanization, agricultural development, military activities, recreational OHV use, and Border Patrol and illegal drive-through traffic." The *Flat-tailed Horned Lizard Rangewide Management Strategy*, page 45, confirms that it is necessary to "maintain or establish effective habitat corridors between naturally adjacent populations." The DEIS fails to adequately address how the NA1-11 development of approximately one million acres of renewable energy projects in this area will impact the FTHL and its habitat. NA1-11

Biologically, the loss of over 6,000 acres of habitat for the proposed-endangered Flat-tailed Horned Lizard should be considered significant and will require costly mitigation according to formulas derived as part of the Flat-tailed Horned Lizard Conservation Strategy. The loss of over 6,000 acres of habitat for burrowing owls (a California Species of Special Concern), likewise will need to be mitigated. The presence of individuals of the State- and federally-listed endangered Peninsular Range population of the Desert Bighorn Sheep will also require mitigation as a result of this project. Some 312 acres of desert washes and waterways would be impacted by the proposed project and require mitigation under the U.S. Army Corps of Engineers and California Department of Fish and Game guidelines. Numerous other sensitive plant and animal species will also need to be mitigated. **S2-3**

Nonetheless, even the inadequate information provided in the DEIS shows that the proposed plan amendment and right-of-way application should be denied because the proposed project will result in significant impacts to a breeding population of flat-tailed horned lizards, which are proposed to be listed under the Endangered Species Act ("ESA"). In addition to direct impacts to the flat-tailed horned lizard, the proposed project is in an area that links the northern and southern populations and management areas for this imperiled species – areas which were set aside for the conservation and recovery of the species. Although the DEIS acknowledges that this site includes documented foraging area for the federally and state endangered Peninsular bighorn sheep (DEIS at C.2-39), the DEIS improperly ignored potential impacts to the bighorn from the loss of this foraging area. Alternative siting, which the BLM failed to adequately address in the DEIS, could significantly reduce the impacts to both of these species, their occupied habitat, and other special status species including potentially rare plants. The Center urges the BLM to revise the DEIS to adequately address these and other issues detailed below and re-circulate the DEIS or a supplemental DEIS for public comment. **O2-3**

In the sections that follow, the Center provides detailed comments on the ways in which the DEIS fails to adequately identify and analyze many of the impacts that could result from the proposed project, including but not limited to: impacts to biological resources, growth inducing impacts alternatives and cumulative impacts. In addition, if undertaken as proposed, this industrial project is inconsistent with local planning and zoning laws, the Endangered Species Act ("ESA"), the Federal Land Policy Management Act ("FLPMA"), the California Desert Conservation Act ("CDCA"), and other laws, ordinances, regulations and standards.

1. Flat-tailed Horned Lizard

Declines in populations of and habitat for the flat-tailed horned lizard were noted for decades resulting in a proposed listing of the species in 1993. Several legal challenges have resulted in the U.S. Fish and Wildlife Service currently reviewing data to determine if the species needs federal Endangered Species Act protection[7]. Threats to the flat-tailed horned lizard are abundant from its small geographic range, it specialized and highly fragmented habitat, its sensitivity to anthropogenic effects, its narrow breadth of diet (almost exclusively harvester ants), and the lowest rates of reproduction of all known horned lizards[8]. All of these factors highlight the potential risk of local and regional extinctions for this species. O2-22

In the more than 15 years since this listing was first proposed in 1993, the threats to the flat-tailed horned lizard have only increased. Clearly the lizard is still in decline, and the Flat-tailed Horned Lizard Management Areas, the voluntary conservation agreement that has been in place since 1997 and the Rangewide Management Strategy (2003) are not sufficient to protect the survival of the species or contribute to its recovery. Moreover, threats to the species are increasing.

Damage to habitat from off-road vehicles has continued in all flat-tailed horned lizard areas, including the Yuha Desert, Coachella Valley, West and East Mesas, near the Algodones Dunes, and near Yuma as well as in other flat-tailed horned lizard habitat. There is increasing ORV use of designated routes as well as increased route proliferation in many areas both within the FTHL Management areas and in lizard habitat outside of these areas. These ongoing and increased impacts remain one of the greatest threats to species survival. Off-road vehicle use and route proliferation both causes direct loss of habitat and increasingly fragments remaining habitats. Habitat fragmentation is a significant factor in decreasing flat-tailed horned lizard survival and may preclude recovery in many areas. A study of flat-tailed horned lizards and other species within a conservation areas found that edge effects from roads had a significant impact on flat-tailed horned lizard populations up to 150 m from roads (as well as impacts from increased predation). Barrows et al. (2006); *see also* Barrows and Allen (2009) (discussion of habitat loss and high degree of fragmentation in remaining habitats).

Several renewable energy projects are proposed within flat-tailed horned lizard habitat including the proposed project here which includes thousands of acres of flat-tailed horned lizard habitat and the Ocotillo Express wind project proposal which would cover over 6,000 acres, including many acres of flat-tailed horned lizard habitat. This project could also further fragment the remaining habitat for the species and could block gene flow between the West Mesa and Yuha Desert area populations. In addition, there are at least another five pending right of way applications for both solar and wind projects covering more than 20,000 acres in areas that may include significant lizard habitat some of them adjacent to the management areas.[9] Each of the proposed energy projects will require a new gen-tie power lines that will likely impact lizard habitat and many may also require new substations and other infrastructure that may directly affect lizard habitat. Moreover, these large-scale, single-use projects will displace other multiple uses on public lands and increase the pressure on the FTHL Management areas and other lizard habitat from ORV use. O2-22

Loss of habitat due to urban sprawl development and farming was the largest historic threat to the flat-tailed horned lizard. One new sprawl development proposal that may impact flat-tailed horned lizards and their habitat in Imperial County is the Travertine Point which proposes 12,000 housing units on nearly 5,000 acres adjacent to the Salton Sea.[10] In addition, the renewable energy projects, as discussed above, represent another kind of sprawl development that threatens the survival of the species through direct loss of habitat as well as increasing fragmentation of habitat. For this reason, the Center and other conservation groups have advocated for siting the new renewable energy projects on previously degraded sites in the desert habitats (including fallowed farmlands) and alternative siting should have been more fully considered here.

The flat-tailed horned lizard has largely been extirpated from the Coachella Valley outside of existing conservation areas and the little remaining habitat in Coachella Valley continues to be lost to sprawl development. Problems with small reserve size, invasive weeds, loss of sand sources, and boundary effects suggest the current Coachella Valley reserve will not

ensure the survival of the flat-tailed horned lizard in the Coachella Valley. Barrows et al. (2006) noted the significant "sink" effect along the boundary areas and cautioned "Without immigration from the preserve core, flat-tailed horned lizards may not be able to sustain populations in the boundary region." This same concern regarding boundary effects arises for the management areas where routes already fragment the management areas and where additional development is proposed on the borders. This project could similarly limit the effectiveness of the FTHL Management areas by fragmenting the habitat and cutting off connectivity between areas.

The Sunrise Powerlink powerline project would also directly impact lizard habitat. This project, if built, will also increase the likelihood that other proposed energy projects will be built in areas that will directly affect the lizard including the proposed project and other such as the Ocotillo wind project and the associated gen-tie lines and substations. Powerlines also provide perches for raptors which then prey on the flat-tailed horned lizards, putting further unnatural predation pressures on this declining species (Barrows, pers. communication).

On-going and increasing impacts to flat-tailed horned lizard habitat near the US-Mexican border in CA and AZ are also of concern particularly off-road vehicle use by border patrol agents (and others). Border Patrol 'tire drags' of dirt roads in lizard habitat are also a problem and continue to kill or injure lizards. The spread of non-native mustards and other invasive plants may also threaten flat-tailed horned lizard habitat viability. Even if exotic plant species do not directly change the habitat character or decrease food sources, many of these invasive weed plants can support and spread fire that could kill or injure lizards in an area where fire would naturally be an extremely rare occurrence (Brooks et al. 2004). The proposed project with its large hydrogen reserves and piping system would also greatly increase the likelihood of fire and the impacts to the lizard and other wildland resources should have been considered in the DEIS but were not. O2-22

Many of the existing and proposed development projects including the proposed project as well as ORV use will increase the likelihood of predation of flat-tailed horned lizards further diminishing their numbers and ability to survive. Barrows et al. (2006) found a significant increase predation in their study of boundary effects. Increased development provides new roosting and nesting sites for predators including for example shrikes and kestrels which are known predators of the flat-tailed horned lizard. It is well established that increases in subsidies from human activities which provide additional water sources and food/trash also increase other potential predators such as ravens.

The flat-tailed horned lizard as all other species, will be affected by climate change. The Service is well aware of the threats to species due to climate change and in turn the threats to biodiversity across in many diverse ecosystems. In its most recent 2007 report, the Intergovernmental Panel on Climate Change (IPCC) expressed in the strongest language possible its finding that global warming is occurring: "Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level" (IPCC 2007: 30). The international scientific consensus of the IPCC is that most of the recent warming observed has been caused by human activities (IPCC 2007). The U.S. Global Change Research Program also stated that "global warming is unequivocal and primarily human-induced" (UCGCRP: 12). One

of the most troubling recent findings is that the concentration of atmospheric carbon dioxide, the biggest contributor to global warming, has been rapidly increasing throughout the 2000s and is generating stronger-than-expected and sooner-than-predicted climate forcing (Raupach et al. 2007).

The global average temperature has risen by approximately 0.74° C ± 0.18° C (1.33° F ± 0.32° F) during the past 100 years (1906-2005) (Trenberth et al. 2007) in response to rapidly increasing greenhouse gas concentrations. Atmospheric concentration of carbon dioxide has increased by 36% since 1750 to a level that has not been exceeded during the past 650,000 years and likely not during the past 20 million years (Denman et al. 2007). The rate of increase in the atmospheric carbon dioxide concentration is accelerating, with especially rapid increases observed in the 2000s. The emissions growth rate rose from 1.1% per year from 1990-1999 to 3.5 % per year from 2000-2007 (McMullen and Jabbour 2009). The emissions growth rate since 2000 has even exceeded that of the most fossil-fuel intensive IPCC SRES emissions scenario, A1FI (McMullen and Jabbour 2009, Richardson et al. 2009). During the past 50 years, carbon dioxide sinks on land and in the oceans have become less efficient in absorbing atmospheric carbon dioxide, which is contributing to the observed rapid rise (Canadell et al. 2007). The atmospheric concentration of methane, another important greenhouse gas, has increased by about 150% since 1750, continues to increase, and has not been exceeded during the past 650,000 years (Forster et al. 2007). Similarly, the atmospheric concentration of nitrous oxide has increased by about 18% since 1750, continues to increase, and has not been exceeded during at least the last 2000 years (Forster et al. 2007). With atmospheric carbon dioxide at ~390 ppm and worldwide emissions continuing to increase, rapid and substantial reductions are clearly needed immediately. **O2-22**

As scientific understanding of global warming has advanced, so too has the urgency of the warnings from scientists about the consequences of our greenhouse gas emissions for biodiversity loss. Significant and wide-ranging ecological impacts of climate change have been well-documented by thousands of peer-reviewed papers. These impacts include changes in distribution, phenology, physiology, demographic rates, abundance, and genetics (see Lovejoy and Hannah (2005), Parmesan (2006), Hartley et al. (2006) for a small sampling of comprehensive reviews). Studies that have forecast species extinction risk under projected climate conditions have predicted catastrophic species losses during this century. Under a mid-level emissions scenario, Thomas et al. (2004) predicted that climate change will commit 15-37% of species to extinction by 2050. The IPCC found that 20 to 30% of plant and animal species will face an increasingly high risk of extinction as global mean temperatures exceed 2 to 3°C above pre-industrial temperatures (Parry et al. 2007). *If current carbon pollution trends continue, the IPCC estimated that climate change will threaten up to 70% of plant and animals with extinction by 2100* (Parry et al. 2007). Therefore, immediate reduction of greenhouse gas pollution is critical to slow global warming and ultimately stabilize the climate system before we commit a significant portion of the world's species to extinction.

Threats to the flat-tailed horned lizard from climate change are significant for several reasons. First, a recent study shows that desert areas may be some of the first affected by increasing temperature and that the changes may be more rapid in these ecosystems making adaptation more difficult. Second, the existing and likely increasing fragmentation of the

lizard's habitat by the proposed project and others will make any adaptation through movement across the landscape far more difficult. Thus, the flat-tailed horned lizard although adapted to hot desert environments may nonetheless be significantly impacted by climate change due to its loss of habitat and the constraints on adaptation.

While the FTHL Rangewide Management Strategy (2003) established Management Areas for the conservation and recovery of the flat-tailed horned lizard, it fails to include connectivity corridors that will help to ensure genetic viability of the core Management Areas. The proposed project site clearly supports significant populations of flat-tailed horned lizard – an estimated 2000 – 5000 animals or 0.32-0.81 lizards/acre which provides an important linkage between the adjacent management areas (Yuha and West Mesa). When last surveyed these two "conserved" areas provided only somewhat higher densities than those estimated at the proposed project site,[11] which also shows the importance of preserving the habitat here.

Impacts to the flat-tailed horned lizards and other affected species must be avoided where possible through a robust alternatives analysis and any remaining impacts should be minimized and mitigated. Unfortunately, the proposal to relocate flat-tailed horned lizards is not part of a comprehensive proposal but appears to be largely an experiment absent any scientific "controls" that may itself have significant impacts to this imperiled species. The DEIS fails to provide a draft of the relocation plan for public review thus undermining NEPA review. Relocation sites are not identified, nor is the impact to resident flat-tailed horned lizards at the relocation sites analyzed. An analysis of likely impacts from the relocation is particularly important based on data that indicates that food resources are a limiting factor in population numbers[12]. Relocating additional flat-tailed horned lizards into a habitat that is already sustaining its carrying capacity will be detrimental to the species. O2-22

Furthermore, mechanisms need to be included to assure that any and all mitigation acquisitions will be conserved in perpetuity for the conservation of the flat-tailed horned lizard. If those acquisitions are within existing Management Areas, higher levels of protection than are currently in place for Management Areas need to be put in place. NEPA mandates consideration of the relevant environmental factors and environmental review of "[b]oth *short- and long-term* effects" in order to determine the significance of the project's impacts. 40 C.F.R. § 1508.27(a) (emphasis added). BLM has clearly failed to do so in this instance with respect to the impact to the flat-tailed horned lizard.

To the extent the DEIS discusses some mitigation measures, the proposal to "nest" mitigation measures undermines much of that discussion. The DEIS proposes to mitigate impacts for flat-tailed horned lizard by land acquisition and management, however, that same mitigation is proposed to also mitigate for several of the impacts to surface waters (including waters of the State) through "nesting" of mitigation. While the Center urges the BLM ensure that any impacts to Waters of the U.S. will be avoided, to the extent that the DEIS considers alternatives that include impacts to the Waters of the U.S. those impacts must be separately mitigated and the mitigation cannot be "nested" with any other mitigation requirement. On the other hand, some of the mitigation issues may pertain primarily to protections afforded by the State (i.e., for waters of the State), however it is important to carefully analyze whether within that structure the proposed 1:1 mitigation for flat-tailed horned lizard will adequately mitigate for other resources of these public lands that will be lost should the project be approved as proposed. It is possible that once the acquisition lands are identified and surveyed, this strategy could achieve mitigation for some aspects of the various impacts, however, it is unlikely that it will actually adequately mitigate for impacts to a number of the species, the loss of wash habitat, or all of the losses the waters of the State that will be potentially impacted by the proposed project. For example, if mitigation lands are acquired for conservation and they are good flat-tailed horned lizard habitat, they still may not support the same suite of potential rare plants, or similar wash habitat important to bighorn populations in order to effectively mitigate for the impacts of the proposed project on those resources. Very careful selection of mitigation lands will need to be done, and additional lands over and above the 1:1 ratio now proposed for the flat-tailed horned lizard maybe required in order to properly mitigate for the loss of other resources of these public lands that the proposed project will affect including, as noted above, separate mitigation for any impacts to the Waters of the U.S.

O2-31

O2-31

The cumulative scenario in the DEIS fails to adequately identify and analyze the scope of the cumulative impacts to various resources across appropriate scales for each impact. While the DEIS looks at the nearby projects to some extent it ignores other scales of analysis such as across the flat-tailed horned lizard range. For example, the DEIS fails to look at cumulative impacts to the biological resources in the CDCA as a whole from multiple proposed industrial scale projects particularly how sprawling industrial sites could fragment habitats and change the quality of the CDCA overall. In addition, the DEIS should have considered the cumulative impacts to the flat-tailed horned lizard both within Imperial County and the species as a whole including the Coachella Valley and Arizona which are both areas where its habitat has become extremely constricted. Each of these scales of analysis would likely reveal different information about the cumulative impacts of this project. As discussed above, the flat-tailed horned lizard is subject to numerous ongoing and proposed impacts from development including renewable energy development and from off-road vehicle use.

O2-37

Because the identification of plant communities and species on site is unfinished and incomplete, the cumulative impacts are also therefore inadequate. Similarly, because impacts to the bighorn were ignored, cumulative impacts to this endangered species were also ignored.

The DEIS also fails to consider all reasonably foreseeable impacts in the context of the cumulative impacts analysis. *See Native Ecosystems Council v. Dombek, et al,* 304 F.3d 886 (9th Cir. 2002) (finding future timber sales and related forest road restriction amendments were "reasonably foreseeable cumulative impacts"). The DEIS also fails to provide the needed analysis of how the impacts might combine or synergistically interact to affect the environment in this valley or region. *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004).

Flat-tailed Horned Lizard: Although the Flat-tailed Horned Lizard Management Plan[1] addressed mitigation for the effects of multiple use activities that would impact the species and its habitat, including habitat replacement at a 1:1 ratio outside of designated management areas, it appears the management plan approach to habitat loss and mitigation was based on the assumption that projects that would impact the species and habitat over time would be relatively small and that net losses of habitat and the populations of the species would be greatly minimized by the habitat compensation requirements. The proposed project is unprecedented in scale and perhaps beyond the scope of the analysis and conservation strategy in the management plan with regard to habitat loss impacts for an individual project. Conformance with the policies established in Manual 6840 is particularly important for this species because on March 2, 2010, the Fish and Wildlife Service proposed that it be listed as threatened under the provisions of the Endangered Species Act. **O3-5**

Recommendation: Analysis of impacts to these two species should be rigorously performed, and the mitigation identified should be to avoid, minimize or compensate for the effects of the proposed project, in priority order. Habitat enhancement opportunities for both species should be identified as part of the impact mitigation strategy involving compensation for habitat loss. Habitat enhancements needed to achieve the no net-loss standard should be identified and included as proposed mitigation measures in addition to compensation for lost habitat. Due to the size of the proposed project, the adequacy of the 1:1 habitat loss compensation ratio should be analyzed and adjusted if deemed necessary to achieve the no net loss outcome. BLM should determine whether or not the proposed project would be consistent with management policy contained in Manuals 6500 and 6840. **O3-7**

Recommendation: Compensation for lost habitat should include replacement habitat and enhancement of sufficient habitat to fully offset the net loss. Enhancement may require establishment of protected reserves within habitats occupied by the species that are being adversely impacted by multiple use activities. **O3-10**

Our principal concerns with the impacts of the Solar Two project at this time relate to three biological resources: Peninsular bighorn sheep which are federally endangered; the flat-tailed horned lizard, currently proposed for federal listing as threatened; and water resources and the habitat values associated with these resources in a desert environment, see "U.S. Army Corps of Engineers Public Notice/Application No.: SPL-2008-01244-MLM, pg. 11". In addition, we have identified several other issues requiring more robust analysis, namely the use of hydrogen and the potential for project phasing.

Biological Resources: The DEIS treatment of the observance of federally endangered bighorn sheep on the project site is particularly deficient. Merely attributing the occurrence of a ewe group of bighorn sheep to a "transient occurrence" without further investigation and analysis is inadequate, id. ES-21. The DEIS indicates that the project site provides marginal foraging habitat, id. C.2-18. Under varying precipitation conditions and levels of vegetation growth, marginal foraging habitat may supply an important part of the sheep's diet and could continue to attract foraging activity on an ongoing basis.

The document indicates that Department of Fish and Game biologists, and biologist for the project applicant "have speculated that the bighorn sheep sited at the project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site," id. C.2-24. While OHV activity in the area can certainly affect movement patterns of sheep, this is not the only possible explanation for the presence of the ewe group on the site, and the DEIS must not assume that it is. The final EIS must analyze avoidance, minimization and mitigation measures based on the assumption that bighorn sheep will continue to use the site on an ongoing basis for forage as their previous visitation suggests rather than simply dismiss their presence as an anomaly. For example, we would suggest consideration of concrete measures to mitigate for loss of habitat, such as purchase of replacement lands, as well as ongoing monitoring on the site to ensure that any subsequent usage by the sheep is well-documented and any necessary modifications to operations are made. **O4-3**

A second species of concern found on the project site is the flat-tailed horned lizard. As noted above, this species is currently being considered for listing as federally threatened, id. ES-12. Estimates of population in the project area vary widely from 2,000 to 5000, id. C.2-22. Greater specificity regarding this population is needed to fully understand possible impacts to this species especially in the context of the pending listing.

The SA/DEIS fails to disclose potentially significant impacts to the Peninsular bighorn sheep ("PBHS") and the FTHL. Both PBHS and FTHL have been "observed on [the] project site" SA/DEIS, pp. C.2-16, C.2-18. PBHS is listed under the federal Endangered Species Act (61 FR 13134, 13136) and a proposed listing of FTHL is currently under review. SA/DEIS, p. C.2-40 (detailing process that led to a federal court order requiring USFWS to consider listing FTHL). The SA/DEIS also fails to disclose significant impacts to special-status plant species. The deficiencies are exemplified by the SA/DEIS' statement that the significance of biological impacts is "to be provided," in violation of both CEQA and NEPA. ES-15.

Although PBHS was observed on the Project site, the SA/DEIS claims that PBHS' use of the project site "is transitory at best" and that therefore impacts to PBHS would be less than significant. SA/DEIS, p. C.2-40. This conclusion is based solely upon BLM's and the applicant's "speculat[ion] that the [PBHS] sited [*sic*] at the Project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site." SA/DEIS, p. C.2-24. This is "pure speculation" that "is contradicted by the evidence regarding known [PBHS] behavior." Testimony of Dr. Vernon Bleich on behalf of California Unions for Reliable Energy ("CURE"), Exhibit 400 to opening testimony for CURE, p. 4. It is quite likely that PBHS appear in the Project vicinity on a regular basis. In fact, just three days ago (May 24, 2010), a group of five adult PBHS ewes were seen about 4-5 miles west of the Project site. Comment letter by Denis Trafecanty, sent May 27, 2010, p. 1.

As Dr. Bleich testified, on behalf of California Unions for Reliable Energy ("CURE"), "the SA fails to adequately analyze the *potential reason(s)* that PBHS were using [the Project site] and, as a result," its conclusions that PBHS' appearance was a mere coincidence are "indefensible." *Id.* at 1, 5. The SA/DEIS also fails to identify or mitigate impacts to forage habitat, and fails to identify and mitigate the loss of 6,063 acres of bighorn sheep habitat within the CTCRA. *See generally id.* 5-9. The SA/DEIS' "fail[ure] to adequately identify the[se] significant impacts" is unlawful. *Id.* at 1. **O6-8**

Furthermore, consultation with the Fish and Wildlife Service regarding the Project's impacts on PBHS is required. The Endangered Species Act specifies that "[t]he agency taking the action must assess the project's effects on endangered or threatened species and consult with the FWS to assure the project's compliance with the ESA." *Sierra Club v. Marsh*, 816 F.2d 1376 (9th Cir. 1987). "The consultation process is triggered when a federal agency . . . undertakes *any* activity which *could* impact an endangered species or threaten its critical habitat." *Florida Key Deer v. Stickney,* 864 F.Supp. 1222, 1228 (S.D. Fla. 1994) (*citing* 16 U.S.C. § 1536(a)(2)) (emphasis in original). Here, as discussed above, the Project "could" affect the PBHS. Thus, consultation with FWS is mandated.

Scott Cashen, an expert biologist, testified as to the Project's undisclosed impacts on special status plant species and the FTHL. Exhibit 429 to opening testimony for CURE. In his professional opinion, the SA/DEIS contains "inadequate information on the presence of special-status plant species within the Project area" and "as a result . . . the SA/DEIS cannot conclude [that] proposed mitigation

would reduce Project impacts" on these species "to less than significant levels." *Id.* at 2; *see also* mitigation measure BIO-19, SA/DEIS pp. C.2-97 through 100. The size of the buffer zone for special-status plant species is unknown and likely insufficient.[7] *Id.* at 2-3. Mr. Cashen also testified that the proposed mitigation measures to mitigate impact to *non*-listed species are unenforceable and that impacts to these species would be significant as well. *Id.* at 3-4. Unless all required plant surveys are completed *before* the mitigation measures are adopted, it is impossible to tell whether the mitigation measures will be effective. *Id.* at 5. Moreover, fall surveys for special-status plant species have not yet been prepared. *Id.* at 6. Because of these informational inadequacies, the SA/DEIS is legally deficient.

With regard to the FTHL, the SA/DEIS contains no conclusion regarding the Project's impacts. "[S]taff is in the process of evaluating if the use of compensation funds is sufficient for CEQA mitigation." SA/DEIS, p. C.2-61. As discussed above, the DEIS *itself* is required to include this information. There is a "possibility that *thousands* of FTHL will die as a result of the Project"; a population of this size is "roughly half the size of the population within the entire West Mesa MA." Exhibit 429 to opening testimony for CURE, pp. 8-9. Additionally, "the loss of 6.063 acres of habitat" that would accompany the Project "represents a tremendous impact" on the FTHL, which "is proposed for listing due to habitat loss." These impacts must be mitigated *before* the Project is approved, not after.

The Project also "would cause considerable fragmentation to the remaining FTHL habitat." *Id.* at 9. Nonetheless, "[t]he SA/DEIS proposed no mitigation for impacts to FTHL movement between MAs." *Id.* at 11. The SA/DEIS' conclusion that such mitigation is infeasible is unsupported by the record. *Id.* There is no basis to assume that a corridor underneath I-8 would be impractical. *Id.* Additionally, the SA/DEIS contemplates that the FTHL "would be moved out of harm's way," SA/DEIS at C.2-55, but this strategy "only partially addresses the[FTHL's] survivorship" and, accordingly, only partially mitigates this impact. Exhibit 429 to opening testimony for CURE, p. 12. CEQA requires these potentially significant impacts to be mitigated and the SA/DEIS' failure to do so is unlawful. O6-8

Finally, the compensatory mitigation measure, BIO-10, also fails to fully mitigate habitat loss. This measure would allow current habitat to be replaced by "poor quality habitat." SA/DEIS, p. C.2-85. As such, the SA/DEIS fails to "prevent[] a net loss of FTHL habitat," as claimed. Exhibit 429 to opening testimony for CURE, p. 14.

The Flat-tailed horned lizard (FTHL) is proposed for Federal listing, and adding fragmentation of its habitat to the list of threats would not be wise. This project lies in a poor location, a connectivity corridor between the Yuha Basin management area and West Mesa management area to the north. Currently, there are highways, roads, and rail tracks that act as filters, but not barriers, to lizard movement and population connection. On May 24 and 24, 2010, Cunningham visited the project site and determined that Highway 8 was not a barrier to FTHL crossing. The roadway is low, often a few feet above desert ground level, and has no barrier fencing to prevent lizard access. The entire road adjacent to the project has habitat on both sides. Mortality would occur on the road, but not prevention of crossing. Thus it is not a barrier.

Adding a much wider industrial project into the broad corridor area of the flat desert between management areas would add a greater hindrance of chainlink fencing that would collect debris, increase disturbance, roads and driving during construction, operation, and maintenance. Mortality would increase greatly because of the size of the project. O7-7

The applicant indicates that the Coyote Wash underpassing on Highway 8 would be adequate to maintain connectivity after the project is built. But on a site visit, we determined that this is much too small to guarantee movement and genetic connectivity north and south of the project site.

This case is similar to the Ridgecrest Solar Power Project (RSPP) in Kern County, California, where the project would block a 13-mile wide flat gap between mountain ranges, thus cutting off connectivity for Mojave ground squirrels. Staff has recommended against the project because this connectivity cannot be mitigated under NEPA and CEQA.

Flora / Fauna

- Fall surveys are required for full compliance. 2010 Fall bloom should be exceptional due to a wet year after numerous dry years. The Fall survey is now proposed to take place *after* public review which eliminates any review and comment on impacts and proposed mitigation. O8-19

- Any historic information for bloom after the 1976 Hurricane Kathleen should be incorporated since many desert plants can remain dormant unless and until the right amount of rain falls at the right time. See photo below of desert Prickly Poppy bloom after Hurricane Kathleen.
- Jim Andre, a rare plant expert and director of UC Riverside's Sweeney Granite Mountains Desert Research Center in the Mojave National Preserve, has stated 40 % of desert plants bloom in the fall.
- The presence of bighorn sheep on-site cannot be dismissed by stating they were flushed out by OHV activity. Flushed out from where? Wilderness and protected areas?
- What does this say about BLM management abilities?
- Previous BLM plans for the area recognized the project site as bighorn habitat.
- The on-site presence of pregnant females during lambing season begs further investigation.

O8-19

- What are the potential impacts of having power collected from the SunCatchers to go through a 600 V underground power lines which apparently will collect from the units leaving much of the area not only disturbed by roads, but also by the underground powerlines .
- What are the potential adverse impacts of this amount of cumulative disturbances, from multiple projects, to the soils used by burrowing small mammals and lizards. This disturbance is in addition to the 27 miles of paved arterial roads, 14 miles of unpaved perimeter roads, and approximately 234 miles of unpaved access roads associated with the proposed IV Solar site (SA/DEIS ES-5) for a total of 275 miles of roads.
- Cumulative impacts to bighorn sheep habitat and corridors
- Indirect and cumulative impacts associated with noise and vibrations that travel through the soil and air.
- We disagree with applicant expert's position that I-8 represents a barrier for FTHL.

watershed.[5] For the most part, these impacts were not even disclosed and, therefore, were not analyzed or mitigated in the DEIS. In addition, according to the DEIS, the Project may result in the mortality of potentially *thousands* of flat-tailed horned lizards, a species currently proposed for listing under the Federal Endangered Species Act. However, the mitigation strategy for reducing these impacts to less than significant has not been developed and, therefore, has not been disclosed. The BLM and USFWS continue to evaluate proposals to design a translocation plan but the details were not analyzed in the SA/DEIS and are not yet finalized. O9-4

B. THE DEIS FAILED TO ANALYZE SIGNIFICANT INDIRECT IMPACTS TO FLAT TAILED HORNED LIZARD

The proposed Project site is within an area that is relatively undisturbed, and that provides generally continuous connectivity of natural community types from the southern extent of the Yuha Desert MA to the O9-28

northern extent of the West Mesa MA. The applicant has proposed locating the Project in the middle of this undisturbed landscape. Placing the Project in the proposed location would cause considerable fragmentation to the remaining FTHL habitat outside of the MAs. The fragmentation that would be caused by the proposed Project would have numerous biological consequences that were not mitigated in the DEIS. Two of these consequences, "edge effects" and loss of connectivity, are likely to be particularly severe on the FTHL population. O9-28

a. Edge Effects

The DEIS failed to analyze the offsite impacts on FTHL near the project site. FTHL are particularly vulnerable to boundary processes between natural and anthropogenic desert landscapes.[97] Given the configuration of the Project, and assuming an edge effect to 450 meters, biologist Scott Cashen estimates that the Project will have an indirect, adverse effect on 2,800 acres outside of the Project boundaries. Not only are these impacts substantial, but they would extend into the Yuha Desert MA, thus reducing its value as a reserve. Incredibly, although the literature is unequivocal about adverse edge effects on FTHL, the DEIS fails to adequately analyze or mitigate this impact. O9-29

A. THE DEIS FAILS TO CONSIDER EFFECTIVE MITIGATION FOR IMPACTS TO FTHL

The DEIS proposes removal surveys as mitigation to move FTHL "out of harm's way."[120] However, the DEIS fails to provide enough detail about this mitigation effort to show that it would be effective or feasible.

FTHLs are notoriously difficult to detect. Any FTHL that remain on the site after the clearance surveys will likely die during Project construction and operation. The DEIS lacks any information on translocation sites, the habitat suitability of those sites, and the monitoring that will accompany translocation. Although the comment period is about to close on the DEIS, the Applicant has just provided a draft plan to the BLM, which has not been disclosed to the public.[121] This draft translocation plan for FTHL is a critical part of the mitigation strategy that must be included in a revised DEIS and circulated to the public for review and comment.

A translocation plan must contain an assessment of potential release sites, with special attention dedicated to evaluating the factors that limit the distribution and abundance of FTHLs. The translocation plan must also include an appraisal of probable dispersal patterns, a detailed description of how FTHLs will be detected, and a means of documenting the effectiveness of the detection techniques.[122] O9-43

The DEIS indicates:

> "[r]emoval surveys would be conducted by experience [sic] biological monitors only during appropriate survey conditions. The surveys shall be conducted from April 1 through September 30 when air temperatures are between 25 and 37°C (75 and 100°F). Surveys would not be conducted during inclement weather conditions (e.g., rain, high winds) that could affect the movement of FTHLs. FTHL removal from the area could continue outside of protocol survey periods since the intent is to move animals from harm's way."

The DEIS should define what constitutes an experienced biological monitor and specify how the measure will be verified. Given the difficulty of detecting FTHL and the typically low FTHL detection rates, the monitor(s) should have prior experience conducting FTHL clearance surveys. Further, the surveys must not be allowed outside of protocol survey periods. There is no scientific basis for allowing clearance surveys outside of the protocol survey period, and it should not be allowed. The RMS dictates all surveys should be conducted from April through September.

Additionally, the mitigation proposed by the DEIS improperly allows a net loss of FTHL habitat. To mitigate for habitat loss and potential take of FTHL, the DEIS requires the project owner to pay the BLM a monetary equivalent for 6,619.9 acres of "land suitable for these species." However, Condition of Certification BIO-10 negates the ability of the proposed compensation to fully mitigate habitat loss by allowing (a) compensation lands to be "poor quality habitat"; and (b) compensation funds to be applied to educational purposes or management actions "deemed necessary by the FTHL ICC." By authorizing these uses, the DEIS conflicts with the RMS's stated goal of preventing a net loss of FTHL habitat.

The DEIS fails to require compensation for impacts along the proposed reclaimed water pipeline route. The DEIS justifies this omission by stating "the construction activities would occur mainly in the developed/disturbed portions in and along the Evan Hewes Highway." This justification is inappropriate because approximately 45 percent (13 acres) of the pipeline route will be within native habitat. Therefore, the DEIS has failed to address the indirect impacts posed by the water pipeline. O9-43

The DEIS must be revised to address indirect impacts to FTHL caused by the proposed water pipeline. The RMS states:

> *A project's indirect effects on FTHLs should be considered when determining compensation. For example, ROW grants for aboveground structures such as roads, pipelines, towers, or similar facilities can have adverse impacts to FTHLs beyond the areas that are proposed to be disturbed. First, such disturbances have been shown to attract FTHL predators. For example, roads may attract round-tailed ground squirrels (Garland and Bradley 1984), and towers can provide perching areas for loggerhead shrikes and American kestrels. Second, construction vehicles can introduce invasive weeds that degrade FTHL habitat. Last, vehicles from increased authorized and unauthorized traffic on maintenance roads can cause FTHL mortality. If these and other adverse indirect effects (e.g., habitat fragmentation, decreased*

FTHL density near roads) cannot be mitigated (with FTHL barriers or corridors, for e.g.), compensation for indirect effects will be required.

The DEIS fails to mitigate potentially significant impacts to FTHL from pipeline development, loss of connectivity between MAs and edge effects. The DEIS should be revised to include mitigation for these impacts and to clarify the details of the mitigation proposal for FTHL translocation and compensation. O9-43

First, impacts to biological resources would be severe. This area is important habitat for the flat-tail horned lizard (FTHL), a BLM sensitive species. The FTHL will probably be listed as a threatened species soon, and this project would certainly push the FTHL over the brink into that status. BLM should not allow further destruction of this animal's habitat. Other sensitive species have been observed on this site as well, including burrowing owls, kit foxes, and endangered peninsular bighorn sheep. The dismissal of the presence of peninsular bighorn sheep as "a transient occurrence" does not excuse the fact that the construction of this project could take away migratory and foraging habitat for bighorn sheep in the future. P7-3

Response: These comments raised concerns about the adequacy of the proposed measures to address take of FTHL and the adequacy of the analysis of cumulative impacts, habitat fragmentation, and population densities in the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS). The applicant has proposed to offset project related impacts to and loss of FTHL by implementing measures pursuant to the Flat-Tailed Horned Lizard Rangewide Management Strategy (Strategy). The Strategy was published by the FTHL Interagency Coordinating Committee (ICC) to ensure FTHL and its habitats are managed appropriately. The ICC consists of the United States Fish and Wildlife Service (USFWS), California Department of Fish and Game, BLM, United States Marine Corps, United States Navy, and Arizona Game and Fish.

Pursuant to the Strategy, the applicant will provide the BLM with funds to acquire 6,619.9 acres (ac) of land for preservation of FTHL habitat. In addition to habitat acquisition, as part of the USFWS conferencing, additional conservation measures will be required. The Strategy has been the guiding document for mitigation for FTHL take within the known range of FTHL in the United States. The Strategy has been accepted as suitable for guiding FTHL mitigation within FTHL range. The species is currently proposed for listing pursuant to the Federal Endangered Species Act. If listed, it is unknown at this time if the USFWS would adopt the current Strategy as appropriate mitigation guidelines for unavoidable adverse impacts to FTHL. The USFWS is a coordinating agency for the Strategy. Implementation of measures in accordance with the Strategy is currently accepted to offset impacts to FTHL.

As noted, the Strategy was designed to offset impacts to FTHL. Indirect impacts and fragmentation were also considered in the preparation of the Strategy and the measures to offset impacts to FTHL.

FTHL population densities on the IVS project site were estimated based on extrapolation of data from the Yuha FTHL MA. The Yuha FTHL MA is comprised of better FTHL habitat than on the IVS project site and along the alignment of the water pipeline. The Yuha FTHL MA has one of the densest known populations of FTHL in the Yuha Desert. The BLM considers the population density estimates for the IVS project site extrapolated from known densities in the Yuha FTHL MA as acceptable for purposes of impact analysis.

D.4.7.6 Flat-Tailed Horned Lizard Relocation

Comments: F2-28, NA1-11, NA1-15, O2-10, O2-16, O2-22, O3-5, O3-7, O6-8, O7-7, O7-8, O9-43, and P11-31.

Additionally, over 6,000 acres of Flat-Tailed Horned Lizard (FTHL) habitat would be permanently impacted by the proposed Project (at pg. C.2-60). Long-term impacts may occur as a result of permanent loss of habitat, increased predation, and habitat fragmentation. Approximately 50% of the historical range of FTHL in California has been destroyed mainly by agricultural and urban development (at pg. C.2-71). Although FTHL is not currently listed, UFWS was recently instructed by federal district court to reinstate the proposal to list FTHL under the Endangered Species Act (ESA). EPA appreciates the extensive discussion on the impacts to FTHL as well the proposed mitigation measures and compensatory mitigation for approximately 6,600 acres of habitat, as directed by the FTHL Rangewide Management Strategy. The DEIS indicates that if listing of FTHL species should take place during the construction or operation of the Project, the potential take and loss of habitat for the FTHL would need to be addressed by the BLM, in conferencing with the USFWS (at pg. C.2-1). F2-28 F2-28

Cumulative impacts on flat-tailed horned lizard habitat also deserve additional attention. DEIS, Biological Resources, page C.2-21 acknowledges that "the FTHL populations have declined throughout their range because of loss and degradation of habitat caused by urbanization, agricultural development, military activities, recreational OHV use, and Border Patrol and illegal drive-through traffic." The *Flat-tailed Horned Lizard Rangewide Management Strategy*, page 45, confirms that it is necessary to "maintain or establish effective habitat corridors between naturally adjacent populations." The DEIS fails to adequately address how the development of approximately one million acres of renewable energy projects in this area will impact the FTHL and its habitat. NA1-11 NA1-11

H. The Project Will Have Unacceptable Impacts to the Flat-Tailed Horned Lizard.

The DEIS acknowledges that the Flat-Tailed Horned Lizard (FTHL) is known to exist in the project area. DEIS, Biological Resources, C.2-22. The FTHL is proposed for listing on the Endangered Species Act and final action on the proposed listing is likely to occur this year. The lizard is also culturally significant to the Quechan Tribe, as it is part of the Tribe's creation story. The DEIS acknowledges that this Project could result in direct mortality, injury, and harassment of lizards. DEIS, at C.2-40. This is another reason why the Tribe supports a no-action alternative here.

The mitigation proposed in the DEIS for impacts to the FTHL requires removal surveys to occur prior to construction activities. DEIS, C.2-83. However, the *Flat-tailed Horned Lizard Rangewide Management Strategy* notes that once the FTHLs are relocated to another area, their rate of mortality often increases due to the change in environment. Thus, while removal of the lizards may avoid direct mortality resulting from the construction and operation of this project, it may result in indirect mortality due to the change in habitat.

NA1-15

In light of the need to conduct the removal surveys, no construction should be permitted to occur until Fall of 2011, at the earliest, to allow for completion of surveys. Removal surveys are to be performed betweeen April 1 and September 30 to account for the time period when the lizards are most active and out of hibernation. Since no decision will be made on this project until at least September 2010, the removal surveys would need to occur the following year, between April 1 and September 30, 2011, with no construction beginning until after that date.

The DEIS's failure to adequately identify or analyze many of the significant impacts to the flat-tailed horned lizard population in the area from direct impacts (loss of habitat, fragmentation, take due to translocation, etc.) indirect impacts, and cumulative impacts is discussed in detail below. In addition, BLM provides no meaningful analysis of how the actual use of the adjacent areas might change if a large 6,000+ acre fenced industrial project site is constructed, particularly with regards to recreational activities. Nor there any discussion of the impacts of increased and more concentrated off-road recreation at the translocation sites for the flat-tailed horned lizard from those displaced from the project site, or, more to the point, the need to reduce recreation in areas any translocation areas after flat-tailed horned lizard are removed from the project site under a translocation plan.[3] The DEIS for the proposed plan amendment should at minimum have included an alternative that would limit impacts to the lizards from off-road vehicle use in the translocation areas.

O2-10

The DEIS appears to rely heavily on conclusory statements and many critical issues have not been fully identified and analyzed in the DEIS. Moreover not all of the references are readily available and in several instances the DEIS relies on personal communications without any documentation for critical assumptions such as the success of flat-tailed horned lizard translocation, ignoring other data and scientific evidence. For example, the DEIS states:

> "The FTHL would be moved out of harm's way in coordination with the FTHL ICC. The FTHL ICC may choose to relocate the salvaged FTHL from the SES Solar Two project to several suitable sites within protect FTHL habitat or possibly conduct field research on FTHL. Decisions regarding the salvaged FTHL should be determined by the BLM in cooperation with the FTHL ICC prior to publication of the Staff Assessment/Final Environmental Impact Statement (Steward 2010)"

O2-16

DEIS C.2-21. The reference given is "Steward, D., 2010 – Telephone conversation between Daniel Steward, Acting Field Manager for the Bureau of Land Management, El Centro, California office, and Joy Nishida, California Energy Commission. January 6, 2010." No other references are discussed or provided for this critical issue. No data are provided that relocation of flat-tailed horned lizard has ever proven to be a successful minimization or mitigation measure. It does not appear that the BLM had sufficient time or made sufficient effort to obtain current information or to accurately address the issue of mortality to the flat-tailed horned lizard from relocation as well as many other issues.

Similarly, the DEIS notes that "The USFWS, CDFG, and BLM biologists are in agreement that the siting [sic] of bighorn sheep on the site in spring 2009 was an unusual occurrence and is unlikely to occur again" (DEIS at C.2-40) yet no citation or reference is included as a basis for this assumption, no independent bighorn biologist was contacted for input, nor is there any other information provided as to the basis of these conclusions are provided. The DEIS does not describe whether any surveys were conducted for bighorn or sign, the methodology and results of such surveys if any, and if no surveys were conducted the reason for that omission. Further, additional sightings of bighorn have been reported on the site of the proposed project, some as recently as this week.

O2-16

These examples show a lack of attention to detail in preparing the DEIS and in consideration of the proposed project as well. When BLM revises the DEIS, as it must, the Center hopes and expects that BLM will remedy the errors noted as well as provide a more considered analysis of the impacts of the proposed project.

1. Flat-tailed Horned Lizard

Declines in populations of and habitat for the flat-tailed horned lizard were noted for decades resulting in a proposed listing of the species in 1993. Several legal challenges have resulted in the U.S. Fish and Wildlife Service currently reviewing data to determine if the species needs federal Endangered Species Act protection[7]. Threats to the flat-tailed horned lizard are abundant from its small geographic range, it specialized and highly fragmented habitat, its sensitivity to anthropogenic effects, its narrow breadth of diet (almost exclusively harvester ants), and the lowest rates of reproduction of all known horned lizards[8]. All of these factors highlight the potential risk of local and regional extinctions for this species. O2-22

In the more than 15 years since this listing was first proposed in 1993, the threats to the flat-tailed horned lizard have only increased. Clearly the lizard is still in decline, and the Flat-tailed Horned Lizard Management Areas, the voluntary conservation agreement that has been in place since 1997 and the Rangewide Management Strategy (2003) are not sufficient to protect the survival of the species or contribute to its recovery. Moreover, threats to the species are increasing.

Damage to habitat from off-road vehicles has continued in all flat-tailed horned lizard areas, including the Yuha Desert, Coachella Valley, West and East Mesas, near the Algodones Dunes, and near Yuma as well as in other flat-tailed horned lizard habitat. There is increasing ORV use of designated routes as well as increased route proliferation in many areas both within the FTHL Management areas and in lizard habitat outside of these areas. These ongoing and increased impacts remain one of the greatest threats to species survival. Off-road vehicle use and route proliferation both causes direct loss of habitat and increasingly fragments remaining habitats. Habitat fragmentation is a significant factor in decreasing flat-tailed horned lizard survival and may preclude recovery in many areas. A study of flat-tailed horned lizards and other species within a conservation areas found that edge effects from roads had a significant impact on flat-tailed horned lizard populations up to 150 m from roads (as well as impacts from increased predation). Barrows et al. (2006); *see also* Barrows and Allen (2009) (discussion of habitat loss and high degree of fragmentation in remaining habitats).

Several renewable energy projects are proposed within flat-tailed horned lizard habitat including the proposed project here which includes thousands of acres of flat-tailed horned lizard habitat and the Ocotillo Express wind project proposal which would cover over 6,000 acres, including many acres of flat-tailed horned lizard habitat. This project could also further fragment the remaining habitat for the species and could block gene flow between the West Mesa and Yuha Desert area populations. In addition, there are at least another five pending right of way applications for both solar and wind projects covering more than 20,000 acres in areas that may include significant lizard habitat some of them adjacent to the management areas.[9] Each of the proposed energy projects will require a new gen-tie power lines that will likely impact lizard habitat and many may also require new substations and other infrastructure that may directly affect lizard habitat. Moreover, these large-scale, single-use projects will displace other multiple uses on public lands and increase the pressure on the FTHL Management areas and other lizard habitat from ORV use. O2-22

Loss of habitat due to urban sprawl development and farming was the largest historic threat to the flat-tailed horned lizard. One new sprawl development proposal that may impact flat-tailed horned lizards and their habitat in Imperial County is the Travertine Point which proposes 12,000 housing units on nearly 5,000 acres adjacent to the Salton Sea.[10] In addition, the renewable energy projects, as discussed above, represent another kind of sprawl development that threatens the survival of the species through direct loss of habitat as well as increasing fragmentation of habitat. For this reason, the Center and other conservation groups have advocated for siting the new renewable energy projects on previously degraded sites in the desert habitats (including fallowed farmlands) and alternative siting should have been more fully considered here.

The flat-tailed horned lizard has largely been extirpated from the Coachella Valley outside of existing conservation areas and the little remaining habitat in Coachella Valley continues to be lost to sprawl development. Problems with small reserve size, invasive weeds, loss of sand sources, and boundary effects suggest the current Coachella Valley reserve will not

ensure the survival of the flat-tailed horned lizard in the Coachella Valley. Barrows et al. (2006) noted the significant "sink" effect along the boundary areas and cautioned "Without immigration from the preserve core, flat-tailed horned lizards may not be able to sustain populations in the boundary region." This same concern regarding boundary effects arises for the management areas where routes already fragment the management areas and where additional development is proposed on the borders. This project could similarly limit the effectiveness of the FTHL Management areas by fragmenting the habitat and cutting off connectivity between areas.

The Sunrise Powerlink powerline project would also directly impact lizard habitat. This project, if built, will also increase the likelihood that other proposed energy projects will be built in areas that will directly affect the lizard including the proposed project and other such as the Ocotillo wind project and the associated gen-tie lines and substations. Powerlines also provide perches for raptors which then prey on the flat-tailed horned lizards, putting further unnatural predation pressures on this declining species (Barrows, pers. communication).

On-going and increasing impacts to flat-tailed horned lizard habitat near the US-Mexican border in CA and AZ are also of concern particularly off-road vehicle use by border patrol agents (and others). Border Patrol 'tire drags' of dirt roads in lizard habitat are also a problem and continue to kill or injure lizards. The spread of non-native mustards and other invasive plants may also threaten flat-tailed horned lizard habitat viability. Even if exotic plant species do not directly change the habitat character or decrease food sources, many of these invasive weed plants can support and spread fire that could kill or injure lizards in an area where fire would naturally be an extremely rare occurrence (Brooks et al. 2004). The proposed project with its large hydrogen reserves and piping system would also greatly increase the likelihood of fire and the impacts to the lizard and other wildland resources should have been considered in the DEIS but were not. O2-22

Many of the existing and proposed development projects including the proposed project as well as ORV use will increase the likelihood of predation of flat-tailed horned lizards further diminishing their numbers and ability to survive. Barrows et al. (2006) found a significant increase predation in their study of boundary effects. Increased development provides new roosting and nesting sites for predators including for example shrikes and kestrels which are known predators of the flat-tailed horned lizard. It is well established that increases in subsidies from human activities which provide additional water sources and food/trash also increase other potential predators such as ravens.

The flat-tailed horned lizard as all other species, will be affected by climate change. The Service is well aware of the threats to species due to climate change and in turn the threats to biodiversity across in many diverse ecosystems. In its most recent 2007 report, the Intergovernmental Panel on Climate Change (IPCC) expressed in the strongest language possible its finding that global warming is occurring: "Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level" (IPCC 2007: 30). The international scientific consensus of the IPCC is that most of the recent warming observed has been caused by human activities (IPCC 2007). The U.S. Global Change Research Program also stated that "global warming is unequivocal and primarily human-induced" (UCGCRP: 12). One

of the most troubling recent findings is that the concentration of atmospheric carbon dioxide, the biggest contributor to global warming, has been rapidly increasing throughout the 2000s and is generating stronger-than-expected and sooner-than-predicted climate forcing (Raupach et al. 2007).

The global average temperature has risen by approximately 0.74° C ± 0.18° C (1.33° F ± 0.32° F) during the past 100 years (1906-2005) (Trenberth et al. 2007) in response to rapidly increasing greenhouse gas concentrations. Atmospheric concentration of carbon dioxide has increased by 36% since 1750 to a level that has not been exceeded during the past 650,000 years and likely not during the past 20 million years (Denman et al. 2007). The rate of increase in the atmospheric carbon dioxide concentration is accelerating, with especially rapid increases observed in the 2000s. The emissions growth rate rose from 1.1% per year from 1990-1999 to 3.5 % per year from 2000-2007 (McMullen and Jabbour 2009). The emissions growth rate since 2000 has even exceeded that of the most fossil-fuel intensive IPCC SRES emissions scenario, A1FI (McMullen and Jabbour 2009, Richardson et al. 2009). During the past 50 years, carbon dioxide sinks on land and in the oceans have become less efficient in absorbing atmospheric carbon dioxide, which is contributing to the observed rapid rise (Canadell et al. 2007). The atmospheric concentration of methane, another important greenhouse gas, has increased by about 150% since 1750, continues to increase, and has not been exceeded during the past 650,000 years (Forster et al. 2007). Similarly, the atmospheric concentration of nitrous oxide has increased by about 18% since 1750, continues to increase, and has not been exceeded during at least the last 2000 years (Forster et al. 2007). With atmospheric carbon dioxide at ~390 ppm and worldwide emissions continuing to increase, rapid and substantial reductions are clearly needed immediately. **O2-22**

As scientific understanding of global warming has advanced, so too has the urgency of the warnings from scientists about the consequences of our greenhouse gas emissions for biodiversity loss. Significant and wide-ranging ecological impacts of climate change have been well-documented by thousands of peer-reviewed papers. These impacts include changes in distribution, phenology, physiology, demographic rates, abundance, and genetics (see Lovejoy and Hannah (2005), Parmesan (2006), Hartley et al. (2006) for a small sampling of comprehensive reviews). Studies that have forecast species extinction risk under projected climate conditions have predicted catastrophic species losses during this century. Under a mid-level emissions scenario, Thomas et al. (2004) predicted that climate change will commit 15-37% of species to extinction by 2050. The IPCC found that 20 to 30% of plant and animal species will face an increasingly high risk of extinction as global mean temperatures exceed 2 to 3°C above pre-industrial temperatures (Parry et al. 2007). *If current carbon pollution trends continue, the IPCC estimated that climate change will threaten up to 70% of plant and animals with extinction by 2100* (Parry et al. 2007). Therefore, immediate reduction of greenhouse gas pollution is critical to slow global warming and ultimately stabilize the climate system before we commit a significant portion of the world's species to extinction.

Threats to the flat-tailed horned lizard from climate change are significant for several reasons. First, a recent study shows that desert areas may be some of the first affected by increasing temperature and that the changes may be more rapid in these ecosystems making adaptation more difficult. Second, the existing and likely increasing fragmentation of the

lizard's habitat by the proposed project and others will make any adaptation through movement across the landscape far more difficult. Thus, the flat-tailed horned lizard although adapted to hot desert environments may nonetheless be significantly impacted by climate change due to its loss of habitat and the constraints on adaptation.

While the FTHL Rangewide Management Strategy (2003) established Management Areas for the conservation and recovery of the flat-tailed horned lizard, it fails to include connectivity corridors that will help to ensure genetic viability of the core Management Areas. The proposed project site clearly supports significant populations of flat-tailed horned lizard – an estimated 2000 – 5000 animals or 0.32-0.81 lizards/acre which provides an important linkage between the adjacent management areas (Yuha and West Mesa). When last surveyed these two "conserved" areas provided only somewhat higher densities than those estimated at the proposed project site,[11] which also shows the importance of preserving the habitat here.

Impacts to the flat-tailed horned lizards and other affected species must be avoided where possible through a robust alternatives analysis and any remaining impacts should be minimized and mitigated. Unfortunately, the proposal to relocate flat-tailed horned lizards is not part of a comprehensive proposal but appears to be largely an experiment absent any scientific "controls" that may itself have significant impacts to this imperiled species. The DEIS fails to provide a draft of the relocation plan for public review thus undermining NEPA review. Relocation sites are not identified, nor is the impact to resident flat-tailed horned lizards at the relocation sites analyzed. An analysis of likely impacts from the relocation is particularly important based on data that indicates that food resources are a limiting factor in population numbers[12]. Relocating additional flat-tailed horned lizards into a habitat that is already sustaining its carrying capacity will be detrimental to the species. O2-22

Furthermore, mechanisms need to be included to assure that any and all mitigation acquisitions will be conserved in perpetuity for the conservation of the flat-tailed horned lizard. If those acquisitions are within existing Management Areas, higher levels of protection than are currently in place for Management Areas need to be put in place. NEPA mandates consideration of the relevant environmental factors and environmental review of "[b]oth *short- and long-term* effects" in order to determine the significance of the project's impacts. 40 C.F.R. § 1508.27(a) (emphasis added). BLM has clearly failed to do so in this instance with respect to the impact to the flat-tailed horned lizard.

Flat-tailed Horned Lizard: Although the Flat-tailed Horned Lizard Management Plan[1] addressed mitigation for the effects of multiple use activities that would impact the species and its habitat, including habitat replacement at a 1:1 ratio outside of designated management areas, it appears the management plan approach to habitat loss and mitigation was based on the assumption that projects that would impact the species and habitat over time would be relatively small and that net losses of habitat and the populations of the species would be greatly minimized by the habitat compensation requirements. The proposed project is unprecedented in scale and perhaps beyond the scope of the analysis and conservation strategy in the management plan with regard to habitat loss impacts for an individual project. Conformance with the policies established in Manual 6840 is particularly important for this species because on March 2, 2010, the Fish and Wildlife Service proposed that it be listed as threatened under the provisions of the Endangered Species Act. O3-5

Recommendation: Analysis of impacts to these two species should be rigorously performed, and the mitigation identified should be to avoid, minimize or compensate for the effects of the proposed project, in priority order. Habitat enhancement opportunities for both species should be identified as part of the impact mitigation strategy involving compensation for habitat loss. Habitat enhancements needed to achieve the no net-loss standard should be identified and included as proposed mitigation measures in addition to compensation for lost habitat. Due to the size of the proposed project, the adequacy of the 1:1 habitat loss compensation ratio should be analyzed and adjusted if deemed necessary to achieve the no net loss outcome. BLM should determine whether or not the proposed project would be consistent with management policy contained in Manuals 6500 and 6840. **O3-7**

The SA/DEIS fails to disclose potentially significant impacts to the Peninsular bighorn sheep ("PBHS") and the FTHL. Both PBHS and FTHL have been "observed on [the] project site" SA/DEIS, pp. C.2-16, C.2-18. PBHS is listed under the federal Endangered Species Act (61 FR 13134, 13136) and a proposed listing of FTHL is currently under review. SA/DEIS, p. C.2-40 (detailing process that led to a federal court order requiring USFWS to consider listing FTHL). The SA/DEIS also fails to disclose significant impacts to special-status plant species. The deficiencies are exemplified by the SA/DEIS' statement that the significance of biological impacts is "to be provided," in violation of both CEQA and NEPA. ES-15.

Although PBHS was observed on the Project site, the SA/DEIS claims that PBHS' use of the project site "is transitory at best" and that therefore impacts to PBHS would be less than significant. SA/DEIS, p. C.2-40. This conclusion is based solely upon BLM's and the applicant's "speculat[ion] that the [PBHS] sited [*sic*] at the Project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site." SA/DEIS, p. C.2-24. This is "pure speculation" that "is contradicted by the evidence regarding known [PBHS] behavior." Testimony of Dr. Vernon Bleich on behalf of California Unions for Reliable Energy ("CURE"), Exhibit 400 to opening testimony for CURE, p. 4. It is quite likely that PBHS appear in the Project vicinity on a regular basis. In fact, just three days ago (May 24, 2010), a group of five adult PBHS ewes were seen about 4-5 miles west of the Project site. Comment letter by Denis Trafecanty, sent May 27, 2010, p. 1.

As Dr. Bleich testified, on behalf of California Unions for Reliable Energy ("CURE"), "the SA fails to adequately analyze the *potential reason(s)* that PBHS were using [the Project site] and, as a result," its conclusions that PBHS' appearance was a mere coincidence are "indefensible." *Id.* at 1, 5. The SA/DEIS also fails to identify or mitigate impacts to forage habitat, and fails to identify and mitigate the loss of 6,063 acres of bighorn sheep habitat within the CTCRA. *See generally id.* 5-9. The SA/DEIS' "fail[ure] to adequately identify the[se] significant impacts" is unlawful. *Id.* at 1. **O6-8**

Furthermore, consultation with the Fish and Wildlife Service regarding the Project's impacts on PBHS is required. The Endangered Species Act specifies that "[t]he agency taking the action must assess the project's effects on endangered or threatened species and consult with the FWS to assure the project's compliance with the ESA." *Sierra Club v. Marsh*, 816 F.2d 1376 (9th Cir. 1987). "The consultation process is triggered when a federal agency . . . undertakes *any* activity which *could* impact an endangered species or threaten its critical habitat." *Florida Key Deer v. Stickney,* 864 F.Supp. 1222, 1228 (S.D. Fla. 1994) (*citing* 16 U.S.C. § 1536(a)(2)) (emphasis in original). Here, as discussed above, the Project "could" affect the PBHS. Thus, consultation with FWS is mandated.

Scott Cashen, an expert biologist, testified as to the Project's undisclosed impacts on special status plant species and the FTHL. Exhibit 429 to opening testimony for CURE. In his professional opinion, the SA/DEIS contains "inadequate information on the presence of special-status plant species within the Project area" and "as a result . . . the SA/DEIS cannot conclude [that] proposed mitigation

would reduce Project impacts" on these species "to less than significant levels." *Id.* at 2; *see also* mitigation measure BIO-19, SA/DEIS pp. C.2-97 through 100. The size of the buffer zone for special-status plant species is unknown and likely insufficient.[7] *Id.* at 2-3. Mr. Cashen also testified that the proposed mitigation measures to mitigate impact to *non*-listed species are unenforceable and that impacts to these species would be significant as well. *Id.* at 3-4. Unless all required plant surveys are completed *before* the mitigation measures are adopted, it is impossible to tell whether the mitigation measures will be effective. *Id.* at 5. Moreover, fall surveys for special-status plant species have not yet been prepared. *Id.* at 6. Because of these informational inadequacies, the SA/DEIS is legally deficient.

With regard to the FTHL, the SA/DEIS contains no conclusion regarding the Project's impacts. "[S]taff is in the process of evaluating if the use of compensation funds is sufficient for CEQA mitigation." SA/DEIS, p. C.2-61. As discussed above, the DEIS *itself* is required to include this information. There is a "possibility that *thousands* of FTHL will die as a result of the Project"; a population of this size is "roughly half the size of the population within the entire West Mesa MA." Exhibit 429 to opening testimony for CURE, pp. 8-9. Additionally, "the loss of 6.063 acres of habitat" that would accompany the Project "represents a tremendous impact" on the FTHL, which "is proposed for listing due to habitat loss." These impacts must be mitigated *before* the Project is approved, not after.

The Project also "would cause considerable fragmentation to the remaining FTHL habitat." *Id.* at 9. Nonetheless, "[t]he SA/DEIS proposed no mitigation for impacts to FTHL movement between MAs." *Id.* at 11. The SA/DEIS' conclusion that such mitigation is infeasible is unsupported by the record. *Id.* There is no basis to assume that a corridor underneath I-8 would be impractical. *Id.* Additionally, the SA/DEIS contemplates that the FTHL "would be moved out of harm's way," SA/DEIS at C.2-55, but this strategy "only partially addresses the[FTHL's] survivorship" and, accordingly, only partially mitigates this impact. Exhibit 429 to opening testimony for CURE, p. 12. CEQA requires these potentially significant impacts to be mitigated and the SA/DEIS' failure to do so is unlawful. O6-8

Finally, the compensatory mitigation measure, BIO-10, also fails to fully mitigate habitat loss. This measure would allow current habitat to be replaced by "poor quality habitat." SA/DEIS, p. C.2-85. As such, the SA/DEIS fails to "prevent[] a net loss of FTHL habitat," as claimed. Exhibit 429 to opening testimony for CURE, p. 14.

The Flat-tailed horned lizard (FTHL) is proposed for Federal listing, and adding fragmentation of its habitat to the list of threats would not be wise. This project lies in a poor location, a connectivity corridor between the Yuha Basin management area and West Mesa management area to the north. Currently, there are highways, roads, and rail tracks that act as filters, but not barriers, to lizard movement and population connection. On May 24 and 24, 2010, Cunningham visited the project site and determined that Highway 8 was not a barrier to FTHL crossing. The roadway is low, often a few feet above desert ground level, and has no barrier fencing to prevent lizard access. The entire road adjacent to the project has habitat on both sides. Mortality would occur on the road, but not prevention of crossing. Thus it is not a barrier.

Adding a much wider industrial project into the broad corridor area of the flat desert between management areas would add a greater hindrance of chainlink fencing that would collect debris, increase disturbance, roads and driving during construction, operation, and maintenance. Mortality would increase greatly because of the size of the project. O7-7

The applicant indicates that the Coyote Wash underpassing on Highway 8 would be adequate to maintain connectivity after the project is built. But on a site visit, we determined that this is much too small to guarantee movement and genetic connectivity north and south of the project site.

This case is similar to the Ridgecrest Solar Power Project (RSPP) in Kern County, California, where the project would block a 13-mile wide flat gap between mountain ranges, thus cutting off connectivity for Mojave ground squirrels. Staff has recommended against the project because this connectivity cannot be mitigated under NEPA and CEQA.

We suggest that for FTHL on the Imperial Valley Solar Project, connectivity would also be greatly reduced for FTHL, a species on the brink of federal protection, if the relatively wide valley floor were taken up by an industrial project. CEC and California Department of Fish and Game biologists said in the RSPP case that the risk of blocking a wide corridor and relying on a very narrow alternate corridor was too great. The best way to maintain connectivity of metapopulations would be to keep the widest possible area for a corridor.

Recent ecological concepts such as "matrix ecology" should be kept in mind when managing FTHL populations, where the permeability of less-desirable habitat around core populations in optimum habitats must be maintained so that movement can occur between good habitat patches (see Corridor Ecology, 2006, by Jodi Hilty, William Lidicker, Jr, and Adina Merenlender, Island Press: Washington). O7-8

Relocation as a mitigation measure has had a poor record of success for sensitive lizard species. Efforts to relocate the Blunt-nosed leopard lizard in San Joaquin region areas has had very high failure rates according to studies undertaken by Dr. David Germano of California State University, Bakersfield, and Steve Juarez of the California Department of Fish and Game. At a minimum a fool-proof study design needs to be incorporated into a relocation plan, which should be available for public review long before construction begins.

A. THE DEIS FAILS TO CONSIDER EFFECTIVE MITIGATION FOR IMPACTS TO FTHL

The DEIS proposes removal surveys as mitigation to move FTHL "out of harm's way."[120] However, the DEIS fails to provide enough detail about this mitigation effort to show that it would be effective or feasible.

FTHLs are notoriously difficult to detect. Any FTHL that remain on the site after the clearance surveys will likely die during Project construction and operation. The DEIS lacks any information on translocation sites, the habitat suitability of those sites, and the monitoring that will accompany translocation. Although the comment period is about to close on the DEIS, the Applicant has just provided a draft plan to the BLM, which has not been disclosed to the public.[121] This draft translocation plan for FTHL is a critical part of the mitigation strategy that must be included in a revised DEIS and circulated to the public for review and comment.

A translocation plan must contain an assessment of potential release sites, with special attention dedicated to evaluating the factors that limit the distribution and abundance of FTHLs. The translocation plan must also include an appraisal of probable dispersal patterns, a detailed description of how FTHLs will be detected, and a means of documenting the effectiveness of the detection techniques.[122] O9-43

The DEIS indicates:

> "[r]emoval surveys would be conducted by experience [sic] biological monitors only during appropriate survey conditions. The surveys shall be conducted from April 1 through September 30 when air temperatures are between 25 and 37°C (75 and 100°F). Surveys would not be conducted during inclement weather conditions (e.g., rain, high winds) that could affect the movement of FTHLs. FTHL removal from the area could continue outside of protocol survey periods since the intent is to move animals from harm's way."

The DEIS should define what constitutes an experienced biological monitor and specify how the measure will be verified. Given the difficulty of detecting FTHL and the typically low FTHL detection rates, the monitor(s) should have prior experience conducting FTHL clearance surveys. Further, the surveys must not be allowed outside of protocol survey periods. There is no scientific basis for allowing clearance surveys outside of the protocol survey period, and it should not be allowed. The RMS dictates all surveys should be conducted from April through September.

Additionally, the mitigation proposed by the DEIS improperly allows a net loss of FTHL habitat. To mitigate for habitat loss and potential take of FTHL, the DEIS requires the project owner to pay the BLM a monetary equivalent for 6,619.9 acres of "land suitable for these species." However, Condition of Certification BIO-10 negates the ability of the proposed compensation to fully mitigate habitat loss by allowing (a) compensation lands to be "poor quality habitat"; and (b) compensation funds to be applied to educational purposes or management actions "deemed necessary by the FTHL ICC." By authorizing these uses, the DEIS conflicts with the RMS's stated goal of preventing a net loss of FTHL habitat.

The DEIS fails to require compensation for impacts along the proposed reclaimed water pipeline route. The DEIS justifies this omission by stating "the construction activities would occur mainly in the developed/disturbed portions in and along the Evan Hewes Highway." This justification is inappropriate because approximately 45 percent (13 acres) of the pipeline route will be within native habitat. Therefore, the DEIS has failed to address the indirect impacts posed by the water pipeline. O9-43

The DEIS must be revised to address indirect impacts to FTHL caused by the proposed water pipeline. The RMS states:

> *A project's indirect effects on FTHLs should be considered when determining compensation. For example, ROW grants for aboveground structures such as roads, pipelines, towers, or similar facilities can have adverse impacts to FTHLs beyond the areas that are proposed to be disturbed. First, such disturbances have been shown to attract FTHL predators. For example, roads may attract round-tailed ground squirrels (Garland and Bradley 1984), and towers can provide perching areas for loggerhead shrikes and American kestrels. Second, construction vehicles can introduce invasive weeds that degrade FTHL habitat. Last, vehicles from increased authorized and unauthorized traffic on maintenance roads can cause FTHL mortality. If these and other adverse indirect effects (e.g., habitat fragmentation, decreased*

FTHL density near roads) cannot be mitigated (with FTHL barriers or corridors, for e.g.), compensation for indirect effects will be required.

The DEIS fails to mitigate potentially significant impacts to FTHL from pipeline development, loss of connectivity between MAs and edge effects. The DEIS should be revised to include mitigation for these impacts and to clarify the details of the mitigation proposal for FTHL translocation and compensation. O9-43

FTHL

74. As we listened to the info at the Evidentiary Hearing, with a potential for 2000 to 5000 FTHL on site, if they do construction immediately and increase travel speeds from 15 to 25 mph on the hundreds of miles of unpaved roads, the only real questions are how, when and where the FTHL will be killed. To think of translocation to already occupied habitat in winter sounds like a grand scheme for failure. And inappropriate for a species being considered for listing now. P11-31

Response: These comments raised concerns about the concept of relocation or translocation of FTHL encountered during construction and operation of the IVS project. The common theme of these comments is that relocation/translocation of FTHL to offsite recipient areas is not a proven measure and could result in negative effects on the relocated FTHL and/or to FTHL in the offsite recipient areas. The SA/DEIS discussed relocation/translocation as a potential component of FTHL avoidance, minimization, and mitigation measures. However, the USFWS, as part of its conferencing process, has deemed relocation/translocation as inadequate and the BLM has incorporated a modified Measure BIO-9 in the project. That modified measure requires that FTHL encountered during construction and operations be moved immediately "…out of harm's way…" without any requirement to relocate FTHL to offsite recipient areas.

D.4.7.7 Peninsular Bighorn Sheep

Comments: F2-27, F2-29, S2-3, O2-3, O2-16, O2-23, O3-6, O3-7, O3-8, O3-9, O3-10, O4-3, O6-8, O7-9, O9-5, O9-19, O9-24, O9-25, O9-26, O9-27, O9-48, P7-3, P9-1, P10-1, and P10-9.

Endangered Species and Other Species of Concern

The site supports a diversity of mammals, birds, and reptiles, including some special status wildlife species. Grading on the plant site would result in direct impacts to some special status animal species and possibly special status plant species through the removal of vegetation that provides cover, foraging, and breeding habitat for wildlife (at pg. C.2-1). A group of Peninsular bighorn sheep were observed on the site and could use the Project site as foraging habitat and as a possible migratory corridor (at C.2-39). The DEIS speculates that the sheep may have arrived at the site after having become disoriented upon being flushed by OHV activity (at pg. C.2-24). It is our understanding that the US Fish and Wildlife Service (USFWS) will shortly make its determination whether to engage in consultation on this listed species. EPA has concerns that the DEIS did not fully consider the impacts to Peninsular bighorn sheep that may result from the proposed Project. **F2-27**

Proposed designs for the Project should avoid and minimize impacts to all federally threatened and endangered species, as well as BLM species of concern and State species of concern. In addition to bighorn sheep and FTHL, the site of the proposed Project includes sensitive species such as the American badger and the Western burrowing owl, among others. Any mitigation measures that result from consultation with the USFWS to protect sensitive biological resources should be included in the FEIS and, ultimately, the ROD. The FEIS should also clearly articulate under which alternatives sensitive biological resources, including the bighorn sheep, FTHL and American badger, would be least impacted and to what extent impacts can be mitigated.

Recommendations:

- EPA recommends BLM include the outcome of further discussions with, and future determinations or biological analyses by, the U.S. Fish and Wildlife Service in the FEIS pertaining to the Peninsular bighorn sheep and FTHL. Additionally, the FEIS should provide analysis of impacts on, and mitigation for, covered species, including:
    - Baseline conditions of habitats and populations of the covered species;
    - A clear description of how avoidance, mitigation, and conservation measures will protect and encourage the recovery of the covered species and their habitats in the project area;
    - Monitoring, reporting, and adaptive management efforts to ensure species and habitat conservation effectiveness. F2-29
- Incorporate complete information on the compensatory mitigation proposals (including quantification of acreages, estimates of species protected, costs to acquire compensatory lands, etc.) and analyze the environmental and economic trade-offs of acquiring the off-site lands versus reducing the size of on-site alternatives for equivalent protection.
- The FEIS should provide additional information to substantiate the finding that it is unlikely that FTHL would use the culverts to move between the Yuha Desert FTHL Management Area and the proposed Project site due to the long distance between these areas and lack of light along the length (at pg. C.2-22)
- The FEIS should consider establishing a corridor on the eastern portion of the site to facilitate surface flows and allow FTHL movement between zones consistent with the FTHL Rangewide Management Plan.
- The FEIS should also clearly articulate under which alternatives sensitive biological resources, including the Peninsular bighorn sheep and FTHL, would be least impacted and to what extent impacts can be mitigated.
- A clear commitment to implement mitigation measures to avoid and minimize adverse effects to the habitat of the Peninsular bighorn sheep, FTHL and other sensitive species should be made in the FEIS and, ultimately, the ROD.

Biologically, the loss of over 6,000 acres of habitat for the proposed-endangered Flat-tailed Horned Lizard should be considered significant and will require costly mitigation according to formulas derived as part of the Flat-tailed Horned Lizard Conservation Strategy. The loss of over 6,000 acres of habitat for burrowing owls (a California Species of Special Concern), likewise will need to be mitigated. The presence of individuals of the State- and federally-listed endangered Peninsular Range population of the Desert Bighorn Sheep will also require mitigation as a result of this project. Some 312 acres of desert washes and waterways would be impacted by the proposed project and require mitigation under the U.S. Army Corps of Engineers and California Department of Fish and Game guidelines. Numerous other sensitive plant and animal species will also need to be mitigated. **S2-3**

Nonetheless, even the inadequate information provided in the DEIS shows that the proposed plan amendment and right-of-way application should be denied because the proposed project will result in significant impacts to a breeding population of flat-tailed horned lizards, which are proposed to be listed under the Endangered Species Act ("ESA"). In addition to direct impacts to the flat-tailed horned lizard, the proposed project is in an area that links the northern and southern populations and management areas for this imperiled species – areas which were set aside for the conservation and recovery of the species. Although the DEIS acknowledges that this site includes documented foraging area for the federally and state endangered Peninsular bighorn sheep (DEIS at C.2-39), the DEIS improperly ignored potential impacts to the bighorn from the loss of this foraging area. Alternative siting, which the BLM failed to adequately address in the DEIS, could significantly reduce the impacts to both of these species, their occupied habitat, and other special status species including potentially rare plants. The Center urges the BLM to revise the DEIS to adequately address these and other issues detailed below and re-circulate the DEIS or a supplemental DEIS for public comment. **O2-3**

In the sections that follow, the Center provides detailed comments on the ways in which the DEIS fails to adequately identify and analyze many of the impacts that could result from the proposed project, including but not limited to: impacts to biological resources, growth inducing impacts alternatives and cumulative impacts. In addition, if undertaken as proposed, this industrial project is inconsistent with local planning and zoning laws, the Endangered Species Act ("ESA"), the Federal Land Policy Management Act ("FLPMA"), the California Desert Conservation Act ("CDCA"), and other laws, ordinances, regulations and standards.

The DEIS appears to rely heavily on conclusory statements and many critical issues have not been fully identified and analyzed in the DEIS. Moreover not all of the references are readily available and in several instances the DEIS relies on personal communications without any documentation for critical assumptions such as the success of flat-tailed horned lizard translocation, ignoring other data and scientific evidence. For example, the DEIS states:

> "The FTHL would be moved out of harm's way in coordination with the FTHL ICC. The FTHL ICC may choose to relocate the salvaged FTHL from the SES Solar Two project to several suitable sites within protect FTHL habitat or possibly conduct field research on FTHL. Decisions regarding the salvaged FTHL should be determined by the BLM in cooperation with the FTHL ICC prior to publication of the Staff Assessment/Final Environmental Impact Statement (Steward 2010)"

O2-16

DEIS C.2-21. The reference given is "Steward, D., 2010 – Telephone conversation between Daniel Steward, Acting Field Manager for the Bureau of Land Management, El Centro, California office, and Joy Nishida, California Energy Commission. January 6, 2010." No other references are discussed or provided for this critical issue. No data are provided that relocation of flat-tailed horned lizard has ever proven to be a successful minimization or mitigation measure. It does not appear that the BLM had sufficient time or made sufficient effort to obtain current information or to accurately address the issue of mortality to the flat-tailed horned lizard from relocation as well as many other issues.

Similarly, the DEIS notes that "The USFWS, CDFG, and BLM biologists are in agreement that the siting [sic] of bighorn sheep on the site in spring 2009 was an unusual occurrence and is unlikely to occur again" (DEIS at C.2-40) yet no citation or reference is included as a basis for this assumption, no independent bighorn biologist was contacted for input, nor is there any other information provided as to the basis of these conclusions are provided. The DEIS does not describe whether any surveys were conducted for bighorn or sign, the methodology and results of such surveys if any, and if no surveys were conducted the reason for that omission. Further, additional sightings of bighorn have been reported on the site of the proposed project, some as recently as this week.

O2-16

These examples show a lack of attention to detail in preparing the DEIS and in consideration of the proposed project as well. When BLM revises the DEIS, as it must, the Center hopes and expects that BLM will remedy the errors noted as well as provide a more considered analysis of the impacts of the proposed project.

2. Peninsular Bighorn Sheep

The DEIS simply fails to assess the impacts of the proposed project on the federally and state endangered peninsular bighorn sheep population. Without basic information about the use of the proposed project site and adjacent areas by bighorn it is impossible to assess the extent of the impacts to the bighorn population in this area from the proposed project.

O2-23

However, the proposed project will clearly cause the loss of foraging habitat on the project site in washes where at least one Peninsular bighorn sheep ewe group was documented to

occur (DEIS at C.2-39) and additional sitings this year show that it was not an anomaly. Even if such habitat may only be used during certain seasons or years it can be critical to survival of bighorn. Without site-specific data on the details of habitat use patterns of the bighorn in the area, the DEIS cannot properly assess the importance of the wash habitat to the bighorn population or the impact of its loss on the population.

The proposed project may affect foraging areas and movement corridors for bighorn, as well as fragmenting currently intact habitat. The DEIS simply dismisses the documented occurrence of bighorn on the site and fails to analyze the impacts to this endangered species. Moreover no mitigation is proposed for the loss of forage and movement areas and fragmentation of habitat by the construction of the proposed solar project on over 6,000 acres.

For other rare species addressed in the document the mitigation involves the purchase and future protection of at minimum an equal amount of acreage or more that is being impacted. No such suggestion is listed for Peninsular bighorn sheep, although even the purchase of lands elsewhere will do nothing to mitigate for the potential movement corridor onsite. O2-23

Additional field study needs to be conducted by a knowledgeable researcher on the proposed solar site, to understand how the bighorn use this area. Absence of previous documentation of Peninsular bighorn sheep occurrence on site (or in the general area) does not infer that bighorn were not using the site previously. Indeed, the Center was informed several years ago that the El Centro Office may have lost or misplaced many documents concerning the Peninsular bighorn sheep and earlier sightings in the area. Absent any real information in the field, the dismissal of impacts to this California fully-protected species and federally endangered species is a violation of NEPA as well as the ESA.

Peninsular Bighorn Sheep: The potential loss of seasonal foraging habitat and potential movement corridors for Peninsular Bighorn Sheep is a concern. Very little information was presented in the SA/DEIS about bighorn populations and movements on a regional basis, which ranges are currently occupied and where potential movement corridors may be located. The documented sighting of several Peninsular Bighorn in a wash within the central portion of the project area may be a significant event. No other information is provided which would indicate that these animals were studied to document their use of the habitat for foraging, movements, duration within the project area, and other behaviors. The permitting agencies and the California Department of Fish and Game have addressed the bighorn sheep occurrence and impact issue and concluded that presence of bighorn sheep within the project area in the spring of 2009 was "…an unusual occurrence and is unlikely to occur again." (DEIS at C.2-40). O3-6 O3-6

Recommendation: Analysis of impacts to these two species should be rigorously performed, and the mitigation identified should be to avoid, minimize or compensate for the effects of the proposed project, in priority order. Habitat enhancement opportunities for both species should be identified as part of the impact mitigation strategy involving compensation for habitat loss. Habitat enhancements needed to achieve the no net-loss standard should be identified and included as proposed mitigation measures in addition to compensation for lost habitat. Due to the size of the proposed project, the adequacy of the 1:1 habitat loss compensation ratio should be analyzed and adjusted if deemed necessary to achieve the no net loss outcome. BLM should determine whether or not the proposed project would be consistent with management policy contained in Manuals 6500 and 6840. O3-7

Recommendation: Additional studies of the ephemeral washes on the proposed project site for use and occupancy by Peninsular Bighorn should be conducted if their accessibility to Bighorn would be precluded due to the project. Any additional information available on the activities and behavior of the bighorn observed on the proposed project site in the spring of 2009 should be provided, such as feeding, resting, direction of travel, and duration within the proposed project area. **O3-8**

Recommendation: The larger ephemeral washes coursing through the proposed project area plus a corresponding buffer zone may be warranted as a means to allow for continued use of the area by Bighorn. The specific washes and the necessary width of a buffer to allow for Bighorn feeding and movement should be determined by subject matter experts from the California Department of Fish and Game and U.S. Fish and Wildlife Service. **O3-9**

Recommendation: Compensation for lost habitat should include replacement habitat and enhancement of sufficient habitat to fully offset the net loss. Enhancement may require establishment of protected reserves within habitats occupied by the species that are being adversely impacted by multiple use activities. **O3-10**

Our principal concerns with the impacts of the Solar Two project at this time relate to three biological resources: Peninsular bighorn sheep which are federally endangered; the flat-tailed horned lizard, currently proposed for federal listing as threatened; and water resources and the habitat values associated with these resources in a desert environment, see "U.S. Army Corps of Engineers Public Notice/Application No.: SPL-2008-01244-MLM, pg. 11". In addition, we have identified several other issues requiring more robust analysis, namely the use of hydrogen and the potential for project phasing.

Biological Resources: The DEIS treatment of the observance of federally endangered bighorn sheep on the project site is particularly deficient. Merely attributing the occurrence of a ewe group of bighorn sheep to a "transient occurrence" without further investigation and analysis is inadequate, id. ES-21. The DEIS indicates that the project site provides marginal foraging habitat, id. C.2-18. Under varying precipitation conditions and levels of vegetation growth, marginal foraging habitat may supply an important part of the sheep's diet and could continue to attract foraging activity on an ongoing basis.

The document indicates that Department of Fish and Game biologists, and biologist for the project applicant "have speculated that the bighorn sheep sited at the project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site," id. C.2-24. While OHV activity in the area can certainly affect movement patterns of sheep, this is not the only possible explanation for the presence of the ewe group on the site, and the DEIS must not assume that it is. The final EIS must analyze avoidance, minimization and mitigation measures based on the assumption that bighorn sheep will continue to use the site on an ongoing basis for forage as their previous visitation suggests rather than simply dismiss their presence as an anomaly. For example, we would suggest consideration of concrete measures to mitigate for loss of habitat, such as purchase of replacement lands, as well as ongoing monitoring on the site to ensure that any subsequent usage by the sheep is well-documented and any necessary modifications to operations are made. **O4-3**

A second species of concern found on the project site is the flat-tailed horned lizard. As noted above, this species is currently being considered for listing as federally threatened, id. ES-12. Estimates of population in the project area vary widely from 2,000 to 5000, id. C.2-22. Greater specificity regarding this population is needed to fully understand possible impacts to this species especially in the context of the pending listing.

The SA/DEIS fails to disclose potentially significant impacts to the Peninsular bighorn sheep ("PBHS") and the FTHL. Both PBHS and FTHL have been "observed on [the] project site" SA/DEIS, pp. C.2-16, C.2-18. PBHS is listed under the federal Endangered Species Act (61 FR 13134, 13136) and a proposed listing of FTHL is currently under review. SA/DEIS, p. C.2-40 (detailing process that led to a federal court order requiring USFWS to consider listing FTHL). The SA/DEIS also fails to disclose significant impacts to special-status plant species. The deficiencies are exemplified by the SA/DEIS' statement that the significance of biological impacts is "to be provided," in violation of both CEQA and NEPA. ES-15.

Although PBHS was observed on the Project site, the SA/DEIS claims that PBHS' use of the project site "is transitory at best" and that therefore impacts to PBHS would be less than significant. SA/DEIS, p. C.2-40. This conclusion is based solely upon BLM's and the applicant's "speculat[ion] that the [PBHS] sited [*sic*] at the Project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site." SA/DEIS, p. C.2-24. This is "pure speculation" that "is contradicted by the evidence regarding known [PBHS] behavior." Testimony of Dr. Vernon Bleich on behalf of California Unions for Reliable Energy ("CURE"), Exhibit 400 to opening testimony for CURE, p. 4. It is quite likely that PBHS appear in the Project vicinity on a regular basis. In fact, just three days ago (May 24, 2010), a group of five adult PBHS ewes were seen about 4-5 miles west of the Project site. Comment letter by Denis Trafecanty, sent May 27, 2010, p. 1.

As Dr. Bleich testified, on behalf of California Unions for Reliable Energy ("CURE"), "the SA fails to adequately analyze the *potential reason(s)* that PBHS were using [the Project site] and, as a result," its conclusions that PBHS' appearance was a mere coincidence are "indefensible." *Id.* at 1, 5. The SA/DEIS also fails to identify or mitigate impacts to forage habitat, and fails to identify and mitigate the loss of 6,063 acres of bighorn sheep habitat within the CTCRA. *See generally id.* 5-9. The SA/DEIS' "fail[ure] to adequately identify the[se] significant impacts" is unlawful. *Id.* at 1. **O6-8**

Furthermore, consultation with the Fish and Wildlife Service regarding the Project's impacts on PBHS is required. The Endangered Species Act specifies that "[t]he agency taking the action must assess the project's effects on endangered or threatened species and consult with the FWS to assure the project's compliance with the ESA." *Sierra Club v. Marsh*, 816 F.2d 1376 (9th Cir. 1987). "The consultation process is triggered when a federal agency . . . undertakes *any* activity which *could* impact an endangered species or threaten its critical habitat." *Florida Key Deer v. Stickney,* 864 F.Supp. 1222, 1228 (S.D. Fla. 1994) (*citing* 16 U.S.C. § 1536(a)(2)) (emphasis in original). Here, as discussed above, the Project "could" affect the PBHS. Thus, consultation with FWS is mandated.

Scott Cashen, an expert biologist, testified as to the Project's undisclosed impacts on special status plant species and the FTHL. Exhibit 429 to opening testimony for CURE. In his professional opinion, the SA/DEIS contains "inadequate information on the presence of special-status plant species within the Project area" and "as a result . . . the SA/DEIS cannot conclude [that] proposed mitigation

would reduce Project impacts" on these species "to less than significant levels." *Id.* at 2; *see also* mitigation measure BIO-19, SA/DEIS pp. C.2-97 through 100. The size of the buffer zone for special-status plant species is unknown and likely insufficient.[7] *Id.* at 2-3. Mr. Cashen also testified that the proposed mitigation measures to mitigate impact to *non*-listed species are unenforceable and that impacts to these species would be significant as well. *Id.* at 3-4. Unless all required plant surveys are completed *before* the mitigation measures are adopted, it is impossible to tell whether the mitigation measures will be effective. *Id.* at 5. Moreover, fall surveys for special-status plant species have not yet been prepared. *Id.* at 6. Because of these informational inadequacies, the SA/DEIS is legally deficient.

With regard to the FTHL, the SA/DEIS contains no conclusion regarding the Project's impacts. "[S]taff is in the process of evaluating if the use of compensation funds is sufficient for CEQA mitigation." SA/DEIS, p. C.2-61. As discussed above, the DEIS *itself* is required to include this information. There is a "possibility that *thousands* of FTHL will die as a result of the Project"; a population of this size is "roughly half the size of the population within the entire West Mesa MA." Exhibit 429 to opening testimony for CURE, pp. 8-9. Additionally, "the loss of 6.063 acres of habitat" that would accompany the Project "represents a tremendous impact" on the FTHL, which "is proposed for listing due to habitat loss." These impacts must be mitigated *before* the Project is approved, not after.

The Project also "would cause considerable fragmentation to the remaining FTHL habitat." *Id.* at 9. Nonetheless, "[t]he SA/DEIS proposed no mitigation for impacts to FTHL movement between MAs." *Id.* at 11. The SA/DEIS' conclusion that such mitigation is infeasible is unsupported by the record. *Id.* There is no basis to assume that a corridor underneath I-8 would be impractical. *Id.* Additionally, the SA/DEIS contemplates that the FTHL "would be moved out of harm's way," SA/DEIS at C.2-55, but this strategy "only partially addresses the[FTHL's] survivorship" and, accordingly, only partially mitigates this impact. Exhibit 429 to opening testimony for CURE, p. 12. CEQA requires these potentially significant impacts to be mitigated and the SA/DEIS' failure to do so is unlawful. O6-8

Finally, the compensatory mitigation measure, BIO-10, also fails to fully mitigate habitat loss. This measure would allow current habitat to be replaced by "poor quality habitat." SA/DEIS, p. C.2-85. As such, the SA/DEIS fails to "prevent[] a net loss of FTHL habitat," as claimed. Exhibit 429 to opening testimony for CURE, p. 14.

Attention has been raised as to the importance of flats and upper alluvial fans adjacent to mountain ranges for spring foraging habitat, especially used by ewe herds. We have seen several times Desert bighorn sheep herds feeding on spring vegetation on fans away from typical steep hill habitat. Thus the sighting of bighorn sheep on the project site may not be an aberration, but a regular part of the behavioral ecology of Peninsular bighorn sheep in the area. This habitat should be preserved so that this important foraging habitat can be preserved. O7-9

The Project will also fence more than 6,000 acres that may provide critical movement corridors and forage resources for endangered peninsular bighorn sheep in the Carrizo Mountains/Tierra Blanca Mountains/Coyote Mountains Recovery Area. This impact was not even discussed in the DEIS. O9-5

C. RECOVERY AREA FOR BIGHORN SHEEP

The Project site is located within a recovery area for federally endangered peninsular bighorn sheep ("PBHS"). PBHS were photographed on the Project site in March of 2009. However, the DEIS fails to describe how the Project site may be important to the recovery of PBHS.

According to Dr. Vern Bleich, federally endangered peninsular bighorn sheep occupy a number of areas surrounding the Project site including (a) the area known as the Coyote Mountains immediately west of the Project site and north of Interstate Highway 8, which supports a population of between 45 and 60 individuals; (b) the Fish Creek Mountains immediately north of the Project site that are occupied by PBHS on at least a seasonal basis; (c) the Sierra Juarez located immediately south of the Jacumba Mountains near the project site; (d) the Sierra Cucapa, located immediately southeast of the Project site; and (e) a portion of the Jacumba Mountains immediately south of Interstate 8.[51] These mountainous areas have been designated as the Carrizo Mountains/Tierra Blanca Mountains/Coyote Mountains Recovery Area (henceforth referred to as the CTCRA) in the Recovery Plan for PBHS in the Peninsular Ranges. The Project site may be part of an important movement corridor in this Recovery Area. This should be described as part of the affected environment in the DEIS. O9-19 O9-19

A. THE DEIS FAILED TO ANALYZE SIGNIFICANT IMPACTS TO ENDANGERED PENINSULAR BIGHORN SHEEP

The DEIS concludes that there is no significant adverse impact to PBHS. The DEIS erroneously quotes the USFWS as having concluded that peninsular bighorn sheep are unlikely to reoccur on the Project site and that all the resource agencies agree that the project is not likely to affect PBHS. In an email communication on May 11, 2010, USFWS biologist Felicia Sirchia confirmed that USFWS has not yet made a determination as to whether the Project is likely to adversely affect PBHS and that neither she, nor Guy O9-24

Wagner, the USFWS bighorn specialist in the Project area, ever told the Applicant that PBHS are unlikely to reoccur on the Project site.[59]

Peninsular bighorn sheep ("PBHS") were photographed on the proposed Project site in March 2009. The DEIS fails to adequately analyze the potential reasons(s) that PBHS were witnessed on the property in March, 2009, and as a result the DEIS fails to adequately identify the significant impacts of the project on the local population of PBHS occupying the southeastern portion of the peninsular ranges. In particular, the DEIS failed to address four specific impacts: (a) impacts to sheep movement corridors among areas occupied (or habitat that may be suitable, but otherwise unoccupied) by PBHS; (b) impacts to PBHS through the loss of valuable forage in low-lying areas; (c) the significance of the permanent loss of 6,063 acres of habitat used at least occasionally by PBHS; and (d) cumulative impacts and their overall potential to influence the recovery or persistence of PBHS.

a. The DEIS failed to analyze impacts to PBHS movement corridors

O9-24

Without any support, the DEIS concludes that the site "... does not provide any corridor to other habitat that would support Peninsular bighorn sheep."[60] As a result, the DEIS does not analyze the likely potential that PBHS observed on the project site were moving from permanently occupied areas to other permanently or seasonally occupied areas. Instead, the DEIS dismisses the presence of PBHS on the project site as "...a transient occurrence."[61]

The project will be completely surrounded by a perimeter fence, effectively eliminating the potential for PBHS movement through the project site. This will translate to nearly 7 miles of fence immediately adjacent to Interstate Highway 8 along just one side of the project.[62] The DEIS fails to acknowledge that the fence will eliminate present and future movement of PBHS through the project site and between areas of known habitat.[63] The project's elimination of this movement corridor may impact the recovery of PBHS in the CTCRA. Therefore, development of the project may result in direct impacts to PBHS and habitat linkage(s) in this recovery area.[64]

The conclusion in the DEIS that "[t]he site is several miles from designated critical habitat and does not provide any corridor to other habitat that would support Peninsular bighorn sheep" is not supported by the literature on this topic.[65] It is well known that bighorn sheep moving between occupied areas, or even from occupied areas into unoccupied areas, are capable of moving long distances, and that such movements may occur more frequently than previously recognized.[66,67]

Moreover, the statement that "[m]ovement by bighorn sheep of this distance [6 miles] from *known habitat* to the west of the project site has not been previously documented"[68] implies that such movements are not likely to occur. In fact, movements by bighorn sheep of distances far greater than 6 miles from stereotypical bighorn sheep habitat are being increasingly recognized,[69,70] and the value of intermountain areas like the project site to metapopulation function and, in turn, population persistence, has been repeatedly emphasized in the literature.[71,72,73,74] Further, the PBHS photographed on the project site were female, and female bighorn sheep are inherently conservative in their behavior and are slow to colonize vacant areas,[75] so the presence of female PBHS on the project site suggests those sheep were moving from one area to another within the CTCRA.

O9-24

The statement that, "…sheep entering the area are far from escape habitat and would be in a highly stressed state which could put them at great risk as the site is already surrounded by busy highways and the railroad"[76] is not consistent with known sheep behavior. Bighorn sheep occupy areas adjacent to busy highways elsewhere, as well as other areas that receive high human use such as state parks, golf courses, areas on and adjacent to mines, and urbanized areas. PBHS are also known to cross Interstate Highway 8 and other heavily traveled routes. Telemetry data indicate that Interstate Highway 8 does not preclude movement of bighorn sheep[77] and the observation of bighorn sheep "[a]pproximately six miles east of the closest Peninsular bighorn sheep critical habitat"[78] is consistent with an expanding population of bighorn sheep in the CTCRA.[79] The photographs of the PBHS on the site demonstrate the animals were alerted to the photographer's presence and then moved away, but the DEIS provides no evidence to support the conclusion that the sheep were in a "highly stressed state which could put them at great risk."

O9-24

Additionally, the DEIS's statement that, "[b]iologists for the BLM and consultants for the applicant have speculated that the bighorn sheep sited [*sic*] at the project location could have been flushed by OHV activity and possibly became disoriented and wandered onto the project site"[80] is based on pure speculation and is contradicted by the evidence regarding known bighorn sheep behavior. According to Dr. Bleich, when bighorn sheep are harassed, the sheep retreat to steep and rugged areas that provide the greatest opportunity to detect and evade threats to their well being, not an area "less safe" than the steep, rocky terrain often described as "escape terrain" by bighorn sheep biologists.

The recent observation of PBHS on the project site, as noted in the DEIS, is encouraging in the context of increased utilization of such areas by bighorn sheep.[81] In fact, the "transient" use of the project site by PBHS, which was dismissed in the DEIS as insignificant, can be essential to the

recovery of the sheep in the region.[82] "Transient" movements by bighorn sheep among populations support metapopulation function, population viability and, ultimately, recovery of that endangered distinct population segment ("DPS").[83] Such movements facilitate gene flow and opportunities for colonization of vacant patches of habitat.[84] The potentially significant impacts from eliminating the opportunity for bighorn sheep to use the site on a transient basis must be addressed in the DEIS.

Additionally, because the project is so close to an unfenced part of the United States/Mexico border, it may impact movement corridors between Mexico and the United States. Connectivity among populations of large mammals along the international border is important to the persistence of bighorn sheep and other large mammals in both the United States and Mexico,[85] and habitat connectivity on both sides of the border is important to the conservation or restoration of bighorn sheep.[86] Resource agencies must promote habitat expansion and protect linkage corridors within the CTCRA because new habitat and movement corridors are critical to the recovery of the DPS.[87] O9-24

Failure of the DEIS to address the potential for the project site to function as a movement corridor, compounded by the DEIS's unsupported conclusion that use of the site by bighorn sheep was "transitory at best"[88] is baseless, and a cause for concern. Minimally, the DEIS must acknowledge that the site may be important in providing opportunities for PBHS to travel between areas of known occupied bighorn sheep habitat. In the absence of data to the contrary, the unsupported conclusion in the DEIS that any importance of the project area being used for movement between such areas is "highly unlikely"[89] is indefensible.

b. The DEIS failed to analyze the potential for the Project site to provide key forage opportunity to peninsular bighorn sheep

The PBHS photographed on the site in March 2009 were most likely there due to the presence of high quality forage.[90] The DEIS failed to analyze the significance of the potential nutritional benefits incurred by PBHS on the project site. The DEIS concludes that the project site provides marginal foraging habitat, but then fails to provide any basis whatsoever for its conclusion. This is inexplicable because the project site is in a low-lying area with a number of significant desert washes, a habitat known to provide rich forage for bighorn sheep, particularly during springtime.[91] The DEIS provided no citation to evidence that the forage consumed by the animals on the site was of poor quality, low in availability, or otherwise unimportant to bighorn sheep. Low-lying areas, and particularly washes, are used by bighorn sheep for foraging. Such use may occur only for short periods of time, but can play critically important roles in the life history of bighorn sheep, particularly during years when forage production is poor.[92] Indeed, patterns and amounts of precipitation, and resultant productivity of vegetation, affect the distribution of bighorn sheep and, ultimately, the probability of persistence of populations of that species.[93] O9-25

Of the vegetation found on the project site, many species are utilized as forage by bighorn sheep, including:

Aristida spp. (three-awn grass)
Bouteloua spp. (grama grass)
Ephedra nevadensis (Mormon tea)
Prosopis glandulosa (mesquite)
Krameria grayi (white rattany)
Cercidium floridum (palo verde)
Sphaeralcea ambigua (desert mallow)
Encelia farinosa (brittlebush)
Vigueria spp. (vigueria)
Opuntia acanthocarpa (buckhorn cholla)
Larrea tridenta (creosote bush)
Astragalus spp. (milkvetch)
Ditaxis spp. (silverbush)
Hymenoclea salsola (cheeseweed)
Bebbia juncea (sweetbush)

Phoradendron californicum (desert mistletoe).[94]

Indeed, bighorn sheep inhabiting the peninsular ranges are known to forage on more than 50 species of vegetation.[95] Thus, the analysis of the project's impacts to bighorn sheep habitat, particularly wash habitat, is inadequate. O9-25

c. The DEIS failed to consider the loss of more than 6,000 acres of habitat for PBHS

The DEIS simply dismisses the loss of 6,063 acres of bighorn sheep habitat within the CTCRA. All of the area that will be enclosed by the perimeter fence will preclude access to the project site by PBHS.[96] Thus, an area of more than 6,000 acres that currently is available to bighorn sheep, and appears to support substantial areas of desert wash habitat, will suddenly become unavailable for use by those animals either as foraging habitat or for movement between areas of more stereotypical bighorn sheep habitat. The significant impact of the loss of habitat must be analyzed in the context of what is known about bighorn sheep life histories, nutritional needs, and population structure. At a minimum, the DEIS needs to address the impact of this loss of habitat, and propose appropriate mitigation for that loss. O9-26

d. The DEIS failed to adequately analyze cumulative impacts of this Project and others on PBHS movement

A number of alternative energy projects are being, or have been, proposed in the vicinity of the project site. Due to the DEIS' dismissal of the potential importance of the project site to PBHS, the cumulative impacts of such projects (e.g., Ocotillo Express) in combination with the Project have not been fully assessed. Thus, a discussion of the cumulative impacts of Imperial Valley, in combination with other developments anticipated to occur in the vicinity of the southeastern peninsular ranges, is necessary to more fully assess the overall impact(s) on PBHS. O9-27

F. THE DEIS FAILS TO MITIGATE IMPACTS TO WILDLIFE MOVEMENT

The project as proposed in the DIES will result in a potentially significant unanalyzed impact to bighorn sheep and to other species that may move through the area regularly or occasionally.[134] Movement is critical to the long term viability of many species. The DEIS identifies the ephemeral washes in the Project site as wildlife movement corridors. However, it provides no discussion of the significance of eliminating these corridors, or the ability to maintain functional wildlife movement corridors after the fence is erected around the 6,063-acre Project site. O9-48

The DEIS fails to provide any mitigation for impacts that will result from erecting a fence around the Project site even though this is likely to have a significant impact on the metapopulation dynamics essential to the recovery of peninsular bighorn sheep.[135] In addition to this species, the Project would undoubtedly serve as a significant barrier to numerous other terrestrial wildlife species.[136] The DEIS lacks any analyses of the impacts of the Project on wildlife movement or mitigation to reduce these impacts to a level considered less than significant.

First, impacts to biological resources would be severe. This area is important habitat for the flat-tail horned lizard (FTHL), a BLM sensitive species. The FTHL will probably be listed as a threatened species soon, and this project would certainly push the FTHL over the brink into that status. BLM should not allow further destruction of this animal's habitat. Other sensitive species have been observed on this site as well, including burrowing owls, kit foxes, and endangered peninsular bighorn sheep. The dismissal of the presence of peninsular bighorn sheep as "a transient occurrence" does not excuse the fact that the construction of this project could take away migratory and foraging habitat for bighorn sheep in the future. P7-3

I'm writing to voice my opposition to the implementation of the Imperial Valley Solar project.

I feel that it will have grave ecological consequences for the area, and that SES has not been forthcoming about those consequences. They claim that habitat "between the solar panels" will be fine, but that is simply not true- fragmented habitat is lower quality habitat, and this habitat will be severely fragmented. This is currently fantastic habitat; while not pristine, it has huge expanses of desert pavement, big open washes, unique assemblages of the Sonoran Desert vegetative community, and is a fully functioning, biogically intact area. I personally have seen many different types of lizards, birds (including phaenopeplia), kit foxes, and jackrabbits all on the site. Additionally, on January 10 of this year, I saw bighorn sheep sign, on the western edge of the site- I saw cloven hoof foot prints in the sand that could have been nothing else. P9-1

1. First and foremost, while my wife and I were in transit to the SDGE Office meeting in El Centro observed a herd of Big Horn sheep grazing approximately 4-5 miles west of the western end of the proposed IV project site on May 24th at 5:10PM. My wife had a clearer picture of the siting as I was driving. After the meeting, we got a better picture of the location although it was too dark to get a precise location. We plan to visit this location again to obtain more details. I strongly believe that we should not treat the original siting on the proposed IV Project site as an anomaly and treat it as a presumed re direction of the Big Horns due to someone's thought that four wheel drive vehicles caused the incident. I plan to visit the IV site on many occasions to determine if there will be additional sitings of Big Horn Sheep. I will need about 6 months to complete this effort due to the increased temperatures currently. P10-1

Report of Sighting of Bighorn Sheep

When: May 24, 2010, 5:10 pm

Where: Approximately 4 ½ to 5 miles west southwest of Phase I of the Imperial Valley Solar Site, about 50 feet west northwest of Interstate 8 eastbound

Description: I was a passenger in a vehicle traveling about 60-65mph eastbound on I-8 when I observed what appeared to be five adult ewes (no circular horns as on rams) about 50 feet west northwest of I-8 eastbound, that were facing southwest towards the freeway grazing on some natural vegetation. The bighorn sheep were sighted at the northeast end of the stretch of I-8 where east and westbound are separated, just west of Ocotillo. P10-9

Response: These comments raised concerns about the Peninsular bighorn sheep (PBS), including concerns regarding the adequacy of the analysis of the IVS project effects on PBS, loss of migratory and forage habitat for PBS, claims of PBS observations on the IVS project site by members of the general public, the adequacy of the analysis of the use of drainages by PBS, PBS habitat fragmentation, and the adequacy of measures to offset project impacts to PBS. BLM maintains that the March 2009 sighting of PBS on the project site was unusual and transitory, and remains the only documented observation of PBS that far east of its Federally designated critical habitat. There are vast expanses of desert floor Sonoran desert creosote bush habitat adjacent to the existing PBS MAs. The IVS project site is over 6 miles (mi) from Federally designated PBS critical habitat and would not be considered a migratory corridor because the IVS project site is not surrounded by typical PBS habitat. There are PBS MAs north and south of the Coyote Mountains Area, but the IVS project site is east of there and it is highly unlikely that PBS would circumvent much more efficient routes to other areas occupied by or

suitable for occupation by PBS. The IVS project site is in proximity to developed agricultural lands to the east and is bounded to the north by Evan Hewes Highway and the railroad tracks, and to the south by I-8. The IVS project site could provide some temporary forage habitat to displaced PBS, but does not function as primary forage habitat or a migration corridor for PBS. With incorporation of the project avoidance, minimization, and mitigation measures, the IVS project may affect, but will not adversely affect, PBS.

D.4.7.8 Soils

Comments: O2-27, O7-4, O9-14, O9-15, O9-16, O9-18, O9-39, O10-4, and O10-5.

6. Cryptobiotic soil crusts

The proposed project is located in the Imperial County Air Pollution Control District area, and is already in non-attainment for PM-10 particulate matter[18]. The construction of the proposed project further increase emissions of these types of particles because of the disruption and elimination of potentially thousands of acres of cryptobiotic soil crusts. Cryptobiotic soil crusts are an essential ecological component in arid lands. They are the "glue" that holds surface soil particles together precluding erosion, provide "safe sites" for seed germination, trap and slowly release soil moisture, and provide CO_2 uptake through photosynthesis[19]. **O2-27**

The FEIS does not describe the on-site cryptobiotic soil crusts. The proposed project will disturb an unidentified portion of these soil crusts and cause them to lose their capacity to stabilize soils and trap soil moisture. The DEIS fails to provide a map of the soil crusts over the project site, and to present any avoidance or minimization measures. It is unclear how many acres of cryptobiotic soils will be affected by the project. The DEIS must identify the extent of the cryptobiotic soils on site and analyze the potential impacts to these diminutive, but essential desert ecosystem components as a result of this project.

Biological soil crusts need to be analyzed, as we have seen them on the project site. When disturbed they may take decades to recover, and provide important soil-binding and carbon-storing functions. **O7-4**

B. SOIL AND WATER CONDITIONS IN THE REGIONAL WATERSHED

The Project is within the Salton Sea Watershed and soil and water conditions on the Project site directly affect this watershed. Soil and water impacts were identified and analyzed by independent expert hydrologists Dr. Chris Bowles and Chris Campbell. Their testimony is attached to this comment and their opinions are incorporated in the soil and water sections of this comment letter.

As California's largest lake, the Salton Sea supports a multitude of recreational uses and a National Wildlife Refuge and is a critical stop on the Pacific Flyway for migrating birds, including several state- and federal-listed endangered and threatened species. Since the Sea has no outlets, salts concentrate in it and thus the sea is dependent on the continued inflow of freshwater to support it. Currently, the Sea is 25 percent saltier than the ocean, with salinity increasing at approximately 1 percent per year.

O9-14

The desert washes impacted by the Project provide critical ecological functions such as sediment transport and deposition, energy dissipation and groundwater recharge for the Salton Sea Transboundary Watershed. As explained by the EPA, these important services will be lost or degraded by the Project development.[38] The DEIR failed to adequately describe the soil and water conditions on the Project in order to provide a baseline to evaluate the Project's impacts.

a. Cryptobiotic Crusts

Notably, the DEIS failed to include any analysis of surface soils, including identification of the presence of cryptobiotic crusts on the Project site. It is highly likely that cryptobiotic crust is widespread across the site.[39] Cryptobiotic crust is a highly specialized community of cyanobacteria, mosses, and lichen and are prevalent in the project area.[40] The living organisms present in the desert soils create a surface crust of soil particles bound together by organic material. The thickness of these crusts can reach up to 10 cm. The crusts are important members of the desert ecosystem and

contribute to the well-being of other plants by stabilizing sand and dirt, promoting moisture retention, and fixing atmospheric nitrogen.[41] Because of their thin, fiberous nature, cryptobiotic soils are extremely fragile systems. Some species in the soil can recover within a few years of disturbance, but slow growing species may require more than a century to recover.[42]

Disruption of the crust will result in decreased organism diversity, soil nutrients, stability, and organic matter.[43] The crusts significantly aid infiltration of precipitation, and anthropogenic disturbance can dramatically increase surface runoff and increase the rate of soil loss by an order of magnitude.[44] Wind erosion is substantially more prevalent with disruption of the crust. Crusts that may remain intact downstream of the project site will inevitably be buried through windblown and water transported erosion.[45] O9-14

The BLM must establish the extent of cryptobiotic crust in the affected environment in order to analyze the effect that elimination of this crust will have on the hydrology of the Project site. This information and analysis must also be disclosed to the public, and the Project's impacts on the regional watershed must be analyzed as required by NEPA.

b. Desert Pavement

The DEIS failed to analyze or account for the physical properties of the desert pavement on the Project site. The extent and type of desert pavement and distinct geomorphic surfaces across the site should be mapped since they control infiltration, runoff, and transmission losses under existing conditions.[46] Resilience and self healing of the desert pavement to minor anthropogenic disturbance is possible over centuries if the mature Av horizon (clay-rich eolian epipedon) remains intact.[47] However, in the context of project construction and subsequent maintenance activities (i.e., servicing the Power Conversion Unit, monthly mirror washing, etc.), this is unlikely to occur. This is described in more detail in an attached comment letter submitted by Dr. Christopher Bowles and Christopher Campbell.[48] O9-15

The BLM must evaluate the extent and type of desert pavement on the Project site in order to analyze the effects of destruction of that pavement on the hydrology of the site from Project activities.

c. Soluable Salts

Deep grading, a potential aspect of the proposed project, will likely destroy the Av horizon and directly influence infiltration, runoff, transmission losses, and movement of soluble salts.[49] The DEIS provides no consideration of the content of the soil on the Project site and the extent of soluble salts that could be released into the environment from development activities. Soluble salts may travel laterally in the short term with soil erosion and surface runoff and leach down into the groundwater in the long term. This could also have an indirect impact on neighboring established vegetation since vegetation is influenced by proximity to leached soluble salts.[50] O9-16

e. Conclusion

The description of the affected environment in the DEIS must be substantially revised to describe the cryptobiotic crusts, desert pavement and soluble salts that are on the Project site because these resources play a significant role and must be considered in the analysis of the Project's impacts on the hydrology of the region. O9-18

e. Soil Binders

The DEIS indicates that the Project will employ widespread use of soil binders to avoid erosion and reduce dust. The potential impacts of the soil binders on the natural characteristics of the desert pavement (specifically soil infiltration, runoff generation, and soil erosion), in addition to specifics on binder deterioration and reapplication rates and downslope flow convergence leading to gully erosion, was not investigated nor stated. As such, the DEIS fails to adequately address the potentially significant impacts posed by the widespread use of soil binders. O9-39

Wind Erosion: Wind erosion creates dust and dust has been shown to be detrimental to desert plants and cryptobiotic crusts.

The Applicant has not provided information regarding the cryptobiotic crusts, if any, on the project site. Without such information, the affects of construction and operation of the project on wind erosion and its direct and indirect impacts on local and off site plant and cryptobiotic crusts is not known. O10-4

The Salton Sea Restoration Project, faced with the same challenge, evaluated dust emissions with on-site testing. According the Salton Sea Ecosystem Restoration Draft EIR:

"There is no agreed upon method to estimate PM10 emissions or wind blown dust, and there are many uncertainties and limitations associated with the available tools and methods. The MacDougall Method is a tool used to estimate particulate matter emissions that relies heavily on emission factors developed through us of wind tunnel and/or Portable In-Situ Wind Erosion Laboratory (PI-SWERL) study results. The MacDougall Method was developed to estimate dust emissions from land with little or no vegetation. Such lands may have the ability to form a crust, which can minimize dust emissions. Other available methods for dust emissions estimation are not able to take into account the ability of solids to form a crust. The method relies on actual field measurements of soil with and without crust to estimate PM10 emissions. Soils with vary crust strengths or stabilities may also be studied....Wind Tunnels usually operate in laboratories, but a portable version is available and was used...for measurements at the Salton Sea."

The MacDougall method is an In-Situ method, normally used to quantify PM2.5 and PM10 emissions, common air pollutants. These pollutants affect human health but they are just one result of soil wind erosion and are know to harm plant communities. O10-4

Dust grains of less than PM10 predominate on plant surfaces, and such deposition frequently results in dust clothing shrubs boarding dirt roads or downwind of a barren source areas, such as a dry lake (Sharifi, Gibson, Rundel: 1997) Medium and large soil grains typically move relatively short distances by modified saltation or short-term suspension, whereas smaller particulates (<20um) may enter long-term suspension and be transported greater distances (Sharifi, Gibson, Rundel: 1997) Analysis of wind blown dust effects on desert plants have shown reduced maximum rates of photosynthesis to between 21 and 58 percent compared to control plants. Dusted leaf temperatures and photosynthetic stems were 2-3 degrees Celsius higher due to greater absorption of infra-red radiation; heavily dusted shrubs had smaller leaf areas and greater leaf –specific masses suggesting lowered primary production in desert plants exposed to dust (Sharifi, Gibson, Rundel: 1997)

Applicant has not provided wind erosion information based on the MacDougall Method or any other In-Situ method such as Big Springs Number Eight (BSNE). Therefore, it's reasonable to conclude that any analysis of air pollution or wind erosion conducted to date is not adequate. Clearly dust from wind erosion affects plants and cryptobiotic crusts. Without adequate wind erosion information, impacts from wind erosion to onsite and offsite plant communities cannot be determined.

We believe that additional analysis, using In-Situ methods, should be conducted so that impacts to onsite and offsite plant communities are known. O10-5

Cumulative Effects and the Salton Sea: The project site lies entirely within the Salton Sea Watershed. The Salton Sea Restoration Act of 2003 requires the Secretary of undertake an Ecosystem Restoration Study to determine a preferred alternative for the

restoration of the Salton Sea ecosystem and the permanent protection of wildlife dependent on that ecosystem. The preferred alternative must provide the maximum feasible attainment of the following objectives:

•Restoration of long term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea;
• Elimination of air quality impacts from the restoration project; and
• Protection of water quality resources.

(Salton Sea Ecosystem Restoration Program: Preferred Alternative Report and Funding Plan, California Department of California Department of Water Resources, Department of Fish and Game)
Plants are an integral part of the Salton Sea aquatic and shoreline habitat and its tributaries. The estimated cost of the restoration plan is $8.9 billion.
The sediment transport study recommends several mitigation measures, one of them is:

"It is recommended all sediment basins be deleted from the proposed plan."

The US Army Corps of Engineers Preliminary Jurisdictional Determination Form (01/05/2010) states:

O10-5

"The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time."

The Applicant's AFC Section 5.5 – Surface Water Quality states:
"Project surface water that does not infiltrate or evaporate ultimately drains approximately 30 miles north to the Salton Sea."

In addition, the "Review of Federal and State Surface Waters for the Stirling Energy Systems Solar 2 Project", February 23, 2009 states:
"URS conducted a site visit with the Corps on January 8, 2009, and the Corps noted indication of flooding on lands and buildings at Dixieland, which is located east of the Westside Main Canal/Dixie Drain systems, and at the intersection with Evan Hewes Highway. Laurie Monarres from the Corps indicated that she had talked to some field staff from the IID, who stated that flooding occurred in this area."
We argue that the project site in fact contains jurisdictional waters of the United States and that construction and operational activities from this project and other planned

renewable energy projects within the Salton Sea watershed would increase erosion, thus increasing sediment transported to the Salton Sea. The Salton Sea Restoration Plan includes two 200 acre sedimentation basins. However, the $8.9 billion project is not designed to accommodate the cumulative additional sediment from this project or others like it in the Salton Sea watershed.
The Salton Sea Executive Summary states:

"Impacts to special status species would result primarily from construction of sedimentation and distribution basin at river deltas…particularly at the southern shore (of the Salton Sea)." O10-5

Significant impacts, including cumulative impacts, on the Salton Sea habitat, including plants, from increased sediment have not been adequately analyzed. We believe that additional analysis should be conducted so that impacts on plant communities of the Salton Sea and its watershed are known.

Response: There are very limited areas on the project site that currently support biotic crusts. Much of the site was used for gravel mining in the past and the site is currently used for some recreation uses which may have disturbed or continue to disturb biotic crusts on the site. There are also limited areas on the site that support physical crusts. Therefore, as a result of the limited amounts of these types of soils on the site, the Build Alternatives are not expected to result in substantial adverse impacts to biotic or physical crusts.

D.4.7.9 Rare Plants Mitigation

Comments: F2-20, F2-30, O9-21, O9-44, and O9-45.

Finally, the DEIS provides no assessment of the cumulative impacts on waters of the United States that are likely to result from the proposed Project and other proposed energy-related projects in the area. In short, the Project, as proposed, does not comply with EPA's Guidelines, nor with the Corps' and EPA's regulations governing mitigation under Section 404 of the CWA.[2] F2-20

Recommendations:

- Discuss the steps that will be taken to avoid and minimize impacts to waters of the United States. To the extent any aquatic features that could be affected by the Project are determined not to constitute waters of the United States, EPA recommends that the FEIS characterize the functions of such features and discuss potential mitigation. F2-20
- Include in the FEIS a mitigation plan for unavoidable impacts to waters of the United States, as required by Corps and EPA regulations.

Sensitive Plant Species and Vegetation

The DEIS indicates that CEC staff and BLM are concerned that special status plant species may have been overlooked due to inconsistent site surveys and varying levels of botanical expertise (at pg. ES-22, C.2-3 and C.2-20). The DEIS concludes that survey results were not considered adequate to assess presence or absence of a species within the project area.

It is EPA's understanding that the proposed Project will clear vegetation along 130 foot wide parallel rows of SunCatchers. Alternating 72 foot wide rows would be left undisturbed (at pg. C.7-34). The FEIS should further discuss how these cleared rows will increase the potential for sediment transfer in the cleared areas as mentioned on page C. 7-34. The DEIS also indicates that while grading would not occur on the entire site, grading would directly affect wildlife and other special status species by removal of shrubs and herbaceous vegetation, resulting in loss and fragmentation of cover, breeding, and foraging habitat. Severe damage involving vegetation removal and soil disturbance can take from 50 to 300 years for partial recovery; complete ecosystem recovery may require over 3,000 years (at pg. C.2-28). Further, during construction, wildlife could be crushed or entombed in dens or burrows, and could collide with vehicles (at pg. C.2-29). In light of these impacts, EPA has concerns as the vegetation removal and placement of facilities in the washes would have indirect effects that have not been fully assessed (at pg. C.2-2).

Recommendations: F2-30

- Incorporate BIO-19 into the FEIS and ROD which requires botanical surveys to be conducted and avoidance of rare plants during project construction and operation.
- Further discuss and quantify the expected direct and indirect effects of vegetation removal and placement of facilities under each alternative.
- Discuss and propose mitigation measures for the increased sediment transfer likely to result from the cleared rows between SunCatchers.
- Discuss the impacts associated with pile driving the SunCatcher pedestals into the ground and include mitigation measures to ensure maximum avoidance of sensitive species on site during construction.
- Discuss the impacts associated with connecting the SunCatchers by gas and electrical transmission lines buried in two foot wide trenches. Include mitigation measures to ensure maximum avoidance of sensitive species on site during construction.
- Discuss alternatives to any proposed vegetation mowing that would result from a maintenance regime. Excess mowing may suppress vegetation through carbohydrate starvation, reducing its water use, and discouraging reproduction by seed. Mowing is likely to promote proliferation of non-native invasive weeds as well.
- Mitigation measures that result from consultation with the US Fish and Wildlife Service to protect sensitive biological resources should be included in the FEIS and, ultimately, the ROD.

E. RARE PLANTS ON PROJECT SITE

The DEIS acknowledges that the types and quantities of rare plants had not been determined at the time that the DEIS was published due to the inadequacy of the Applicant's botanical survey efforts. The DEIS proposed that surveys be conducted for special status plants in the spring and fall of 2010. As a result, DEIS correctly concludes the applicant's botanical surveys have not provided an adequate basis for analyzing potential Project impacts.

O9-21

Although the SA/DEIS attempts to analyze the impacts and formulate mitigation measures before adequate survey data are obtained, the analysis and mitigation may change after the additional survey efforts are better able to identify impacts to rare plants. The baseline data that makes up the affected environment should be shared with the public and the public should have the opportunity to comment. Without this information, the affected environment is inadequately defined in the DEIS.

B. THE DEIS FAILS TO CONSIDER EFFECTIVE MITIGATION FOR IMPACTS TO LISTED RARE PLANTS

The strategy for mitigating impacts to any State or federally listed rare plant species found on the Project site focuses on establishing a buffer zone around the population(s). The size of the buffer would depend on the proposed use of the immediately adjacent lands, and it would include consideration of the plant's ecological requirements (e.g., sunlight; moisture; shade tolerance; edaphic, physical, and chemical characteristics) that are identified by the Designated Biologist (there is no requirement for the Designated Biologist to examine the plant's ecological requirements).

O9-44

Although the project technology is exactly the same as the Calico Solar Project, the BLM concluded a 250-foot buffer would be needed for on-site plant protection on Calico, whereas BLM concluded that a buffer of 50-feet [and perhaps smaller] would be adequate for the Imperial Valley Project.[123] According to biologist Scott Cashen, this discrepancy highlights the fact that the DEIS's approach to establishing adequate buffers is largely guesswork.[124] Inherently, this may be the case because: (1) the ecological requirements of most plant species are poorly understood; and (2) there have not been any studies on the effects of SunCatchers installation (including changes to hydrology) on the surrounding microclimate.[125] Thus, there is no scientific basis to conclude establishing the prescribed 50-foot buffer will mitigate Project impacts to a less than significant level.

C. THE DEIS FAILS TO DESCRIBE ENFORCEABLE MITIGATION FOR IMPACTS TO NON-LISTED RARE PLANTS

O9-45

The strategy for mitigating impacts to any non-listed special-status species (e.g., CNPS listed species) found on the site is comprised of two parts. First, the Condition of Certification directs the applicant to avoid impacts "where feasible." However, the DEIS does not define what is considered "feasible." Consequently, the condition is at the sole discretion of the applicant, and it is unenforceable.

Second, for impacts that are not "feasible" and that would result in loss of more than 10% of the known individuals within an existing population, the DEIS requires the project owner to preserve existing off-site occupied habitat (that is not already part of public lands) in perpetuity at a 2:1 mitigation ratio. Thus, if avoidance is not feasible, the ability to mitigate impacts is entirely dependent on the assumptions that the applicant will first be able to identify sufficient quantities of occupied habitat on private lands, and then be able to acquire those lands from willing sellers. There is a high likelihood that due to the rarity of the plants, the applicant will be unable to locate any suitable private parcels that could serve as compensation habitat for proposed project impacts to special-status plant species.

O9-45

Therefore, the DEIS fails to describe enforceable mitigation for impacts to non-listed rare plants. The DEIS must be revised to include an enforceable mitigation strategy.

Response: These comments raised concerns about the adequacy of the proposed mitigation for rare plants and non-listed rare plants. Specifically, the commenter indicated that a 50-foot buffer was inadequate to protect rare plants and that the project would fail to protect non-listed rare plants. A total of 5 special-status plant species were found during spring 2010 botanical surveys. One plant, Wiggins' croton (*Croton wigginsii*) is listed as BLM sensitive and CNPS 2.2. The remaining 4 special-status species plants which are listed by the CNPS, but have no other Federal or State status, are Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*) (CNPS 2.2), brown turbans (*Malperia tenuis*) (CNPS 2.3), Utah milk vineweed (*Funastrum utahense*), and Thurber's pilostyles (*Pilostyles thurberi*) (CNPS 4.3). To address special-status species that may occur on the project site after late summer/early fall monsoonal rainstorms typical in the project area, botanical surveys are scheduled for fall 2010. There are 2 special-status species with the potential to occur on the project site that are targets of the late summer/early fall 2010 botanical surveys: Abram's spurge (*Chamaesyce abramsiana*) (CNPS 2.2) and curly herissantia

(*Herrisantia crispa*) (CNPS 2.3). Neither of these has Federal or State status and neither is listed as BLM sensitive. If project impacts to special-status plants are unavoidable, the applicant will be responsible for 2:1 mitigation as indicated in the project mitigation measures.

D.4.7.10 Salton Sea

Comments: F2-22, F2-24, O1-25, O9-3, O9-40, and O10-5.

EPA is also concerned about the indirect impacts to the Salton Sea. As mentioned above, the ephemeral waters traversing the Project site flow to the Westside Main Canal and Coyote Wash, tributaries to the New River, which drains to the Salton Sea. The DEIS fails to assess the indirect impacts to the Salton Sea from the proposed Project. Indirect effects could include, but are not limited to: 1) changes in hydrology and sediment transport into the New River and Salton Sea; 2) increases in volume and velocity of polluted stormwater from impervious surfaces on the Project site; 3) decrease in water quality from the impairment of ecosystem services such as water filtration, groundwater recharge, and attenuation of floods; 4) disruption of hydrological and ecological connectivity from upstream of the Project to the Salton Sea; and 5) decreases in biodiversity and ecosystem stability. Ensuring maximum avoidance of Waters and, thereby, reducing potential discharges into waters should reduce the indirect effects to the New River and Salton Sea. F2-22

Recommendation:

- Maximize avoidance of Waters to reduce potential discharges into waters, as described above, to reduce indirect effects to New River and Salton Sea, which are waters of the United States.

Clean Water Act Section 303(d)

Section 303(d) of the CWA requires each State to develop, every two years, a list of impaired waters that do not meet water quality standards; to establish priority rankings of such waters; and to develop Total Maximum Daily Loads (TMDLs) for the pollutants causing impairment.

The State of California has listed the New River and the Salton Sea under CWA 303(d) as impaired water bodies. The New River is impaired by several pollutants/stressors such as pesticides and nutrients. The Salton Sea is impaired by nutrients, salinity and selenium (at pg. C.7-11). Wastewater, agricultural return flows, and industrial point sources are noted as sources. Increased degradation of water quality, modification of flow, and sedimentation will worsen existing impairments in these waterbodies and may adversely affect beneficial uses throughout the watershed. F2-24

Recommendation:

- Adopt measures, to be included in the Record of Decision (ROD), to avoid and minimize discharges into onsite waters, alteration of flow, and sedimentation to prevent further impairment of water quality downstream.

C.7 – Hydrology, Water Use, and Water Quality (Soil and Water Resources)
This section simply states that the project conforms to all applicable LORS, with no discussion of what LORS, if any, apply to soil loss from grading and erosion, or soil O1-25

contamination by leakage of evaporation ponds and other spillage absorbed by the soils. It is appropriately admitted (p. C.7-1, 2) that the effects of changed morphology and the nature of sediment carried offsite by runoff are not known. Thus, it cannot be accurately stated that the project conforms to all applicable LORS, and the effects beyond closure cannot be predicted. O1-25

For example, the Project is in the Salton Sea watershed and, as designed, will result in direct, indirect and cumulative effects on this watershed.[5] For the most part, these impacts were not even disclosed and, O9-3

f. Salton Sea National Wildlife Refuge

The DEIS does not address the Project's potentially significant impacts to the Salton Sea National Wildlife Refuge. Moreover, the Project and its associated pipelines may not be compatible with the purposes of the National Wildlife Refuge System Administration Act of 1966 ("Refuge Act"), 16 U.S.C. §§ 668dd-668ee.

The Refuge Act was enacted for the conservation of fish and wildlife, including species that are threatened with extinction, all lands, waters, and interests therein administered by the Secretary as wildlife refuges, wildlife ranges, game ranges, wildlife management areas, or waterfowl production areas. (16 U.S.C. § 668dd(a)(1).) The mission of the Refuge System is to "administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats…" (*Id.* § 668dd(a)(2).) The system must be administered not only to "provide for the conservation of fish," but also to "ensure that the biological integrity, diversity, and environmental health of the System are maintained." (*Id.* § 668dd(a)(4).) O9-40

The Refuge Act allows the U.S. Fish and Wildlife Service to permit only those uses within the Refuge that "are compatible with the major purposes" for which the area was established. (16 U.S.C. § 668dd(d)(1)(A).) The definition of "compatible use" is a wildlife-dependent recreational use or any other use of a refuge that "will not materially interfere with or detract from the… purposes of the refuge." (16 U.S.C. § 668ee(1).) In order to be "compatible," a use must not materially interfere with stated Refuge purposes.

The Salton Sea National Wildlife Refuge was established in 1930 for the purpose of providing wintering and spring migration habitat for birds. The Project is incompatible with the purposes of the Refuge. The purposes of the Refuge include:

1) A refuge and breeding ground for birds and wild animals. (Executive Order 5498, dated November 25, 1930)
2) Use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. § 715d, Migratory Bird Conservation Act)
3) Management and control of migratory waterfowl and other wildlife. (16 U.S. C. § 695, Lea Act)

The Project may irrevocably violate the purpose of the Refuge as breeding ground for birds and other wildlife by reducing the amount of available water for the refuge and releasing salts and other sediment into the already overburdened watershed.[116] The BLM must evaluate this potentially significant impact.

O9-40

Applicant has not provided wind erosion information based on the MacDougall Method or any other In-Situ method such as Big Springs Number Eight (BSNE). Therefore, it's reasonable to conclude that any analysis of air pollution or wind erosion conducted to date is not adequate. Clearly dust from wind erosion affects plants and cryptobiotic crusts. Without adequate wind erosion information, impacts from wind erosion to onsite and offsite plant communities cannot be determined.

We believe that additional analysis, using In-Situ methods, should be conducted so that impacts to onsite and offsite plant communities are known.

O10-5

Cumulative Effects and the Salton Sea: The project site lies entirely within the Salton Sea Watershed. The Salton Sea Restoration Act of 2003 requires the Secretary of undertake an Ecosystem Restoration Study to determine a preferred alternative for the

restoration of the Salton Sea ecosystem and the permanent protection of wildlife dependent on that ecosystem. The preferred alternative must provide the maximum feasible attainment of the following objectives:

•Restoration of long term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea;
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(Salton Sea Ecosystem Restoration Program: Preferred Alternative Report and Funding Plan, California Department of California Department of Water Resources, Department of Fish and Game)
Plants are an integral part of the Salton Sea aquatic and shoreline habitat and its tributaries. The estimated cost of the restoration plan is $8.9 billion.
The sediment transport study recommends several mitigation measures, one of them is:

"It is recommended all sediment basins be deleted from the proposed plan."

The US Army Corps of Engineers Preliminary Jurisdictional Determination Form (01/05/2010) states:

O10-5

"The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time."

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We argue that the project site in fact contains jurisdictional waters of the United States and that construction and operational activities from this project and other planned

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The Salton Sea Executive Summary states:

"Impacts to special status species would result primarily from construction of sedimentation and distribution basin at river deltas…particularly at the southern shore (of the Salton Sea)." O10-5

Significant impacts, including cumulative impacts, on the Salton Sea habitat, including plants, from increased sediment have not been adequately analyzed. We believe that additional analysis should be conducted so that impacts on plant communities of the Salton Sea and its watershed are known.

Response: These comments stated that the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) did not analyze the potential effects the project would have on the Salton Sea National Wildlife Refuge. The specific concerns noted were the reduction in available water for the Refuge and increased salt and sediment into that watershed. The reduction of water available for the Refuge would be related to the operations of the Seeley Wastewater Treatment Plant (SWWTP) and how much water is released from the SWWTP into the New River. The IVS project and the other Build Alternatives propose to treated water from the SWWTP during operations and construction when that water becomes available. The Seeley County Water District is currently preparing an Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA) to assess the affects of proposed upgrades to the SWWTP to increase the amount of treated water produced at that facility. Those upgrades are outside the jurisdiction of the BLM and, therefore, are not considered in the FEIS for the IVS project. In regard to increased salt and sediment loads in the watershed, the IVS project has been designed to maintain the existing pre-project sediment transport conditions and will not result in any changes in downstream hydrology or sediment loads.

D.4.8 Climate Change

These comments raised questions regarding climate change.

Comments: F2-33, O2-35, O8-14, and O9-38.

Greenhouse Gases

EPA commends CEC and BLM for including a substantive discussion on greenhouse gases as well as estimates of carbon dioxide emissions from the construction of the proposed Project. Scientific evidence supports the concern that continued increases in greenhouse gas emissions resulting from human activities will contribute to climate change. Effects on weather patterns, sea level, ocean acidification, chemical reaction rates, and precipitation rates can be expected. These changes may affect the proposed Project as well as the scope and intensity of impacts resulting from the proposed Project. The DEIS does not include measures to avoid, minimize, nor mitigate the effects of climate change on the proposed Project.

Recommendations:

- Consider how climate change could affect the proposed Project, specifically within sensitive areas, and assess how the impacts of the proposed Project could be exacerbated by climate change. F2-33
- Identify specific mitigation measures needed to 1) protect the Project from the effects of climate change, 2) reduce the Project's anticipated adverse air quality effects, and/or 3) promote pollution prevention or environmental stewardship.
- Identify strategies to effectively monitor for climate change impacts in the surrounding area, such as monitoring groundwater change or special status species.
- Quantify and disclose the anticipated climate change *benefits* of solar energy. We suggest quantifying the greenhouse gas emissions that would be produced by other types of electric generating facilities (solar, geothermal, natural gas, coal-burning, and nuclear) generating comparable amounts of electricity, and compiling and comparing these values.

F. The DEIS Fails to Adequately Identify, Analyze and Off-set Impacts to Air Quality and GHG Emissions.

Federal courts have squarely held that NEPA requires federal agencies to analyze climate change impacts. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 508 F.3d 508 (9th Cir. 2007). As most relevant here, NEPA requires consideration of greenhouse gas emissions ("GHG emissions") associated with all projects and, in order to fulfill this requirement the agencies should look at all aspects of the project which may create greenhouse gas emissions including operations, construction, and life-cycle emissions O2-35

from materials. Where a proposed project will have significant GHG emissions, the agency should identify alternatives and/or mitigation measures that will lessen such effects.

As part of the NEPA analysis federal agencies must assess and, wherever possible, quantify or estimate GHG emissions by type and source by analyzing the direct operational impacts of proposed actions. Assessment of direct emissions of GHG from on-site combustion sources is relatively straightforward. For many projects, as with the proposed project, energy consumption will be the major source of GHGs. The indirect effects of a project may be more far-reaching and will require careful analysis. Within this category, for example, the BLM should evaluate, GHG and GHG-precursor emissions associated with construction, electricity use, fossil fuel use, water consumption, waste disposal, transportation, the manufacture of building materials (lifecycle analysis), and land conversion. Moreover, because many project may undermine or destroy the value of carbon sinks, including desert soils, projects may have additional indirect effects from reduction in carbon sequestration, therefore both the direct and quantifiable GHG emissions as well as the GHG effects of destruction of carbon sinks should be analyzed.

The discussion of greenhouse gas emissions ("GHG") in the DEIS notes that the solar generation itself will produce no GHGs "but there is direct and indirect gasoline and diesel fuel use in the maintenance vehicles, offsite delivery vehicles, staff and employee vehicles, and the two diesel-fueled emergency engines. Another GHG emission source for this proposed project is SF6 from electrical equipment leakage." DEIS, Greenhouse Gas Appendix, A-1-7. There is no discussion of reducing these sources by using alternative fuels or highly efficient vehicles and equipment. **O2-35**

The GHG emissions from the construction phase of the project are stated to be over 31,000 metric tons CO2 equivalent (Greenhouse gas table 2, DEIS A-1-6). Again, there is no discussion of reducing these emissions by using more efficient equipment or vehicles.

Moreover, leakage of SF6 is of particular concern as it is many times more potent greenhouse gas than CO2—indeed, its potential as a GHG has been estimated at 23,900 times that of CO2 (for a 100 year time horizon) and it can persist in the atmosphere far longer than CO2 as well—up to 3,200 years.[28] The DEIS fails to state the actual amount of SF6 that is estimated to leak from equipment and provides only that 271.83 MTCO2E is expected in emissions each year. No information is provided on the calculation. Moreover, the DEIS does not analyze any alternatives to avoid or minimize the long-term emissions of this powerful GHG from operations and no mitigation measures are provided.

The DEIS also fails to adequately address other air quality issues most importantly PM10 both during construction and operation which is of particular concern in this area which is already in serious nonattainment. It is clear that on site grading and roads between the suncatcher components will increase bare soils and increase PM10 may be introduced into the air

by wind and that the use of the roads between the suncatchers will lead to additional PM 10 emissions from the site.

The DEIS also fails to analyze the impacts to air quality and GHG emissions should a fire occur due to the extensive on-site hydrogen system. Of particular concern is that plans to minimize air quality impacts from construction, operations, and decommissioning are all deferred to later development with no clear standards.

BLM fails to identify any significant GHG emissions and therefore does not provide for avoidance, minimization, or mitigation. BLM has also failed to include the loss of carbon sequestration from soils in its calculations or to provide a lifecycle analysis of GHG emissions that include manufacturing and disposal. Moreover, it is undisputed that in the near-term GHG emissions will increase emissions during construction, and in the manufacturing and transportation of the components. BLM fails to consider any alternatives to the project that would minimize such emissions or to require that these near-term emissions be off set in any way. O2-35

Although the proposed project may reduce GHG's overall it is admittedly experimental and will cause GHG emissions that are not accounted for or off-set, BLM completely fails to explore this aspect of the impacts of the project in the DEIS in violation of NEPA.

Renewable Energy requires additional gas fired generation

What are the GHG impacts?

We have known this fact for a long time. Now, however, SDG&E admits it pretty clearly in a San Diego Union Tribune article (5-23-10): **Renewables need helping hand from gas:** www.signonsandiego.com/.../renewables-need-helping-hand-from-gas/

"When a cloud goes over a solar farm or the wind dies down, a gas plant has to kick it up a notch to make up the difference. 'People need to understand the intermittency challenge we have' said SDG&E's Niggli. 'The wind comes and goes, and on the hottest days of the year, there's no wind, and you still need to provide power to your customers....These resources are not under our control, but under the control of nature.' Gas plants take up the slack." O8-14

What is the backup generation for IV Solar /Solar Two? What are the GHG impacts associated with that backup power generations which is a part of the whole of the project/action?

d. Climate Change

The DEIS failed to consider the role that climate change may have in shaping the significance of the Project impacts on the hydrologic conditions on the Project site. Climate change can have an influential role in shaping the project's impacts on the environment in terms of hydrologic response and soil erosion.[113] Provided that intense summer storms are responsible for a majority of the runoff that occurs at the project site, the Nature Conservancy would suggest that summer rainfall in southeastern California may increase by as much as 50% by 2080 in the summer, which could be accompanied by significant increases in rainfall intensity and erosivity (Angel et al., 2005).[114] O9-38

These significant increases in rainfall quantity, intensity, and erosivity would have a profound impact on the landscape, especially on the morphology of the washes where solar dishes are proposed.[115] The impacts to the landscape would, in turn, significantly impact the structural stability and flood preparedness of the solar dishes placed in the washes, and coupled with increased sedimentation from the solar arrays, subsequent and significant water quality impacts to downstream impaired water bodies would ensue.

Project design and best management practices must be analyzed in the DEIS to deal with these future changes in the climate. O9-38

Response: The effects of climate change on the IVS project, the Agency Preferred Alternative, and the other Build Alternatives are difficult to predict. One primary affect of climate change is sea level rise, which, given the location of the IVS project site well away from the coast and the Pacific Ocean, it is unlikely that sea level rises would pose much of a threat to any solar project on the IVS project site. Another principal affect of climate change is the potentially greater incidence of wild fires. Given the desert location of the project and the limited vegetation on the site, it is unlikely that increased wildfires as a result of climate change will pose a threat substantially different than the existing risks associated with wildfires as discussed in Sections 3.6 and 4.6, Fire and Fuels Management, in the FEIS. None of the other recognized potential effects of climate change are expected to pose much of a threat to the IVS project site or a solar project on that site.

When the amount of sunlight arriving at the IVS facility is reduced, the amount of electricity produced will also be reduced. This reduction in electrical production will result in a transfer of electrical power from somewhere else in the grid. However, given the gradual replacement of coal, natural gas, and other carbon-based fuel fired power plants with clean renewable energy sources, such as hydro, wind, and solar powered plants, the likelihood that this power transfer will result in a "…gas plant having to kick it up a notch…" is diminishing. The backup to the IVS

power plant is the entire existing power grid as well as future clean energy projects as they come on line.

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D.4.9 Cultural Resources

The comments regarding cultural resources addressed several topics as discussed below

D.4.9.1 Archaeological Studies

Comments: NA1-7, O6-7, O9-6, O9-33, and O9-49.

C. The Cultural Resource Evaluation Has Occurred Without Required Government-to-Government Consultation with the Quechan Tribe.

BLM has not engaged in government-to-government consultation with the Tribe regarding the impacts of this project on cultural resources. Nor has the Tribe received any of the reports that identify cultural resources within the Project Area. Thus, at this time, the Tribe's (and other stakeholders) ability to comment on the impacts to cultural resources is impaired by lack of information.

The NHPA requires ongoing consultation with interested Indian tribes throughout the identification and evaluation of cultural resources and the resolution of adverse effects. 36 C.F.R. § 800.3(f)(2); 800.4(a)(4); 800.5(c)(2)(iii); 800.6(a); 800.6(b)(2), etc. Here, pursuant to the Draft Programmatic Agreement, all evaluation and resolution of effects will occur after the decision has been made. The Draft Programmatic Agreement fails to provide for the full level of tribal consultation required by 36 C.F.R. Part 800.

There are several federal laws that mandate ongoing consultation with Indian tribes where federally approved actions will affect tribal interests. *See* Executive Order 12875, Tribal Governance (Oct. 26, 1993) (the federal government must consult with Indian tribal governments on matters that significantly or uniquely affect tribal governments); Executive Order 12898, Environmental Justice (Feb. 11, 1994) (federal government must consult with tribal leaders on steps to ensure environmental justice requirements); Executive Order No. 13007, Sacred Sites (May 24, 1996) (federal government is obligated to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, avoid adversely impacting the physical integrity of sites, and facilitate the identification of sacred sites by tribes); Executive Order No. 13084, Consultation and Coordination with Indian Tribal Governments (May 14, 1998) (places burden on federal government to obtain timely and meaningful input from tribes on matters that significantly or uniquely affect tribal communities); Executive Order 13175, Consultation with Indian Tribal Governments (Nov. 6, 2000) (the federal government shall seek to establish regular and meaningful consultation with tribes in the development of federal policies affecting tribes). NA1-7

The Tribe has identified certain statements in the DEIS that may be inaccurate and that would benefit from consultation with the Tribe. For example, pages C.2-110 and 111 contain a discussion of the Yuha Basin Discontiguous District. According to the Tribe, it is likely that the sites within the project area are directly related to those within the Yuha area. However, due to the lack of consultation or the provision of cultural reports or maps, it is not possible to provide additional meaningful comments on this topic at this time.

To date, BLM has failed to fulfill its obligation to consult on a government-to-government basis with the Quechan Tribe. BLM must fulfill this obligation prior to issuance of the ROD. Also, the Draft PA should be amended to require ongoing consultation with the Tribe, and tribal monitoring, if the development process goes forward.

Consultation under state law may also be required pursuant to California Government Code § 65562.5, because the project land is currently designated as open space under Imperial County zoning. Section 65562.5 requires local governments to consult with tribes "for the purpose of developing treatment with appropriate dignity of the place, feature, or object in any corresponding management plan." This section suggests that consultation may be required when development is proposed to occur in open space lands containing cultural resources of significance to tribes. NA1-7

The Project would have significant cultural impacts and could "wholly or partially destroy all archeological sites on the surface of the project area." SA/DEIS, p. C.3-102. The discussion of impacts to cultural resources is incomplete and inadequate. Assessment of the short and long term adverse impacts to cultural resources is "[t]o [b]e [p]rovided." SA/DEIS, p. ES-15. The Project would have significant impacts on "a presently unknown subset of approximately 330 known prehistoric and historical surface archaeological resources and may have significant impacts . . . on an unknown number of buried archaeological deposits, many of which may be determined historically significant. . . ." SA/DEIS, p. C.3-1. The project would also have indirect cultural impacts, because the Flat-tailed horned lizard ("FTHL") has cultural significance to the Tribe – it is "part of the Tribe's creation story" – but, as discussed below, FTHL would be adversely affected by the Project. Tribe Comments, p. 9. Indirect cultural impacts would also result from the Project's aesthetic impacts on culturally significant areas. *Id.* at 7.

As discussed more fully in Exhibit A to the Tribe Comments, BLM has failed to satisfy its obligations under section 106 of the National Historic Preservation Act ("NHPA"), 16 U.S.C. section 470(f). Tribe Comments, Exhibit A, at 1. This section of the NHPA requires agencies to take into account the impact of effects of their actions on historical resources "*prior to the issuance of any license*." 16 U.S.C. § 470(f). "Instead of completing this required process, BLM is opting to use a programmatic agreement to defer evaluation, mitigation, and treatment until after approval. . . ." Tribe Comments, Exhibit A, at 2. O6-7

Here again the assessment of impacts and the formulation of mitigation measures is impermissibly deferred. CEC plans to "fulfill the bulk of its obligation[s] under CEQA" by conditioning approval on the applicant's compliance with a programmatic agreement whose contents are *not* disclosed. SA/DEIS, p. C.3-12. "[F]ormal evaluations of some ethnographic resources and all archeological resources . . . will occur subsequent to [CEC/BLM] decisions on the proposed action." SA/DEIS, p. C.2-106. Although "the ideal intensity of the geographic coverage in a project area of analysis would be 100%," here the "geographic coverage . . . presently includes a . . . sample of 25% of the archaeological sites. . . ." SA/DEIS, pp. C.3-57 through 58. Moreover, the applicant's studies have been repeatedly rejected, giving little confidence in the 25% sample that was used. DEIS/SA, p. C.3-58. Before committing to the permanent destruction of irreplaceable cultural resources for the sake of a temporary project, CEC and BLM must, at the very least, determine the nature and extent of the cultural heritage they are obliterating.

Finally, the Project will adversely affect hundreds of cultural resources including ancient cremation zones, trails and village sites, and will directly block one of the most undisturbed sections of the Juan Bautista de Anza O9-6

National Historic Trail, the first overland route from New Spain to San Francisco. The DEIS failed to provide ANY mitigation for impacts to cultural resources and instead explained that a future consultation process would work out the details of a mitigation proposal. O9-6

biological resources on the Project site that are sacred to local tribes and the impacts of the Project on the viewshed of sacred areas on or near the Coyote Mountains.[101] The DEIS failed to analyze impacts to these cultural resources or to consult with Tribes early enough to ensure that these impacts could be considered in the DEIS.[102]

Under Section 106 of the National Historic Preservation Act, the BLM has responsibility to consult with tribes and other parties to ensure that these impacts are identified as early as possible. Consultation must provide Indian tribes a reasonable opportunity to identify concerns about historic properties, advise on the identification of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of such effects.[103] CURE has submitted a comment letter to BLM on the Draft Programmatic Agreement explaining why the BLM's proposed process for identifying and mitigating impacts to cultural resources on the Project site violates the NHPA and NEPA, among other statutes. This letter and other letters with similar conclusions are attached. O9-33

The DEIS identified cultural resources and historic properties affected by the proposed undertaking in a improperly narrow area of potential effect ("APE") that failed to consider many potentially significant effects of the undertaking. The APE in the DEIS failed to include areas where the project may have visual, audible, or atmospheric effects on traditional, religious and cultural resources. The DEIS failed to identify an accurate area of potential area of Project effects on cultural resources and the BLM failed to consult with the Tribes early enough to gather information about cultural resources outside of the Project boundaries that may be impacted. The DEIS fails to provide an adequate or accurate analysis of potentially significant impacts to cultural resources on and adjacent to the site. The DEIS should be revised to take into account the non-archeological effects of the undertaking on irreplaceable cultural resources that were not analyzed in the DEIS.

G. THE DEIS FAILS TO MITIGATE IMPACTS TO SIGNIFICANT CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act directs federal agencies to take into account the effects of their actions on historic properties PRIOR TO the issuance of any license. The DEIS informs the public that ALL mitigation will be included in a Programmatic Agreement ("PA") that is to developed in consultation with the Advisory Council, the State Historic Preservation Officer and other consulting parties. The Draft PA that was circulated to the consulting parties rather explicitly provides for the mitigation of effects of the Project on cultural resources to be taken into account -- to the extent they will be -- AFTER issuance of a license for the Imperial Valley Solar Project.

While the Advisory Council's regulations for carrying out consultation pursuant to Section 106 allow for "conducting or authorizing nondestructive project planning activities before completing compliance with section 106,"[137] this may only occur if no decisions are made that would "restrict the subsequent consideration of alternatives to avoid, minimize, or mitigate the undertaking's adverse effects on historic properties."[138] This PA would permit BLM to authorize far more than "nondestructive project planning activities;" the PA would allow the BLM to adopt an alternative and authorize Project development, thus restricting the consideration of all other alternatives. O9-49

The BLM may not move forward with the project prior to taking into account the adverse effects of the project on the cultural resources through the consultation process. To date, the consulting parties have not had any chance at all to develop mitigation for cultural resource impacts, the DEIS fails to propose any mitigation that is reasonably likely to mitigate the project's impacts.

Response: Archaeological studies of the surface of the Imperial Valley Solar (IVS) project site (footprint) were prepared by the consultant for the applicant, and deemed adequate by the United States Bureau of Land Management (BLM). A copy of that technical report was provided to interested tribes for comment. As part of good faith and reasonable identification efforts, government-to-government consultation is on-going, including providing for additional site visits seeking comments regarding National Register of Historic Places (National Register) evaluations. The National Register evaluations, in consultation with consulting parties and Tribes, will be completed where feasible prior to the Record of Decision (ROD).

D.4.9.2 Cumulative Impacts on Cultural Resources

Comments: F1-7, NA1-8, O4-10, and O6-7.

B.3 - Cumulative Scenario

Section B.3, Cumulative Scenario, identifies many other past, present, or future projects that could impact the Anza NHT, and the California desert as a whole. Several of the wind projects identified in the EIS, proposed west of the site near Ocotillo, would be visible from the Anza NHT (Wind Zero, Ocotillo Express, TelStar Energies). The analysis does not identify projects underway or anticipated in Arizona near the Anza NHT alignment that could add to cumulative impacts (i.e. cultural, visual, noise, recreational) and further degrade the integrity of the trail. As a result, the cumulative impact analysis needs to be expanded in the final EIS to include such projects and specifically address cumulative impacts to the Anza NHT corridor. F1-7

Nonetheless, the cumulative analysis makes clear that the implementation of this and other energy projects would result in significant impacts to many environmental resources in the California desert and elsewhere in the west. The result will be profound changes to the visitor's experience in these areas. NPS is very concerned about the implications of these long term changes. To ensure that projects are sited in appropriate locations using appropriate technologies to avoid impacts to our nation's natural and cultural heritage, it is imperative that landscape level analyses be conducted to fully evaluate the implications of the widespread deployment of renewable energy projects, and their associated support facilities, on the public lands. We recommend that the final EIS include a section discussing this aspect of cumulative impacts and efforts underway by the Bureau to address landscape level concerns. F1-7

D. The DEIS Fails to Thoroughly Evaluate Cumulative Impacts to Cultural Resources Associated With the Extensive Plans for Renewable Energy Development in Southern California and Arizona.

An EIS must examine the cumulative impacts of proposed actions. *Neighbors of Cuddy Mtn. v. Alexander*, 303 F3d 1059, 1071 (9th Cir. 2002). A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such actions." 40 CFR § 1508.7. Failure to properly analyze cumulative impacts violates NEPA. *See Lands Council v. Powell*, 395 F.3d 1019 (9th Cir. 2004) (reversing EIS for failure to properly analyze cumulative impacts); *Ocean Advocates v. United States Army Corps of Engineers*, 402 F.3d 846 (9th Cir. 2005) (overturning FONSI due, in part, to failure to properly analyze cumulative impacts.

The DEIS contains no real analysis of the impact to cultural resources that will result from the extensive proposed development of renewable energy projects throughout the Southwestern United States. The DEIS notes that approximately one million acres of land are proposed for solar and wind energy development just in the southern California desert lands alone. ES-31. The DEIS offers an extremely cursory analysis of cumulative impacts to cultural resources on pages C.2-144 and 145. This analysis is nothing more than a statement of the obvious that more renewable energy developments will likely result in more impacts to cultural resources. This simplistic analysis does not satisfy NEPA requirements. *City of Carmel-By-The-Sea v. United States Department of Transportation*, 123 F.3d 1142 (1997). **NA1-8**

The DEIS also fails to comprehensively list the full extent of proposed solar projects within the area. For example, there are four proposed solar projects on abandoned agricultural lands near the project that do not appear to be addressed in the DEIS:

i) Centinela Solar Energy (proposed 125 MW solar facility east of the Imperial Valley substation on approximately 1170 acres)

ii) Sunrise Gateway West Solar farm (proposed 250 MW facility located along I-8 west of El Centro on approximately 1130 acres)

Moreover, additional evaluation is needed to understand the cumulative impacts on recreational resources, specifically the Juan Bautista de Anza National Historic Trail, see National Park Service comments dated May 4, 2010 on the Proposed Imperial Valley Solar Project Draft EIS, pg. 3. A comprehensive cumulative impacts analysis including the evaluation of such information strengthens this document including associated mitigation measures and contributes to more informed decision-making. **O4-10**

The Project would have significant cultural impacts and could "wholly or partially destroy all archeological sites on the surface of the project area." SA/DEIS, p. C.3-102. The discussion of impacts to cultural resources is incomplete and inadequate. Assessment of the short and long term adverse impacts to cultural resources is "[t]o [b]e [p]rovided." SA/DEIS, p. ES-15. The Project would have significant impacts on "a presently unknown subset of approximately 330 known prehistoric and historical surface archaeological resources and may have significant impacts . . . on an unknown number of buried archaeological deposits, many of which may be determined historically significant. . . ." SA/DEIS, p. C.3-1. The project would also have indirect cultural impacts, because the Flat-tailed horned lizard ("FTHL") has cultural significance to the Tribe – it is "part of the Tribe's creation story" – but, as discussed below, FTHL would be adversely affected by the Project. Tribe Comments, p. 9. Indirect cultural impacts would also result from the Project's aesthetic impacts on culturally significant areas. *Id.* at 7.

As discussed more fully in Exhibit A to the Tribe Comments, BLM has failed to satisfy its obligations under section 106 of the National Historic Preservation Act ("NHPA"), 16 U.S.C. section 470(f). Tribe Comments, Exhibit A, at 1. This section of the NHPA requires agencies to take into account the impact of effects of their actions on historical resources "*prior to the issuance of any license*." 16 U.S.C. § 470(f). "Instead of completing this required process, BLM is opting to use a programmatic agreement to defer evaluation, mitigation, and treatment until after approval. . . ." Tribe Comments, Exhibit A, at 2. **O6-7**

Here again the assessment of impacts and the formulation of mitigation measures is impermissibly deferred. CEC plans to "fulfill the bulk of its obligation[s] under CEQA" by conditioning approval on the applicant's compliance with a programmatic agreement whose contents are *not* disclosed. SA/DEIS, p. C.3-12. "[F]ormal evaluations of some ethnographic resources and all archeological resources . . . will occur subsequent to [CEC/BLM] decisions on the proposed action." SA/DEIS, p. C.2-106. Although "the ideal intensity of the geographic coverage in a project area of analysis would be 100%," here the "geographic coverage . . . presently includes a . . . sample of 25% of the archaeological sites. . . ." SA/DEIS, pp. C.3-57 through 58. Moreover, the applicant's studies have been repeatedly rejected, giving little confidence in the 25% sample that was used. DEIS/SA, p. C.3-58. Before committing to the permanent destruction of irreplaceable cultural resources for the sake of a temporary project, CEC and BLM must, at the very least, determine the nature and extent of the cultural heritage they are obliterating.

Response: The cumulative impacts analysis in the Final Environmental Impact Statement (FEIS) discusses the effects of reasonably foreseeable future projects. Refer to Section 2.10, Overview of the Cumulative Impacts Analysis, for a list of reasonably foreseeable future projects considered in the analysis of the potential for the IVS project to contribute to cumulative adverse impacts on cultural resources. The cumulative impacts analysis for cultural resources is provided in Section 4.5.5, Cumulative Impacts, in the FEIS. That analysis indicates that the construction of the IVS project and other foreseeable cumulative projects will contribute to permanent long term adverse effects on cultural resources.

D.4.9.3 Government-to-Government Consultation

Comments: F2-36, F2-37, NA1-7, NA1-14, O6-7, O9-13, O9-33, and P11-19.

Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000), was issued in order to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States government-to-government relationships with Indian tribes.

Recommendation:

- The FEIS should summarize the process and outcome of government-to-government consultation between the BLM and each of the tribal governments within the Project area, issues that were raised (if any), and how those issues were addressed in the selection of the proposed alternative.

F2-36

Consultation for tribal cultural resources is required under Section 106 of NHPA. Section 106 of the NHPA requires a federal agency, upon determining that activities under its control could affect historic properties, consult with the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO). Under NEPA, any impacts to tribal, cultural, or other treaty resources must be discussed and mitigated. Section 106 of the NHPA requires that Federal agencies consider the effects of their actions on cultural resources, following regulation in 36 CFR 800.

Executive Order 13007, *Indian Sacred Sites* (May 24, 1996), requires federal land managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian Religious practitioners, and to avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. It is important to note that a sacred site may not meet the National Register criteria for a historic property and that, conversely, a historic property may not meet the criteria for a sacred site. We do note that BLM had requested assistance in identifying sacred sites affected by the proposed Project (at pg. C.2-78).

F2-37

Recommendation:

- The FEIS should address Executive Order 13007, distinguish it from Section 106 of the NHPA, and discuss how the BLM will avoid adversely affecting the physical integrity, accessibility, or use of sacred sites, if they exist.

C. The Cultural Resource Evaluation Has Occurred Without Required Government-to-Government Consultation with the Quechan Tribe.

BLM has not engaged in government-to-government consultation with the Tribe regarding the impacts of this project on cultural resources. Nor has the Tribe received any of the reports that identify cultural resources within the Project Area. Thus, at this time, the Tribe's (and other stakeholders) ability to comment on the impacts to cultural resources is impaired by lack of information.

The NHPA requires ongoing consultation with interested Indian tribes throughout the identification and evaluation of cultural resources and the resolution of adverse effects. 36 C.F.R. § 800.3(f)(2); 800.4(a)(4); 800.5(c)(2)(iii); 800.6(a); 800.6(b)(2), etc. Here, pursuant to the Draft Programmatic Agreement, all evaluation and resolution of effects will occur after the decision has been made. The Draft Programmatic Agreement fails to provide for the full level of tribal consultation required by 36 C.F.R. Part 800.

There are several federal laws that mandate ongoing consultation with Indian tribes where federally approved actions will affect tribal interests. *See* Executive Order 12875, Tribal Governance (Oct. 26, 1993) (the federal government must consult with Indian tribal governments on matters that significantly or uniquely affect tribal governments); Executive Order 12898, Environmental Justice (Feb. 11, 1994) (federal government must consult with tribal leaders on steps to ensure environmental justice requirements); Executive Order No. 13007, Sacred Sites (May 24, 1996) (federal government is obligated to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, avoid adversely impacting the physical integrity of sites, and facilitate the identification of sacred sites by tribes); Executive Order No. 13084, Consultation and Coordination with Indian Tribal Governments (May 14, 1998) (places burden on federal government to obtain timely and meaningful input from tribes on matters that significantly or uniquely affect tribal communities); Executive Order 13175, Consultation with Indian Tribal Governments (Nov. 6, 2000) (the federal government shall seek to establish regular and meaningful consultation with tribes in the development of federal policies affecting tribes). NA1-7

The Tribe has identified certain statements in the DEIS that may be inaccurate and that would benefit from consultation with the Tribe. For example, pages C.2-110 and 111 contain a discussion of the Yuha Basin Discontiguous District. According to the Tribe, it is likely that the sites within the project area are directly related to those within the Yuha area. However, due to the lack of consultation or the provision of cultural reports or maps, it is not possible to provide additional meaningful comments on this topic at this time.

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the ROD. Also, the Draft PA should be amended to require ongoing consultation with the Tribe, and tribal monitoring, if the development process goes forward.

Consultation under state law may also be required pursuant to California Government Code § 65562.5, because the project land is currently designated as open space under Imperial County zoning. Section 65562.5 requires local governments to consult with tribes "for the purpose of developing treatment with appropriate dignity of the place, feature, or object in any corresponding management plan." This section suggests that consultation may be required when development is proposed to occur in open space lands containing cultural resources of significance to tribes. NA1-7

G. The Staff Assessment Fails to Comport With CEQA Provisions Addressing Disposition of Discovered Human Remains.

The project area is known to contain sites containing human cremations of potentially historic origin. The full extent of the cremation sites is not currently known to the Quechan Tribe due to the lack of consultation and lack of a cultural resource report. CEQA Guidelines Section 15.064.5(d) states that "when an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resource Code 5097.98." Public Resource Code 5097.98 provides a process for identifying the most likely descendants of the remains and provides for inspections, consultations, and development of agreements with the most likely descendants for the appropriate treatment of the remains. It does not appear that the CEC or the applicant have complied with these provisions. Due to the lack of consultation, the Quechan Tribe lacks sufficient information at this time to know whether its people are the most likely descendants of the discovered remains. Further investigation and consultation with affected tribes (including the Quechan) is required before approving any project impacting these sacred cremation sites. NA1-14

The Project would have significant cultural impacts and could "wholly or partially destroy all archeological sites on the surface of the project area." SA/DEIS, p. C.3-102. The discussion of impacts to cultural resources is incomplete and inadequate. Assessment of the short and long term adverse impacts to cultural resources is "[t]o [b]e [p]rovided." SA/DEIS, p. ES-15. The Project would have significant impacts on "a presently unknown subset of approximately 330 known prehistoric and historical surface archaeological resources and may have significant impacts . . . on an unknown number of buried archaeological deposits, many of which may be determined historically significant. . . ." SA/DEIS, p. C.3-1. The project would also have indirect cultural impacts, because the Flat-tailed horned lizard ("FTHL") has cultural significance to the Tribe – it is "part of the Tribe's creation story" – but, as discussed below, FTHL would be adversely affected by the Project. Tribe Comments, p. 9. Indirect cultural impacts would also result from the Project's aesthetic impacts on culturally significant areas. *Id.* at 7.

As discussed more fully in Exhibit A to the Tribe Comments, BLM has failed to satisfy its obligations under section 106 of the National Historic Preservation Act ("NHPA"), 16 U.S.C. section 470(f). Tribe Comments, Exhibit A, at 1. This section of the NHPA requires agencies to take into account the impact of effects of their actions on historical resources "*prior to the issuance of any license*." 16 U.S.C. § 470(f). "Instead of completing this required process, BLM is opting to use a programmatic agreement to defer evaluation, mitigation, and treatment until after approval. . . ." Tribe Comments, Exhibit A, at 2. O6-7

Here again the assessment of impacts and the formulation of mitigation measures is impermissibly deferred. CEC plans to "fulfill the bulk of its obligation[s] under CEQA" by conditioning approval on the applicant's compliance with a programmatic agreement whose contents are *not* disclosed. SA/DEIS, p. C.3-12. "[F]ormal evaluations of some ethnographic resources and all archeological resources . . . will occur subsequent to [CEC/BLM] decisions on the proposed action." SA/DEIS, p. C.2-106. Although "the ideal intensity of the geographic coverage in a project area of analysis would be 100%," here the "geographic coverage . . . presently includes a . . . sample of 25% of the archaeological sites. . . ." SA/DEIS, pp. C.3-57 through 58. Moreover, the applicant's studies have been repeatedly rejected, giving little confidence in the 25% sample that was used. DEIS/SA, p. C.3-58. Before committing to the permanent destruction of irreplaceable cultural resources for the sake of a temporary project, CEC and BLM must, at the very least, determine the nature and extent of the cultural heritage they are obliterating.

A. NATIVE AMERICAN TRADITIONAL CULTURAL PROPERTIES

The DEIS did not disclose the significance of the area on and around the Project site to contemporary tribal members. The DEIS focused almost solely on archeological resources and failed to analyze traditional cultural properties, which are areas on and around the Project site that have O9-13

importance to tribes and Native Americans today. The purpose of an EIS is to address any major federal action significantly affecting the quality of the human environment.[34] The definition of "human environment," as defined in the NEPA regulations, "shall be interpreted comprehensively to include the natural and physical environments and the relationship of people with that environment."[35]

Section 101 of NEPA declares it is a matter of national policy to preserve important historic, cultural, and natural aspects of our national heritage. Policy direction in BLM Manual 8100, section 8110.05D, further provides that BLM should "[i]ncorporate cultural resource considerations into all aspects of planning and decision making."

The cultural resources section of the DEIS fails to acknowledge the traditional cultural properties in and around the proposed action. A "traditional cultural property" is a property, a place, that is eligible for inclusion on the National Register of Historic Places because of its association with cultural practices and beliefs that are (1) rooted in the history of a community, and (2) are important to maintaining the continuity of that community's traditional beliefs and practices.[36] O9-13

The project area is within the ancestral use area of the Quechan Tribe and other Native Americans.[37] Tribal members and other Native Americans have described significant non-archeological cultural resources within the Project boundaries and surrounding the Project. These cultural resources include biological resources on the Project site that are sacred to local tribes and the impacts of the Project on sacred areas on or near the Coyote Mountains. The project may result in visual, audible, and atmospheric impacts to these sites.

These resources were not analyzed in the DEIS; in fact, the DEIS included no information about the direct, indirect or cumulative effects on potential traditional cultural properties. The BLM should conduct an ethnographic study and interviews with local Native Americans and tribal representatives to further refine the BLM's understanding of the importance of these potential traditional cultural properties. At a minimum, the scope of analysis in the DEIS must include areas where the Project would have direct, indirect and cumulative impacts on areas which could be directly impacted by views and sounds from the property. The BLM must study and disclose the

types of cultural properties that are located within the area that the Project will impact. O9-13

E. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO CULTURAL RESOURCES

The surveys for cultural resources have identified over 300 known prehistoric and historic surface archeological resources and an unknown number of buried archeological deposits. Known surface resources include human cremation sites, habitation sites, lithic scatters, trails, ceramic scatters, ground stone and ground features. O9-33

Tribal members and local Native Americans have described other non-archeological cultural resources within the project boundaries including biological resources on the Project site that are sacred to local tribes and the impacts of the Project on the viewshed of sacred areas on or near the Coyote Mountains.[101] The DEIS failed to analyze impacts to these cultural resources or to consult with Tribes early enough to ensure that these impacts could be considered in the DEIS.[102]

Under Section 106 of the National Historic Preservation Act, the BLM has responsibility to consult with tribes and other parties to ensure that these impacts are identified as early as possible. Consultation must provide Indian tribes a reasonable opportunity to identify concerns about historic properties, advise on the identification of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of such effects.[103] CURE has submitted a comment letter to BLM on the Draft Programmatic Agreement explaining why the BLM's proposed process for identifying and mitigating impacts to cultural resources on the Project site violates the NHPA and NEPA, among other statutes. This letter and other letters with similar conclusions are attached. O9-33

The DEIS identified cultural resources and historic properties affected by the proposed undertaking in a improperly narrow area of potential effect ("APE") that failed to consider many potentially significant effects of the undertaking. The APE in the DEIS failed to include areas where the project may have visual, audible, or atmospheric effects on traditional, religious and cultural resources. The DEIS failed to identify an accurate area of potential area of Project effects on cultural resources and the BLM failed to consult with the Tribes early enough to gather information about cultural resources outside of the Project boundaries that may be impacted. The DEIS fails to provide an adequate or accurate analysis of potentially significant impacts to cultural resources on and adjacent to the site. The DEIS should be revised to take into account the non-archeological effects of the undertaking on irreplaceable cultural resources that were not analyzed in the DEIS.

32. I was unable to find discussion of **visual resources analysis** from the perspective of Native Americans for whom the lands are sacred. I know that this can be done because BLM considered visual resources issues when it evaluated and decided to deny the Plan of Operations for the proposed Glamis Imperial Mine. Even if sacred sites are not disclosed, and they should not be, It would seem that the public benefits form a better understanding and appreciation of Native American traditions and views of the lands on which their ancestor lived. **P11-19**

Response: Government-to-government consultation is ongoing, and is summarized in Section 7.0, Native American Consultation. That consultation includes discussions of resources on a landscape level and potential visual effects to those resources. The Tribes participating in this consultation process have been informed that the IVS project will have an adverse effect on cultural resources. Efforts are being made to avoid all known habitation sites and human remains locations through project modifications and design refinements.

The ongoing government-to-government consultation has not yet identified specific traditional cultural properties (TCP) that are eligible for the National Register in the project area of potential effects (APE). In an effort to identify TCPs in the APE that are eligible for the National Register, if any, meetings, requests to interview tribal elders, and field visits continue.

D.4.9.4 Identification of Cultural Resources

Comments: NA1-5, NA1-6, NA1-7, NA1-12, O4-6, O6-7, O9-6, O9-49, P7-1, and P7-5.

II. Comments on Staff Assessment/Draft Environmental Impact Statement

A. BLM/CEC Should Select the No-Action Alternative Given the Acknowledged Impacts to Cultural Resources and Biological Resources.

This project is located in an area confirmed to have high cultural sensitivity. The DEIS notes that 432 cultural resource sites have been previously recorded in the project area. DEIS, page C.2-65.[1] Development of the preferred alternative would result in significant adverse effects on "a presently unknown subset of 328 known pre-historic and historical surface archaeological resources and may have significant adverse effects under CEQA on an unknown number of buried archaeological deposits." DEIS, at ES-24; *see also* page C.2-1. On page C.2-106, there is an acknowledgement that the project "may wholly or partially destroy all archaeological sites on the surface of the project area." See also page B.2-12 (acknowledging that construction of the project would lead to the whole and partial destruction of cultural resources). Yet, BLM and CEC are proceeding to make a decision on this project before completing required tribal consultation and evaluation of the significance of the resources. NA1-5

The cultural significance of the project area was previously described in the discussion of the proposed Plaster City ACEC in the 1980 Draft California Desert Conservation Area Plan Alternatives and EIS. The proposed ACEC, which included the current project area, was described as having "8,320 acres of high sensitivity/significance and 26,680 acres of high to very high buried site potential that could be severely impacted. In addition, possibly 1,125 prehistoric sites and 2 National Register properties (including 8 linear miles of historically significant trails) also stand to be disturbed and/or destroyed." The cultural value of this landscape has been well known for years. The proposed solar project would significantly impact this cultural landscape. NA1-5

Given the substantial amount of ongoing and proposed solar development on disturbed lands near the project area, the Tribe does not believe that this location is appropriate for the short term (40-year) solar project proposed by the applicant. At minimum, BLM and CEC should complete the cultural identification, evaluation, and mitigation processes as required by NEPA and NHPA Section 106 before making their final decisions on this project.

B. The Analysis of Cultural Resource Impacts Is Incomplete and Based on Inadequate Data.

Under NEPA, BLM is obligated to take a "hard look" at the potential environmental consequences of the proposed project. *Klamath-Siskiyou Wildlands Center v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004). BLM must ensure the scientific integrity of the discussions and analysis in its EIS. *Native Ecosystems Council v. U.S. Forest Service*, 418 F.3d 953 (9th Cir. 2005). A Draft EIS must be as complete as possible and must not ignore or exclude important analysis or factual information. *See* 40 C.F.R. § 1502.9(a) ("the draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of NEPA").

NA1-6

In this case, the analysis of cultural resource impacts is based on incomplete and unreliable identification efforts. The DEIS describes the inadequate effort made by the applicant to document the cultural resources affected by the project. Throughout the cultural evaluations, BLM and the CEC have expressed numerous concerns with the completeness and accuracy of information provided by the applicant about cultural resources in the project area. *See* DEIS, pages C.2-57 and 58 (noting that documentation by the applicant of approximately 43% of the archaeological sites in the project area was probably inadequate, and noting conclusion of third-party consultant that extant documentation for the archaeological sites in the project area was inadequate for assessing either the historical significance of the resources or the effects that the proposed action would have on them). Although 432 cultural resource sites have been previously located in the project area, the inventory conducted for the DEIS definitively re-

located only two. DEIS, C.2-65. Overall, the survey effort identified 337 total cultural resources, which is far less than the 432 sites previously recorded. DEIS, C.2-85.

The inadequate identification of resources means that BLM and CEC cannot accurately evaluate the impact that this project will have on cultural resources. On page ES-15 of the DEIS, there is no summary of the short and long term adverse impacts to cultural resources. Instead, that discussion is "to be provided." The very same table on page ES-15 asserts there will be "no cumulative adverse impacts" to cultural resources and that the "level of significance after mitigation" will be "less than significant." It is not clear how BLM and CEC can determine the correct "level of significance" when the impact analysis has not yet been completed.

The DEIS states that the project would have "significant adverse effects" on a "presently unknown subset of approximately 328 known prehistoric and historical surface archaeological resources and . . . on an unknown number of buried archaeological deposits." ES-24. It is not apparent from the DEIS how many of the surface resources will actually be affected. The inadequate identification efforts make it impossible for the decisionmakers and interested public to reasonably evaluate the cultural significance of the area and the full extent of impacts that this project will cause to the cultural landscape. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360 (1989) (noting a primary purpose of NEPA is to foster both informed decision making and informed public participation). This also violates the obligation to make a good faith effort to identify cultural resources of concern to interested Indian tribes. *See* 36 C.F.R. § 800.4(b) (requiring agency to make reasonable and good faith effort to identify historic properties affected by undertaking). **NA1-6**

There has been no evaluation of the eligibility of the cultural resources for listing on the National Register of Historic Places. This also makes it impossible to know the extent of impact that this project will have on the cultural landscape. As noted in the Tribe's May 4, 2010 letter commenting on the draft Programmatic Agreement (which is attached hereto as Exhibit A and incorporated in these comments by reference), the Tribe objects to BLM's proposal to defer all evaluation and mitigation development efforts until after the decision has been made on the right-of-way. Approving the right-of-way prior to evaluating the eligibility of the resources violates both NEPA and the NHPA. Both NEPA and the NHPA are intended to inform the decision-making process. Deferring evaluation of NHPA-eligibility until after the decision to permit the project has been made is inconsistent with these laws.

In addition to direct impacts to cultural sites in the project area, there will also be impacts to sites outside the project area due to visual and glare impacts. There are many culturally significant areas outside the project boundaries, as evidenced by the proposed Plaster City ACEC discussed above. The DEIS, page C.13-10, also notes the close proximity of culturally and historically significant areas. Several of the cultural sites and geoglyphs located in the Yuha area are ceremonial in nature and the presence of the Suncatchers will interfere with the use of these sites and ability to see from these sites to other landscapes nearby.

In sum, BLM and CEC must complete the cultural resource identification, consultation, and evaluation process before making a final decision on this Project. **NA1-6**

C. The Cultural Resource Evaluation Has Occurred Without Required Government-to-Government Consultation with the Quechan Tribe.

BLM has not engaged in government-to-government consultation with the Tribe regarding the impacts of this project on cultural resources. Nor has the Tribe received any of the reports that identify cultural resources within the Project Area. Thus, at this time, the Tribe's (and other stakeholders) ability to comment on the impacts to cultural resources is impaired by lack of information.

The NHPA requires ongoing consultation with interested Indian tribes throughout the identification and evaluation of cultural resources and the resolution of adverse effects. 36 C.F.R. § 800.3(f)(2); 800.4(a)(4); 800.5(c)(2)(iii); 800.6(a); 800.6(b)(2), etc. Here, pursuant to the Draft Programmatic Agreement, all evaluation and resolution of effects will occur after the decision has been made. The Draft Programmatic Agreement fails to provide for the full level of tribal consultation required by 36 C.F.R. Part 800.

There are several federal laws that mandate ongoing consultation with Indian tribes where federally approved actions will affect tribal interests. *See* Executive Order 12875, Tribal Governance (Oct. 26, 1993) (the federal government must consult with Indian tribal governments on matters that significantly or uniquely affect tribal governments); Executive Order 12898, Environmental Justice (Feb. 11, 1994) (federal government must consult with tribal leaders on steps to ensure environmental justice requirements); Executive Order No. 13007, Sacred Sites (May 24, 1996) (federal government is obligated to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, avoid adversely impacting the physical integrity of sites, and facilitate the identification of sacred sites by tribes); Executive Order No. 13084, Consultation and Coordination with Indian Tribal Governments (May 14, 1998) (places burden on federal government to obtain timely and meaningful input from tribes on matters that significantly or uniquely affect tribal communities); Executive Order 13175, Consultation with Indian Tribal Governments (Nov. 6, 2000) (the federal government shall seek to establish regular and meaningful consultation with tribes in the development of federal policies affecting tribes). NA1-7

The Tribe has identified certain statements in the DEIS that may be inaccurate and that would benefit from consultation with the Tribe. For example, pages C.2-110 and 111 contain a discussion of the Yuha Basin Discontiguous District. According to the Tribe, it is likely that the sites within the project area are directly related to those within the Yuha area. However, due to the lack of consultation or the provision of cultural reports or maps, it is not possible to provide additional meaningful comments on this topic at this time.

To date, BLM has failed to fulfill its obligation to consult on a government-to-government basis with the Quechan Tribe. BLM must fulfill this obligation prior to issuance of

the ROD. Also, the Draft PA should be amended to require ongoing consultation with the Tribe, and tribal monitoring, if the development process goes forward.

Consultation under state law may also be required pursuant to California Government Code § 65562.5, because the project land is currently designated as open space under Imperial County zoning. Section 65562.5 requires local governments to consult with tribes "for the purpose of developing treatment with appropriate dignity of the place, feature, or object in any corresponding management plan." This section suggests that consultation may be required when development is proposed to occur in open space lands containing cultural resources of significance to tribes. NA1-7

E. The DEIS Relies On A Programmatic Agreement That Fails to Provide Mitigation for Cultural Resources and That Fails to Comply With the Requirements of the National Historic Preservation Act and the Advisory Council Regulations.

The DEIS proposes one condition of certification relating to cultural resource protection, which would require the applicant to abide by the terms of a not-yet-completed programmatic agreement. The Tribe has filed a separate comment letter, dated May 4, 2010, which details how the use of a programmatic agreement in this proceeding is inappropriate. The Tribe's letter (which is attached hereto as Exhibit A and incorporated in these comments by reference) argues that BLM is improperly deferring the required Section 106 process until after its decision on the right-of-way is made, and that the current draft of the programmatic agreement fails to provide sufficient mitigation. The draft programmatic agreement, page 3, states that BLM will incorporate the mitigation measures and performance standards from the Staff Assessment/Draft EIS. The only "mitigation" for cultural resources provided in the Draft EIS is a reference back to the programmatic agreement. In other words, the programmatic agreement and DEIS simply cross-reference each other, but neither document provides for mitigation. NA1-12

Cultural Resources: The BLM and CEC must fully consider the comments submitted by the National Park Service (see National Park Service comments dated May 4, 2010 on the Proposed Imperial Valley Solar Project Draft EIS) and comments that are submitted by local stakeholders regarding important cultural resources in the project vicinity and the impacts to these resources must be fully analyzed and mitigated. O4-6

The Project would have significant cultural impacts and could "wholly or partially destroy all archeological sites on the surface of the project area." SA/DEIS, p. C.3-102. The discussion of impacts to cultural resources is incomplete and inadequate. Assessment of the short and long term adverse impacts to cultural resources is "[t]o [b]e [p]rovided." SA/DEIS, p. ES-15. The Project would have significant impacts on "a presently unknown subset of approximately 330 known prehistoric and historical surface archaeological resources and may have significant impacts . . . on an unknown number of buried archaeological deposits, many of which may be determined historically significant. . . ." SA/DEIS, p. C.3-1. The project would also have indirect cultural impacts, because the Flat-tailed horned lizard ("FTHL") has cultural significance to the Tribe – it is "part of the Tribe's creation story" – but, as discussed below, FTHL would be adversely affected by the Project. Tribe Comments, p. 9. Indirect cultural impacts would also result from the Project's aesthetic impacts on culturally significant areas. *Id.* at 7.

As discussed more fully in Exhibit A to the Tribe Comments, BLM has failed to satisfy its obligations under section 106 of the National Historic Preservation Act ("NHPA"), 16 U.S.C. section 470(f). Tribe Comments, Exhibit A, at 1. This section of the NHPA requires agencies to take into account the impact of effects of their actions on historical resources "*prior to the issuance of any license*." 16 U.S.C. § 470(f). "Instead of completing this required process, BLM is opting to use a programmatic agreement to defer evaluation, mitigation, and treatment until after approval. . . ." Tribe Comments, Exhibit A, at 2. O6-7

Here again the assessment of impacts and the formulation of mitigation measures is impermissibly deferred. CEC plans to "fulfill the bulk of its obligation[s] under CEQA" by conditioning approval on the applicant's compliance with a programmatic agreement whose contents are *not* disclosed. SA/DEIS, p. C.3-12. "[F]ormal evaluations of some ethnographic resources and all archeological resources . . . will occur subsequent to [CEC/BLM] decisions on the proposed action." SA/DEIS, p. C.2-106. Although "the ideal intensity of the geographic coverage in a project area of analysis would be 100%," here the "geographic coverage . . . presently includes a . . . sample of 25% of the archaeological sites. . . ." SA/DEIS, pp. C.3-57 through 58. Moreover, the applicant's studies have been repeatedly rejected, giving little confidence in the 25% sample that was used. DEIS/SA, p. C.3-58. Before committing to the permanent destruction of irreplaceable cultural resources for the sake of a temporary project, CEC and BLM must, at the very least, determine the nature and extent of the cultural heritage they are obliterating.

Finally, the Project will adversely affect hundreds of cultural resources including ancient cremation zones, trails and village sites, and will directly block one of the most undisturbed sections of the Juan Bautista de Anza O9-6

National Historic Trail, the first overland route from New Spain to San Francisco. The DEIS failed to provide ANY mitigation for impacts to cultural resources and instead explained that a future consultation process would work out the details of a mitigation proposal. O9-6

G. THE DEIS FAILS TO MITIGATE IMPACTS TO SIGNIFICANT CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act directs federal agencies to take into account the effects of their actions on historic properties PRIOR TO the issuance of any license. The DEIS informs the public that ALL mitigation will be included in a Programmatic Agreement ("PA") that is to developed in consultation with the Advisory Council, the State Historic Preservation Officer and other consulting parties. The Draft PA that was circulated to the consulting parties rather explicitly provides for the mitigation of effects of the Project on cultural resources to be taken into account -- to the extent they will be -- AFTER issuance of a license for the Imperial Valley Solar Project.

While the Advisory Council's regulations for carrying out consultation pursuant to Section 106 allow for "conducting or authorizing nondestructive project planning activities before completing compliance with section 106,"[137] this may only occur if no decisions are made that would "restrict the subsequent consideration of alternatives to avoid, minimize, or mitigate the undertaking's adverse effects on historic properties."[138] This PA would permit BLM to authorize far more than "nondestructive project planning activities;" the PA would allow the BLM to adopt an alternative and authorize Project development, thus restricting the consideration of all other alternatives. O9-49

The BLM may not move forward with the project prior to taking into account the adverse effects of the project on the cultural resources through the consultation process. To date, the consulting parties have not had any chance at all to develop mitigation for cultural resource impacts, the DEIS fails to propose any mitigation that is reasonably likely to mitigate the project's impacts.

My name is Brendan Hughes and I would like to comment on the Tessera Solar Two project in Imperial County. Contrary to the CEC staff's assessment, this project has unmitigable impacts on biological, cultural, and visual resources, and therefore should not be approved. P7-1

Also, cultural resources would be damaged or destroyed by this project.
Numerous sites that are sacred to local Indian tribes have been discovered in the project area, including trails and cremation sites.
These sites will be permanently altered by this project. Additionally, the project will restrict access to the sites not destroyed by the 30,000 proposed Sun Catchers. P7-5

Response: As part of a good faith and reasonable effort to identify historic properties in the project APE, the BLM has required the preparation of a Class III Inventory. This report was provided to interested Tribes for comment. Based on the consultation process and comments

from Tribes and other interested parties, the BLM will make determinations of eligibility and effect for individual resources. On an undertaking wide context, the BLM has determined that the IVS project will have an adverse effect on historic properties and mitigation is required prior to construction. Preliminary mitigation measures are described in the FEIS, and in the draft Programmatic Agreement (PA) provided in Appendix G, Draft Programmatic Agreement, in the FEIS.

D.4.9.5 Juan Batista de Anza National Historic Trail and the Yuha Geoglyphs

Comments: F1-1, F1-3, F1-4, F1-5, F1-6, F1-7, F1-8, F1-10, F1-11, F1-14, F1-16, O2-8, O4-10, O5-1, O5-2, O5-3, O6-3, O7-5, O9-51, P5-1, P12-3, P12-4, and P12-5.

The National Park Service (NPS) respectfully submits the following comments regarding the Draft Environmental Impact Statement (EIS) prepared for the Imperial Valley Solar Project (aka SES Solar Two Project) in Imperial County, California. Our comments primarily address potential impacts to, and mitigation for, the Juan Bautista de Anza National Historic Trail (Anza NHT), due to NPS's responsibility to administer, preserve and enhance this component of the National Trails System. With the exception of the concerns discussed below, we feel that the Draft EIS adequately discloses the project's impacts to the Anza NHT. However, we are concerned that the document does not adequately specify the mitigation needed to offset the project's impacts to the Anza NHT. **F1-1**

To summarize our concerns regarding the Imperial Valley Solar project, the Yuha Desert is one of the least disturbed landscapes along the entire 1,200 mile length of the Anza NHT. This setting would be irrevocably changed by the proposed project. Because the project would have significant direct and indirect impacts to the Anza NHT, the NPS would prefer that the project not proceed, or that alternatives be considered which avoid impacts to the Anza NHT. However, should the project be approved, NPS requests that its impacts be mitigated to the greatest extent feasible. We recommend that the final EIS incorporate a comprehensive approach to mitigating impacts to the Anza NHT, through the preparation of a comprehensive Interpretive Plan and a re-evaluation of the alignment of the Anza Recreational Trail in the area. **F1-3**

At the end of this memo, we identify a suite of mitigation measures that could be implemented to offset the project's impacts to the Anza NHT. We would like to work with you in reviewing each of these measures and determining jointly which measures will be required of the applicant should this project be approved. We make this request as a sister agency within the Department, as a Cooperating Agency for the EIS, and as an Invited Signatory to the Section 106 Programmatic Agreement. **F1-3**

Comments on the Draft EIS

The following comments focus on specific sections of the EIS most relevant to impacts to the Anza NHT. **F1-4**

B.2 - Alternatives

Alterations to the project design as proposed by the Build Alternatives (300 MW Alternative, and Drainage Avoidance Alternatives #1 and #2) would not significantly lessen impacts to the Anza NHT due to the scale and visual impacts of the project. Also, because the historic corridor through the project site is an inferred alignment based on historic journals and maps (between the two historic campsite locations), reducing the project size or shifting its boundaries would not necessarily avoid direct impacts to the historic corridor traveled by the expedition. Furthermore, as noted in the EIS, approval of a project alternative could still ease the approval of other projects in the vicinity, resulting in cumulative impacts to the Anza NHT. This would be facilitated through the installation of infrastructure that would support additional energy generation facilities, changing the land use of the area to one of energy generation, and by degrading the existing landscape such that future projects would be considered a less dramatic change or impact to the environment. F1-5

NPS prefers alternatives that would locate the project within or adjacent to existing disturbed lands, either in Imperial County, or closer to metropolitan areas that would consume the energy generated by the project. The merits of such alternatives need to be fully examined in the final EIS. Locating the proposed project on or near existing agricultural or urbanized areas in the vicinity would avoid or minimize impacts to the natural landscape. The Mesquite Lake and Agricultural Lands Alternatives for this project, evaluated under CEQA, would meet some of these criteria and avoid impacts to the historic corridor of the Anza NHT. It should also be noted that the Mesquite Lake and South of Highway 98 Alternatives would be located adjacent to the Auto Tour Route of the Anza NHT (Highways 98 and 86), but these Alternative locations would preferable to the proposed project site. F1-6

B.3 - Cumulative Scenario

Section B.3, Cumulative Scenario, identifies many other past, present, or future projects that could impact the Anza NHT, and the California desert as a whole. Several of the wind projects identified in the EIS, proposed west of the site near Ocotillo, would be visible from the Anza NHT (Wind Zero, Ocotillo Express, TelStar Energies). The analysis does not identify projects underway or anticipated in Arizona near the Anza NHT alignment that could add to cumulative impacts (i.e. cultural, visual, noise, recreational) and further degrade the integrity of the trail. As a result, the cumulative impact analysis needs to be expanded in the final EIS to include such projects and specifically address cumulative impacts to the Anza NHT corridor. F1-7

Nonetheless, the cumulative analysis makes clear that the implementation of this and other energy projects would result in significant impacts to many environmental resources in the California desert and elsewhere in the west. The result will be profound changes to the visitor's experience in these areas. NPS is very concerned about the implications of these long term changes. To ensure that projects are sited in appropriate locations using appropriate technologies to avoid impacts to our nation's natural and cultural heritage, it is imperative that landscape level analyses be conducted to fully evaluate the implications of the widespread deployment of renewable energy projects, and their associated support facilities, on the public lands. We recommend that the final EIS include a section discussing this aspect of cumulative impacts and efforts underway by the Bureau to address landscape level concerns. F1-7

C.3 - Cultural Resources

The Cultural Resources section adequately identifies the Anza expedition's place in history and discusses its relationship to the site. The document correctly recognizes the Anza NHT is a cultural resource of national significance, and that the impacts to the trail's integrity must be considered, including the visual impacts of the project on the historic trail corridor. The Draft EIS states:

> *The Juan Bautista de Anza National Historic Trail is a cultural resource of national significance for its association with important events in our history and its associations with important persons in our early history, as well as for its information potential. Staff believes that the associative values of the resource require Federal and State agencies to more broadly consider the degree of integrity the resource must have in order to convey its significance. This means that, in addition to considering how the proposed action would affect the physical integrity of the spatial relationships among any material remains of the use of the trail, the agencies need to consider whether and how the action would visually degrade the integrity of the setting, feeling, and association of the resource, formal aspects of integrity under both the NRHP and CRHR programs.* (Draft EIS p. C.2-132)

F1-8

On page C.2-146, the EIS concludes that Condition of Certification CUL-1 would reduce all cultural resource impacts to less than significant. CUL-1 requires compliance with the terms of the Programmatic Agreement (PA) being prepared by BLM pursuant to Section 106 of the National Historic Preservation Act. NPS is an Invited Signatory to the PA, which is still under development and does not yet specify mitigation for the Anza NHT. The only provision for mitigation in the draft PA released March 26, 2010 (for review by consulting parties) states: "In consultation with NPS and BLM's National Trail Office, provide a plan for treating effects to the Juan Bautista de Anza National Historic Trail corridor."

NPS does not believe that the impacts to the Anza NHT can be reduced to a less than significant level through mitigation. Implementation of this project will forever change the landscape of this area and irreparably degrade the integrity of the Anza NHT and it will diminish the public's experience and understanding of the historic expedition and the cultural landscape of that period. Potential mitigation measures that should be included in the PA's treatment plan to reduce the project's impacts to the Anza NHT are listed beginning on page 8 below.

NPS requests that this significant impact to the Anza NHT be identified in the Final EIS and that appropriate mitigation be provided. At a minimum, NPS recommends that the alignment of the Anza Recreational Trail in the vicinity of the project be re-evaluated re-routed away from the project site to avoid impacts to the recreational users. Refer to the end of this letter for a more detailed discussion of suggested mitigation to address this impact.

F1-10

C.9 - Noise and Vibration

The Draft EIS states that the primary noise sources would consist of the reciprocating Stirling Engines (including generator, cooling fan and air compressor) utilized on each of the 30,000 Sun Catchers that make up the project. Because each individual Stirling Engine would be a primary noise source, similar noise levels would be generated throughout the entire project site, and the combined noise level would be significantly high in the immediate vicinity.

The analysis does not clearly describe the noise levels on or adjacent to the project site. It only states that "based on the model estimates, operational noise levels within the Project boundary would be similar in magnitude to comparably sized large industrial projects. Noise levels within the Project site were modeled to be below 85 dBA within 10 feet of the substation and amongst several SunCatcher assemblies. . ." which is under the exposure limit for industrial workers. Table A2, Typical Environmental and Industrial Sound Levels, indicates that 85dBA is equivalent to the noise level experienced 50 feet from a freight train.

The EIS does quantify noise levels at distant sensitive receptors (residential uses) located 0.6 mile or more away from the site boundaries, but does not predict noise levels at or adjacent to the site, or from the Anza NHT. Table 8 indicates a 1 dBA increase in noise expected at the closest residences (Painted George, 3,300 feet northwest of the site). However, this appears to contradict page 5.12-20 of the Application for Certification, which says "the calculated increase of ambient sound level, generated by Project operation, is calculated to be +4 dB at the closest of two aforementioned sensitive receptors". F1-11

The Solar Energy Programmatic EIS being prepared by the Departments of Energy & Interior for solar projects in the Western U.S. identifies the noise impacts from solar dish engine technologies as more significant than other solar energy technologies. It suggests that a solar dish engine facility such as the proposed project should be sited in locations with higher background noises; for example, such as close to a well-traveled highway where the ambient sounds partially mask the noise from the facility. Those portions of the project site closest to the freeway and the Plaster City Gypsum plant may blend in better with ambient noise environment, but the more distant portions of the 6,500 acre site would experience a significant increase in noise levels.

This high noise level, more common to industrial facilities, is not what recreational visitors expect when traveling to the desert, where the natural soundscape is very quiet. The final EIS should clearly disclose the increase in noise levels that would be generated by the project and experienced adjacent to the site. The final EIS also needs to evaluate the increase in noise levels that would be experienced by persons traveling on segments on the Anza Recreational Trail adjacent to the site boundaries. The noise impacts to the Anza Recreational Trail may

suggest that trail alignment be re-routed further away from site, such as west toward Ocotillo, rather than using Dunaway Road and Evan Hughes Highway to connect the southerly trail segment to the segment north of Plaster City.

In order to adequately disclose the project's noise impacts, the NPS recommends that the following additional information be provided in the final EIS:

- Noise contour maps should be provided documenting ambient and with project noise levels. We expect that these maps would visually demonstrate a significant increase in noise around the project site. The maps would show how the noise from the facility would compare to the primary existing noise sources in the area: the I-8 freeway and the Plaster City gypsum plant.

- Existing ambient sound levels and projected solar project noise levels at specific points along the Anza Recreational Trail in the project vicinity. Some of the same sites used for the Anza NHT visual impact analysis could be used, in addition to locations adjacent to the project site along Dunaway Road and Evan Hughes Highway. F1-11

The NPS also requests that additional noise mitigation measures be identified and required should this project be approved. Due to the magnitude of noise from tens of thousands of Stirling dish engines, a combination of noise mitigation measures is probably warranted. Noise control solutions which can be applied to each Stirling engine are desirable, because reduction of Stirling engine noise can translate into a reduction in project noise levels everywhere. Other noise reduction measures that should be considered include siting of noise sources and receivers, such as the Anza Recreational Trail, to take advantage of noise attenuation provided by topography and distance. In addition, construction of engineered sound barriers and/or berms has the potential to reduce some project noise at specific locations.

At the request of NPS, the applicant prepared a visual impact analysis for the Anza NHT, dated January 21, 2010. Its findings are summarized on pages C.13-18 and 19. The analysis concludes that visual impacts to the Anza Recreational Trail would be significant and that no feasible mitigation exists to eliminate or substantially reduce the visual impacts. Condition of Certification/Mitigation Measure VIS-5 is proposed to mitigate impacts to the Anza NHT:

> *VIS-5: In order to off-set unavoidable adverse impacts to visitors on the Anza Trail and Yuha Desert ACEC, the project owner shall contribute funds to the National Park Service (NPS) and BLM, specifically to provide improvements to benefit visitors on the Anza Trail. Such improvements could include, but not be limited to, interpretive displays or exhibits, improvements to use areas, mounted telescopes, or other improvements to be determined by the NPS and BLM.*
>
> *Verification: The project owner shall coordinate closely with the BLM and, NPS, and contribute funds to mitigate for visual impacts to recreational users of the Anza Trail. The funds will be used by the agencies to improve the recreational experience for Anza Trail visitors through such means as interpretive signage, improvements to camping facilities, provision of view scopes at campsites or vista points, or other measures as appropriate. The amount and payment of funds will be determined by the two agencies commensurate with the loss scenic integrity of the Anza Trail experience. The project owner shall provide funds to the two agencies as approved by the Compliance Project Manager (CPM) within 180 days of the start of construction, and specify that the funds would be used for the area affected by the SES Solar Two Project. The project owner shall provide documentation to the CPM that the funds have been paid to the satisfaction of the BLM.* (Draft EIS, p.C.13-45)

F1-14

NPS concurs that funds should be provided by the applicant as mitigation to offset the project's visual impacts if earmarked for a wide range of improvements to the Anza NHT, as outlined in the mitigation section at the end of this letter. The key question and concern to the NPS is the amount of the mitigation fund. A guiding principle for determining the value of mitigation is that there must be a nexus to the impact, and it should be roughly proportional to the impact. Consistent with this, the EIS says "The amount and payment of funds will be determined by the two agencies commensurate with the loss [of] scenic integrity of the Anza Trail experience." NPS has consulted internally and with BLM staff regarding how such a loss of scenic integrity would be valued. One method discussed with BLM would be to determine the cost of purchasing a conservation easement to protect a viewshed equivalent in scale to the area degraded by the project. An appraisal by a land trust or other conservation organization experienced with conservation easements might provide a reasonable valuation. Another possible methodology would utilize surveys and focus groups to quantify the long term loss in value to visitors of the area. This is similar to the approach used for damage assessments to quantify the value of deliberate or accidental destruction of natural resources. NPS would like to work with the Bureau and the applicant to determine the appropriate methodology for quantifying the value of the mitigation fund.

F1-14

Mitigation Proposed by NPS

The following is a suite of potential mitigation measures proposed by NPS to offset the project's various impacts to the integrity of the Anza NHT if indeed this project is authorized. Implementation of these mitigation measures would provide enhancements to the Anza NHT in the vicinity of the project site through improved interpretation and recreation resources. We recommend that the final mitigation measures be identified through a comprehensive Interpretive Plan for the area. NPS has had preliminary discussions with BLM staff regarding these proposed mitigation measures. Should this project be approved, the NPS realizes that more in-depth discussions with the Bureau and the project applicant are needed before finalizing these measures. F1-16

Interpretive Plan for Anza NHT within El Centro Field Office Territory

We recommend that the NPS (or BLM in consultation with NPS) prepare an Interpretive Plan for the Anza NHT in western Imperial and San Diego Counties. The plan would identify the existing interpretive sites in the area and make specific recommendations for expanding the

interpretation of the Anza Trail in the area. The mitigation measures below are some specific ideas that might be included in the plan's recommendations.

New Interpretive Facilities

Design, fabricate, and install new interpretive facilities throughout the area, including:

1. *Installation of Yuha Well wayside exhibit*. The BLM has designed an interpretive panel for Yuha Well, but doesn't have the resources to construct and install a permanent kiosk for the panel. Due to the significance of Yuha Well as a critical Anza campsite location, and the more modern historical resources that are extant at the site, installation of a permanent interpretive exhibit is a considered a top priority.
2. *Additional Interpretation at Anza Overlook*. The Anza Overlook, located along the Anza Recreational Trail near Highway 98, contains a large stone monument and plaque placed by BLM in 1990. The site, which is also near a designated camping area and the Yuha Geoglyphs, affords spectacular views of the Yuha Desert. Additional interpretive exhibits at this location, or at the existing kiosk near the Highway 98 turnoff for the Overlook & Anza Recreational Trail (dirt road EC-274), would connect with many visitors to the area and provide more insight to the story of the Anza expedition.
3. *Install Interpretive exhibit at Plaster City OHV Staging Area*. The Plaster City OHV area is a busy off road vehicle area with over 20,000 vehicles per year. The Plaster City OHV staging area is located just west of Plaster City off Evan Hewes Highway. Installation of an interpretive facility at this location would connect with the many OHV visitors to the area and provide more insight to the story of the Anza expedition. The historic Anza expedition Campsite #48 is within the OHV area, and is identified as an interpretive site in the Anza NHT management plan.
4. *Supplement exhibit at Sunbeam Rest Area on I-8*. The Sunbeam Rest Area, located between Forrester & Drew Roads, six miles west of El Centro, was recently renovated by Caltrans. New interpretive panels at the rest area mention the Anza expedition in the context of other early Spanish explorers. The rest area also contains a State historic monument with misleading text that refers to the rest area as the site of Yuha Well. There may be an opportunity to provide supplemental information about the Anza Expedition at the rest area and to correct the record and reach the many visitors who use the facility. F1-16

Museum Exhibit

Install an Anza-themed exhibit at a local museum. The recently constructed Imperial Valley College Desert Museum in the town of Ocotillo sits vacant due to the college's lack of funds to install exhibits and to staff the museum. The BLM-El Centro Field Office has a collection of Native American artifacts that need to be properly archived, and this museum was planned as a repository for the collection. Due to its proximity to the project site, the vacant museum building would be a good venue to provide interpretation of the Anza expedition in addition to the original subjects planned for the museum, archaeology and natural resources. The town of Ocotillo is the southwestern access point off Interstate 8 for the Anza-Borrego State Park and the Yuha Desert, and is a good location to connect with visitors and increase tourism to these areas. Additional subjects at the museum could include solar energy technology, the Jacumba Mountains Wilderness and Anza-Borrego State Park. An alternative museum for interpretation of the Anza NHT could be the Imperial Valley Pioneer Museum in Imperial, CA.

Anza NHT Interpretive Brochure

Prepare an interpretive brochure specific to western Imperial and San Diego Counties which describes the Anza Trail and the expeditions' experience through the area.

Increase Accessibility of BLM's Yuha Desert Cultural History Audio Tour

In 2010 the BLM completed an excellent audio tour of the Yuha Desert that interprets the Anza expedition and other cultural history. It discusses Yuha Well, the Anza Overlook, as well as the

nearby Geoglyphs. The audio tour is on the BLM website as a downloadable podcast (http://www.blm.gov/ca/st/en/fo/elcentro/arch_cult/yuha_pc.html) and on CDs distributed from BLM's El Centro office in early 2010. The BLM's audio tour of the Yuha Desert could be made more accessible to visitors to the desert by implementing a phone-in tour or by broadcasting it via low-power radio. Visitors would be notified of the tour through signage at the interpretive sites. The audio tour could also be expanded to discuss other important resources or subjects in the area, such as San Sebastian Marsh, Native American tribes, and even modern uses of the desert, such as the solar project.

Re-evaluate and Complete the Anza Recreational Trail

The Anza Recreational Trail currently extends south of the project site from I-8 and Dunaway Road toward the Anza Overlook, and north of the project site from Plaster City along the U.S. Gypsum rail line. The Recreational Trail connecting these two points was intended to be routed immediately adjacent to the project site via the Dunaway Road I-8 overpass. Due to the project's noise and visual impacts to the Anza Recreational Trail, the trail's existing and planned alignment in the vicinity of the site would need to be re-evaluated. An alternative alignment to more distant and/or shielded terrain should be implemented if it would substantially improve the recreational experience on the trail by minimizing impacts from the proposed project and other cumulative impacts. If the relocated trail route were to cross private property, access easements would need to be obtained. The cost of acquiring such easements could be a mitigation measure required of the project applicant.

F1-16

Historic Campsite Surveys

Fund archaeological studies of the Anza Expedition campsites. The historic campsites #47 (Yuha Well) and #48 (north of Plaster City near Coyote Wash), are south and north of the project site, and have not had formal archaeological studies to identify historic artifacts left by the Anza expedition. It should be noted that previous archaeological studies of campsite #49, (San Sebastian Marsh) have identified Spanish artifacts. The trail's management plan calls for NPS to survey campsite locations and prepare record forms for listing on the National Register of Historic Places.

Trail-wide Mitigation Fund

Contribute a fee (amount to be determined) to a mitigation fund for trail-wide projects (in addition to those listed above, and not tied to immediate vicinity of project site), that the Superintendent of the Anza NHT would have discretion to allocate for high priority projects anywhere along the Anza NHT.

As stated above, the mitigation outlined above are conceptual in nature and are intended to facilitate discussions with the Bureau and project applicant. Should this project be approved, the final mitigation measures should be more carefully evaluated in the context of a comprehensive Interpretive Plan for the Anza NHT in area. Feel free to contact Naomi Torres, Superintendent for the Anza NHT (Naomi_torres@nps.gov, 510-817-1438), or Steven Ross (steven_ross@nps.gov, 510- 817-1400) Outdoor Recreation Planner, to discuss this letter.

As the DEIS recognizes, the Juan Bautista de Anza National Historic Trail "bisects the western portion of both proposed phases of the project site". DEIS at C.13-5. While the DEIS goes onto state that "the portion of the trail located within the project site is not marked or open for travel, as it is within the Yuha Desert ACEC". DEIS at C.13-5. This last statement is confusing at best and appears to be inaccurate. The map from the Juan Bautista de Anza National Historic Trail clearly shows the trail going through the project site.[1] Additionally, BLM's own route designation maps from the Western Colorado Routes of Travel Designation Plan also show that route as an open route on the proposed project site.[2] The designated route is also accessible by a number of other designated routes that currently occur on the proposed project site, yet the DEIS fails to analyze any alternative routes that might be adopted if these routes are blocked by the proposed project or the impact of such routes on rare species and other resources if the propose project moves forward. O2-8

Moreover, additional evaluation is needed to understand the cumulative impacts on recreational resources, specifically the Juan Bautista de Anza National Historic Trail, see National Park Service comments dated May 4, 2010 on the Proposed Imperial Valley Solar Project Draft EIS, pg. 3. A comprehensive cumulative impacts analysis including the evaluation of such information strengthens this document including associated mitigation measures and contributes to more informed decision-making. O4-10

The Juan Bautista de Anza National Historic T (Anza NHT) is only one of nineteen National Historic Trails in the United States. It was established by an Act of Congress in 1990 to commemorate the 1775-1776 Anza Expedition. National Historic Trails are established to preserve our culture and heritage that is associated with the history of the trail. The Anza NHT constitutes a heritage corridor that depends its setting to create the visitor experience. The viewshed and the landscape are intertwined. with the story of the expedition. The Yuha Desert is one of the few remaining pristine sites along the entire 1200 mile Anza NHT that allows the visitor to connect the landscape with the culture and heritage of the expedition and to relive the experience of the expedition. O5-1

corridor. The visual impact will destroys the viewshed for miles. The constant noise will make it impossible for the visitor to envision the experience of expedition members. The destruction of the night sky will prevent the visitor to experience the setting. O5-2

It would be irresponsible and unconscionable to allow this industrial plant to be placed directly on top of the Anza NHT in one of the most significant areas along the trail between two important campsites of the expedition. There is simply no mitigation that could adequately and completely compensate for the loss to the Anza NHT and the public. The project should not be approved or should not be approved for this area. It should be required to be moved at least ten miles from this highly significant pristine area of the trail corridor. Industrial projects with such substantial and permanent impacts should be located in areas already disturbed. Offsite mitigation is unacceptable as compensation for a loss of this magnitude. Mitigation should include among other items, the rerouting of the trail, purchase of easements for that purpose, surveys of the entire El Centro region to clearly identify and establish the trail route and to prevent other such industrial plants from being placed on the trail. O5-3

NEPA "is our basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). The purpose of NEPA is "to help public officials make decisions that are based on an understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." *Id.* § 1500.1(c). NEPA's "procedures . . . insure that environmental information" of "high quality" is O6-3

"available to public officials and citizens before decisions are made and before actions are taken." *Id.* § 1500.1(b). This is because "[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA." *Id.* "[B]y requiring agencies to take a 'hard look' at how the choices before them affect the environment, and then to place their data and conclusions before the public, NEPA relies upon democratic processes to ensure . . . that 'the most intelligent, optimally beneficial decision will ultimately be made.'" *Oregon Natural Desert Ass'n v. Bureau of Land Mgmt.*, 531 F.3d 1114 (9th Cir. 2008) (internal citations omitted). CEQA is similarly intended to "[i]nform governmental decision makers and the public about the potential, significant environmental effects of proposed activities." CEQA Guidelines [14 C.C.R.; "Guidelines"] § 15002(a); *No Oil, Inc. v. City of Los Angeles,* 13 Cal.3d 68, 86 (1974). The Guidelines emphasize that agencies "must use [their] best efforts to find out and disclose all that [they] reasonably can." Guidelines § 15144. O6-3

In violation of these fundamental precepts, the SA/DEIS fails to include a number of critically important studies whose inclusion is necessary for both the public and CEC/BLM to fully understand the environmental consequences of the Project. For example, many viewpoint simulations were omitted "due to fast-track time constraints," so the public has no idea of the actual visual impacts of the Project on the Juan Bautista de Anza National Historic Trail ("Anza NHT"). SA/DEIS, p. C.13-18. As discussed more fully in the following section, nearly *every* section of the SA/DEIS mentions an omitted study.

Because the SA/DEIS fails to include critical studies and information necessary to fully understand the impacts that the Project will have, it violates both CEQA and NEPA.

The area now provides scenic views while driving along Highway 8, in a historic area of the Anza Trail. If this historic route is to be maintained, the viewshed should not be compromised by large-scale developments. O7-5

This historic value cannot be mitigated. We would much rather have a trail corridor with interpretive displays in this desert, than a scraped and industrialized projects. O7-5

A. JUAN BAUTISTA DE ANZA TRAIL CORRIDOR

The proposed Project wholly obstructs one of the most undisturbed portions of the Juan Bautista de Anza National Trail administered by the National Park Service. The National Park Service bluntly declared that they would prefer that the Project not be approved due to the severity of the Project's impacts on cultural resources, and in particular this National Trail. The DEIS recognizes that the Anza party most likely camped on the Project site during the first overland route between "New Spain" and San Francisco. There will be significant impacts to the National Trail and viewshed from the proposed Project. Furthermore, the access to this section of the trail will be completely eliminated and the camping and exploration along the section of the National Trail on the Project site will not be possible once the Project is constructed. This is a significant adverse impact that is completely unmitigated. The DEIS must study an alternative that eliminates SunCatcher units and Project infrastructure from the National Trail corridor designated by Congress. O9-51

Dear Jim,

I would like to comment on the proposed Stirling Energy Systems Solar Project.

I live and work near the Anza trail in Carpinteria, California.

I don't think the solar project should be built on the Anza trail corridor.

If it is built on the trail corridor, mitigation should be required to minimize impacts to the night sky from lights and reflections. Mitigation should also take the form of money to be paid to realign the recreational Anza trail away from the noisy motors. Mitigation should also take the form of monetary payments to the National Park Service and to The Anza Trail Foundation so that they can improve the visitor-serving amenities and interpretive facilities for the Anza trail. P5-1

Thank you for considering my comments as part of the public record.

Sincerely,

Gregory Gandrud
Carpinteria, CA

The *cultural resources* include indications of historic (and pre-historic) trails and paths, and signs of historic trails or routes. Since the Anza expedition utilized Native American guides, and since the trails on many of the segments of the Anza trail were also Native American trails that were used for many hundreds - if not thousands - of years, the final EIS should report on results from studies that use tools and techniques (in conjunction with the historic diaries and maps from the Anza expedition) to more accurately and precisely locate the historic route of the Anza trail within the NHT corridor. **Trails that have been used over many years might be detected from soil compactness or via remote sensing techniques** such as an examination of existing images from satellites possessing infrared (IR) filters. This might allow the trail's possible preservation while utilizing the surrounding areas for activities such as solar power production. **This is my first suggestion on the DEIS and it relates to its Cultural Resources section. Specifically, the text at pages C.2-47, C.2-113, and C.2-132 should be edited to reflect a stronger commitment to identifying the trail** beyond our understanding of it at the time of its Federal recognition (a decade ago). With this improved and refined knowledge, it should be preserved to the greatest extent possible. It is a reasonable mitigation to ask of the applicant, BLM and NPS to identify and preserve the route of the Anza expedition using the most modern tools, techniques and analysis currently available. **P12-3**

The **Cultural Resources section of the EIS and/or its appendices should also include the December 12th and 13th, 1775 diary entries** of Father Pedro Font and Captain Juan Bautista de Anza, because they provide information about the cultural significance of the proposed site of the project and they help to locate the route of the expedition through it. Translations of these entries are published in print and on-line and can be obtained by consultation with the NPS JUBA NHT office in Oakland, CA. **P12-4**

Anza expedition historic campsite #49 is the San Sebastian Marsh (near the Anza Borrego Desert State Park). It relates to the interpretation of the previously described historic campsites, because the 240 men, women and children of the 1775-1776 Anza expedition, together with over 1000 head of livestock, made it from Yuha Wells to San Sebastian without water in between. The trek was made across the lands of what is today the proposed solar

project. It was the most critical and dangerous segments of the 1,400 mile journey. In addition to these three campsites (47-49), there is also an Anza overlook marker/monument site (coordinates UTM: 602921 E, 3618052 N; Lat/Long: 32 degrees 41' 43.50" N, 115 degrees 54' 07.32" W). Though not officially on the NHT or corridor, it affords a unique overview and vantage point of the route of the Anza expedition looking approximately north. One should add that there are Native American geoglyphs quite near this site. Campsites 47-49 are visible from the monument. It is an easy-to-access recreational spot that is enjoyed near the driving and recreation route of the JUBA NHT.

With the above description and background in mind, I would like to bring to your attention the **Visual Resources section** of the DEIS. I refer to:

- CEC-700-2010-002-SA-DEIS Visual Resouces Fig. 2
- 2010-01-22_Juan_Bautista_de_Anza_National_Historic_Trail_Visual_Impact_Analysis_TN-55011-3
- 2010-04-28_Applicant_Glint_and_Glare_Study_TN-56457.

P12-4

The Key Observation Points (KOPs) in the DEIS are different than in those in the other studies posted at the CEC web-site. The numbers are the same, but the locations are different in these three documents. In addition, there were errors in those studies that I pointed out to the applicant and the BLM that are being remedied and corrected for the sake of accuracy. **The results of these studies should be captured and reiterated in the final EIS. Some effort should be made in the final EIS to correctly identify those KOPs with significance to JUBA NHT-related sites. The document should employ a consistent KOP numbering system and/or employ a table that describes (with Lat./Long.) the locations and significance of all the KOPs in the three documents.** A map should be included that clearly identifies the current understanding of the route/corridor of the JUBA NHT, Anza campsite locations, JUBA NHT-related sites, together with the proposed project footprint, roads and all KOPs that have been studied to date. This should be updated as new KOPS are studied. For example, **I strongly recommend that the Anza Monument and Overlook site mentioned above be studied as a KOP and reported on in the EIS with regard to Visual Resources** and impacts**.**

Furthermore, the 2010-04-28 Applicant Glint and Glare Study states,"*Glint may be visible to KOPs 1-6 and motorists, depending on time of day. KOPs facing northwest or west may experience glint during morning hours and KOPs facing east or northeast may experience glint during evening hours. Simulation review determined a 20-foot fence to be of minimal benefit...*"

My experience as an optics design engineer suggests that **only an experimental analysis of the project site using small test mirrors viewed from the vantage point of the JUBA NHT-related KOP sites can determine the extent of <u>cumulative</u> glint and glare from all SunCatchers™/trackers. This should be addressed in some way in the Visual Resources section.** I have strong concerns that the modeling for visual impact has taken into account a diffuse reflectance and object outline rather than the true specular nature of the dish mirror surface surface at the angles involved in the lines of sight at NHT-relevant KOPs. I also have serious concerns that a modeling study may not pick up all the subtle optical aspects that a more empirical approach would take. While the plots at the back of that study show the time of day and direction for the glint, the analysis does not represent the extent (and area) that the viewer will see from these sites. They do not address the *solid angle* for the effects. In other words, the vast expanse of desert that relates to the Anza NHT-related interpretation and recreation at these

P12-5

sites will be filled with the glint and/or glare specified in the report, as well as the objects (e.g. trackers) themselves. Additional questions related to the JUBA NHT include:

- What is the solid angle involved (in steradians) at nearby Anza campsites and at the Anza overlook monument (coordinates given above) from the sum total of the SunCatchers? If it is discontinuous, describe this aspect and,
- What are the quantitative luminance estimates from the SunCatchers at these sites given the cumulative and additive effects of the planned number of SunCatchers at the proposed project site?

P12-5

Response: The Juan Batista de Anza National Historic Trail (Anza Trail) corridor is on and near the Imperial Solar (IVS) project site. Although a corridor (not a trail) for the Juan Bautista de Anza National Historic Trail (Anza Trail) is designated within the boundary of the IVS project site, that corridor alignment it is currently not marked on the project site with Trail signage. The public currently has access to the IVS project site via designated BLM roads.

As of June 2010, no physical evidence for the presence of the Anza Trail or campsite within the IVS project site has been observed. There is ongoing analysis of using remote sensing imagery to try to determine if the Anza Trail is on the IVS project site.

Visitors walking, hiking, or biking on the Anza Trail will hear noise associated with the construction and operation of the IVS project and the other Build Alternatives. However, because these trail users would be transient (traveling through the area) and are already exposed to noise sources such as traffic noise on Interstate 8 (I-8) and other nearby roads, the exposure to IVS project related noise is not expected to substantively affect their visitor experiences. In addition, because much of the inferred trail corridor alignment is this area is on local roads, drivers traveling on the trail would also be transient and would not be expected to be sensitive to noise associated with the construction and operation of the IVS project and the other Build Alternatives. In summary, because the trail visitors would be transient and would be exposed to the IVS project noise for only limited periods of time, the BLM does not believe that it is not necessary to conduct additional noise analysis or noise contour maps at the inferred alignment of the Anza Trail corridor in the project area.

The BLM has determined the IVS project and the other Build Alternatives will have an adverse effect on historic properties. Impacts to the Anza Trail corridor would be substantial. Measures to address project impacts to the Anza Trail are provided in Section 4.5, Cultural Resources, in the FEIS, and the draft Programmatic Agreement (PA) included as Appendix G in the FEIS.

Diary entries authored by Father Pedro Font and Captain Juan Bautista de Anza are included in Section 3.5, Cultural Resources in the FEIS.

Visual impacts to the Yuha Geoglyphs south of the IVS project site would be adverse. However, that impact would not be substantial due to the greater distance between that resource and the IVS project site. Project mitigation will require that all exterior lighting be designed so that lamps and reflectors are not visible from beyond the IVS project site boundary, lighting does not cause excessive reflected glare, direct lighting does not illuminate the nighttime sky except for required Federal Aviation Administration (FAA) aircraft safety lighting, and illumination of the IVS project site and the immediate vicinity is minimized.

D.4.9.6 Mitigation and the Programmatic Agreement

Comments: F2-35, NA1-7, NA1-12, NA1-13, NA1-20, and O9-49.

Cultural Resources and Coordination with Tribal Governments

Due to the extremely high frequency of identified cultural resources on or adjacent to the proposed Project site, the Project could have adverse effects on a presently unknown subset of approximately 328 known prehistoric and historical surface archaeological resources (at pg. ES-24). Impacts on an unknown number of buried archaeological deposits may also result, many of which may be determined historically significant (i.e., eligible for the National Register of Historic Places and the California Register of Historical Resources) (at pg. C.2-1). According to the DEIS, BLM has initiated consultation under Section 106 of the National Historic Preservation Act (NHPA) (at pg. C.2-1). The DEIS indicates that CUL-1 would resolve effects under Section 106 of NHPA on known and newly found cultural resources (at pg. C.2-145). F2-35

Recommendations:

- Given the magnitude of potential impacts to cultural and historic resources, we recommend that the FEIS include a more detailed discussion of mitigation measures and design guidelines to avoid, minimize and compensate for adverse impacts. We recommend that these measures be adopted in the Record of Decision (ROD).
- Include in the FEIS the completed Section 106 Programmatic Agreement and mitigation plans. Alternatively, discuss the process and timeline for completing the Section 106 consultation process.

C. The Cultural Resource Evaluation Has Occurred Without Required Government-to-Government Consultation with the Quechan Tribe.

BLM has not engaged in government-to-government consultation with the Tribe regarding the impacts of this project on cultural resources. Nor has the Tribe received any of the reports that identify cultural resources within the Project Area. Thus, at this time, the Tribe's (and other stakeholders) ability to comment on the impacts to cultural resources is impaired by lack of information.

The NHPA requires ongoing consultation with interested Indian tribes throughout the identification and evaluation of cultural resources and the resolution of adverse effects. 36 C.F.R. § 800.3(f)(2); 800.4(a)(4); 800.5(c)(2)(iii); 800.6(a); 800.6(b)(2), etc. Here, pursuant to the Draft Programmatic Agreement, all evaluation and resolution of effects will occur after the decision has been made. The Draft Programmatic Agreement fails to provide for the full level of tribal consultation required by 36 C.F.R. Part 800.

There are several federal laws that mandate ongoing consultation with Indian tribes where federally approved actions will affect tribal interests. *See* Executive Order 12875, Tribal Governance (Oct. 26, 1993) (the federal government must consult with Indian tribal governments on matters that significantly or uniquely affect tribal governments); Executive Order 12898, Environmental Justice (Feb. 11, 1994) (federal government must consult with tribal leaders on steps to ensure environmental justice requirements); Executive Order No. 13007, Sacred Sites (May 24, 1996) (federal government is obligated to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, avoid adversely impacting the physical integrity of sites, and facilitate the identification of sacred sites by tribes); Executive Order No. 13084, Consultation and Coordination with Indian Tribal Governments (May 14, 1998) (places burden on federal government to obtain timely and meaningful input from tribes on matters that significantly or uniquely affect tribal communities); Executive Order 13175, Consultation with Indian Tribal Governments (Nov. 6, 2000) (the federal government shall seek to establish regular and meaningful consultation with tribes in the development of federal policies affecting tribes). NA1-7

The Tribe has identified certain statements in the DEIS that may be inaccurate and that would benefit from consultation with the Tribe. For example, pages C.2-110 and 111 contain a discussion of the Yuha Basin Discontiguous District. According to the Tribe, it is likely that the sites within the project area are directly related to those within the Yuha area. However, due to the lack of consultation or the provision of cultural reports or maps, it is not possible to provide additional meaningful comments on this topic at this time.

To date, BLM has failed to fulfill its obligation to consult on a government-to-government basis with the Quechan Tribe. BLM must fulfill this obligation prior to issuance of the ROD. Also, the Draft PA should be amended to require ongoing consultation with the Tribe, and tribal monitoring, if the development process goes forward.

Consultation under state law may also be required pursuant to California Government Code § 65562.5, because the project land is currently designated as open space under Imperial County zoning. Section 65562.5 requires local governments to consult with tribes "for the purpose of developing treatment with appropriate dignity of the place, feature, or object in any corresponding management plan." This section suggests that consultation may be required when development is proposed to occur in open space lands containing cultural resources of significance to tribes. NA1-7

E. The DEIS Relies On A Programmatic Agreement That Fails to Provide Mitigation for Cultural Resources and That Fails to Comply With the Requirements of the National Historic Preservation Act and the Advisory Council Regulations.

The DEIS proposes one condition of certification relating to cultural resource protection, which would require the applicant to abide by the terms of a not-yet-completed programmatic agreement. The Tribe has filed a separate comment letter, dated May 4, 2010, which details how the use of a programmatic agreement in this proceeding is inappropriate. The Tribe's letter (which is attached hereto as Exhibit A and incorporated in these comments by reference) argues that BLM is improperly deferring the required Section 106 process until after its decision on the right-of-way is made, and that the current draft of the programmatic agreement fails to provide sufficient mitigation. The draft programmatic agreement, page 3, states that BLM will incorporate the mitigation measures and performance standards from the Staff Assessment/Draft EIS. The only "mitigation" for cultural resources provided in the Draft EIS is a reference back to the programmatic agreement. In other words, the programmatic agreement and DEIS simply cross-reference each other, but neither document provides for mitigation. NA1-12

F. The Inadequate Cultural Resource Identification, Evaluation, and Mitigation Efforts Also Violate California Law.

CEQA requires development of appropriate mitigation measures. "Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way." CEQA Guidelines, § 15126.4(a). The DEIS fails to development appropriate mitigation measures relating to cultural resources. The only mitigation referenced is the Draft PA, which as discussed above, does not contain any actual mitigation measures or performance standards.

NA1-13

California law also favors the preservation of cultural resources in place and the avoidance of impacts to such resources. Appendix K to the CEQA Guidelines states that "public agencies should seek to avoid damaging effects on an archaeological resource whenever feasible." The commentary on Appendix K states that "an important principle in this appendix is the emphasis on avoidance of archaeological sites. . . where the proposed project includes a potential impact on a site, avoidance is suggested as a preferred mitigation measure where all other factors are equal." Here, hundreds of resources will be directly or indirectly impacted. Yet, the rush to issue certification and approve the right-of-way forecloses a meaningful opportunity to design the project in a way that will avoid resources or to consider whether an alternative location should be selected.

Re: Comments on Draft Programmatic Agreement regarding Tessera Solar Imperial Valley Solar Project (formerly Solar Two)

Dear Ms. Simmons:

The Quechan Indian Tribe submits the following comments on the Draft Programmatic Agreement Regarding the Tessera Solar – Imperial Valley Solar Project ("Draft PA"). In summary, the Tribe believes that the Draft PA is inconsistent with the National Historic Preservation Act (NHPA) Section 106 process, and not adequate to evaluate and mitigate effects on cultural resources in and around the project area. The Draft PA defers a substantial majority of the Section 106 process, including all evaluation, treatment, and mitigation until after BLM has granted the right-of-way to the applicant. BLM has failed to adequately explain why a PA is necessary or appropriate here. The only apparent basis for deferring the evaluation of cultural resources, and development of an appropriate treatment plan, until after approval of the right-of-way is the artificial timeline imposed by the applicant.

I. The Draft PA Is Inconsistent With Section 106 of the NHPA. NA1-20

Section 106 of the National Historic Preservation Act, 16 U.S.C. § 470f, requires that BLM "shall, *prior to the approval* of the expenditure of any Federal funds on the undertaking or *prior to the issuance of any license*, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register." (emphasis added). Only "nondestructive project planning activities may be completed before completing compliance with Section 106." 36 C.F.R. § 800.1(c). Similar to NEPA, the NHPA is designed to ensure that federal decision-makers thoroughly evaluate the impacts of their proposed actions on NHPA-eligible resources *prior to* taking action.

Prior to the approval of a federal undertaking, the federal agency must engage in a four-part process. First, the agency must identify the "historic properties" within the area of potential effects. 36 C.F.R. § 800.4. Second, the agency must evaluate the potential effects that the undertaking may have on historic properties. 36 C.F.R. § 800.5. Third, the agency must resolve the adverse effects through development of mitigation measures. 36 C.F.R. § 800.6. Fourth,

throughout all of these processes, BLM must consult with interested Indian tribes that might attach religious and cultural significance to properties within the area of potential effects. 36 C.F.R. §§ 800.3(f)(2); 800.4(a)(4); 800.5(c)(2)(iii); 800.6(a); 800.6(b)(2), etc.

Instead of completing this required process, BLM is opting to use a programmatic agreement to defer evaluation, mitigation, and treatment until after approval of the right-of-way. 36 C.F.R. § 800.14(b) authorizes the Advisory Council and the agency to negotiate programmatic agreements to govern programs, complex project situations, or multiple undertakings. 36 C.F.R. § 800.14(b)(1) specifies the circumstances under which a programmatic agreement may be used. None of those circumstances exist in this case. Nor does the Draft PA identify any element of 36 C.F.R. § 800.14(b)(1) that justifies the use of a PA here.

There is no reasonable basis to depart from the standard Section 106 process. There is no valid reason why the effects on historic properties cannot be fully determined prior to approval of this undertaking. The only apparent reason why BLM is choosing to use a programmatic agreement is to allow the applicant to obtain its right-of-way approval before the end of the calendar year, in an effort to qualify for federal funding. *See* Draft PA, p. 5. Absent this arbitrary deadline being imposed by the applicant, there is no reason to believe that BLM could not complete the standard Section 106 process before it makes its decision on right-of-way issuance.

To the extent that the Advisory Council regulations authorize the deferral of the Section 106 process until after approval of the undertaking, those regulations are inconsistent with the plain language of 16 U.S.C. § 470f and invalid. The statute is clear that the agency must consider the effect of its undertaking on historic properties prior to approval. *See Corridor H Alternatives, Inc., v. Slater*, 166 F.3d 368 (D.C. Cir. 1999) (rejecting agency's use of PA to defer Section 106 process until after issuance of ROD); *City of Alexandria v. Slater*, 198 F.3d 862 (D.C. Cir. 1999) (approving PA where agency only deferred identification of sites that might be impacted by small number of ancillary activities, and distinguishing from case where the entire Section 106 process is deferred). While the Advisory Council has discretion to determine how the effects on historic properties are evaluated, it does not have authority to permit the approval of undertakings prior to the completion of that evaluation. *Chevron v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984) (ruling that the judiciary must reject administrative interpretations that are contrary to clear congressional intent). NA1-20

In summary, this is not an appropriate case for use of a programmatic agreement. This case involves a straightforward proposal to issue a right-of-way on BLM lands for a single solar development project. There is no "program" at issue, no significant complexity, and no reason why the standard identification, evaluation, and resolution process cannot occur prior to approval of the undertaking. BLM must complete the cultural resource evaluation required by Section 106 prior to approving the right-of-way for this project.

II. BLM Has Not Fulfilled Its Government-to-Government or Section 106 Tribal Consultation Obligations.

The NHPA and the Advisory Council regulations contain detailed requirements for consultation with Indian tribes who attach religious and/or cultural significance to historic properties that may be affected by an undertaking. *See* NHPA, Section 101(d)(6)(B). This

consultation obligation applies "regardless of the location of the historic property." 36 C.F.R. § 800.2(c)(2)(ii). "The agency official shall ensure that consultation in the section 106 process provides the Indian tribe . . . a reasonable opportunity to identify its concerns about historic properties, including those of religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects." 36 C.F.R. § 800.2(c)(2)(ii)(A). "Consultation should commence early in the planning process, in order to identify and discuss relevant preservation issues and resolve concerns about the confidentiality of information on historic properties." *Id.*

There are also several federal laws that mandate ongoing government-to-government consultation with Indian tribes where federally approved actions will affect tribal interests. *See* Executive Order 12875, Tribal Governance (Oct. 26, 1993) (the federal government must consult with Indian tribal governments on matters that significantly or uniquely affect tribal governments); Executive Order 12898, Environmental Justice (Feb. 11, 1994) (federal government must consult with tribal leaders on steps to ensure environmental justice requirements); Executive Order No. 13007, Sacred Sites (May 24, 1996) (federal government is obligated to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, avoid adversely impacting the physical integrity of sites, and facilitate the identification of sacred sites by tribes); Executive Order No. 13084, Consultation and Coordination with Indian Tribal Governments (May 14, 1998) (places burden on federal government to obtain timely and meaningful input from tribes on matters that significantly or uniquely affect tribal communities); Executive Order 13175, Consultation with Indian Tribal Governments (Nov. 6, 2000) (the federal government shall seek to establish regular and meaningful consultation with tribes in the development of federal policies affecting tribes). **NA1-20**

The Advisory Council regulations make it clear that consultation with interested tribes is to occur throughout the entire Section 106 process. 36 C.F.R. § 800.4(a)(4) requires BLM to consult with interested tribes "to assist in identifying properties, including those off tribal lands, which may be of religious and cultural significance to them and may be eligible for the National Register." 36 C.F.R. § 800.5(a) requires BLM to consult with interested tribes when assessing adverse effects. 36 C.F.R. § 800.6(a) requires BLM to consult with interested tribes when developing and evaluating alternatives that could avoid, minimize, or mitigate adverse effects on historic properties.

Here, BLM has not complied with the tribal consultation regulations. Since BLM is proposing to defer the identification, evaluation, and impact mitigation until after it approves the right-of-way, the Quechan Tribe and other tribes are being deprived of their ability to provide meaningful input prior to BLM's decision. In addition, the Tribe has not yet received a final cultural resources report for this project, further impairing its ability to consult.

The tribal consultation provisions in the Draft PA are also inconsistent with the Advisory Council regulations. Appendix A, Section I(d) of the Draft PA requires BLM to consult with tribes to identify traditional cultural places within the APE. However, this is narrower than the regulations' requirement to consult for the purpose of identifying properties, "which may be of religious and cultural significance." 36 C.F.R. § 800.4(a)(4). Likewise, Appendix A, Section II of the Draft PA requires consultation with tribes in the resource evaluation phase, but only for the purpose of determining whether or not a resource is NRHP-eligible. In contrast, the ACHP

regulations also require consultation with tribes in the assessment of effects to the properties. 36 C.F.R. § 800.5(a). The Draft PA does not provide for this phase of tribal consultation.

Appendix B of the Draft PA requires the applicant to develop a Treatment Plan in consultation only with BLM and other *signatories* to the PA. Thus, if the Tribe does not sign the PA, it loses its right to consult on the resolution of adverse effects required by 36 C.F.R. § 800.6(a). BLM can not condition tribal consultation on execution of a PA that the Tribe objects to. If the Tribe declines to sign the PA, BLM and the applicant must still comply with the tribal consultation provisions in 36 C.F.R. § 800.6(a) and consult with the Tribe in development and implementation of the Treatment Plan. This should be made clear in the PA.

In summary, BLM has failed to comply with its tribal consultation obligations. In addition, the Draft PA does not provide for the level of tribal consultation required by the Advisory Council regulations. At minimum, the Draft PA should be revised to provide for tribal consultation in a manner consistent with 36 C.F.R. Part 800. No work should be authorized until tribal consultation on the evaluation and resolution of effects is completed

III. Specific Comments on Draft PA

As noted above, the Tribe believes that use of a programmatic agreement in this case violates both the letter and spirit of the NHPA by deferring evaluation and resolution of effects until after approval of the undertaking. In addition, the programmatic agreement is woefully inadequate in terms of specifying appropriate mitigation measures. The following are specific comments on the Draft PA: NA1-20

- The Draft PA, page 3, states that BLM will incorporate the mitigation measures and performance standards from the Staff Assessment/Draft EIS ("SA/DEIS") for the SES Solar Two Project. However, the only Condition of Certification contained in the SA/DEIS is that the applicant shall comply with the terms of the programmatic agreement. In other words, the Draft PA and SA/DEIS simply cross-reference each other, but neither document provides any substantive mitigation measures or performance standards.

- The Draft PA, page 6, states that BLM has determined that a "phased (tiered) process for compliance with section 106 of the NHPA is appropriate for the undertaking." BLM fails to explain why a phased approach is appropriate in this case. Even if a phased approach was appropriate, there is no valid reason why BLM should not complete the Section 106 process for at least Phase I of the Project prior to approval of the undertaking. BLM is not just deferring evaluation of effects for Phase II of this Project, but is deferring the entire Section 106 process for all phases until after approval of the undertaking. This is not consistent with NHPA requirements.

- The Draft PA, page 6, asserts that BLM has "comparatively examined the relative effects of the alternatives [in the SA/DEIS] on known historic properties." However, there has not actually been any evaluation of the identified historic properties to date. The DEIS simply assumes that effects on cultural resources can be adequately mitigated through the PA, but the Draft PA lacks any actual mitigation measures or performance standards.

- The Draft PA, page 7, contains a definition of "cultural resource," but then fails to use that definition consistently throughout the document. The term "cultural resource" as defined on page 7 should be incorporated throughout the substantive terms of the agreement.

- The area of potential effects (APE) is coterminous with the project boundary. However, there are many other sensitive areas adjacent to the project area. It may be appropriate to broaden the APE to consider the indirect effects that this project will have on the adjacent areas. Further consultation with the Tribe is necessary on this issue. NA1-20

- Stipulation VI discusses the need to treat Native American burials and related items discovered during implementation of the Agreement in compliance with NAGPRA. The Tribe is aware that cremation sites have been located in the project area, yet the Tribe has not been consulted or provided with specific information about the nature or extent of these cremation sites. The Tribe is very concerned with a ROD being issued until full identification and evaluation of cremation sites in compliance with NHPA and NAGPRA takes place.

- Stipulation VIII, on page 10, states that BLM will ensure preparation and distribution of a report to consulting parties that documents the results of implementing the evaluation and treatment plan efforts referenced in Stipulations III and IV. This report will be circulated within 18 months after all fieldwork required by Stipulations III "or" IV is complete. This stipulation should be modified to require the preparation of two reports; one that addresses evaluation of resources and a second that addresses treatment. The first report, which would document evaluation efforts, should be subject to comments of consulting parties and other interested Indian tribes prior to preparation of a treatment plan. The evaluation report would help inform development of the treatment plan. There should be consultation throughout the evaluation process, and throughout the development and implementation of the treatment plan.

- Stipulation IX authorizes BLM to commence "construction activities such as grading, buildings, and installation of Sun Catchers" prior to completion of the evaluation of resources and the development and implementation of a treatment plan. The Tribe objects to this as inconsistent with the requirements of the NHPA. BLM should not authorize any construction until the evaluation of resources, and development of a treatment plan, occurs.

- Stipulation XI discusses dispute resolution in the event there is disagreement about how the terms of the PA are being implemented. BLM's authority to revoke its right-of-way, or to impose additional conditions on the project for failure to comply with the PA, should be made clear in this section. If BLM proceeds with the PA, and defers the Section 106 process until after it issues the right-of-way, it must also retain the authority to revoke or condition the project in the event that the applicant violates the PA. The Draft PA does not contain clear language that ensures BLM will have authority to meaningfully enforce the terms of the Agreement.

- Stipulation XII discusses termination of the Agreement, but fails to clearly state that if the agreement is terminated, then the applicant must stop work on the project. Again, BLM is deferring the Section 106 process through the proposed agreement. Compliance with mitigation measures developed through the Section 106 process should be an express condition of the right-of-way approval. In other words, it should be clear both in the PA and in the ROD that termination of the PA, or other failure to comply with prescribed mitigation measures, means that work must stop pending full compliance with any unfulfilled obligations under the NHPA.

- Stipulation XIV is unclear. Section (a) states that the PA will expire if the undertaking or the Stipulations have not been performed within five years. "At such time," says the PA, the BLM shall either execute an MOA or request comments from the ACHP. Does this mean that the PA will change into an MOA at the end of the five year period? If the applicant fails to agree to the MOA, does this result in revocation of the right to continue with the undertaking? Section (b) then indicates that the undertaking may proceed even though the PA is terminated. This section should make it clear that, if the PA is terminated, all work must cease until the development of a new PA or MOA. NA1-20

- Stipulation XV(b) states that execution and implementation of the PA is evidence that BLM has afforded the ACHP a reasonable opportunity to comment on the undertaking. However, even if this is true, implementation of the PA is not evidence that BLM has satisfied its consultation obligations to interested Indian tribes.

- Appendix A, Section I(b) states that an inventory report, containing 100% survey of the APE, has been submitted to BLM. The Tribe has not received a copy of that report from BLM, nor has it been consulted as to the contents of that report. This has limited the ability of the Tribe to effectively consult and comment in this process.

- Appendix A, Section I(d) states BLM shall consult with Tribes to identify traditional cultural places, but does not require this consultation to occur prior to issuance of the ROD. BLM is violating Section 106 and the Advisory Council regulations by failing to provide meaningful consultation with the Tribes prior to issuance of the ROD in this proceeding.

- Appendix A, Section II discusses evaluation of historic properties. The Tribe disagrees with the presumption in Section (e) that isolated artifacts may not be considered eligible under the NRHP. The Tribe also disagrees with Section (f), which states that cultural resources that can be "avoided" will not be evaluated. This is inconsistent with the NHPA and the Advisory Council Regulations. BLM must evaluate all of the identified cultural resources for NRHP eligibility. The mere fact that the project footprint will not directly damage a resource does not mean that a resource will not be affected by the development of the project. This is

especially true for resources that have cultural or religious significance to tribes, which can suffer impacts from the presence of adjacent commercial developments. Development activities may affect the cultural setting in which resources lie, even if the project does not directly impact them. Thus, all identified resources should be evaluated for NRHP eligibility. The Section 106 process is intended to inform BLM and the public of how sensitive a project area is. An analysis of how many eligible resources are located on the site should occur before any decision is made to permit the project.

- Appendix B states that the treatment plan will be developed among Signatory Parties. BLM cannot deprive the Tribe of its rights as a consulting party if the Tribe chooses not to be a signatory party. As discussed above, the regulations require consultation with the Tribe in the resolution of adverse effects, and the Draft PA should clarify that such consultation is required. No work should be authorized until resources are evaluated and the HPTP is completed. NA1-20

In conclusion, the Tribe objects to the use of a programmatic agreement in this proceeding. The Section 106 process, and the evaluation of impacts to cultural resources is being arbitrarily rushed to the detriment of tribal input and protection of the resources. To the extent that a programmatic agreement is adopted, the current draft is inadequate and should be revised in accordance with the comments above. We look forward to continue working with BLM as this process continues. Please contact me if you have any questions.

G. THE DEIS FAILS TO MITIGATE IMPACTS TO SIGNIFICANT CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act directs federal agencies to take into account the effects of their actions on historic properties PRIOR TO the issuance of any license. The DEIS informs the public that ALL mitigation will be included in a Programmatic Agreement ("PA") that is to developed in consultation with the Advisory Council, the State Historic Preservation Officer and other consulting parties. The Draft PA that was circulated to the consulting parties rather explicitly provides for the mitigation of effects of the Project on cultural resources to be taken into account -- to the extent they will be -- AFTER issuance of a license for the Imperial Valley Solar Project.

While the Advisory Council's regulations for carrying out consultation pursuant to Section 106 allow for "conducting or authorizing nondestructive project planning activities before completing compliance with section 106,"[137] this may only occur if no decisions are made that would "restrict the subsequent consideration of alternatives to avoid, minimize, or mitigate the undertaking's adverse effects on historic properties."[138] This PA would permit BLM to authorize far more than "nondestructive project planning activities;" the PA would allow the BLM to adopt an alternative and authorize Project development, thus restricting the consideration of all other alternatives. O9-49

The BLM may not move forward with the project prior to taking into account the adverse effects of the project on the cultural resources through the consultation process. To date, the consulting parties have not had any chance at all to develop mitigation for cultural resource impacts, the DEIS fails to propose any mitigation that is reasonably likely to mitigate the project's impacts.

Response: Preliminary mitigation measures are included in the FEIS, and will be adopted in the ROD. A draft PA is included in Appendix G in the FEIS, with execution of the PA expected prior to the publication of the ROD.

The draft PA stipulates ongoing consultation with tribes, including participation in construction monitoring. The draft PA further requires that development and implementation of an Historic Properties Treatment Plan(s) must take place prior to ground-disturbing activities that have the potential to adversely affect historic properties. The PA stipulates treatment measures to be implemented, regardless of which alternative is selected.

D.4.10 Public Health and Safety, and Hazardous Materials

This section responds to comments related to the proposed use and storage of hydrogen on the IVS project site.

Comments: L2-8, O2-29, and O4-5.

7) It is the County's understanding that the 30,000 dishes will utilize a closed-cycle heating/expansion system using Hydrogen gas as the fuel source. It is expected that there will be a significant amount of Hydrogen gas (195 cubic feet per dish, or 5,850,000 cubic feet at build-out), and that each dish will need to replace it's Hydrogen gas twice a year. The Hydrogen gas, which is highly explosive, will be produced, transported, stored, and handled during maintenance and replacement all on-site.

The project description states that there will be a two day supply of Hydrogen gas on-site at any given time. Based on 30,000 dishes that need to have their Hydrogen gas replaced twice a year and assuming that every day of the year the facility staff is replacing Hydrogen gas, a two day supply would be able to cover 164 dishes, at 195 cubic feet per dish the storage tank(s) would need to be able to hold 31,980 cubic feet of Hydrogen gas. The County did not find an analysis of an on-site "worst case" blast scenario and/or a proposed fire protection/emergency response plan to protect IVSP employees and all surrounding sensitive parties and wildlife. **L2-8**

8. Fire Plan

Fire in desert ecosystems is well documented to cause catastrophic landscape scale changes[25] and impacts to the local species[26]. The DEIS mentions the impacts of fire via the proliferation of nonnative weeds (DEIS at C.2-32), it fails to analyze the impacts of fire on adjacent natural desert habitat. The DEIS fails to adequately analyze the impact that an escaped on-site-started fire could have on the natural lands adjacent to the project site if it escaped from the site. The likelihood of fire is of particular concern for this proposal which includes large amounts of flammable hydrogen manufactured and stored on site and piped throughout the site. The DEIS also fails to address the mitigation of this potential impact. Instead it defers it to the Worker Environmental Awareness Program (WEAP) and only requires "a discussion of fire prevention measures to be implemented by workers during project activities" (DEIS at C.2-77). A fire prevention and protection plan needs to be developed and required to prevent the escape of fire onto the adjacent landscape (avoidance), lay out clear guidelines for protocols if the fire does spread to adjacent wildlands (minimization) and a revegetation plan if fire does occur on adjacent lands originating from the project site (mitigation) or caused by any activities associated with construction or operation of the site even if the fire originates off of the project site. **O2-29**

Hydrogen Use: Since the filing of the original AFC several modifications have been made to the plan for hydrogen storage, circulation and use at the site. The original AFC proposed a distributed hydrogen system, with hydrogen bottles on each dish. In a Supplement to the AFC filed in June 2009, the Project was updated to include a centralized hydrogen gas supply, storage and distribution system which is analyzed in the DEIS id D.3-3.

After the release of the DEIS, another supplement was filed by the applicant on May 10, 2010 proposing to increase the amounts of hydrogen piped to each of the "sunflowers" to bring them online every morning. It is our understanding that this increase in volume of hydrogen does not require any additional infrastructure, however, this needs to be clarified in the final EIS. Also, given the possibility of hydrogen leakage and the flammable nature of this gas, the potential impacts of this increase in the volume of hydrogen on site and in use must be acknowledged and analyzed fully.

O4-5

O4-5

Response: As described in Section 2.15 in Appendix B, Determination of NEPA Adequacy, in the FEIS, analysis was conducted assuming a worst case release of all the hydrogen on site. It was assumed that a hydrogen release would form a vapor cloud and detonate causing an unconfined vapor cloud explosion. The distance to an overpressure of 1.0 pounds per square inch (psi) was then determined. That is an overpressure that could cause some damage to structures and injury to exposed members of the general population. The maximum distance to this level of impact was estimated to be 0.13 mile. There are no public receptors at this distance from the project site and in general such overpressures would be confined to the project site depending on the location of the cloud at detonation. It is nearly impossible to detonate hydrogen in an unconfined cloud. Hydrogen also disperses very rapidly due to its low density relative to air. The release scenarios considered in the worst case analysis are very conservative in that a release would almost certainly occur over a period of time resulting in substantial dispersion of the hydrogen while the cloud was forming. Actual experience with hydrogen releases have not resulted in unconfined cloud explosions. It is widely believed that unconfined hydrogen will not detonate without a high explosive initiating event. Measure HAZ-2 was expanded to include a Risk Management Plan that would be reviewed by Imperial County. As a result, it is not anticipated a fire would escape from the site.

D.4.11 Bonds Required of the Applicant

This section responds to comments regarding bonds that will be required of the applicant.

Comments: O1-10, O1-21, and P10-7.

Inadequate closure protocols and Surety bonding. p. E-11 states that "Laws, Ordinances, Regulations and Standards (LORS pertaining to facility closure are identified in the sections dealing with each technical area" (Sections C-1 through 15 and D-1 through 5). The promised discussions relating to closure protocols are largely missing from technical area assessments. Specific guidelines for achievement of "restoration" of land post-closure are lacking and the Surety Bonding does not protect the public from the abuses of mine reclamation bonding, which are well known.[4] Restoration in the sense of returning the land to its pre-development condition is probably impossible, as discussed below.

The level of Surety bonding is placed in the hands of the BLM Authorized Office. This is not adequate for the very complex matter of reclaiming severely disturbed arid lands. The cost, and therefore the level of bonding required, needs to be judged by an independent expert group fully knowledgeable of the problems involved, the time that will be required for the best possible results, the detailed nature of an adequate monitoring program and the actions required based on monitoring results, and the time interval over which restoration activities and monitoring are to be maintained specified. Responsibility for reclamation should be in the hands of independent land restoration specialists, not the BLM, which is insufficiently staffed (as is amply demonstrated by failure to enforce mandated mitigations in numerous projects, including, for example, transmission lines).[5] O1-10

p. E-2. Definitions section is incomplete. A closure plan that requires "restoration" of landforms and "revegetation" of complex arid lands ecosystems must define those terms carefully. Restoration in the sense of returning the land used by the facility to its pre-development condition is probably not possible.[7] The definition of Grading, Boring, and Trenching in covering such activities as soil removal, removing topographic highs and filling lows, and drainage modifications underscore the impossibility of restoration *sensu stricto*. The more appropriate term is "reclamation," which can and should be defined rigorously.

p. E-7 states that "…the project owner shall post a surety bond adequate to cover the cost of decommissioning and restoration, including the removal of the project features that have been constructed for that that [sic] portion of the site and restoring the native topography and vegetation…This surety bond will apply to all site disturbance features".

"The project owner shall provide the surety bond to the BLM AO [Authorized Office] for approval and to the CPM [Compliance Project Manager] for review with written evidence indicating that the surety bond is adequate to cover the cost of decommissioning and removing the project features constructed, allowing for site restoration. The written evidence shall include a valid estimate showing that the amount of the bond is adequate to accomplish such work."

The second paragraph quoted is not as inclusive as the first, apparently implying that only removal "of project features constructed" is to be bonded. The following phrase, "allowing for site restoration" is ambiguous. This must be restated to make it clear, and consistent with the first paragraph quoted. O1-21

Considering the major difficulties of reclaiming severely disturbed arid lands to an acceptable condition, the costs, and therefore the level of bonding, should be done in consultation with independent specialists fully knowledgeable with arid lands reclamation who do not have an economic interest in the project. Guidelines and standards for reclamation and revegetation must be fully specified in the SA/DEIS, including the nature and longevity of monitoring, with specific actions tied to monitoring findings. In other words, if monitoring reveals problems, there should be specific plans in place to deal with them in a timely manner. Reports on degree of successful reclamation fully explained, monitoring, and actions taken in response to monitoring results should be made public annually. Estimates of costs can and should be made now so that potential facility owners are aware that this is not a small cost item or time commitment.

Bonding should be done in a way that the owner cannot escape paying the costs of reclamation.[8]

p. E-11. Where is the "Closure, Revegetation and Restoration Plan"? This document must be provided in the SA/DEIS for public review.

p. E-11. It is stated that "Laws, Ordinances, Regulations and Standards (LORS) pertaining to facility closure are identified in the sections dealing with each technical area." This does not appear to be true, particularly in regard to standards.

p. E-11. It is stated that "Closure would be conducted in accordance with Condition of Certification **BIO-14** that requires the project owner to develop and implement a Closure, Revegetation and Rehabilitation Plan." In the first page E-11 citation above, it is called Revegetation and Restoration Plan, not Revegetation and Rehabilitation. Restoration and Rehabilitation are not the same. Assigning development of such a plan should be performed by an independent fully qualified consulting group assigned by the BLM, not the project owner. And, the language of this statement should be mandatory, not permissive. O1-21

Section D was searched for LORs relevant to site "restoration" in keeping with the statement made on page E-11 cited above about the location of LORS pertaining to facility closure, with the following results:

7. Is 100% of the financing for this proposed project in place? I doubt it! What are the conditions of this financing? Has the CEC looked at it? Should we raze our public lands only to find out that the project is abandoned? Who is going to restore our public lands if this occurs? If this project is ever approved, one of the requirements has to be that the applicant must post a bond that will remove all the concrete and infrastructure for this project and restore the public lands to their original condition including restorations of new roads should the project fail. This bond must survive the bankruptcy of the project by the applicant. P10-7

Response: As the steward for the management of Federal public lands, the United States Bureau of Land Management (BLM) has a fiscal responsibility to ensure that projects it approves on those lands do not result in financial liabilities for American taxpayers. As part of the right-of-way (ROW) grant application process, the BLM will identify specific financial resources that must be placed in bonds by the applicant and that would be available to the BLM in the event the project applicant fails to live up to the project construction, operation, and decommissioning requirements; financial; environmental protection; and other commitments and responsibilities associated with the project. As a result, as part of the execution and approval of the ROW grant for the IVS project, the BLM will require the applicant to provide bonds to cover the three major project phases (construction, operations, decommissioning). Those funds would be used by the BLM in the event the project applicant does not meet the defined project obligations and the BLM has to step in return the project site to its pre-project condition. This can include decommissioning of project equipment, demolition and removal of project structures, remediation of any hazardous materials contamination, repair/restoration of

drainages and natural topography, revegetation, etc. The value of the bond for each of those three phases will be developed by the BLM and incorporated in the project conditions detailed in the ROW grant.

D.4.12 Visual Resources

The comments on the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) identified concerns regarding visual impacts including dark skies, light/glare, and desert views. These comments are addressed in the following sections.

D.4.12.1 Impacts to Dark Skies

Comments: F1-12 and O5-2.

C.13 - Visual Resources

The EIS identifies that the project would result in significant unavoidable adverse visual impacts:

> *. . . the proposed project would substantially degrade the existing visual character and quality of the site and its surroundings, including motorists on Interstate 8, recreational destinations within the Yuha Desert Area of Critical Environmental Concern and portions of the Juan Bautista Anza National Historic Trail, resulting in significant impacts. Because effective, feasible mitigation measures could not be identified by staff, these impacts are considered to be unavoidable.* (Draft EIS, p. C.13-1)

The project would also impact the dark night skies of the area, which is another important experience enjoyed by visitors to the desert. The 400-watt high-pressure sodium lights would illuminate the roadways throughout the site, and other infrastructure components would utilize other types of illumination. Condition of Certification VIS-2 is intended to minimize glare and lighting to the extent feasible. While lighting would be shielded to minimize glare and would not project directly in the night sky, reflection off the mirrored SunCatchers as well as the ground surface would still result in significant night sky light pollution. Due to the dark night skies that make up the lightscape of this area of the desert, this should be identified as a significant impact in the EIS. Also, please note that lighting impacts are not addressed the CEQA discussion on pages C.13-29 and 30. F1-12

In the event this project is approved, the NPS asks that a provision be included in the approval document that requires mitigation of impacts to night skies to the maximum extent feasible. We would like to work with the Bureau and the project applicant to identify additional mitigation to lower the impact of the project on night skies. The NPS has national recognized night skies experts on staff. F1-12

corridor. The visual impact will destroys the viewshed for miles. The constant noise will make it impossible for the visitor to envision the experience of expedition members. The destruction of the night sky will prevent the visitor to experience the setting. O5-2

Response: These comments raised concerns about potential project related light impacts to dark night skies in the area. To address the potential construction and operation light impacts to dark skies and campers in the Yuha Desert Area of Critical Environmental Concern (ACEC) and the Juan Batista de Anza National Historic Trail (Anza Trail), Measure VIS-2 was incorporated in the IVS project. That measure specifically requires:

VIS-2 **Temporary and Permanent Exterior Lighting.**To the extent feasible, consistent with safety and security considerations, the project owner will design and install all permanent exterior lighting and all temporary construction lighting such that a) lamps and reflectors are not visible from beyond the project site, including any off-site security buffer areas; b) lighting does not cause excessive reflected glare; c) direct lighting does not illuminate the nighttime sky, except for required FAA aircraft safety lighting; and will employ on-demand lighting technology such as a radar-triggered audio-visual warning system; d) illumination of the project and its immediate vicinity is minimized, and e) the plan complies with local policies and ordinances. The project owner will submit to BLM's Authorized Officer for review and approval and simultaneously to Imperial County for review and comment a lighting mitigation plan that includes the following:

A. The locations and directions of light fixtures will take the lighting mitigation requirements into account;

B. The lighting design will consider setbacks of project features from the site boundary to aid in satisfying the lighting mitigation requirements;

C. The lighting will incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated;

D. Light fixtures that are visible from beyond the project boundary will have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the project boundary, except where necessary for security;

E. All lighting will be of minimum necessary brightness consistent with operational safety and security; and

F. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) will have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied.

Based on compliance with this measure, the project construction and operation lighting will substantially minimize impacts related to light effects on dark skies.

D.4.12.2 Glint/Glare Impacts

Comments: F1-13, NA1-6, NA1-10, S1-4, L2-10, O7-6, and O8-18.

Glare from the mirrored SunCatchers would also have a detrimental impact on visitors to the area. As identified in the Draft EIS page C.13-46, VIS-6 requires a glare mitigation plan to minimize the visibility of mirror glare to eastbound and westbound traffic on I-8 utilizing a variety of measures which could include 20 foot high fencing or large earth berms. Glare could also affect distant recreational visitors to the area. The glare mitigation plan should also evaluate visual and other impacts resulting from the implementation of these potential mitigation measures, as 20 foot-high fencing and berms have the potential to generate their own environmental impacts. Once again, the NPS would like to work with the Bureau and the project applicant on the measures to be included in the mitigation plan. **F1-13**

B. The Analysis of Cultural Resource Impacts Is Incomplete and Based on Inadequate Data.

Under NEPA, BLM is obligated to take a "hard look" at the potential environmental consequences of the proposed project. *Klamath-Siskiyou Wildlands Center v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004). BLM must ensure the scientific integrity of the discussions and analysis in its EIS. *Native Ecosystems Council v. U.S. Forest Service*, 418 F.3d 953 (9th Cir. 2005). A Draft EIS must be as complete as possible and must not ignore or exclude important analysis or factual information. *See* 40 C.F.R. § 1502.9(a) ("the draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of NEPA").

In this case, the analysis of cultural resource impacts is based on incomplete and unreliable identification efforts. The DEIS describes the inadequate effort made by the applicant to document the cultural resources affected by the project. Throughout the cultural evaluations, BLM and the CEC have expressed numerous concerns with the completeness and accuracy of information provided by the applicant about cultural resources in the project area. *See* DEIS, pages C.2-57 and 58 (noting that documentation by the applicant of approximately 43% of the archaeological sites in the project area was probably inadequate, and noting conclusion of third-party consultant that extant documentation for the archaeological sites in the project area was inadequate for assessing either the historical significance of the resources or the effects that the proposed action would have on them). Although 432 cultural resource sites have been previously located in the project area, the inventory conducted for the DEIS definitively re- **NA1-6**

located only two. DEIS, C.2-65. Overall, the survey effort identified 337 total cultural resources, which is far less than the 432 sites previously recorded. DEIS, C.2-85.

The inadequate identification of resources means that BLM and CEC cannot accurately evaluate the impact that this project will have on cultural resources. On page ES-15 of the DEIS, there is no summary of the short and long term adverse impacts to cultural resources. Instead, that discussion is "to be provided." The very same table on page ES-15 asserts there will be "no cumulative adverse impacts" to cultural resources and that the "level of significance after mitigation" will be "less than significant." It is not clear how BLM and CEC can determine the correct "level of significance" when the impact analysis has not yet been completed.

The DEIS states that the project would have "significant adverse effects" on a "presently unknown subset of approximately 328 known prehistoric and historical surface archaeological resources and . . . on an unknown number of buried archaeological deposits." ES-24. It is not apparent from the DEIS how many of the surface resources will actually be affected. The inadequate identification efforts make it impossible for the decisionmakers and interested public to reasonably evaluate the cultural significance of the area and the full extent of impacts that this project will cause to the cultural landscape. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360 (1989) (noting a primary purpose of NEPA is to foster both informed decision making and informed public participation). This also violates the obligation to make a good faith effort to identify cultural resources of concern to interested Indian tribes. *See* 36 C.F.R. § 800.4(b) (requiring agency to make reasonable and good faith effort to identify historic properties affected by undertaking). **NA1-6**

There has been no evaluation of the eligibility of the cultural resources for listing on the National Register of Historic Places. This also makes it impossible to know the extent of impact that this project will have on the cultural landscape. As noted in the Tribe's May 4, 2010 letter commenting on the draft Programmatic Agreement (which is attached hereto as Exhibit A and incorporated in these comments by reference), the Tribe objects to BLM's proposal to defer all evaluation and mitigation development efforts until after the decision has been made on the right-of-way. Approving the right-of-way prior to evaluating the eligibility of the resources violates both NEPA and the NHPA. Both NEPA and the NHPA are intended to inform the decision-making process. Deferring evaluation of NHPA-eligibility until after the decision to permit the project has been made is inconsistent with these laws.

In addition to direct impacts to cultural sites in the project area, there will also be impacts to sites outside the project area due to visual and glare impacts. There are many culturally significant areas outside the project boundaries, as evidenced by the proposed Plaster City ACEC discussed above. The DEIS, page C.13-10, also notes the close proximity of culturally and historically significant areas. Several of the cultural sites and geoglyphs located in the Yuha area are ceremonial in nature and the presence of the Suncatchers will interfere with the use of these sites and ability to see from these sites to other landscapes nearby.

In sum, BLM and CEC must complete the cultural resource identification, consultation, and evaluation process before making a final decision on this Project. **NA1-6**

The cumulative glint/glare impacts associated with the anticipated solar development projects is also inadequately addressed. The glint/glare study performed for the DEIS is not adequate because it fails to account for the cumulative effect of the entirety of solar projects proposed in the broader area. The cumulative glint/glare from the proposed solar developments will not only affect driving conditions along the I-8 corridor, but will also affect the ability of tribal people to use ceremonial sites nearby. In sum, the cumulative visual impacts resulting from the project and other developments have been inadequately addressed. **NA1-10**

Visual aspects of the project, specifically glint and glare, must be documented not to have any potential impact to motorist driving on I-8. **S1-4**

determination of consistency with the Airport Land Use Compatibility Plan. The visual impacts to the military's low level training routes within the area will need to be analyzed and assessed by the Commission and affected military base officials. **L2-10**

Views from nearby wilderness areas would also be ruined by this huge expanse of mirrors reflecting light, and loud noise. **O7-6**

Tessara Solar Glint & Glare Study:

- Why are no Key Observation Points located on Evan Hewes Hwy (East or West) or from the Coyote Mountain Wilderness or Painted Gorge areas on the northwest, looking back at the project site? The areas to the NW are actually slightly elevated.
- **Appendix A: Report on SunCatcher Luminance (4-20-10)** *"Sunrise occurred at 6:01am MST. The SunCatchers began operation at about 6:30am. The parabolic dishes moved to an "offaxis" mode initially. During this mode of operation a reflection of the sun was visible in many of the*

O8-18

parabolic reflector dishes. I attempted to measure the luminance of a solar image. However my instrument is limited to 685,000 cd/m² and it saturated when I tried to measure the solar reflection. The solar reflection did appear to be less difficult to view than the Sun itself. The luminance of the Sun at a high solar altitude can have a luminance of approximately 1.6 billion cd/m²."

- The excerpt above, indicates there may be more impact than has been admitted to.

- **At page 13 last bullet , Glint Analysis** (SunCatcher TM in off-axis position) – Off-axis tracking SunCatchersTM have the potential for viewers to experience glint. This statement appears: ***"However, in some conditions where a viewer has an elevated view of the Imperial Valley Solar Project, glint may be visible."***

- At the May 24 Evidentiary hearing in El Centro, I had the opportunity to meet a very nice gentleman (Kevin?) who was involved in the glint and glare study. He was kind enough to show me the animated version of the study that I had not been able to access. The version I saw included a 20 foot fence which I understand is now being recommended for removal of consideration by the applicant. It would seem that the rotating SunCatchers will be very distracting to drivers. **O8-18**

- I was told that there is some glint/glare from an elevated view such as from a low-flying plane. This information was not made very clear in the public document.

- It appears that there will be impacts to frequent low-flying air traffic related to US Customs and Border Patrol, and military flights related to Seeley Air Station and other San Diego and Yuma related military operations as the project area is located in their flight path.

- The Desert View Tower, a historic landmark / tourist attraction that, draws folks from around the world, sits at an elevated location with a clear view of the valley floor, US Gypsum, and the IV Solar /solar Two project site.

- The Coyote Mountain Wilderness, the Jacumba Mountain Wilderness and the Yuha ACEC also sit at an elevated location from the project, as does the In-Ko-Pah ACEC, and the McCain Valley Resource Conservation Area with scenic overlooks out over the Imperial Valley and project area.

Response: These comments raised concerns about glint/glare from the SunCatchers and cumulative glint/glare impacts associated with other solar development projects. Measure TRANS-4 specifically requires that:

TRANS-4 The project owner shall prepare and implement a SunCatcher Mirror Positioning Plan that would avoid the potential for human health and safety and significant visual distractions from solar radiation exposure.

This plan will be coordinated with the Federal Aviation Administration (FAA), the California Department of Transportation (Caltrans), the California Highway Patrol (CHP), and Imperial County and will be updated on an annual basis for the first five years and at 2-year intervals after that. The project applicant will be specifically required to coordinate with the FAA on the placement of the SunCatchers, pursuant to the FAA regulations in the Code of Federal Regulations Part 77.

Measure VIS-6 specifically requires:

VIS-6 **Reflective Glare Mitigation.**The project owner will develop and implement a glare mitigation plan that minimizes visibility of the SunCatcher mirrors to both east- and west-bound traffic on I-8 using one or more measures, which may include but are not limited to 20-foot tall slatted fencing, particularly at the eastern and western boundaries near the highway; earth berms, and/or an increase in the setbacks of the SunCatcher units from the road; and must include a SunCatcher Mirror Positioning Plan (MPP) describing how the outermost rows of SunCatchers could be positioned to avoid or minimize the most intensive potential glare incidents on motorists as called for under Measure TRANS-4. The MPP will include a glare complaint resolution form to be distributed to the BLM and the NPS.

Based on implementation on the SunCatcher Mirror Positioning Plan and the glare mitigation plan, the project related glare/glint impacts will be substantially reduced.

After the publication of the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS), the applicant prepared a Glint and Glare Study (Power Engineers, April 26, 2010 and errata dated May 21, 2010) to specifically respond to two key questions regarding visual effects associated with the SunCatcher mirrors:

(1) **Will a 20-foot (ft) high fence or earth berm reduce glint and glare for off site viewers?** Based on the study, it was determined that a 20 ft high fence or berm would provide minimal benefits in terms of screening any off site views from glint and glare. The analysis determined that most glint occurs when the SunCatchers are in the offset tracking position. The applicant has determined that the offset tracking position can be adjusted by computers to a setting where the glint to off site viewers would be substantially reduced.

(2) **Will highway travelers experience a flashing effect while driving next to rows of SunCatchers?** It is possible that in rare circumstances, motorists may experience a flashing effect in their peripheral vision. The analysis determined that most of the

potential for flashing effects occurs when the SunCatchers are in the offset tracking position. The applicant has determined that the offset tracking position can be adjusted by computers to a setting where the flashing effect to motorists would be substantially reduced.

In summary, the IVS project will result in changes in light, glint, and glare on and around the project site. However, based on mitigation included in the IVS project and adjustments to the offset tracking position of the SunCatchers, those impacts can be substantially reduced.

The potential for cumulative glint/glare impacts as a result of other cumulative projects and the IVS project is discussed in Section 4.16, Visual Resources, in the FEIS. That analysis determined that the IVS project in combination with past and foreseeable future projects would contribute to substantial visual changes in the area. If those other projects include solar or other technologies which potentially create glint and glare, there could be a cumulative increase in the overall amount of glint and glare in the area.

Some comments raised concerns about the impacts of glint/glare from an elevated view from a low-flying plane and visual impacts to the military's low level training routes in the area. As noted above, Measure TRANS-4 provides for a SunCatcher Positioning Plan and the project owner would coordinate with the FAA during the development of that plan. Compliance with the plan would substantially reduce glint/glare impacts on aircraft.

D.4.12.3 Impacts on Views

Comments: NA1-9, S2-4, L2-3, O5-2, O6-6, O7-5, O7-6, O8-18, O8-22, P7-1, and P7-6.

In addition to the direct destruction of cultural resources that will result from the development of one million acres of land for solar and wind projects, there will also be indirect visual impacts. For example, the Tribe is concerned that certain ceremonial areas located in the Yuha, just south of the project area, would be affected by the view of this project. The cultural and ceremonial use of the landscape will be impaired when tens of thousands of solar pedestals are visible from these areas. **NA1-9**

State Parks also has concerns regarding the aesthetic impacts the proposed project would have on the desert lands surrounding the southern portion of Anza-Borrego Desert State Park; the impact of nearly 550 miles of unpaved and paved access roads on the project site – the same amount of roads **S2-4**

found in the entire 600,000+ acre Anza-Borrego Desert State Park; and the **S2-4**

2) The County of Imperial agrees with the DEIS regarding the Project's impacts to visual resources along Interstate 8. From the Imperial County line to the edge of the agricultural lands approximately 25 miles of open space desert visual resource. With the exception of the small community of Ocotillo/Nomirage and the United States Gypsum Plant, the desert visual resource is unbroken. This project proposed to build 30,000 38' by 40' steel and glass dish style structures over a 10+ square mile area, predominantly along both sides of the Interstate 8 corridor. These impacts will be significant. The DEIS identifies mitigation such as setbacks from Interstate 8, but do not fully eliminate the impact. There should be more consideration with project reduction and/or more screening methods. The reduced project alternative limits the project less than half of the total structures, greatly decreasing the visual impacts and reduce the project footprint from 6,500 acres to 2,600 acres. **L2-3**

corridor. The visual impact will destroys the viewshed for miles. The constant noise will make it impossible for the visitor to envision the experience of expedition members. The destruction of the night sky will prevent the visitor to experience the setting. **O5-2**

The Project "would substantially degrade the existing visual character and quality of the site and its surroundings. . . ." SA/DEIS, p. C.13-1. The SA/DEIS claims that "these impacts are . . . unavoidable." SA/DEIS, p. C.13-1. This portion of the impact assessment is deficient because (1) the specific nature and magnitude of the aesthetic and visual impacts are undisclosed and unknown; (2) some of the adopted mitigation measures could have significant impacts, but these impacts are undisclosed; and (3) it is unclear whether or not the project transmission line will be relocated or not. (As previously mentioned, the SA/DEIS also unlawfully defers formulation of the glare mitigation plan, so it is impossible to tell whether the plan actually will mitigate the potentially significant glare impacts.)

First, the discussion of aesthetic impacts is insufficient because it does not even attempt to ascertain what the *actual* aesthetic impacts of the Project will be. The Project applicant failed to include information about the Project's visual impacts on the Jacumba Wilderness, Coyote Mountain Wilderness, Painted Gorge, and Yuha Basin, and "fast-track time constraints" apparently prevented CEC and BLM from creating their own simulations, so the analysis of impacts on these areas is limited at best. SA/DEIS, pp. C.13-10, C.13-18. Staff simply assumed that the Project would have the same impacts as the Plaster City facility.6 *Id.* The contrast in the depth of analysis of aesthetic impacts to these areas *vis-à-vis* those areas that the Project applicant *has* provided information about is striking. The public is prevented from ascertaining anything about the nature of these aesthetic impacts beyond that they will be sizeable. Because the SA/DEIS fails to include simulations of these viewpoints, it is also impossible for members of the public to suggest methods of avoiding or mitigating these impacts. O6-6

Second, the mitigation measures themselves could have significant impacts, but these impacts were not disclosed. The Guidelines specify that "[i]f a mitigation measure would cause one or more significant effects . . . , the[se] effects shall be discussed. . . ." Guidelines § 15126.4(a)(1)(D). The SA/DEIS requires the applicant to submit and implement "a glare mitigation plan that minimizes visibility of the" Project by "utilizing . . . 20-foot tall slatted fencing, . . ; earth berms; and/or an increase in the setbacks of the" Project from I-8. These mitigation measures, which themselves involve the construction of enormous structures, could have significant visual and other impacts, but these impacts are not disclosed or analyzed.

Finally, mitigation measure VIS-3 is unclear. One the one hand, the SA/DEIS' summary of this measure states that it would require, "**[i]f feasible,** re-alignment of the segment of the project transmission line paralleling I[-]8 to be set back from the roadway at least ½ mile." SA/DEIS, p. C.13-18. But the measure itself contains no such "if feasible" language and instead states that "the applicant **shall** set back the transmission line. . . ." SA/DEIS, p. C.13-44. This example illustrates why it is impermissible to rely on undeveloped mitigation measures – the public cannot tell if it is feasible to relocate the transmission line or not. If not, the magnitude of visual impacts will be different than what the SA/DEIS assumes. O6-6

The area now provides scenic views while driving along Highway 8, in a historic area of the Anza Trail. If this historic route is to be maintained, the viewshed should not be compromised by large-scale developments. O7-5

This historic value cannot be mitigated. We would much rather have a trail corridor with interpretive displays in this desert, than a scraped and industrialized projects. O7-5

Views from nearby wilderness areas would also be ruined by this huge expanse of mirrors reflecting light, and loud noise. O7-6

Tessara Solar Glint & Glare Study:

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Visual Resources / Impacts

- Starting with the IV Solar/Solar Two project, the entire viewshed from I-8 and Evan Hewes Hwy will be destroyed for the entire corridor starting west of Dunaway Road, through Ocotillo, and continuing through Eastern San Diego County, including the Cleveland National Forest.

- Views from the Coyote Mountain and Jacumba Mountain Wilderness Areas, the Anza Borrego Desert State Park, the Yuha and In-Ko-Pah ACEC, the McCain Valley Resource Conservation Area, the historic Desert View Tower, the De Anza Trail, and more will be forever altered, degraded, transformed, destroyed by the 750 MW IV Solar /Solar Two project, the 561 MW Ocotillo Express Wind project, the 1,240 MW Energia Sierra Juarez Wind project (Sempra) , 1,000 MW Zemer Energy wind project, 200 MW Tule Wind project (Iberdrola), the 160-300MW Kumeyaay Wind project (SDG&E, Invenergy, Campo tribe), the 57 MW Manzanita (SDG&E and Manzanita tribe) the Sunrise Powerlink (SDG&E), the ECO Substation (SDG&E), and more.

- Appendix VR -1 fig 1 - 7 (SA/DEIS): Visual simulations do show SunCatcher arrays and some transmission lines but they do not accurately demonstrate the overall visual resource impact with all 30,000 SunCathers, all the on-site massive water, hydrogen, and other tanks, the new gen-tie lines, on-site substations, the Sunrise Powerlink, the Southwest Powerlink, the security fencing around the 6500 acre site and other project components. O8-22

- Please ensure that the required Visual Resource surveys /inventories are also conducted from the Native American perspective and that these significant Traditional Cultural Properties and Landscapes, and others, are protected for future generations.

- Carmen Lucas and the Quechan tribal representative expressed their concerns on cultural impacts in their public comments at the May 25th hearing

- Carmen Lucas, in her March 23, 2007 comments to the El Centro BLM office on the Ocotillo MET tower (CA-670-2005-95) ,now the 561 MW Ocotillo Pattern Wind energy project, proposed west of SES Solar Two /IV Solar, expressed her concerns regarding the traditionally significant Coyote Mountain and Mt Signal landscapes and creation stories. Here is an excerpt regarding Traditional Cultural properties, landscapes and resources:

  "It should be understood that part of what makes up the sacred can and most often is the visual quality and the quietness that is often part of that visual quality of place. It is my opinion, that the visual impact of the Wind Hunter Ocotillo Met Tower will have a destructive adverse effect on this important Intangible Culture Resource. Further it is also the undersigns opinion that Traditional Culture Landscape, the visual quality and the essence of those properties cannot be mitigated and the public is better served if such places are left alone arid preserved for future generations."

My name is Brendan Hughes and I would like to comment on the Tessera Solar Two project in Imperial County. Contrary to the CEC staff's assessment, this project has unmitigable impacts on biological, cultural, and visual resources, and therefore should not be approved. P7-1

Moreover, impacts to the visual resources of the area cannot be mitigated, as the DEIS declares. This is another problem for local Indian tribes, whose religious ceremonies and practices will be disrupted by this visual disturbance to their cultural landscape. In addition, those who enjoy the landscape of the Yuha Desert for aesthetic purposes will have lost this precious resource and will have no recourse for its return. P7-6

Response: Some comments raised concerns about the aesthetic impacts on desert lands, impacts to viewsheds including from Evan Hewes Highway, scenic views of the Anza Trail, and impacts to visual resources along Interstate 8. As discussed in the SA/DEIS and the FEIS, Measure VIS-5 would provide improvements to benefit visitors of the Anza Trail and the Yuha Desert ACEC. The project applicant will contribute funds to the National Park Service (NPS) for improvements for the Anza Trail and funds to BLM for improvements to the Yuha Desert ACEC. Those improvements could include, but not be limited to, interpretive displays or exhibits, improvements to use areas, mounted telescopes, or other improvements to be determined by the NPS and BLM.. Measure VIS-4 provides for the setback of the SunCatcher units from roads and measures to minimize views of the SunCatchers with fencing, and/or berms. Measures VIS-6 and TRANS-4 would provide for a glare mitigation plan and a SunCatcher Positioning Plan to avoid or minimize potential glare to motorists, and Measure VIS-7 would provide for the re-vegetation of staging areas in the project area.

One comment was regarding the impact of 500 miles of unpaved and paved access roads on the IVS project site. As discussed in the SA/DEIS and the FEIS, some roads would be paved to reduce fugitive dust; unpaved roads will be treated with polymeric stabilizers to stabilize the surfaces of those roads. The grading/blading of roads would be conducted to specifically limit the removal of terrain undulations as feasible, ground disturbance activities would be minimized wherever possible, and paved roads would be constructed as close to the existing topography as possible. Because the roads would be developed as close to the existing topography, the views of the roads from off site locations may be obscured by the irregular terrain of the project site, the low rises adjacent to the highway, fencing, and intervening structures on the site.

Some comments raised concerns of the views of the project site from nearby wilderness areas (Jacumba Wilderness, Coyote Mountains Wilderness) and other special land use designations (Painted Gorge, Yuha Basin/Yuha Desert ACEC). As discussed in the SA/DEIS and the FEIS, the visibility and prominence of the IVS project at background distances is limited. The project contrast would be due primarily to color and texture contrast; at background distances the mirror reflections would often resemble the surface of a lake. The overall line and form contrast would be very weak due to the oblique viewing angle and low overall visual magnitude within the field of view. Project contrast would be seen, but would not attract attention. As a result, no KOPs in those areas were identified or analyzed.

The view from the vicinity of the Yuha Geoglyphs, along the Anza Trail, at a distance of approximately 3 mi, the IVS project would be very evident but would exhibit a moderate degree of contrast. Color and texture contrast could be moderately high, but form and line contrast would be weak due to the level, oblique angle of view and the small part of the field of view occupied by the IVS project. Similarly, the visual dominance of the IVS project would be moderate in scale at this distance and from other principal destinations in the Yuha Desert ACEC, such as Yuha Well, fossil shell beds, and segments of the Anza Trail south of the Yuha Geoglyphs, and along Highway 98 and the surrounding areas, the IVS project would not be visible due to intervening terrain of washes and low hills. In the context of high viewer sensitivity, the impacts of the IVS project at this distance would be adverse, but not substantial.

Some comments raised concerns about why there were no views of the Key Observation Points (KOPs) on Evan Hewes Highway or from the Coyote Mountains Wilderness or Painted Gorge areas. As discussed in the SA/DEIS and the FEIS, foreground views of the IVS project from Evan Hewes Highway would experience strong visual dominance and visual change by the IVS project. Views of the mountains would be obstructed from this location. Therefore, all views in the foreground and the near-middle-ground distance zones to at least 1 mile away would experience strong project dominance and visual change, which would result in a substantial adverse visual impact.

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D.4.13 Water Resources

The comments received regarding water resources concern three primary issues: the modification to the project to use well water for construction and initial operations, water supply, and water pollution/quality impacts to surface water and groundwater, as discussed in the following sections.

Comments: F2-6, S2-5, L2-4, L2-5, O1-18, O1-19, O1-25, O2-33, O6-9, O6-16, O7-2, O7-3, O8-15, O9-3, O9-11, O9-14, O9-34, O9-35, O9-36, O9-37, O9-41, P11-12, P11-24, P11-35, and P11-38.

In addition to the above, we are concerned about the Project's potential impacts on groundwater, We note that, on May 10th the Project proponent released a Supplement to the Imperial Valley Solar Application for Certification to BLM and the California Energy Commission (CEC). That supplement includes analyses of project design modifications, and proposes, as an alternative water supply for the Project, a sole source aquifer that may already be over-appropriated. An analysis of this newly proposed water source and the potential **F2-6**

impact in terms of erosion and air pollution that would potentially result from construction of the project. **S2-5**

3) The County has concerns with the change in surface water absorption due to the development of 275 miles of roads that will cover an estimated 667 acres ((5,280' long x 20' wide (fire lanes) X 275 miles)/ 1 acre foot). The County could not find precise dimensions of the Suncatchers (dishes), in terms of footprint in the active and "wind stow" positions. How much land will be covered by the dishes, support buildings and equipment? What is the amount of area, overall, that the project would cover that would directly impact the surface water absorption? Assuming absorption is reduced what is the impact to the existing washes and drains? **L2-4**

4) It is the County's understanding, based on the CEC hearing on May 25, 2010, that IVSP proposes to use water from the Westwind's water well in Ocotillo for a temporary water source during the construction phase, with permanent water from the Seeley County Water District. If a water supply is proposed from the Ocotillo "Westwind's" water well, proof of compliance with the February 23, 2005 Imperial County Planning Commission's approved conditions of well registration will be necessary along with an executed contract for water prior to use of the water well by IVSP. The conditions limit the well water extraction to 40 acre feet a year, it is strongly recommended that the CEC take into account the on-site water needs for the Westwind's parcel and historical residential users in its permitting of the IVSP to use this off-site water source. Also, it needs to be noted that the project description does not denote Westwind as a water supply source. **L2-5**

p. C.7-2. It is stated that the primary water use of the facility would be for mirror washing, estimated to require 33,550 gallons per day. If this is the primary use of water, why is it necessary to upgrade the Seeley Waste Water Treatment Plant to provide six times as much water per day (200,000 gallons)? If it is decided instead to use groundwater, what supply level will be sought? O1-18

p. C.7-3. The statement claiming less than significant impacts on groundwater is not supported. Use of tertiary-treated water (Title 22 standard; p. C.7-15) imports numerous toxic contaminants onto the site that were not removed by treatment of the water. The proposed uses of this water, including dumping residual waste water, in which contaminants have been concentrated into evaporation ponds is likely to lead to progressive contamination of the unsaturated zone, and ultimately groundwater contamination by infiltration through the unsaturated zone. This can continue long after site closure. Monitoring of the concrete-lined evaporation ponds for leakage would do no more than validate contamination of the unsaturated zone if leakage is detected. O1-19

C.7 – Hydrology, Water Use, and Water Quality (Soil and Water Resources)
This section simply states that the project conforms to all applicable LORS, with no discussion of what LORS, if any, apply to soil loss from grading and erosion, or soil O1-25

contamination by leakage of evaporation ponds and other spillage absorbed by the soils. It is appropriately admitted (p. C.7-1, 2) that the effects of changed morphology and the nature of sediment carried offsite by runoff are not known. Thus, it cannot be accurately stated that the project conforms to all applicable LORS, and the effects beyond closure cannot be predicted. O1-25

E. Impacts to Water Resources—Groundwater and Surface Water Impacts

1. Groundwater Impacts:

The DEIS analyzes a water resources scenario that no longer is a valid project description. It is now unclear whether or when reclaimed water will be available for the project from the Seeley facility and although the DEIS states otherwise, the proposed project never actually secured access to reclaimed water from the Seeley Waste Water Treatment Facility. The project proponent now proposes to use groundwater for construction and *initial* operations-- in the hopes that the Seeley water will be available in the future. No analysis of groundwater pumping is provided in the DEIS. As a result, the DEIS is inaccurate. This significant change in the project description requires a supplemental EIS.

This is a major change in the project description and this issue needs to be fully evaluated in a revised or supplemental DEIS. The environmental review must consider the water source for the proposed project *for the life of the project* and must fully analyze the impacts of that water use.

As the BLM is aware, the Ocotillo-Coyote Wells Aquifer was designated as a sole source aquifer by the EPA on September 10, 1996. 61 Fed. Reg. 47752-53. The EPA determined that the aquifer "serves as the 'sole source' of drinking water for the residents of Ocotillo, Coyote Wells, Yuha Estates and Nomirage." *Id.* at 47753. Further, the EPA determined that the aquifer should be protected because "[t]here is no economically feasible alternative drinking water source near the designated area." *Id.* As the EPA noted the boundary of the sole source aquifer area at the Elsinore Fault "separates the sole source aquifer area, which contains high quality, potable water, from high saline, non-potable water to the east of the fault." *Id.* This designation protects this aquifer from contamination by all activities whether by actively polluting the water source or by degradation of water quality due to excessive pumping and overdraft that could draw in non-potable water from adjacent aquifers. **O2-33**

The newly-proposed use of groundwater for both construction and operation of the proposed project (for some unknown length of time) could impact existing uses by local communities for drinking water and domestic use and at the expense of other environmental resources as well. Cumulative impacts of this use along with other proposed groundwater pumping from the aquifer (including by the neighboring Plaster City plant) must be identified and analyzed as well. Impacts of the over-draft of this aquifer and use of groundwater by the proposed project must be fully analyzed. Such impacts include drawdown of springs and creeks in the area and the impacts to the fragile biological resources of the region that could result including resources in the San Sebastian Marsh/San Felipe Creek Areas of Critical Environmental Concern (ACECs). Any drawdown of the aquifer would have substantial effects on water supply for other existing users. Moreover, issues regarding use of the water in this aquifer by the Plaster City plant have been in litigation for several years, including issues regarding the possibly catastrophic impacts loss of reliable well water would have on existing communities. The BLM cannot ignore the ongoing insecurity and controversy surrounding the proposed alternate water source in the DEIS and must revise or supplement the DEIS to fully disclose and analyze these issues. **O2-33**

project." SA/DEIS, p. C.7-3. Yet the Project applicant has recently modified the Project so as to satisfy its water needs with groundwater. This substantial change must be recognized in the DEIS.

The DEIS' failure to acknowledge that the Project will use groundwater leads to the second inadequacy: the availability of this water, and the impacts of its use, are unknown because neither has been studied. As a result, it is impossible for members of the public to determine whether the Project's water needs can actually be satisfied in this manner. The environmental impacts of such use also have yet to be ascertained. CEC staff has noted that "the amount of water identified for project use . . . exceeds the permitted amount of groundwater extraction for the well." Staff Comments on Schedule Impacts of AFC Supplement, received May 17, 2010, p. 1. Furthermore, it is unknown how long groundwater will be used. The DEIS must be revised to include this critical information. O6-9

Third, the impacts that the Project will have on waters of the United States is unknown. The Project has the potential to cause massive amounts of runoff and erosion. Whether or not these impacts will be significant has yet to be determined because the Project applicant failed to include sufficient information in its application "to resolve uncertainties regarding the ability of the applicant-proposed measures to reduce sedimentation and stream morphology impacts to less than significant." The Project's consistency with section 404 of the Clean Water Act "cannot [be] determine[d] at this time." SA/DEIS, p. C.7-66.[8] This information must also be included in the SA/DEIS.

The DEIS for the Project claimed that wastewater from the Seeley Wastewater Reclamation Facility (SWWRF) would be used to clean the solar panels. This decision, however, was based on a mitigated negative declaration for the SWWRF. The Seeley County Water District (SCWD) decided not to adopt the mitigated negative declaration, but instead to prepare an Environmental Impact Report for the SWWRF. Because of this change, the Project now intends to rely on a sole-source aquifer to provide the wash-water for the panels. The impacts of the groundwater pumping that would be required by the Project are completely unknown, and present many risks.

The aquifer from which the wash-water for the Project will be pumped, the Ocotillo-Coyote Wells Aquifer, has been deemed the "sole or principal source of drinking water for Ocotillo, Nomirage, Yuha Estates, and Coyote Wells." 61 Fed. Reg. 47752 (Sept. 10, 1996). If this aquifer is contaminated it "would create a significant hazard to public health." *Id.* It is irresponsible for the Project to use four cities' sole-source of drinking water as wash-water, especially in the desert. This impact is not recognized, analyzed or mitigated in the DEIS. O6-16

As was admitted in the "Staff Comments on Schedule Impacts of AFC Supplement," dated May 17, 2010, the amount of water needed for the Project "exceeds the permitted amount of groundwater extraction for the well." The risk of groundwater depletion from the Ocotillo-Coyote Wells Aquifer is not recognized, analyzed or mitigated in the DEIS.

Further, the Public Health and Welfare Code forbids projects that receive federal monies that "may contaminate" a sole-source aquifer. 42 U.S.C.A. § 300h-3(e). "Contaminant" is defined as "any

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physical, chemical, biological, or radiological substance or matter in water." 42 U.S.C.A. § 300f(6). By drastically increasing the rate of groundwater pumping from the Ocotillo-Coyote Wells Aquifer, the Project may contaminate this sole-source aquifer by creating a cone of depression in the area of the aquifer, allowing physical, chemical, biological or radiological substances present elsewhere in other groundwater aquifers to leach into the Ocotillo-Coyote Wells Aquifer. If such contamination were to occur, a "significant hazard to public health" would result, in violation of the Public Health and Welfare Code. 42 U.S.C. § 300h-3(e). Because the DEIS did not analyze the possible impacts of pumping groundwater from the Ocotillo-Coyote Wells Aquifer, the risk of contamination from pumping is unknown. The Project's impacts on groundwater pumping must therefore be fully acknowledged, analyzed and mitigated to protect the sole-source of water for Ocotillo, Nomirage, Yuha Estates and Coyote Wells. O6-16

We consider the water use estimates to be too low, based on personal observation of the amount of dust and fine sand blown up into the air in O7-2

Imperial Valley. On May 23, 2010, for instance, a wind storm blew dust far into the sky all over the valley, and this is a regular occurrence. The Ridgecrest Solar Power Project applicant admits that mirror washing would need to be weekly or bi-weekly to maintain the highest efficiency. Though different technology, the SunCatchers still use mirrors to reflect sunlight, and still need washing. Water use may be grossly underestimated in this dusty desert area, especially considering the location just south of the Plaster City off-road use area, and the ground disturbance of the site itself by the applicant grading, cutting vegetation, building more than 200 miles of new roads, driving, and other development. O7-2

Cunningham walked through several parts of the project site on May 24 and 25, 2010, and noticed evidence of flood events that appeared to be stronger than those described by the applicant. Washes come down from the south and head north through the site, and a large wash spreads out into anastomosing channels from the south-central to the east. The strength of flows is indicated by two-foot high scour banks, ripple marks in wash sands, mud-cracks of pooled-up water in front of blockages, debris thrown up three feet into shrubs and trees, and sediment piled up around shrubs. Even individual Galleta grass bunches has scour six inches deep and one foot wide on the sides facing flows, and we wonder if similar scour will occur around SunCatcher pedestals over the years. O7-3

This desert has an intense summer monsoon. How will the perimeter fence not block flows and debris? This is not described in the Staff Assessment/Draft Environmental Impact Statement.

We disagree that these impacts will be insignificant. Downstream effects could be significant to habitat and agricultural lands.

Water source issues / Ocotillo -Coyote Wells Sole Source Aquifer / What is replacement water source for the residents of impacted rural desert communities when industrial use exports decrease and degrade their sole source aquifer?

- Like Sunrise Powerlink, the Solar Two / IV Solar water source is still unstudied and unsecured.
- The belated backup alternative to use groundwater from Ocotillo, is a non starter.
- The Applicant's response to CURE letter of May 10 is both ignorant and callus in its disregard for the significant negative impacts their proposed groundwater export represents to the low income rural desert communities that rely on the at-risk aquifer to sustain them.
- Figure 1-4 in the May 5 submittal shows the proximity of the proposed Ocotillo water well source and the US Gypsum wells.
- Section 2.5 of the Supplemental downplays the significance of the sole source aquifer designation.
- In 1996, I helped concerned citizens in Ocotillo apply for and secure federal designation of the Ocotillo / Coyote Wells Sole Source Aquifer, after our group BAD secured the Campo/Cottonwood Creek Sole Source Aquifer designation in 1993. These are the only two sole source aquifers in Southern California.
- Link to Ocotillo / Coyote Wells Sole Source Aquifer boundary map: http://www.epa.gov/safewater/sourcewater/pubs/qrg_ssamap_ocotillocoyotewells.pdf
- The EPA's Sole Source Aquifer (SSA) Program was established under Section 1424(e) of the Safe Drinking Water Act (SDWA.) Since 1977, it has been used by communities to help prevent contamination of groundwater from federally-funded projects. It has increased public awareness of the vulnerability of groundwater resources. ***The SSA program allows for EPA environmental review of any project which is financially assisted by federal grants or federal***

O8-15

loan guarantees. These projects are evaluated to determine whether they have the potential to contaminate a sole source aquifer: http://www.epa.gov/region9/water/groundwater/ssa.html

- The State Water Resources Control Board (State Water Board) Clean Water State Revolving Fund Program Federal Cross-cutting Environmental Regulations Evaluation Form for Environmental Review and Federal Coordination questionnaire includes a Water Sources question that asks if the project is in the boundaries of a SSA. The Ocotillo/Coyote Wells Aquifer is one of the five California SSAs listed See the document at the link copied below: http://www.swrcb.ca.gov/water_issues/programs/grants_loans/srf/docs/envcompliance/federal_cross_cutting_evaluation_form.pdf
- At a minimum a site specific study and full EIR would be legally required to determine the impacts to the Ocotillo source well(s) and aquifer which are located wholly within the boundaries of the federally designated Ocotillo / Coyote Wells Sole Source Aquifer.
- The US Gypsum wallboard plant next door, already pipes in precious groundwater from Ocotillo 8 miles to the west. This has resulted in litigation. US Gypsum was supposed to stop using that groundwater when they got approval for 1,000 ac feet of canal water from Imperial Irrigation District. But they need a new pipeline similar to the one proposed for IV Solar / Solar Two.
- That pipeline needs a Biological Opinion from Fish & Wildlife, but due to the administration's pressure to fast track renewable energy projects like this one, that Biological Opinion has been placed on hold indefinitely (confirmed May 17 by FWS staff). O8-15
- As a result, US Gypsum continues to pump hundreds of acre feet of irreplaceable desert groundwater from a residential area that has no alternate water supply.
- Now this project wants to take another 40 acre feet from them which in my opinion is immoral, unlawful and unethical.
- Here is a quote from the attached July 14, 2006 RWQCB Memorandum, addressed to Donna Tisdale, regarding the proposed US Gypsum Expansion / Modernization Project (EIR/EIS Sch. No. 2001121133) and increased export / use of Ocotillo groundwater:

"We acknowledge the Regional Boards limitation to control groundwater extraction/pumping (i.e., lack of jurisdiction over water rights issues). Nevertheless, we feel obligated to weigh in the subject matter because the projected impact is on waters of the State, and the project as proposed practically could eliminate the Municipal Supply beneficial use of an aquifer . The impact may be economically irreversible, is in direct conflict with the Basin Plan, and short-changes water quality. Consequently, it is our intention to recommend the Regional Board use any and all of its available powers to protect the area's groundwater resources for current and future generations."

For example, the Project is in the Salton Sea watershed and, as designed, will result in direct, indirect and cumulative effects on this watershed.[5] For the most part, these impacts were not even disclosed and, O9-3

B. GROUNDWATER – DAN BOYER WATER COMPANY

The DEIS unequivocally and repeatedly states that the Project **will not rely upon groundwater**[25] and will rely upon recycled wastewater from the SWWTP. This is simply false. On May 6, 2010, the Applicant docketed information with the Energy Commission and BLM that outlines the Applicant's plan to use groundwater as its primary water supply for the first three years and potentially for the life of the Project. This new water supply, the Dan Boyer Water Company, requires a whole new analysis by the reviewing agencies and the public. The Dan Boyer well that would be used for the Project is in the Coyote Wells Aquifer, an aquifer designated by the US Environmental Protection Agency ("EPA") as a "sole source" aquifer.[26] This means that the EPA has determined that the Coyote Wells Aquifer is the sole or principal source of drinking water for the communities of Ocotillo, Nomirage, Yuha Estates, and Coyote Wells and that if contaminated, this aquifer would create a significant hazard to public health.[27] As a result, all Federal financially assisted projects that could impact the Ocotillo-Coyote Wells aquifer will be subject to EPA review to ensure that these projects are designed and constructed such that they do not create a significant hazard to public health.[28] Personal communications with the EPA reveal that this review has not even begun.[29] In fact, the BLM had not even contacted the EPA's groundwater office as of May 13, 2010.[30] O9-11

The Coyote Wells aquifer is currently in overdraft condition, and additional drawdown could potentially result in degradation of the quality of the water for the residents of the surrounding communities that rely upon this aquifer for their drinking water supply.[31] The public should be given adequate notice that this water supply is proposed to be used for the life of the Project.[32] The Project's water supply is a core aspect of the proposed action under NEPA. Because the DEIS does not include any information about this water supply, the DEIS must be revised with a complete analysis of the potentially significant impacts from the use of groundwater in a revised DEIS and must recirculate the revised DEIS for public review and comment. O9-11

C. CONCLUSION

Both the Dan Boyer groundwater supply and the SWWTP are connected actions under NEPA and, as such, must be studied by the BLM in the same environmental document as the proposed action. Since this was not done in the DEIS, a revised DEIS must be prepared and circulated for public review.

B. SOIL AND WATER CONDITIONS IN THE REGIONAL WATERSHED

The Project is within the Salton Sea Watershed and soil and water conditions on the Project site directly affect this watershed. Soil and water impacts were identified and analyzed by independent expert hydrologists Dr. Chris Bowles and Chris Campbell. Their testimony is attached to this comment and their opinions are incorporated in the soil and water sections of this comment letter.

As California's largest lake, the Salton Sea supports a multitude of recreational uses and a National Wildlife Refuge and is a critical stop on the Pacific Flyway for migrating birds, including several state- and federal-listed endangered and threatened species. Since the Sea has no outlets, salts concentrate in it and thus the sea is dependent on the continued inflow of freshwater to support it. Currently, the Sea is 25 percent saltier than the ocean, with salinity increasing at approximately 1 percent per year.

O9-14

The desert washes impacted by the Project provide critical ecological functions such as sediment transport and deposition, energy dissipation and groundwater recharge for the Salton Sea Transboundary Watershed. As explained by the EPA, these important services will be lost or degraded by the Project development.[38] The DEIR failed to adequately describe the soil and water conditions on the Project in order to provide a baseline to evaluate the Project's impacts.

a. Cryptobiotic Crusts

Notably, the DEIS failed to include any analysis of surface soils, including identification of the presence of cryptobiotic crusts on the Project site. It is highly likely that cryptobiotic crust is widespread across the site.[39] Cryptobiotic crust is a highly specialized community of cyanobacteria, mosses, and lichen and are prevalent in the project area.[40] The living organisms present in the desert soils create a surface crust of soil particles bound together by organic material. The thickness of these crusts can reach up to 10 cm. The crusts are important members of the desert ecosystem and

contribute to the well-being of other plants by stabilizing sand and dirt, promoting moisture retention, and fixing atmospheric nitrogen.[41] Because of their thin, fiberous nature, cryptobiotic soils are extremely fragile systems. Some species in the soil can recover within a few years of disturbance, but slow growing species may require more than a century to recover.[42]

Disruption of the crust will result in decreased organism diversity, soil nutrients, stability, and organic matter.[43] The crusts significantly aid infiltration of precipitation, and anthropogenic disturbance can dramatically increase surface runoff and increase the rate of soil loss by an order of magnitude.[44] Wind erosion is substantially more prevalent with disruption of the crust. Crusts that may remain intact downstream of the project site will inevitably be buried through windblown and water transported erosion.[45] O9-14

The BLM must establish the extent of cryptobiotic crust in the affected environment in order to analyze the effect that elimination of this crust will have on the hydrology of the Project site. This information and analysis must also be disclosed to the public, and the Project's impacts on the regional watershed must be analyzed as required by NEPA.

F. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO SOIL AND WATER RESOURCES

As mentioned, Dr. Christopher Bowles and Christopher Campbell independently reviewed the DEIS and concluded that the DEIS failed to analyze a number of potentially significant adverse environmental impacts to the soil and water resources onsite and in the watershed. Specifically, these experts identified significant unanalyzed impacts from sedimentation and O9-34

hydromodification; unanalyzed impacts to water quality; unidentified impacts from climate change relevant to project function; impacts from the extensive application of soil binders and potentially significant impacts to the Salton Sea National Wildlife Refuge. The soil and water resources section of the DEIS must be revised to reflect these significant changes. O9-34

a. Sedimentation and Hydromodification

The DEIS failed to analyze the potential for significant gully erosion to be initiated by interception of runoff in access road cuts (and trenches) and/or concentrated runoff directly beneath the bottom lip of the solar dishes during intense summer storms.[104] The DEIS also failed to analyze the potential for significant degradation (i.e., incision) of the washes as a result of installing sediment basins. Gully erosion has the ability to deliver significant quantities of sediment to the dendritic network of washes, which, in turn, can significantly impact the morphology of the washes and deliver excess sediments offsite to the further impairment of the New River and Imperial Valley Drains.[105]

The DEIS failed to analyze significant project impacts resulting in increased runoff. The DEIS severely underestimated the amount of impervious surface that the Project will create and likely dramatic changes in the hydrologic functions on the site (i.e., runoff duration, frequency, volume), which, in turn, can significantly degrade the washes.[106] The DEIS did not analyze the impervious surfaces created by site infrastructure (i.e., paved roads, building pads, solar disc footings), hundreds of miles of access road compaction, destruction of desert pavement and cryptobiotic crust, and the widespread application of soil binders. These aggregate changes in impervious surfaces were not considered and can have a significant impact on the morphology of the washes and downstream water bodies.[107] Although small increases in impervious surfaces were perceived to be negligible in the DEIS, these small changes will result in significant impacts to onsite and offsite resources.[108] O9-35

b. Impacts to Water Quality

The DEIS did not consider the water quality impacts of runoff laden with sediment and soluble salts that could be carried with surface runoff from the extensively graded project site. Considering intense rainfall and O9-36

subsequent runoff occurs in the summer, these soluble salts could enter the Westside Main Canal, be applied to agricultural fields, only to ultimately enter the Salton Sea through discharge from Imperial Valley drains.[109] Without a detailed analysis of offsite impacts, fine sediments could also reach the New River.[110] This potentially significant impact was not addressed in the DEIS. O9-36

c. Offsite Hydromodification

Potential offsite impacts due to onsite hydromodification were not considered in the DEIS since the DEIS improperly concluded that onsite impacts were negligible. Significant offsite impacts stem from the ability of increased runoff, in terms of higher peaks and larger volumes, to cause more erosion in the washes, thereby degrading the condition of the washes and conveying the eroded sediments downstream.[111] In addition to significant degradation of the morphology of the washes, these impacts include further impairment of the already degraded receiving waters (e.g., New River and Salton Sea).[112] O9-37

G. THE DEIS FAILED TO ANALYZE POTENTIALLY SIGNIFICANT IMPACTS TO GROUNDWATER RESOURCES

As mentioned above, the DEIS failed to analyze the use of groundwater (Dan Boyer Well) as the primary source of water for the Project. Given that the aquifer was designated as a sole source aquifer by the EPA in 1996 and is currently in an overdraft deficient status with static water levels declining on average of 1 foot every five years, it is difficult to fathom how this project would not further contribute to the groundwater deficit and lowering of the water table, which is not even acknowledged as an impact. The DEIS must analyze the Project's potentially significant direct, indirect and cumulative impacts to groundwater resources. O9-41

19. In my efforts to respond to the Alternative Water Supply, I have documented considerable information which either contradicts what the Applicant states about the Boyer water well 16S/9E-36G4 in Ocotillo or fails to substantiate assertions made by applicant or applicant's consultants related to groundwater usage at the well site. Those letters and their accompanying exhibits are included as Exhibits 566 and 567 and 515-564. P11-12

38. **Project does not have an assured water supply and there is inadequate up to date information on the proposed alternative water supply for any agency decision other than to deny.** The question of an assured water supply and what it means to others who have relied on that source **if groundwater**. I have submitted a detailed analysis with many exhibits on the alternative water supply as a witness for Intervenor Tom Budlong at the CEC Evidentiary Hearings. Yes, there is repetition, and there may be some typos not yet found, but I am submitting them as exhibits for the comments on the SA/DEIS. (See Exhibits 566 and 567.) (The letter to the US ACE is submitted as Exhibit 572.)

39. SA/DEIS at c.7-3 states that "No groundwater would be used by the project and the effect on groundwater infiltration would be negligible."

40. Project appears now to have no assured water supply. Seeley WasteWater Treatment Facility is in process of doing an EIR for upgrade and to address impacts of loss of outflow to wetlands along New River and could not be ready to deliver water for construction when applicant wants to start ...driven by desire to get federal monies.. May 5th Applicant's Supplemental AFC now identifies use of potable groundwater from Ocotillo by tank trucks for construction, dust suppression and mirror washings. However the documentation provided by the applicant for the hydrology and groundwater issues is more than woefully inadequate given the absence of monitoring information, pumping information and water quality information for the well in question and the nearest wells the US Gypsum wells.

P11-24

41. We learned that there is no valid permit to export water from the proposed well as of yesterday May 25th, 2010 at the Evidentiary hearing.

42. If groundwater were to be approved, it could/would eliminate source of domestic water for residents of Painted Gorge and West Texas who were identified as using this source in documents dating since 1996 and likely much earlier. So much for the CA hierarchy that puts domestic use as a higher priority than industrial or commercial activities. No one could answer the question about what happens if current domestic users lose their supply. Applicant intends to take all the water pumped from the well. The groundwater is from a US EPA designated Sole Source Aquifer, which means that in 1996 when EPA made the determination it recognized the water availability/water quality problems that are associated with the area where groundwater users get water for all needs. Derailed information and questions about the Boyer Well will be appended at the end of this comment letter.

43. The 2/2010 SA/DEIS document identifies the Seeley Waste Water Treatment Facility (SWWTF) as an intended source for 150,000 to 200,200 gallons of tertiary treated water for construction and operation (ES-4). The environmental impacts of use of this water have not been fully evaluated because there has not been any real discussion of what losing the outfall of treated wastewater would mean to the wetlands now receiving the water.

P11-24

44. When it comes to water I am wondering (ES-6) what is meant by the statement that the daily water requirement for SunCatcher mirror washing .... would be approximately 10.4 gallons of water/minute." If 30,000 SunCatchers that sounds like 0.96 AF/min, but again what does this really mean in terms of water usage.

Water well issues related to the Boyer well and the Ocotillo-Coyote Wells groundwater basin:

80. The monitoring data and information about water wells that was used by USGS for its 1977 report on the groundwater basin raised much interest and concern among residents of the groundwater basin. And can be summarized as follows.

    a. The County Dept. Of Public Works provided to residents copies of the 1977 USGS Groundwater study and model that was locally called the Skrivan Report. (Exhibit 537, USGS 1977)

    b. Some time after the USGS made its presentation to the Board of Supervisors, and during a public hearing, I challenged the reliability of the computer model because USGS water level monitoring data for the domestic wells in Yuha area and the well that was exporting groundwater showed that there was a significant decline in water level centered at the export well.

    c. USGS staff agreed with my conclusion that when the computer model cannot predict what the monitoring data shows, that it is the computer model that is inaccurate not the monitoring data.

    d. I was provided with computer print outs of water level and water quality monitoring data from USGS and a USGS printout that provided information on well construction, location, and ownership (Exhibit 553) that was included in the 1977 USGS Report (USGS 1977 Exhibit 537and 553) .

81. Water levels and water quality issues in the groundwater basin have been a growing and continuing concern for groundwater users for more than three decades. In fall 1977 I moved from Ocotillo to Yuha and was caretaking a property immediately south of a well which had started to export groundwater in September 1977. In 1977 all the homeowners because very concerned because in September 1977 tank trucks began lining up, leaving engines running and filling with water at all hours of day and night from the Simpson-McDougal well at the center of the 160 acre subdivision in addition to lining up at the well in Ocotillo. Residents were concerned, and when USGS came to monitor wells, residents learned water levels were showing signs of decline. **P11-35**

82. The 1977 USGS study that residents and the County were concerned because the USGS study revealed that:

    a. Water levels were declining where the residential development was.

    b. All groundwater pumping in the basin was located in a relatively small area or private land because most land is owned by federal govt BLM (See ONCAP Exhibit 517, Fig 1 after text, and Exhibit 562 a figure depicting location of wells on private lands)

    c. 90% of annual pumpage is centered in Ocotillo (Exhibit 537 p.1, 45)

    d. overdraft or groundwater mining because groundwater levels are declining (USGS 197, 7 Exhibit 537 p. 35) and discussion by USGS at County meeting

    e. large cones of depression of water levels centered around and downgradient from wells that were pumping 100 AF/Y or more of groundwater in locations relatively close together (USGS 1977, Exhibit 537 Fig 12, pp. 38-39)

    f. concern about saline intrusion or migration of highly saline groundwater from the east side of the . (USGS 1977, Exhibit 537 p. 1, 20, 41.)

g. Some wells in residential areas have poor quality water or high fluoride levels (USGS 1977, Exhibit 537 Fig. 6, pp 18-19)

h. USGS report stated that when it was prepared that there was only one well exporting water to Mexico, that was well 16S/9E-25K2 in Ocotillo (USGS 1977, Exhibit 537 at p 14) but a second well 17S/10E -11G1 had started to export to Mexico in September 1977. USGS report had not considered impacts of this export because it was not exporting water at the time the report was completed and/or the County had not told USGS that there was a second well exporting groundwater from Yuha Estates.

83. The USGS report discussed overdraft and showed local cones of depression where water levels were lower where wells were pumping more than for single family use. But, additionally, there other studies or analyses that addressed these concerns during years when there was ongoing litigation. Important new insights related to how groundwater basin was responding to pumping came to light in these additional/subsequent reports.

a. Huntley 1979 described significant well interference in locations where groundwater pumping exceeded 100 AF/Y and declining water levels in spite of years one might consider above average recharge based on rainfall (Huntley 1979 p. 11, 21 Exhibit 549)

b. Huntley expressed concern about the computed overdraft or depletion as seen by declining water levels, and "continued uncontrolled pumping" which "suggests that the ground water resources of the basin are seriously overallocated." (Huntley 1979 p. 21 Exhibit 549)

c. Huntley was further concerned that the USGS report tended to "underestimate the problems of overdraft in the Ocotillo-Coyote Wells basin." (Huntley 1979 p. 21 Exhibit 549) **P11-35**

d. Zipp from the State Water Resources Control Board prepared a report for a hearing of the RWQCB and noted that the basin (a very large area of mostly BLM lands) was not in critical condition of overdraft, but that there were several local cones of depression around major extraction areas. (Zipp 1980, Exhibit 554 p. 19)

e. 80% of water pumped in basin is exported from the basin. County should use hydrologic boundaries not political boundaries to define basin.. ..."all extractions from basin by US Gypsum must be considered as exports because water is taken across the fault into poor quality, unusable area." (Zipp 1980 Exhibit 554 p. 7)

f. Cones of depression in Ocotillo, Coyote Wells, and Yuha Estates areas have resulted in well interference. (Zipp 1980, Exhibit 554 p. 19)

g. There is no evidence of recharge despite years of heavy rainfall,(Zipp 1980, Exhibit 554 p. 19)

h. Additional export of water from the areas affected by well interference will only intensify the problem. (Zipp 1980 at p.19)

i. Deepening of the pumping cones may induce poor quality water upward from the deeper zones." (Zipp 1980 at p.19)

j. Huntley 1993 in response to my observation that one well exhibited an increase in chloride level which his court testimony had stated could be an indicator of saline intrusion, prepared a report for the APCD in response to a request by US Gypsum to increase the amount of groundwater it exported. (Exhibit 548)

k. Huntley discusses "local degradation [of water quality] in response to overdraft in the Ocotillo area" at the export well 16S/9E-25K2. (Huntley 1993 p. 1, Exhibit 548)

l. "Groundwater level information suggests that local overdraft conditions continue to exist within the Ocotillo-Coyote Wells basin, despite decreases in production from wells." USGS monitoring data indicated declining water levels including from US Gypsum well 36H1 contrary to the information provided by USG. ((Huntley 1993 p. 2, Exhibit 548)

m. Huntley recommended that US Gypsum groundwater production should not exceed 380 AF/Y. (Huntley 1993 p. 2, Exhibit 548)

84. Imperial County updated its General Plan in 1993. The updated General Plan affect planning for the Ocotillo-Coyote Wells Groundwater basin planning area in the following ways related to groundwater usage.

a. After lengthy input and community meetings, in 1994 the Board of Supervisors adopted the Ocotillo/Nomirage Community Area Plan (ONCAP) as a part of the Land Use Element of the General Plan. (Exhibit 517)

b. The intent of the County in preparing the ONCAP "is to maintain and protect the existing rural character of the area and to preserve its natural resources." (ONCAP p.2)

c. Text notes that "The entire planning area is dependent on groundwater. Historically, water has been of good quality. Recently, however, data seems to indicate a possible decline in water quality in some areas of the basin." (ONCAP p. 4)

d. The ONCAP states that: "Preservation and conservation of groundwater is one of the major concerns of the Ocotillo/Nomirage Community Area Plan. Water use, quality, quantity and protection are key issues in planning for the area. All land use proposals shall be reviewed to determine their impacts on groundwater quantity and quality." (ONCAP4) **P11-35**

e. Protection of Environmental Resources lists Objective 5.3 "Protect the groundwater in the Ocotillo/Nomirage Community Area from overdraft and saline conditions." (ONCAP p. 10) Objective 5.4 "Ensure that new development proposals do not contribute to overdraft or increase salinity of groundwater." (ONCAP p. 10) Objective 5.8 Work with IID and US Gypsum to examine other water sources and reduce their dependence on groundwater. (ONCAP p. 10) Objective 5.10 "Impose a limit of 1.5 acre-feet of water per dwelling unit in the Ocotillo/Nomirage Community Area>" (ONCAP 10)

f. For the Community Vision Objective 7.2 says: "Ensure that future growth and development is orderly, safe and does not cause overdraft, contamination or increase salinity of the groundwater aquifer." (ONCAP p. 11)

g. The ONCAP specifically requires a site specific geohydrology study for any project or property intending ro use more than 5 acre/feet/year or for any subdivision to be served by groundwater. (ONCAP 14, 15, 16, 17) .

h. Under Commercial Development the ONCAP states that: "It is the intent of the plan to maintain the existing character of the community by discouraging regional commercial land uses in order to preserve the groundwater resources from overdraft and contamination." (ONCAP 22)

85. Did the ONCAP 's only reference to the well at the Boyer property (formerly the WestWind Water Company) is found on ONCAP p. 4 ONCAP did not say anything about export of water from this property to Mexico or state how much water us supplied to the residents of Painted

Gorge.

a. ONCAP in discussion of existing conditions related to water mentions the "West Wind Water Company (Elfring) which supplies Painted Gorge residents." (ONCAP p. 4) The West Wind Water Company is now known as the Boyer well.

b. There is no information about how many homes there are in Painted Gorge or in West Texas which is just to the east of Coyote Wells. Also no information about how many permanent residents live in those places. In the ONCAP, However, information about that water usage at West Texas and Painted Gorge is found in the BE 1996 and 2004 reports for US Gypsum.

86. After the ONCAP was approved and residents had learned more about groundwater issues and seen how other communities tried to protect their groundwater basins from over-development or degraded quality, local residents were inspired by the efforts of the residents of Boulevard after their groundwater basin was designated as a Sole Source Aquifer by US EPA.

a. USGS report and other studies all showed that the groundwater basin was the only source of water for all domestic needs of the communities overlying the groundwater basin, and reports warned that overpumping could result in the degradation of water quality if water levels continued to decline.

b. In May 1994, residents began working together to apply for Sola Source Aquifer status with the aid of a pro bono attorney who lived in the community.

c. In September 1996, the Ocotillo-Coyote Wells basin was designated as a "Sole Source Aquifer" by EPA in 1996, and because of that designation, any project for which there is any federal money to be spent would require a serious study by US EPA and USGS to determine impacts and mitigation for impacts on the SSA. (Exhibit 515.) **P11-35**

87. What is the significance of Sole Source Aquifer designation?

a. .The EPA determined that the Ocotillo-Coyote Wells Aquifer in SW Imperial County CA "is the sole or principal source of drinking water for Ocotillo, Nomirage, Yuha Estates, and Coyote Wells and that this aquifer, if contaminated, would create a significant public health hazard. " (EPA 1996 at p. 47752, Exhibit 515)

b. "There is no economically feasible alternative drinking water source near the designated area." (EPA 1996 at p. 4775, Exhibit 515)

c. The designation is important because the EPA made its designation based on hydrologic boundaries with the Elsinore Fault marking the northern boundary and the Laguna Salada Fault along the eastern boundary (as recommended by Zipp 1980) rather than using a political boundary to include Plaster City factory as did USGS 1977 presumably at County request.

88. Groundwater basin come from fossil water. Several reports state that there is recharge to the basin from the Jacumba Mountains and Coyote Mts Wilderness areas, but there is very little rainfall in these mountains. There is also supposed to be some recharge to the basin when water in Myer Canyon is flowing if there is runoff in the mountains to the southwest of Ocotillo. However,

a. No water level monitoring of wells overlying potable waters done by USGS since the 1977 report has shown any increase in water levels in wells even though there have been three 100 year storm events that caused flooding from the Jacumba Mountains, in addition to several years of above average rainfall associated with El Nino years.

b. My discussions with John Izbicki, PhD of USGS water Resources Center in San Diego over the years leads me to the understanding that the water in the basin is "fossil groundwater" that is a remnant of a different weather and climate pattern toward the end of the last ice age., perhaps 10,000 to 100,000 years ago.

c. Groundwater in other desert groundwater basins has been dated and is tens of thousands of years old according to published research by Dr. Izbicki. From Dr. Izbicki and others at USGS I have learned that when the water is gone, it is gone because there is no longer enough rainfall to wet a dry column of soil in many places several hundred feet below the surface.

89. Based on information in technical reports and my own analysis of monitoring data from USGS, I am concerned about the potential for declining water levels and degradation of water quality for downgradient domestic wells in the Nomirage area based on changes already observed in wells monitored in other nearby parts of the groundwater basin.

a. Based on my review of USGS monitoring data and the studies that have been done, I am concerned that if US Gypsum and other nearby wells are permitted to export or extract 100-200 AF/Y from the existing large capacity wells that water levels will continue to decline and that there are inadequate protections /ineffective mitigation measures / inadequate and unimplemented monitoring which could do anything to protect residents of Nomirage from serious water quantity/quality problems?.

b. The Boyer well is the closest well to the USG wells.

90. Why the concern about impacts of pumping near the SE part of Ocotillo on the community of Nomirage?

P11-35

a. The Graham well near the center of Nomirage was unable to supply the needs of the Nomirage subdivision decades ago, so all dwellings had to pay to put in private domestic wells to serve each family, even though the subdivision was intended to have a single water supplier such as in the community of Ocotillo a few miles to the NW.

b. Depths to groundwater near and in parts of Nomirage are relatively shallow according to USGS 1977 and USGS subsequent water level monitoring (See Exhibit 516 for a table with water levels.).

c. The Nomirage area does not respond to pumping the same way as do the larger capacity wells in Ocotillo. Water quality in the Nomirage area is highly variable today with considerable difference for one well to another even on adjoining lots. Water level declines in Nomirage are on a continuum and static water levels are mush lower than in Ocotillo. (See details in Exhibit 516, the table I prepared for comments on the 2008 Final EIR/EIS for the US Gypsum project.)

91. The major past or proposed groundwater concerns for the community of Nomirage follow:

a. Failure of County to adequately and seriously consider impacts of commercial and industrial scale projects on Nomirage

b. Past proposal to create a sand and gravel operation on lands adjacent to the SE part of Nomirage, finally denied by Supervisors in November 1998. White Gravel pit would have intersected watertable if permitted and been the first sand and gravel operation in the State of California to be approved on lands designated for residential development..

c. Continued or increased groundwater extraction for export from 3 wells owned by US

Gypsum to east and southeast of Ocotillo . County approved US Gypsum expansion and increasing groundwater export in 1998 without requiring any groundwater study as required by the ONCAP. That decision was challenged in Court in January 1999 and still has not bee resolved.

d. Proposal by Wind Zero Group for a military style "law enforcement training facility" and 6.1 mile competitive race course, and luxury townhomes and resort hotel called Coyote Wells Specific Plan (CWSP) on about 944 acres immediately adjacent to Molitar Road, the eastern boundary of Nomirage,

e. CWSP project has a FEMA designated floodway going through property and nearby wells have poor quality water. Applicant proposed to use anywhere from 67 to 87 or more AF/Y of groundwater from 2 wells on-site My calculations of the uses suggest closer to 126 AF/Y. CWSP DEIR suggests that even more groundwater might be needed. ( )

f. And now the proposal for the Boyer well upgradient of Nomirage to be used as an Alternative Supply of Water for the Imperial Valley Solar/Solar 2 Project pumping 40 AF/Y, but asserting a need for 50 AF/Y during construction..

92. There have been other studies or reports on this groundwater basin that have raised concerns about the potential for adverse impacts of increased groundwater pumping. And I have submitted written comments on those projects for different organizations and community groups.

a. El Remate 1990 proposal to pump about 1000 AF/Y in the vicinity of Sunrise Butte along the Laguna Salada Fault in the SE part of the basin. Against the recommendations of its own consultant, the County approved a permit for pumping about 600 AF/Y. I submitted comments for the Ocotillo Community Council and Exhibit 562 is one of the maps I prepared to depict geology and well location and extent of private property, and the distance to which the cone of depression would extend, even upgradient. Lawsuit followed and project was abandoned. County decided to Update its General Plan. **P11-35**

b. White Pit project adjacent to Nomirage. It took about 5 years for community to convince County to deny this ill-advised project. Land is now for lease.

c. US Gypsum expansion project. USG first wanted to increase its groundwater pumping in 1993, then again in 1998. Huntley had recommended that USG's pumping be limited to 380 AF/Y. I commented on project and problems at Planning Commission on behalf of Sierra Club. After County approved the project without requiring an EIR, Sierra Club filed a lawsuit and the Court of Appeals decision required preparation of an EIR . See Exhibit 538.

d. Recently in 2010 the Wind Zero Group's Coyote Wells Specific Plan for law enforcement training , competitive racing, luxury housing and resort hotel on property through which a FEMA designated floodway passes has raised lots of concerns about groundwater impacts. I submitted comments on behalf of Sierra Club's San Diego Chapter, the CNRCC Desert Committee, and Desert Survivors.

e. The 2009 Ocotillo Express Wind Facility also proposed to use groundwater from undisclosed sources for construction of the wind turbans, using 22,000 gallons of groundwater for each of the 240 wind turbines. Turbines are planned for north and west of Ocotillo and west and south of Nomirage. (See Exhibits 525 and 529 for locations of wind turbines and estimates of water usage..)

f. Further away near the Coyote Mountains are Granite Construction wells are pumping water

for the sand and gravel operations.

g. Then the proposal to use water from the Boyer well in a quantity in excess of the total permitted quantity, and from a well which is currently serving residential users..

93. What have I learned things from reviewing all these Draft and Final EIR/EIS documents that raises concerns about groundwater studies and the potential for success of proposed mitigation measures related to any groundwater pumping?

a. First, is that applicants always seem to submit studies that were prepared several years prior to the release of the Draft EIR/EIS and have somewhat outdated USGS monitoring information. It doesn't matter who the applicant is.

b. Preparers of EIRs and County do not consider the implications of the fact that US Gypsum could not prove that it ever pumped as much as what it told USGS and the County. See discussions about the "US Gypsum variance" which is the difference between the water used at the plant based on production and the amount reported as being used by US Gypsum to USGS and County. This was described both in the Bookman-Edmonston 1996 study , in the DEIR and in the decision of the Court of Appeal.

c. The studies for the USG DEIR/S and FEIR/S do not make reference to this discrepancy in groundwater export to the factory or explain how such a 40% discrepancy might affect the conclusions of the USGS 1977 Report or any other groundwater reports .

94. Failure to ignore the discrepancy between what USG likely pumped and what it asserted it pumped is so great as to raise concerns about groundwater basin responses to pumping. Why is this important?

P11-35

a. Water levels have continued to decline since the 1977 USGS report and computer model. But what would the estimates of water level and water quality change be if the estimates were based on about half as much pumping as reported?

b. Would this mean that the groundwater basin is far more sensitive to smaller amounts of pumping than previously thought? If the basin or parts of the basin are more sensitive/respond to lower levels of pumping with declining water levels or changes in water quality?

c. Do the documented changes discovered by USGS monitoring mean that the problem of well interference is even greater than earlier thought?

d. What might happen if USG were to pump the quantity it wants, and what about the cumulative impacts of pumping at nearby wells?

95. Information about the Boyer Well 16S/9E-36G4 when learned when reviewing materials provided by the Applicant raises concerns about impacts if the well were to be used as an Alternative Water Supply for IV Solar. Specifically:

a. IV Solar proposes at different places to use 40 AF/Y, or approximately 50 AF/Y. (Supplemental Application for Certification at pp 1-2, 1-3)

b. However, the well is only permitted for 40 AF/Y, but applicant proposed to use 10 AF/Y more than the permitted amount for all uses. (SAC 1-3)

c. The temporary nature could be for 6 to 11 months (Appendix D) or 6 months to 3 years (SAC 1-3) , or for the lifespan of operations (if needed). (URS App. D Groundwater Evaluation at p. 6-1)

d. Well 16S/9E-36G4 is used for "personal use or personal consumption (SAC 1-2), but there is no indication of how many residences are served or how much water is provided for the residential needs of residents of West Texas and Painted Gorge as was noted in the BE 1996 and 2004 hydrology studies for the USG DEIR/S of 2006..

e. If IV Solar is approved to use 100% of the output of the Boyer well, what will happen to domestic uses by residents of Painted Gorge and West Texas that have historically been met at the Boyer well?

f. Applicant asserts that the well typically extracted over 100 AF/Y, but provided no documentation to support that assertion.

g. The only documentation for water sales is from the period part of 1990 through June 2004. (Appendix D)

h. Neither the 1977 USGS Report, the 1979 Huntley report, 1980 Zipp study, 1993 Huntley letter or 1994 ONCAP contain any statements to suggest that the Boyer well was exporting groundwater or pumping any quantity near 100 AF/Y. Because all of those documents were concerned with groundwater usage and identifying the largest centers of pumping, it seems unlikely that the Boyer well was doing much pumping without being noticed by the County or USGS, especially if there were about 40 trucks/day until 1982 as indicated in the Bammer 7-23-2004 letter. In Appendix D..

i. Where is the data to support such a claim? Is there documentation or is it simply a claim without basin such as USG's assertion of pumping up to 767 AF/Y?

j. Planning Dept response to Brammer letter suggests that County also did not accept that assertion because there was no documentation. (Exhibit 565, referred to in sworn testimony by Harmon and Planning's Jim Minnick during Evidentiary Hearing on May 25, 2010. **P11-35**

k. Water level monitoring and water quality data where available suggest that the Boyer well responds in a manner suggestive of well interference and changes in both water level and water quality in wells on the Boyer property raise many questions.

l. Why were water levels in 36G4 lower than in the USG well 36H1 which is downgradient? It is assumed that the USG well pumped more water than 36G4. (Exhibit 555)

m. Why did the static water level in 36 H1decline 6.7 feet between 2004 and 2005 when the well? (Exhibit 555)

n. Why did water level in 36H1 decline 14.73 ft between 1996 and 2005? (Exhibit 555)

o. The Westwind table reveals that between 1994 and 1995 when only 7.5 AF was pumped in 1994, that the static **water level in the well** 16S/9E-36G4 **declined by 16.25 ft. in one year**. Why?

p. In 2010, the static water level for well 16S/9E-36G4 was 3.27 feet lower than in the nearby USG well 16S/9E-36H1 (USGS monitoring) which was expected to have pumped far more water than the Boyer well.

q. Which is the center of the cone of depression and/or what is the role of well interference?

r. At one of the wells on the Boyer property (16S/9E-36G1) there was a marked change in water quality when the water quality was monitored between 1958 to 1975. The amount of total dissolved solids (TDS) steadily increased from 341 mg/l to 635 mg/l during that 17 year period. Why? How much was it pumping during that period? How much were any of

the USG wells pumping at that time?

s. Wells in this location appear to have rather dramatic responses in water level and water quality with only a small amount of pumping

t. Both at the Clifford 16S/9E-25K1 well in Ocotillo and McDougal 17S10E-11G1 well in the Yuha, increased pumping for export lead to declining water quality as measures by increased total dissolved solids?

96. It has been stated that the residents of Painted Gorge and West Texas get water trucked from the Boyer Well. It is uncertain how many people live there now. There are reasons related to water quality is different portions of the basin that explain why they get water from the Boyer well.

a. The 2004 Bookman-Edmonston "Ocotillo-Coyote Wells Hydrology and Groundwater Modeling study" that was included as a Technical Appendix to the US Gypsum Draft EIR/.EIS as Appendix B-2 includes two tables and two pages of information about the Painted Gorge and West Texas water issues at pp 4-4 to 4-6. (See Exhibit 563 re BE 2004 information about Painted Gorge, West Texas and WestWind Water company. Exhibit 564 is information from the B-E 1996 report.)

b. Table 4-3 estimates the population in 2010 for Painted Gorge to be 50 persons and West Texas as 13 persons, or a total estimated 2010 population without potable drinking water as 63 persons. (BE 2004 at p. 4-4)

c. "Westwind Water company is also located in Ocotillo and provides water by privately owned trucks to Painted Gorge, West Texas, and construction sites in the area. Groundwater underlying Painted Gorge is unsuitable for drinking and all water must be trucked in. Groundwater underlying West Texas is suitable for bathing and landscape irrigation, but drinking water must be trucked in." (BE 2004 at p. 4-5 and Exhibit 564)) P11-35

97. There is no documentation of how much water is supplied to those residents from the Westwind/Boyer well available for public review. Alternatively, I coulc find no information that might permit one to estimate how much water trucked in from the Boyer well might be used .

a. I can find no information about water usage in Painted Gorge and West Texas in materials provided by the IV Solar applicant or information supplied by Boyer. If included it was not readily located.

b. However, the 2004 BE appendix in the 2006 US Gypsum DEIR/S Table at p. 4-4 for applied water usage suggests that residents in those areas might be using/hauling 60 gal/day/person. Using that figure 63 persons x 60 g/dx 365 days =1,379,700 gallons or 4.23 AF/Y. (See BE 2004 at p. 4-4; Exhibit 563)

98. I am concerned about what would happen if those residents are no longer permitted to obtain water from the Boyer well because it would be used at the IV Solar project site. Where would they get water?

a. It appears that the WestWind /Boyer well has long provided water for those parts of the community and that such use was documented in the 1996 E-E study done for the USG DEIR/S..

b. I do not think that the Mutual Water companies would be permitted to provide a permanent supply of water for those who are not shareholders.

c. It is a matter of environmental justice that residents of those areas not be denied their

traditional water supply in favor of export of water from the Boyer well for construction and mirror washing at the proposed IV Solar Project site near the USG Plaster City factory.

99. The pump test information supplied by URS raises questions.

a. Given the historic declines in static water level over a one year with limited pumping what was the pump test run for only one 8 hour day rather than for several days ?

b. I ask this because the recovery after 17 hours left water in well still 2.98 feet below what it was when pumping started. (URS at 3-2) What might the results have been if pumping on the second day started with water at a depth almost 3 feet lower than when pumping was initiated?

c. Why was there no effort made to get a water level measurement at the nearest well?

100. I have concerns about the significance of the pump test based on knowledge of other pump tests in the basin.

a. Computer models and projections about the nature of impacts from pumping about 100 AF/Y from a well surrounded by domestic wells in Yuha Estates were more than overly optimistic and monitoring data could not be replicated by any computer model, even the most Recent.

b. Check the information in Exhibit 516 for the McDougal Yuha well which exhibited a dramatic decline in water level which also caused in declines in water levels in all measured domestic wells. Our well 17S/10E-11H3 (replacing 11H2)(which was less than 1000 ft from the export well 11G1)showed a decline in water level of about 30 feet in a 5 year period. The water level has been recovering ever since September 1982 when export pumping stopped. (See Exhibit 564 with figures depicting the cones of depression centered at Ocotillo and Yuha.) P11-35

c. All computer models had indicated that there should be no adverse impacts from pumping 100 or more AF/Y. See Exhibit 516 to see change in water levels.

d. It is my recollection that when pump tests have been done in the past, that water levels were monitored in the nearest well. But I was unable to find the test results.

101. For the Boyer well, there is already existing information suggesting that the well is more sensitive to pumping than being asserted by the applicant and those were not addressed by URS information provided by Robert Scott, the URS geologist who prepared the "Groundwater Evaluation Report Dan Boyer Water Company well State well No 16S/9E-36G4" dated 26 April 2010 for the IV Solar Alternative Water Supply assessment.

a. Why did URS rely on the outdated January 2004 hydrology report by Bookman-Edmonston for the US Gypsum EIR/EIS project without providing more recent USGS monitoring data?

b. Why submit the hydrology text from the 2006 DEIR/EIS for the US Gypsum expansion project which appears to include monitoring information and tables with information no more recent than 2000, 2001, or 2003?

c. Why didn't URS update the studies with USGS water level and water quality information available on the internet through spring 2010?

d. What are the URS explanations for the interesting changes in water levels and water quality observed in the Boyer and USG wells?

e. Why didn't URS obtain the pumping amounts for each of the three USG wells and why did

it fail to provide water quantities pumped from the Boyer well for the past 5 years? What analysis might be drawn if information on water levels and amounts pumped for all the USG wells AND the Boyer well

f. Why does URS include Fig 1 with well locations but fail to include the location of all the USGS monitored wells? Why was well 16S/9E-34B1 to the west of Ocotillo not shown"

102. Why is the information about well 34B1 important?

a. Because it is the furthest west well, closest to the supposed recharge coming from the mountains, but in 2009 it had a static water level (253.21' AMSL) that is about 15.71 ft lower than the 2009 static water level in the Ocotillo Mutual Water Company (well 16S/9E-25M2) (268.92' AMSL) that is to the east. What is the explanation for the upgradient well to have a lower static water level than those that are pumping more and are located down gradient?

b. Without answering some of these questions it is not possible to determine whether or not and to what extent the proposed alternative source of water would have a significant cumulative impact on downgradient domestic wells located within the growing and deepening cone of depression SE of Ocotillo. **P11-35**

c. Why was no information presented to indicate the success or failure of the groundwater related to the implementation of the various mitigation and monitoring measures that are part of the USG approvals from Imperial County in 2006?

d. Were the new monitoring wells drilled, if so when and by whom monitored?

e. Why was there no discussion or identification of other wells pumping more than a few AF/Y to makes some king of consideration of cumulative impacts analysis? Wells such as the Ocotillo Mutual and Coyote Valley Mutual, , Wind Zero, Atlas Storage, and Ocotillo Express Wind Facility and sand and gravel operations?

f. This is especially concerning when the duration of the alternative water supply use was found in at least two places to state that the duration could be for the lifespan of operations.

105. The IV Solar Project might also have an adverse impact on the groundwater basin/sole source aquifer by forcing the solar project biological resources review to a priority position ahead of completing the biological opinion related to making it possible for US Gypsum to start reducing its export of groundwater and being using Colorado River. This is a serious but unintended consequence of making renewables issues a higher priority than other projects for the FWS? **P11-38**

a. It seems obvious that in addition to the concerns about using the Boyer well as a water source for the project, the Solar project is effectively delaying the initiation of actions for USG to use Colorado River water. This continued export of potable groundwater for use in wallboard manufacturing represents an adverse impact on the groundwater basin and allows for continued pumping in the location that is very close to the center of the cone of depression.

D.4.13.1 Temporary Use of Well Water for Construction and Initial Operations

As discussed in Section D.4.16, below, and in detail in the Final Environmental Impact Statement (FEIS) in Chapter 4, Environmental Consequences, and in Appendix B, Determination of NEPA Adequacy (DNA), the Imperial Valley Solar (IVS) project, the Agency Preferred Alternative, and the other Build Alternatives were modified after the publication of the SA/DEIS to use an off site well as a temporary water source during construction and initial operations. The use of water from the existing permitted Dan Boyer Water Company well to provide water to the site is proposed until the Seeley Wastewater Treatment Plant (SWWTP) can provide the water to the site.

It is expected that the IVS project would require water from the Dan Boyer Water Company well for 6 months to 3 years. The water would be transported to the IVS project site in 7,000 gallon water trucks. Based on the expected construction demand of approximately 50 acre-feet-per-year (afy) on average, it is anticipated that up to 13 truck trips would be required per day. If the well water supply is used during initial project operation, a maximum of 7 truck trips per day would be required to supply the approximate 33 afy demand for operations. Once on site, the water would be stored for construction and/or operations use.

The analysis of the use of the well water is described in detail in the DNA in Appendix B in the FEIS.

D.4.13.2 Water Supply

The water needs for the IVS project are described above. The Dan Boyer Water Company is a private water purveyor located at 1108 Imperial Avenue in Ocotillo, approximately 3.5 miles (mi) southwest of the IVS project site and 7 mi by road as shown on figures provided in Chapter 2, Alternatives Including the Proposed Action, in the FEIS. The Company operates State well #16S/9E-36G4 with a current permitted pumping rate of 40 afy. The well water is potable and permitted for use by construction or personal consumption. Historically, the well has typically extracted over 100 afy for uses such as construction, dust control, and personal use. The Dan Boyer Water Company had indicated its intent to temporarily furnish well water to the IVS project.

The source of water for the Dan Boyer Water Company well is the Ocotillo Wells, which is a United States Environmental Protection Agency (EPA)-designated sole source aquifer. The water supply capability of Ocotillo Wells is described in the Supplement to the Imperial Valley Solar (Formerly Solar Two) Application for Certification (URS, May 2010).

D.4.13.3 Erosion, Soil Runoff, and Hydromodification

The SunCatchers would be mounted on a pedestal foundation. Those foundations would consist of a metal fin-pipe hydraulically driven into the ground. This type of foundation requires no concrete, generates no spoils, and can be completely removed when the project is decommissioned. The metal fin-pipe foundation eliminates conventional drilling techniques that would generate soil cuttings, require dust suppression, and require the trucking and disposal of the cuttings. However, when conditions are not conducive to the use of the metal fin-pipe foundation, the foundation would consist of rebar-reinforced concrete constructed below grade.

Although the SunCatcher arrangement would be designed to fit the local contours of the site, the density of dishes and the arrangement in straight parallel rows would result in many SunCatchers being installed into flood hazard areas and channels. It is estimated, using a rough grading plan and flood hazard information provided by the applicant, that approximately 5,150 SunCatchers would be placed in flood hazard areas, including active channels. The actual number of SunCatchers subject to flooding is expected to be higher considering the flood-prone areas not mapped on the soil and water resources figure in the SA/DEIS.

Based on the information from the applicant, the total land area disturbed by the construction of the SunCatcher field would be approximately 3,160 square feet per SunCatcher, including the SunCatcher installation, road construction, clearing, and grading. Assuming a minimum of 5,150 SunCatchers in flood hazard areas, the total construction disturbance for the 30,000 SunCatcher array would be at least 374 acres (ac) in floodplains. Approximately 164 ac of this would be permanent disturbance in the form of roads and SunCatcher foundations. The actual floodplain disturbance is expected to be greater due to features placed in flood hazard areas not mapped by the applicant.

During operation, disturbed and cleared areas, primarily within the SunCatcher field, would be subject to increased erosion potential due to the removal of vegetation, the removal of desert pavement, the disturbance of the surface crust, and the placement of SunCatcher foundation poles in the flow path. The result of surface disturbances and the presence of SunCatchers in the flow path could be long-term erosional degradation of the soil surface within the SunCatcher array and in the intervening undisturbed areas, as well as increased sediment discharge off-site across Dunaway Road and toward the east where the Westside Main Canal and New River flow.

SunCatcher foundation poles in the flow path would create local areas of flow turbulence, resulting in local stream scour around the foundation poles. Scour such as this occurs on bridge piers, resulting in the need to bury bridge piers to a depth below the depth of scour to ensure stability. SunCatchers subject to scour could also become unstable if the scour is deep enough

to undermine the structural foundation, resulting in collapse and potentially damaging and polluting the ground surface with mirror fragments and other SunCatcher debris.

The SunCatcher foundations will be buried to a sufficient depth to protect against 5 feet (ft) of scour. Using hydraulic information from the HEC-RAS analysis for the project, and the assumption of a 2-ft diameter foundation, that total 100-year scour at SunCatchers would be 5 ft or less in most, but not all, cases. Scour depth is estimated to be deeper than 5 ft in several areas, and if long-term stream degradation and debris accumulation on SunCatcher foundations is considered, the scour depth could be greater than 5 ft in many cases.

Sediment basins are proposed as mitigation for potential excess sediment production which could result from increased sediment transport capacity in the SunCatcher arrays. These basins are designed by a regional equation rather than a site-specific sediment transport analysis. Because of the lack of precision in this form of analysis, the capacity of these basins to function as intended is not known. Because the basins are designed for two years of annual sediment production, they may serve the intended purpose on small floods, but could be overwhelmed by the much larger sediment transport volume of larger floods, with the resulting effect of increased sediment deposition downstream if sediment transport from the SunCatcher fields has been increased through vegetation clearing and grading of surface irregularities.

On an average annual basis, with smaller floods occurring, the basins may function as intended to remove sediment. However, this too could have an adverse impact after a long series of small floods if the basins remove too much sediment from the system.

Artificial removal of sediment from a stream bed otherwise in equilibrium usually results in a lowering of the downstream bed. The result would be an alteration of downstream channel morphology from wide sandy washes with shallow banks to deeper channels with steeper banks. This could have an adverse effect on local riparian resources, increase the bank erosion potential, as well as affect in-stream man-made structures. Flow cascading into unprotected basins could create cuts that would migrate upstream along the channels.

Preliminary analysis determined that sediment transport capacity in on-site drainages would likely be increased by the project, with possible adverse effects. In the absence of a detailed, site-specific sediment transport analysis specifically addressing these issues, these stream morphology impacts are considered a substantial adverse impact of the project as described in the FEIS.

D.4.13.4 Aquifer Contamination from Evaporation Ponds

On-site concrete-lined evaporation ponds will be used as storage reservoirs for construction water trucked in from the off site well and then via the pipeline from the SWWTP. Water quality impacts could occur to groundwater through infiltration of the treated water from the SWWTP. The Colorado River Regional Water Quality Control Board (RWQCB) will require monitoring of groundwater during this period. Compliance with Measure SOIL&WATER-3 in the FEIS will ensure no adverse impacts to groundwater from storage of construction runoff in the evaporation ponds.

The reverse osmosis (RO) water treatment system would produce water with a high concentration of total dissolved solids, as well as other contaminants. These waste waters would be discharged into one of two concrete-lined evaporation ponds at the Main Services Complex for drying. After a pond is filled it would be allowed to dry while the other pond is filled. The dry cake from the evaporation process would be removed and exported by truck to a waste disposal facility. Potential impacts include groundwater degradation from infiltration at the ponds, and surface water degradation from spills and mishandling of the dry cake.

This discharge of wastes to the evaporation ponds would be subject to waste discharge requirements from the RWQCB. The California Water Code (CWC) Section 13260–13269; 23 CCR Chapter 9 requires the filing of a Report of Waste Discharge (ROWD) and provides for the issuance of Waste Discharge Requirements with respect to the discharge of any waste that can affect the quality of the waters of the State. An ROWD would be filed for the RO unit discharge waste. Subject to verification by the RWQCB, the RO unit and evaporation ponds would be constructed and monitored in accordance with RWQCB requirements. Measures SOIL&WATER-3 and SOIL&WATER-7 in the FEIS would ensure no adverse water quality impact from the RO water treatment system.

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D.4.14 NEPA Process and Issues

The responses to comments related to the NEPA process for the IVS project are provided in the following sections.

D.4.14.1 709 MW Alternative: Agency Preferred Alternative

Comments: F2-6 and O6-2.

In addition to the above, we are concerned about the Project's potential impacts on groundwater, We note that, on May 10th the Project proponent released a Supplement to the Imperial Valley Solar Application for Certification to BLM and the California Energy Commission (CEC). That supplement includes analyses of project design modifications, and proposes, as an alternative water supply for the Project, a sole source aquifer that may already be over-appropriated. An analysis of this newly proposed water source and the potential **F2-6**

The Yuha Desert, where the Project is to be located, is a pristine but extraordinarily sensitive landscape. Damage to it from this Project is likely to be irreversible. "Implementation of this [P]roject will forever change the landscape of this area,"[1] and also lead to "the permanent destruction of hundreds of cultural resources. . . ."[2] The environmental devastation that this Project will cause is permanent, but the Project's benefits are only temporary.[3] Nonetheless, the California Energy Commission ("CEC") and United States Bureau of Land Management ("BLM") are rushing through critical environmental reviews and omitting essential information for the sake of the Project applicant's arbitrary timetables. An applicant's supposed time constraints are not a recognized exception to the requirements of either the California Environmental Quality Act ("CEQA") or the National Environmental Policy Act ("NEPA"). It is crucial that a complete and thorough inquiry into the Project's impacts be made *before* the CEC and BLM commit themselves to allowing irreversible environmental damage.

The SA/DEIS fails to comply with CEQA and NEPA in seven distinct ways. First, it omits essential information and, as a result, fails as an informational document. Second, the SA/DEIS unlawfully defers the formulation of various studies and mitigation measures. Third, the assessment of the Project's environmental impacts is inadequate. Significant impacts are deemed insignificant and impacts that can be mitigated are mistakenly found to be unavoidable. Fourth, significant unstudied changes have been made to the Project since the SA/DEIS' release, and significant new information is planned to be added to the SA/DEIS at a future date, so the SA/DEIS must be recirculated and an additional public comment period provided. Fifth, the discussion of Alternatives is inadequate insofar as BLM declined to evaluate Site Alternatives on the sole basis that they are inconsistent with the *applicant's* purpose and need. Sixth, the SA/DEIS unlawfully segments the Project by failing to consider the impacts of the related Sunrise Powerlink project. Seventh, the Project applicant now proposes to satisfy the Project's water needs with well water, but such use of that water would violate the federal Safe Drinking Water Act because the underlying aquifer has been designated a "sole source aquifer" by the United States Environmental Protection Agency. **O6-2**

Response: These comments question whether the modifications to the IVS project included in the Agency Preferred Alternative are adequately evaluated under the requirements of the

National Environmental Policy Act (NEPA). As described in Section 2.0, Alternatives Including the Proposed Action, the Agency Preferred Alternative is the Imperial Valley Solar (IVS) project with modifications. Those modifications are described and evaluated in Chapter 4, Environmental Consequences, in the Final Environmental Impact Statement (FEIS). That evaluation, which is summarized in Appendix B, Determination of NEPA Adequacy (DNA), in the FEIS, determined that the applicant-proposed modications are within the range of the alternatives (specifically the IVS project) and that impacts documented in the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) and the existing NEPA analyses are adequate to document the impacts of the Agency Preferred Alternative (the IVS project with modifications). Refer also to Section D.4.16, Determination of NEPA Adequacy, later in this response to comments appendix for additional discussion regarding the modifications which are part of the Agency Preferred Alternative and the analysis of the potential effects of those modifications.

D.4.14.2 Subsequent Environmental Documentation, Adequacy of Resource Inventories, Lack of Additional Studies, Adequacy of Impacts Analysis

Comments: F2-9, F2-10, L2-2, L2-16, O2-4, O2-12, O2-13, O2-14, O2-15, O2-30, O2-32, O6-2, O6-3, O6-4, O6-5, O6-12, O8-2, O9-2, O9-8, O9-56, O9-58, P10-2, P11-5, and P11-13.

Given the numerous outstanding concerns that have been raised by EPA as well as many other stakeholders on the Project as proposed, EPA strongly encourages BLM to address comments provided on the subject DEIS in the FEIS. The FEIS should also demonstrate that the proposed Project is the *Least Environmentally Damaging Practicable Alternative* (LEDPA), and identify measures that could mitigate the impacts. It should include a robust discussion of all avoidance and mitigation measures proposed for the Project and include an outline of the requirements of a compensatory mitigation plan. **F2-9**

We believe it is imperative that BLM, resource agencies and project applicants coordinate early with other agencies and stakeholders on site selection and project design in order to facilitate timely environmental reviews. EPA appreciates the opportunity to provide input on this Project and the multitude of DEISs under preparation for renewable energy projects in our Region. We are available to further discuss all recommendations provided. Please send one hard copy of the Final EIS and two CD ROM copies to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please contact me at 415-972-3843, or contact Tom Plenys, the lead reviewer for this Project. Tom can be reached at 415-972-3238 or plenys.thomas@epa.gov. **F2-10**

1) Throughout the DEIS there are numerous areas where an analysis or a study is not complete and that information is forthcoming. This makes it very difficult to perform a complete analysis of the DEIS. It is our understanding that the CEC will be releasing a subsequent DEIS and provide additional review time for respondents. We look forward to a more complete document to review. **L2-2**

Please provide the County with responses to the above concerns and other Imperial County Departments may also have project-related comments as well. **L2-16**

Because the project approval process includes a quasi-judicial process in the California Energy Commission, the Center hereby incorporates by reference all of the materials before the California Energy Commission regarding the approval of this project. BLM is a party to the CEC process, which is being conducted in concert with the BLM approval process, and BLM has access to all of the documents (which are also readily accessible on the internet), therefore, BLM should incorporate all of the documents and materials from that process into the administrative record for the BLM decision as well. **O2-4**

The cumulative impacts to species in this area from sprawl development, as opposed to well planned and sited development, are not adequately addressed in the planning context. Nor is the conversion of the western Imperial Valley into a highly industrialized area (with additional wind and large scale solar plants, accompanying substations and power lines, and glare and heat islands) adequately addressed in the environmental review. In fact, it is clear that piecemeal project approvals in this area and others may undermine the solar programmatic planning by federal agencies for the western states. This critical issue regarding planning on public lands is not adequately addressed in the DEIS which only mentions the PEIS process particularly with regards to the "south of Highway 98 alternative". DEIS at B.2-74 to 84. The BLM does not analyze how the PEIS could be affected by piecemeal approval of this and other projects. Such analysis *after the fact* is not consistent with the planning requirements of FLPMA or, indeed, any rational land use planning principles. **O2-12**

FLPMA states that "[t]he Secretary shall prepare and maintain on a continuing basis an inventory of all public lands and their resource and other values," and this "[t]his inventory shall be kept current so as to reflect changes in conditions and to identify new and emerging resource and other values." 43 U.S.C. § 1711(a). FLPMA also requires that this inventory form the basis of the land use planning process. 43 U.S.C. § 1701(a)(2). *See Center for Biological Diversity v. Bureau of Land Management*, 422 F.Supp.2d 1115, 1166-67 (N.D. Cal. 2006) (discussing need for BLM to take into account known resources in making management decisions); *ONDA v. Rasmussen,* 451 F.Supp. 2d 1202, 1212-13 (D. Or. 2006) (finding that BLM did not take a hard look under NEPA by relying on outdated inventories and such reliance was inconsistent with BLM's statutory obligations to engage in a continuing inventory under FLPMA). It is clear that BLM should not approve a management plan amendment based on outdated and inadequate inventories of affected resources on public lands.

O2-13

As detailed below in the NEPA sections, here BLM has failed to compile an adequate inventory of the resources of the public lands that could be affected by the proposed project *before* preparing the DEIS (including, e.g., rare plant surveys including late-summer/early-fall flowering plants, Peninsular bighorn sheep movement and use, and other biological resources) which is necessary in order to adequately assess the impacts to resources of these public lands in light of the proposed plan amendment and BLM has also failed to adequately analyze impacts on known resources. Indeed, the project proponent has stated that surveys were ongoing after the DEIS was issued and the water source for the proposed project has changed thereby requiring additional information regarding the water resources as well. Therefore, at minimum, a revised DEIS or supplemental DEIS must be prepared that includes the new information about the resources of the site and potential impacts of the project on resources of our public land, and that document must be circulated for public review and comment.

E. The DEIS Fails to Provide Adequate Information to Ensure that the BLM will Prevent Unnecessary and Undue Degradation of Public lands

FLPMA requires BLM to "take any action necessary to prevent unnecessary or undue degradation of the lands" and "minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved." 43 U.S.C. §§ 1732(b), 1732(d)(2)(a). Without adequate information and analysis of the current status of the resources of these public lands, BLM cannot fulfill its duty to prevent unnecessary or undue degradation of the public lands and resources. Thus, the failure to provide an adequate current inventory of resources and environmental review undermines BLM's ability to protect and manage these lands in accordance with the statutory directive. O2-14

BLM has failed to properly identify and analyze impacts to the resources including the listed and sensitive species in the project area. As detailed below, the BLM's failure in this regard violates the most basic requirements of NEPA and in addition undermines the BLM's ability to ensure that the proposal does not cause unnecessary and undue degradation of public lands. *See Island Mountain Protectors*, 144 IBLA 168, 202 (1998) (holding that "[t]o the extent BLM failed to meet its obligations under NEPA, it also failed to protect public lands from unnecessary or undue degradation."); *National Wildlife Federation*, 140 IBLA 85, 101 (1997) (holding that "BLM violated FLPMA, because it failed to engage in any reasoned or informed decision-making process" or show that it had "balanced competing resource values"). O2-14

II. The DEIS Fails to Comply with NEPA.

NEPA is the "basic charter for protection of the environment." 40 C.F.R. § 1500.1(a). In NEPA, Congress declared a national policy of "creat[ing] and maintain[ing] conditions under which man and nature can exist in productive harmony." *Or. Natural Desert Ass'n v. Bureau of Land Mgmt.*, 531 F.3d 1114, 1120 (9th Cir. 2008) (quoting 42 U.S.C. § 4331(a)). NEPA is intended to "ensure that [federal agencies] … will have detailed information concerning significant environmental impacts" and "guarantee[] that the relevant information will be made available to the larger [public] audience." *Blue Mountains Biodiversity Project v. Blackwood,* 161 F.3d 1208, 1212 (9th Cir. 1998).

Under NEPA, before a federal agency takes a "'major [f]ederal action[] significantly affecting the quality' of the environment," the agency must prepare an environmental impact statement (EIS). *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1067 (9th Cir. 2002) (quoting 43 U.S.C. § 4332(2)(C)). "An EIS is a thorough analysis of the potential environmental impact that 'provide[s] full and fair discussion of significant environmental impacts and … inform[s] decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.'" *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004) (citing 40 C.F.R. § 1502.1). An EIS is NEPA's "chief tool" and is "designed as an 'action-forcing device to [e]nsure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government.'" *Or. Natural Desert Ass'n,* 531 F.3d at 1121 (quoting 40 C.F.R. § 1502.1). O2-15

An EIS must identify and analyze the direct, indirect, and cumulative effects of the proposed action. This requires more than "general statements about possible effects and some risk" or simply conclusory statements regarding the impacts of a project. *Klamath Siskiyou Wildlands Center v. BLM,* 387 F.3d 989, 995 (9th Cir. 2004) (citation omitted); *Oregon Natural Resources Council v. BLM,* 470 F.3d 818, 822-23 (9th Cir. 2006). Conclusory statements alone "do not equip a decisionmaker to make an informed decision about alternative courses of action or a court to review the Secretary's reasoning." *NRDC v. Hodel*, 865 F.2d 288, 298 (D.C. Cir. 1988).

NEPA also requires BLM to ensure the scientific integrity and accuracy of the information used in its decision-making. 40 CFR § 1502.24. The regulations specify that the agency "must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential." 40 C.F.R. § 1500.1(b). Where complete data is unavailable, the EIS also must contain an analysis of the worst-case scenario resulting from the proposed project. *Friends of Endangered Species v. Jantzen*, 760 F.3d 976, 988 (9th Cir. 1985) (NEPA requires a worst case analysis when information relevant to impacts is essential and not known and the costs of obtaining the

information are exorbitant or the means of obtaining it are not known) *citing Save our Ecosystems v. Clark*, 747 F.2d 1240, 1243 (9th Cir. 1984); 40 C.F.R. § 1502.22.

As detailed below, the DEIS fails to comply with NEPA in several key areas. Overall, that the DEIS provides incomplete information and appears to have been prepared in a rush rather than to be the result of adequate analysis and research regarding impacts to the environment. Moreover, the DEIS fails to meet the requirements for sufficient information in many ways and fails to include any explanation for the missing information or analysis of why it could not be obtained. Further, the DEIS assumed that another agency would make a decision that was not in fact yet made regarding the availability of water from the Seeley plant—an error of fact. At minimum, because the DEIS did not accurately address the water issues a revised DEIS or supplemental DEIS must be prepared and circulated for public review and comment. O2-15

As BLM is well aware, the notice to the public regarding the availability of the DEIS was confused at best with multiple published notices regarding the availability of the DEIS and a mistaken notice regarding the date that comments would be due. In light of this, the Center urges the BLM to accept comments from the public regarding the DEIS up to and including June 23, 2010 – the date that was published in the federal register notice from the EPA on March 5, 2010. 75 Fed. Reg. 10255. Given that the BLM must prepare a revised DEIS or a supplemental DEIS, it will not cause any additional delay for BLM to consider comments that are submitted up to that date from members of the public who may have been mislead by the incorrect notice.

9.. Failure to Identify Appropriate Mitigation

Because the DEIS fails to provide adequate identification and analysis of impacts, inevitably, it also fails to identify adequate mitigation measures for the project's environmental impacts. "Implicit in NEPA's demand that an agency prepare a detailed statement on 'any adverse environmental effects which cannot be avoided should the proposal be implemented,' 42 U.S.C. § 4332(C)(ii), is an understanding that an EIS will discuss the extent to which adverse effects can be avoided." *Methow Valley*, 490 U.S. at 351-52. Because the DEIS does not adequately assess the project's direct, indirect, and cumulative impacts, its analysis of mitigation measures for those impacts is necessarily flawed. The DEIS must discuss mitigation in sufficient detail to ensure that environmental consequences have been fairly evaluated." *Methow Valley*, 490 U.S. at 352; *see also Idaho Sporting Congress*, 137 F.3d at 1151 ("[w]ithout analytical detail to support the proposed mitigation measures, we are not persuaded that they amount to anything more than a 'mere listing' of good management practices"). As the Supreme Court clarified in *Robertson*, 490 U.S. at 352, the "requirement that an EIS contain a detailed discussion of possible mitigation measures flows both from the language of [NEPA] and, more expressly, from CEQ's implementing regulations" and the "omission of a reasonably complete discussion of possible mitigation measures would undermine the 'action forcing' function of NEPA." **O2-30**

Although NEPA does not require that the harms identified actually be mitigated, NEPA does require that an EIS discuss mitigation measures, with "sufficient detail to ensure that environmental consequences have been fairly evaluated" and the purpose of the mitigation discussion is to evaluate whether anticipated environmental impacts *can be avoided*. *Methow Valley*, 490 U.S. at 351-52. As the Ninth Circuit recently noted: "[a] mitigation discussion without at least *some* evaluation of effectiveness is useless in making that determination." *South Fork Band Council of Western Shoshone v. DOI* , 588 F.3d 718 , 727 (9th Cir. 2009) (emphasis in original).

Here, the DEIS does not provide a full analysis of possible mitigation measures to avoid or lessen the impacts of the proposed project and therefore the BLM cannot properly assess the likelihood that such measures would actually avoid the impacts of the proposed project.

D. Key Plans are Not Included

The DEIS fails to include key plans for public review. Plans relied upon for adequate mitigation but which are unavailable include:

- Noxious Weed Management Plan (DEIS at C.2-32)
- Biological Resources Mitigation Implementation and Monitoring Plan (DEIS at C.2-78)
- Raven Management and Monitoring Plan (DEIS at C.2-44)
- Contingency Plan (for temporary closure) (DEIS at C.2-50)
- Decommissioning and Reclamation Plan (for permanent closure) (DEIS at C.2-50)
- Burrowing Owl Mitigation and Monitoring Plan (DEIS at C.2-78)
- Frac-out Contingency Plan (DEIS at C.2-2) for the horizontal drilling of the reclaimed water-line (which may no longer be part of the project)
- Drainage, Erosion, and Sedimentation Control Plan (DEIS at C.7-1)

Several other key plans are also missing from the DEIS but involve more complicated issues. While the Management Plan for Acquired Lands (DEIS at C.2-35) is a key document that needs to have public review to ascertain if, in fact, acquired lands actually do mitigate for the impacts (see discussion above on "nesting"), the DEIS fails to identify the acquisition lands, or if acquisition lands are actually even available. Clearly, if the proposed project was to move forward, acquired lands are a key component of a mitigation strategy. The supplemental EIS must provide a better evaluation if lands are available, and where those lands are, and how they will fulfill the mitigation scenario. O2-32

The Special Status Plant Survey and Protection Plan (DEIS at C.2-97) is also missing. While this plan is proposed as a mitigation requirement, that position is unsupportable because the special status plant surveys need to be done to provide the baseline data from which evaluation for potential project impacts can be analyzed. Surveys are not a mitigation strategy.

Shockingly, no relocation plan for flat-tailed horned lizard is even required in the DEIS, despite the acknowledgement that relocation will be a minimization strategy. The DEIS cannot rely on the FTHL Rangewide Management Strategy because this document does not include any guidance on relocation. Little data is available on the effectiveness of relocating reptiles in general and flat-tailed horned lizards specifically. In fact, a review of the literature concludes that relocation of reptiles (and amphibians) has not been a successful strategy for conservation[27].

Relocation should be looked on as experimental at best, and scientifically based strategy needs to be developed in a relocation plan including a significant adaptive management component. This strategy needs to be included in the revised or supplemental DEIS and provided for public review and comment. O2-32

The Yuha Desert, where the Project is to be located, is a pristine but extraordinarily sensitive landscape. Damage to it from this Project is likely to be irreversible. "Implementation of this [P]roject will forever change the landscape of this area,"[1] and also lead to "the permanent destruction of hundreds of cultural resources. . . ."[2] The environmental devastation that this Project will cause is permanent, but the Project's benefits are only temporary.[3] Nonetheless, the California Energy Commission ("CEC") and United States Bureau of Land Management ("BLM") are rushing through critical environmental reviews and omitting essential information for the sake of the Project applicant's arbitrary timetables. An applicant's supposed time constraints are not a recognized exception to the requirements of either the California Environmental Quality Act ("CEQA") or the National Environmental Policy Act ("NEPA"). It is crucial that a complete and thorough inquiry into the Project's impacts be made *before* the CEC and BLM commit themselves to allowing irreversible environmental damage.

The SA/DEIS fails to comply with CEQA and NEPA in seven distinct ways. First, it omits essential information and, as a result, fails as an informational document. Second, the SA/DEIS unlawfully defers the formulation of various studies and mitigation measures. Third, the assessment of the Project's environmental impacts is inadequate. Significant impacts are deemed insignificant and impacts that can be mitigated are mistakenly found to be unavoidable. Fourth, significant unstudied changes have been made to the Project since the SA/DEIS' release, and significant new information is planned to be added to the SA/DEIS at a future date, so the SA/DEIS must be recirculated and an additional public comment period provided. Fifth, the discussion of Alternatives is inadequate insofar as BLM declined to evaluate Site Alternatives on the sole basis that they are inconsistent with the *applicant's* purpose and need. Sixth, the SA/DEIS unlawfully segments the Project by failing to consider the impacts of the related Sunrise Powerlink project. Seventh, the Project applicant now proposes to satisfy the Project's water needs with well water, but such use of that water would violate the federal Safe Drinking Water Act because the underlying aquifer has been designated a "sole source aquifer" by the United States Environmental Protection Agency. O6-2

"available to public officials and citizens before decisions are made and before actions are taken." *Id.* § 1500.1(b). This is because "[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA." *Id.* "[B]y requiring agencies to take a 'hard look' at how the choices before them affect the environment, and then to place their data and conclusions before the public, NEPA relies upon democratic processes to ensure . . . that 'the most intelligent, optimally beneficial decision will ultimately be made.'" *Oregon Natural Desert Ass'n v. Bureau of Land Mgmt.*, 531 F.3d 1114 (9th Cir. 2008) (internal citations omitted). CEQA is similarly intended to "[i]nform governmental decision makers and the public about the potential, significant environmental effects of proposed activities." CEQA Guidelines [14 C.C.R.; "Guidelines"] § 15002(a); *No Oil, Inc. v. City of Los Angeles,* 13 Cal.3d 68, 86 (1974). The Guidelines emphasize that agencies "must use [their] best efforts to find out and disclose all that [they] reasonably can." Guidelines § 15144. O6-3

In violation of these fundamental precepts, the SA/DEIS fails to include a number of critically important studies whose inclusion is necessary for both the public and CEC/BLM to fully understand the environmental consequences of the Project. For example, many viewpoint simulations were omitted "due to fast-track time constraints," so the public has no idea of the actual visual impacts of the Project on the Juan Bautista de Anza National Historic Trail ("Anza NHT"). SA/DEIS, p. C.13-18. As discussed more fully in the following section, nearly *every* section of the SA/DEIS mentions an omitted study.

Because the SA/DEIS fails to include critical studies and information necessary to fully understand the impacts that the Project will have, it violates both CEQA and NEPA.

Because both NEPA and CEQA are intended to make decisions *based upon* high quality information, they both prohibit agencies from relying on the contents of studies and documents that are to be developed at a future date. "Formulation of mitigation measures should not be deferred until some future time." Guidelines § 15126.4(a)(1)(B). Reliance on yet-to-be-developed studies inevitably leads to a "post hoc rationalization of agency actions" that "inevitably ha[s] a diminished influence on decisionmaking." *Sundstrom v. County of Mendocino*, 202 Cal.App.3d 296, 307 (1988). Agencies "may not 'act first and study later.'" *Western Land Exch. Proj. v. United States Bureau of Land Mgmt.* 315 F.Supp. 2d 1068, 1092 (D. Nev. 2004) (quoting *Nat'l Parks & Conserv. Ass'n. v. Babbitt*, 241 F.3d 722, 734 (9th Cir. 2001). Doing so "provides no . . . guarantee of an adequate inquiry into environmental effects." *Sundstrom, supra,* 202 Cal. App. 3d at 307. Agencies are similarly prohibited from conditioning the approval of projects upon the "adopt[ion] of mitigation measures recommended in a future study." *Id.* at 306. O6-4

Here, the SA/DEIS unlawfully relies on a number of studies whose content has yet to be formulated, and conditions project approval upon the adoption of mitigation measures that have not yet been created. For example, the Army Corps of Engineers' identification of the Least Environmentally Damaging Alternative has not yet occurred, but "[m]itigation for unavoidable impacts to waters of the U.S. is" to be "addressed only" *after* this is completed. SA/DEIS, p. C.7-2; *see also* SA/DEIS, pp. C.7-65 through 66 (compliance with section 404 of the Clean Water Act cannot be determined). A Drainage, Erosion and Sedimentation Control Plan "that ensures protection of water quality and soil resources" is also incomplete,[4] as is the Stormwater Damage Monitoring and Response Plan. SA/DEIS C.7-56, C.7-61. Similarly, an examination of the historically significant cultural resources present at the site "has not been completed." SA/DEIS, p. C.3-136.[5] The Visual Resources section requires the applicant to (1) "develop and implement a glare mitigation plan" and (2) pay an amount that "will be determined" in the future to fund unspecified measures that are intended "to mitigate . . . visual impacts to recreational users of the Anza" NHT. SA/DEIS, p. C.13-45 through 46. The Traffic and Transportation section requires the applicant to develop and implement a plan designed to mitigate the Project's traffic impacts, and to prepare and implement a "Mirror Positioning Plan" to minimize the health and safety impacts that could result from excessive glare. SA/DEIS, p. C.11-20 through 22. A noise control program and community noise survey, and the mitigation measures they will lead to, also have yet to be developed. SA/DEIS, p. C-9-21. A Safety Management Plan, intended to reduce the likelihood of a hazardous waste spill, is unformulated, as is a Construction Security Plan and an Operation Security Plan. SA/DEIS, p. C.5-20 through 21. Impacts to paleontological resources are undisclosed because the pertinent studies are, again, incomplete. SA/DEIS, p. C.4-25 through 27. The Programmatic Agreement that is intended to ensure mitigation of certain cultural impacts was not complete when the SA/DEIS was published, so comment on it is not possible. SA/DEIS, p. C.2-145. Finally, the Biological Resources mitigation Implementation and Monitoring Plan also has yet to be developed. SA/DEIS, p. C.2-78. O6-4

The sheer volume of omitted information is staggering. The public is prevented from assessing the adequacy of the Project's mitigation measures because most of them have not yet been created. Whether or not these unformulated mitigation measures will themselves have environmental impacts is impossible to determine. The CEC and BLM must recirculate the SA/DEIS when all of these omitted studies have been completed and included in the SA/DEIS. Without these studies, the SA/DEIS is incomplete as a matter of law.

Both NEPA and CEQA require agencies to identify the significant environmental effects of their actions. CEQA also requires either mitigate these impacts, or make a finding of overriding considerations. Pub. Res. Code § 21081(a). All significant impacts *must* be mitigated *unless* mitigation measures to reduce these impacts are infeasible. *Id.* Here, the SA/DEIS (1) fails to identify certain O6-5

As discussed above, huge amounts of crucial information were omitted from the SA/DEIS. Moreover, the applicant's decision to modify the Project's water source would, as also discussed above, at the very least create a possibility of new significant environmental impacts. The public was significantly hindered in commenting on the Project by the absence of all of this information. In these situations, both NEPA and CEQA require recirculation of the environmental document. *See, e.g.*, Pub. Res. Code § 21092.1 (renotification required where significant new information is added to EIR prior to certification); Guidelines § 15088.5 (new information is significant, and recirculation accordingly required, where the EIR "deprives the public of a meaningful opportunity to comment upon" the project's significant impacts or mitigation measures); 40 C.F.R. § 1502.9(c)(1) (agencies "shall prepare supplements to . . . draft . . . environmental impact statements" where "substantial changes" are made to the Project or "significant new circumstances or information" was added to the document). Because NEPA and CEQA are intended to provide the public with access to high-quality information, it is unlawful to release the DEIS and then attempt to fix its problems out of the public eye. If significant new information is added to the SA/DEIS, it must be recirculated. O6-12

Late Submittal of 1,021 pages and outstanding data requires recirculation for public comment

The following issues support this justified request for a re-circulated SA/DEIS:

- The May 10 posting of an additional 1,021 pages of information.
- Despite the late posting, the still long list of outstanding issues as raised by CEC staff, CURE and others at the May 24-25 evidentiary hearings.
- Those outstanding issues include the lack of a fully vetted, secured, and approved water source.
- The May 24-25 evidentiary hearings and expert testimony were incomplete due to outstanding data, surveys, environmental reviews.
- The project review is being piecemealed and presented in a serial manner. Which makes for difficult review and comment.
- The Sunrise Powerlink, transmission source for Phase II and part of the "whole of the project", is still undergoing legal challenge and issued a Project Modification Report on May 15th with major changes since the project was unlawfully approved in late 2008 (PUC) and early 2009 (BLM). The Forest Service decision on Sunrise is still outstanding.
- Decision makers and the public need, and the law requires, adequate time to review and respond to all the new and outstanding information regarding the whole of the project--especially when it entails the yet-to-be-vetted backup water supply for the project that is now proposed as the main supply "*for 6 months to 3 years*" (Supplemental 1-3), or for the *life of project,* and the other significant changes.

O8-2

II. THE DEIS FAILS AS AN INFORMATIONAL DOCUMENT

The purpose of NEPA is to ensure that every federal agency prepare an EIS for major federal actions significantly affecting the quality of the human environment.[2] An EIS must provide a "full and fair discussion of significant environmental impacts and shall inform the decision-makers and the public of the reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment."[3]

The DEIS does not even begin to scratch the surface of the size and significance of the impacts that will be posed by this Project on public lands in the fragile desert environment. At 6,500 acres (10 square miles), this single power plant project is larger than many cities in California including Inglewood, Santa Monica and Daly City.[4] A map of the Project lay-out demonstrates that nearly the entire area will be disturbed by roads, power units, buildings, underground utilities and support structures. This will dramatically impact every aspect of the ecosystem on the Project site and surrounding the Project area. The vast majority of these impacts were not identified, disclosed, analyzed or mitigated in the DEIS. O9-2

The DEIS fails as an informational document because it does not adequately describe many of these resources. The DEIS fails to establish the project setting, it does not fully and fairly describe the proposed action, it wholly omits discussion of a number of potentially significant environmental impacts, and it fails to provide a reasonable range of alternatives to avoid or mitigate the Project's adverse impacts. As described below, the DEIS must be revised to fully describe the project setting, the project, the impacts from the project, mitigation and alternatives; and the revised DEIS should be circulated for public review and comment, as required by NEPA. O9-8

IX. A SUPPLEMENTAL DEIS SHOULD BE RECIRCULATED FOR PUBLIC COMMENT

NEPA requires that federal agencies analyze the environmental effects of proposed actions, publish the results of their study and receive and respond to public comments. These "action-forcing" requirements are intended to serve two broad goals. First, Congress intended that an agency, "in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts."[151] Second, the publication of the EIS informs the public of potential environmental impacts and "provides a springboard for public comment."[152]

O9-56

The DEIS falls short of satisfying either of NEPA's two broad goals. First, the DEIS fails to include ANY information about some of the Project's significant environmental impacts. Second, without a complete and detailed statement, the DEIS fails to provide the public with an adequate basis to understand the Project's impacts or to evaluate and compare the proposed alternatives.

The DEIS could not have satisfied these purposes because the Applicant failed to provide BLM with the information necessary for a complete and accurate DEIS and the Applicant made significant changes to the Project in May, 2010. Because the Applicant neglected to provide BLM with sufficient information, BLM issued a DEIS that is incomplete with respect to potentially significant impacts and mitigation measures for several resource areas.[153]

O9-56

X. CONCLUSION

The DEIS must be revised to inform the public and decision makers of the Project's significant impacts, and to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures. As the DEIS is currently written, it fails as an informational document and it violates the Clean Water Act, the Endangered Species Act, and the National Historic Preservation Act. Thus, the BLM, after receiving the necessary information from the Applicant to draft a complete DEIS, must correct the shortcomings outlined above, and circulate a revised DEIS for public review and comment.

O9-58

O9-58

2. As I indicated in my public comments, I feel it was totally unfair to have a public meeting in an office of our adversary SDGE. While I was looking at the panel of officials during this meeting, all I saw was pictures of the proposed Sunrise Powerlink and their logos, etc. I'm sure you know how difficult is to begin with to speak from the heart in a public setting and all this does is make it more difficult. I request that we have an additional public meeting on a neutral site without all the banners of an SDGE ill conceived project that is in the midst of numerous lawsuits due to a lack of need for the proposed project. P10-2

11. **Changing Project description without Staff analysis requires revisions, and recirculation for public comment under both NEPA and CEQA** rather than merely a Final EIS for BLM and a Supplemental Staff Assessment from CEC. Having the Staff analysis which is the environmental review documents become available after the close of public comment precludes meaningful public comment. P11-5

20. The **Changing Project description without Staff analysis requires revisions, and recirculation for public comment under both NEPA and CEQA**.

21. IV Solar Project description has been a moving target and the SA/DEIS does not reflect the current state of the project description under the May 10, 2010 posting of the Applicant's Supplement to the Application for Certification URS Project No. 27657106.00806" (SAFC) which includes a proposal to use groundwater from well 16S/9E-36G4 in the Ocotillo-Coyote Wells Groundwater Basin. This basin is an US EPA designated Sola Source Aquifer in 1996. P11-13

The proposed Imperial Valley Solar Project/SES Solar 2, what is the real project description? How much has changed?

22. According to information in the February 2010 SA/DEIS and Supplement to the AFC dated May 5, 2020 Stirling Energy Systems Solar Two, LLC applied to the Energy Commission for a license to build and operate the Imperial Valley Solar Project. The proposed project proposes a nominal 750-megawatt facility, with construction planned to begin in late 2010 if the project

applicant is able to secure funding for what was stated to now be a $2 billion project according to statements by Mark Van Paten on May 25, 2010. 9See Exhibit 569 "Rush is on for desert solar" at signonsansigeo.com, May 26, 2010 account of CEC Evidentiary Hearing.).

23. The primary equipment for the generating facility would include approximately 30,000, 25-kilowatt solar dish SunCatchers, their associated equipment and systems, and their support infrastructure. Power would be generated by groups of 60 SunCatchers connected by underground lines. The project would also require construction of approximately 10.3 miles of double circuit 230 kV transmission lines to connect to the existing SDG&E transmission facilities In addition to hundreds of miles of roads the solar thermal electric generating facility would include a 230 kV substation and various buildings at the center of the proposed site.

24. More than 5,000 suncatchers would be placed in areas known to be subject to flash flooding (ES-28) There are 878 acres of jurisdictional waters , including 165 acres with permanent impacts (ES-29) P11-13

25. The 6,500 acre (more than 10 square miles) project site is located on approximately 6,140 acres of federal public land managed by the Bureau of Land Management (BLM) and approximately 360 acres of privately owned land. The site is approximately 100 miles east of San Diego, 14 miles west of El Centro, and approximately 4 miles east of Ocotillo, even if the SA/DEIS mischaracterizes the location as being 4 miles east of Ocotillo Wells in San Diego County. Conversion of these lands is cumulatively significant, even though it may seem small compared to the approximately one million acres of lands in the California Deserts that have been proposed for solar or wind development. (ES-31). Other resource values would be lost as public lands are converted to industrial scale solar.

Response: The Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) was prepared based on available technical information. Since then, additional information has been provided by the applicant and the CEC. The CEC will be separately preparing and publishing a Supplemental Staff Assessment incorporating some of that information and addressing modifications to the IVS project since the SA/DEIS was published.

The NEPA process, like the CEQA process, was designed to provide information, but also to examine impacts and alternatives with that examination potentially helping to identify ways to improve a project while further minimizing the project impacts. The information disclosure and sharing process inherent with NEPA does not exist in a vacuum and frequently improvements, additional mitigation, and/or project design features are added to a proposed project as a result of comments received on a draft EIS. Consistent with these tenets of NEPA, the United States Bureau of Land Management (BLM) has prepared a Final Environmental Impact Statement (FEIS) addressing the Agency Preferred Alternative (which is the IVS project with modifications) and which includes results of additional biological resources surveys and other information completed since the SA/DEIS was prepared. The BLM's position is that the SA/DEIS and the FEIS contain sufficient information, including information regarding resources on the BLM-managed lands on the IVS project site, and analyses to understand and document the effects of the IVS project, the Agency Preferred Alternative, the other Build Alternatives, and the No Action Alternatives and, therefore, recirculation of the environmental document is not required.

Refer also to Section 4.21, Determination of NEPA Adequacy, for the documentation of the analyses of the project modifications and the conclusion that the NEPA information and analyses in the FEIS are adequate for the Agency Preferred Alternative.

D.4.14.3 Mitigation

Comments: O2-30, O2-32, O6-2, and O6-4.

9.. Failure to Identify Appropriate Mitigation

Because the DEIS fails to provide adequate identification and analysis of impacts, inevitably, it also fails to identify adequate mitigation measures for the project's environmental impacts. "Implicit in NEPA's demand that an agency prepare a detailed statement on 'any adverse environmental effects which cannot be avoided should the proposal be implemented,' 42 U.S.C. § 4332(C)(ii), is an understanding that an EIS will discuss the extent to which adverse effects can be avoided." *Methow Valley*, 490 U.S. at 351-52. Because the DEIS does not adequately assess the project's direct, indirect, and cumulative impacts, its analysis of mitigation measures for those impacts is necessarily flawed. The DEIS must discuss mitigation in sufficient detail to ensure that environmental consequences have been fairly evaluated." *Methow Valley*, 490 U.S. at 352; *see also Idaho Sporting Congress*, 137 F.3d at 1151 ("[w]ithout analytical detail to support the proposed mitigation measures, we are not persuaded that they amount to anything more than a 'mere listing' of good management practices"). As the Supreme Court clarified in *Robertson*, 490 U.S. at 352, the "requirement that an EIS contain a detailed discussion of possible mitigation measures flows both from the language of [NEPA] and, more expressly, from CEQ's implementing regulations" and the "omission of a reasonably complete discussion of possible mitigation measures would undermine the 'action forcing' function of NEPA." **O2-30**

Although NEPA does not require that the harms identified actually be mitigated, NEPA does require that an EIS discuss mitigation measures, with "sufficient detail to ensure that environmental consequences have been fairly evaluated" and the purpose of the mitigation discussion is to evaluate whether anticipated environmental impacts *can be avoided*. *Methow Valley*, 490 U.S. at 351-52. As the Ninth Circuit recently noted: "[a] mitigation discussion without at least *some* evaluation of effectiveness is useless in making that determination." *South Fork Band Council of Western Shoshone v. DOI* , 588 F.3d 718 , 727 (9th Cir. 2009) (emphasis in original).

Here, the DEIS does not provide a full analysis of possible mitigation measures to avoid or lessen the impacts of the proposed project and therefore the BLM cannot properly assess the likelihood that such measures would actually avoid the impacts of the proposed project.

D. Key Plans are Not Included

The DEIS fails to include key plans for public review. Plans relied upon for adequate mitigation but which are unavailable include:

- Noxious Weed Management Plan (DEIS at C.2-32)
- Biological Resources Mitigation Implementation and Monitoring Plan (DEIS at C.2-78)
- Raven Management and Monitoring Plan (DEIS at C.2-44)
- Contingency Plan (for temporary closure) (DEIS at C.2-50)
- Decommissioning and Reclamation Plan (for permanent closure) (DEIS at C.2-50)
- Burrowing Owl Mitigation and Monitoring Plan (DEIS at C.2-78)
- Frac-out Contingency Plan (DEIS at C.2-2) for the horizontal drilling of the reclaimed water-line (which may no longer be part of the project)
- Drainage, Erosion, and Sedimentation Control Plan (DEIS at C.7-1)

Several other key plans are also missing from the DEIS but involve more complicated issues. While the Management Plan for Acquired Lands (DEIS at C.2-35) is a key document that needs to have public review to ascertain if, in fact, acquired lands actually do mitigate for the impacts (see discussion above on "nesting"), the DEIS fails to identify the acquisition lands, or if acquisition lands are actually even available. Clearly, if the proposed project was to move forward, acquired lands are a key component of a mitigation strategy. The supplemental EIS must provide a better evaluation if lands are available, and where those lands are, and how they will fulfill the mitigation scenario. O2-32

The Special Status Plant Survey and Protection Plan (DEIS at C.2-97) is also missing. While this plan is proposed as a mitigation requirement, that position is unsupportable because the special status plant surveys need to be done to provide the baseline data from which evaluation for potential project impacts can be analyzed. Surveys are not a mitigation strategy.

Shockingly, no relocation plan for flat-tailed horned lizard is even required in the DEIS, despite the acknowledgement that relocation will be a minimization strategy. The DEIS cannot rely on the FTHL Rangewide Management Strategy because this document does not include any guidance on relocation. Little data is available on the effectiveness of relocating reptiles in general and flat-tailed horned lizards specifically. In fact, a review of the literature concludes that relocation of reptiles (and amphibians) has not been a successful strategy for conservation[27].

Relocation should be looked on as experimental at best, and scientifically based strategy needs to be developed in a relocation plan including a significant adaptive management component. This strategy needs to be included in the revised or supplemental DEIS and provided for public review and comment. O2-32

The Yuha Desert, where the Project is to be located, is a pristine but extraordinarily sensitive landscape. Damage to it from this Project is likely to be irreversible. "Implementation of this [P]roject will forever change the landscape of this area,"[1] and also lead to "the permanent destruction of hundreds of cultural resources. . . ."[2] The environmental devastation that this Project will cause is permanent, but the Project's benefits are only temporary.[3] Nonetheless, the California Energy Commission ("CEC") and United States Bureau of Land Management ("BLM") are rushing through critical environmental reviews and omitting essential information for the sake of the Project applicant's arbitrary timetables. An applicant's supposed time constraints are not a recognized exception to the requirements of either the California Environmental Quality Act ("CEQA") or the National Environmental Policy Act ("NEPA"). It is crucial that a complete and thorough inquiry into the Project's impacts be made *before* the CEC and BLM commit themselves to allowing irreversible environmental damage.

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Because both NEPA and CEQA are intended to make decisions *based upon* high quality information, they both prohibit agencies from relying on the contents of studies and documents that are to be developed at a future date. "Formulation of mitigation measures should not be deferred until some future time." Guidelines § 15126.4(a)(1)(B). Reliance on yet-to-be-developed studies inevitably leads to a "post hoc rationalization of agency actions" that "inevitably ha[s] a diminished influence on decisionmaking." *Sundstrom v. County of Mendocino*, 202 Cal.App.3d 296, 307 (1988). Agencies "may not 'act first and study later.'" *Western Land Exch. Proj. v. United States Bureau of Land Mgmt.* 315 F.Supp. 2d 1068, 1092 (D. Nev. 2004) (quoting *Nat'l Parks & Conserv. Ass'n. v. Babbitt*, 241 F.3d 722, 734 (9th Cir. 2001). Doing so "provides no . . . guarantee of an adequate inquiry into environmental effects." *Sundstrom, supra,* 202 Cal. App. 3d at 307. Agencies are similarly prohibited from conditioning the approval of projects upon the "adopt[ion] of mitigation measures recommended in a future study." *Id.* at 306. **O6-4**

Here, the SA/DEIS unlawfully relies on a number of studies whose content has yet to be formulated, and conditions project approval upon the adoption of mitigation measures that have not yet been created. For example, the Army Corps of Engineers' identification of the Least Environmentally

Damaging Alternative has not yet occurred, but "[m]itigation for unavoidable impacts to waters of the U.S. is" to be "addressed only" *after* this is completed. SA/DEIS, p. C.7-2; *see also* SA/DEIS, pp. C.7-65 through 66 (compliance with section 404 of the Clean Water Act cannot be determined). A Drainage, Erosion and Sedimentation Control Plan "that ensures protection of water quality and soil resources" is also incomplete,[4] as is the Stormwater Damage Monitoring and Response Plan. SA/DEIS C.7-56, C.7-61. Similarly, an examination of the historically significant cultural resources present at the site "has not been completed." SA/DEIS, p. C.3-136.[5] The Visual Resources section requires the applicant to (1) "develop and implement a glare mitigation plan" and (2) pay an amount that "will be determined" in the future to fund unspecified measures that are intended "to mitigate . . . visual impacts to recreational users of the Anza" NHT. SA/DEIS, p. C.13-45 through 46. The Traffic and Transportation section requires the applicant to develop and implement a plan designed to mitigate the Project's traffic impacts, and to prepare and implement a "Mirror Positioning Plan" to minimize the health and safety impacts that could result from excessive glare. SA/DEIS, p. C.11-20 through 22. A noise control program and community noise survey, and the mitigation measures they will lead to, also have yet to be developed. SA/DEIS, p. C-9-21. A Safety Management Plan, intended to reduce the likelihood of a hazardous waste spill, is unformulated, as is a Construction Security Plan and an Operation Security Plan. SA/DEIS, p. C.5-20 through 21. Impacts to paleontological resources are undisclosed because the pertinent studies are, again, incomplete. SA/DEIS, p. C.4-25 through 27. The Programmatic Agreement that is intended to ensure mitigation of certain cultural impacts was not complete when the SA/DEIS was published, so comment on it is not possible. SA/DEIS, p. C.2-145. Finally, the Biological Resources mitigation Implementation and Monitoring Plan also has yet to be developed. SA/DEIS, p. C.2-78. O6-4

The sheer volume of omitted information is staggering. The public is prevented from assessing the adequacy of the Project's mitigation measures because most of them have not yet been created. Whether or not these unformulated mitigation measures will themselves have environmental impacts is impossible to determine. The CEC and BLM must recirculate the SA/DEIS when all of these omitted studies have been completed and included in the SA/DEIS. Without these studies, the SA/DEIS is incomplete as a matter of law.

Response: The SA/DEIS and the FEIS include extensive mitigation addressing the potential adverse project impacts. Many of these are measures that have been used extensively throughout the State and, therefore, are anticipated to effectively address the adverse project impacts. In addition, many of the measures include standards or other requirements that, if not met, would trigger the need for additional mitigation. BLM's position is that the mitigation as presented in the SA/DEIS and the FEIS is adequate to address the potential adverse project impacts and includes sufficient standards and other requirements to ensure that the impacts are properly mitigated.

Many of the mitigation measures require the preparation of detailed plans during final design and prior to any activity on the project site. This is consistent with the requirements of NEPA because these measures identify the impacts intended to be addressed by those plans and key activities that would be included in those plans to mitigate the identified impacts.

In summary, BLM's position is that the existing mitigation in the FEIS is adequate to address the adverse project impacts. Where there are adverse impacts that mitigation cannot entirely

mitigate, these impacts have been identified as unavoidable adverse impacts of the IVS project and the other Build Alternatives.

D.4.14.4 Fast Tracking/Project Applicant's Schedule

Comments: O8-4 and O8-9.

Applicant's pressure to move the CEC/BLM process forward without critical data for the "whole of the project", and for "overrides" is unconscionable

The CEC/BLM should deny the applicant's repeated request made at the May evidentiary hearings to move forward with project review /approval without waiting for the EIR for the Seeley Waste Water Treatment Facility (proposed permanent water source), the resolution of the legality and viability of exporting 40 acre feet per year of at risk desert ground water resources (backup water source) from the Ocotillo/Coyote Wells Sole Source Aquifer for industrial use, and the US Army Corps determination of the Least Environmentally Damaging Practicable Alternative project. The issues represent the whole of the project along with the other outstanding information and should be reviewed and analyzed by staff and the public. O8-4

Fast tracking should be rejected: NEPA / CEQA compliance is required including the "whole of project"

- This project should not be fast-tracked--and should not receive ARRA funds or other tax-payer or rate-payer based funding.
- Federal funds are not allowed when a project has the potential to contaminate the federally designated Ocotillo /Coyote Wells Sole Source Aquifer. See comments " water source" comments below.
- There are too many outstanding issues and unanswered questions including a fully vetted and secured water source.
- CEQA requires CEC to determine "whole project" compliance with the law, including direct and indirect impacts.
- NEPA has similar requirements.

O8-9

- Outstanding information includes "whole project" impacts--connected actions, direct, indirect and cumulative impacts--to hydrology, biology, including environmental, biological, air, cultural, visual, historic, recreation, wildlife corridor and foraging impacts, environmental justice, and more.
- The "whole project" includes SDG&E's connected action projects: Sunrise Powerlink, IV Substation, ECO/Boulevard Substation and more (See Sunrise Powerlink FEIR/EIS Figure ES-1)
- Backup generation is needed for wind and solar. See SDG&E's comments in news article dated 5-23-10: http://www.signonsandiego.com/news/2010/may/23/renewables-need-helping-hand-from-gas: ***"People need to understand the intermittency challenge we have," said SDG&E's Niggli. "The wind comes and goes, and on the hottest days of the year, there's no wind, and you still need to provide power to your customers ... These resources are not under our control, but under the control of nature." Gas plants can take up the slack."*** O8-9
- What is the source of necessary back up generation for Solar Two / IV Solar?
- Gas-fired backup generation, and related Green House Gases should also be considered and analyzed as part of the "whole of the project".
- The project and any mitigation measures cannot be analyzed or approved until all the outstanding information is available for public review and comment *prior* to close of public comment.
- How can we make a fully informed decision and comments without all the information on the 'whole of the project" and related impacts, including cumulative impacts.

Response: The fast track schedule for the IVS FEIS is based on The Energy Policy Act and Secretarial Order 3285 (dated March 11, 2009) and not on the applicant's schedule. These directives are discussed in Chapter 1 of the FEIS as part of BLM's purpose and need for the project. The BLM has committed to meeting the goals in these directives and fast tracking some of the renewable energy projects will allow the BLM to meet those goals. The fast tracking included preparation of the joint SA/DEIS with the CEC. The fast track schedule is not in any way dependent on or in response pressure from the applicant.

D.4.15 California Energy Commission Process

These comments raised questions regarding the California Energy Commission's (CEC) process for complying with the requirements of CEQA and CEC requirements for the IVS project.

Comments: O2-4, P10-2, P11-3, P11-7, P11-10, and P11-11.

Because the project approval process includes a quasi-judicial process in the California Energy Commission, the Center hereby incorporates by reference all of the materials before the California Energy Commission regarding the approval of this project. BLM is a party to the CEC process, which is being conducted in concert with the BLM approval process, and BLM has access to all of the documents (which are also readily accessible on the internet), therefore, BLM should incorporate all of the documents and materials from that process into the administrative record for the BLM decision as well. **O2-4**

2. As I indicated in my public comments, I feel it was totally unfair to have a public meeting in an office of our adversary SDGE. While I was looking at the panel of officials during this meeting, all I saw was pictures of the proposed Sunrise Powerlink and their logos, etc. I'm sure you know how difficult is to begin with to speak from the heart in a public setting and all this does is make it more difficult. I request that we have an additional public meeting on a neutral site without all the banners of an SDGE ill conceived project that is in the midst of numerous lawsuits due to a lack of need for the proposed project. **P10-2**

4. I am also concerned that the phone conferencing excludes those who do not have landline phone service and cannot afford to participate by cell phone during daytime because it is cost prohibitive. I understand that I am not the only concerned member of the public who lives in a place where the phone companies never have run phone lines. Yes, I was present during the entire two days of evidentiary hearings, but I could never have heard any of that input by phone. An around the world plane trip would likely have been less expensive than a two day cell phone call! So, yes, I can appreciate that the State has a tight budget, but so do concerned members of the public who care enough to want to participate. If the state and BLM cannot afford the costs of travel or staff time to provide opportunities for public participation as intended by CEQA and NEPA than there should be a higher up-front cost for the applicant rather than just excuses about the need for a rush deadline. Staff are real people who also occasionally need a few hours to sleep and occasionally to eat also. If the Applicant fails to provide required information in a timely manner, that is the applicant's problem, not to be pushed off on staff and the public because the applicant's real motive and need to get taxpayer financing for a project that is still unproven on a scale proposed. Yes, it is all about money, not about meeting energy needs. **P11-3**

13. How many members of the public would have been aware that the Project Applicant had submitted a SAFC that was posted on May 10, 2010? Even though I have ben participating as a witness for Intervenor Tom Budlong, I do not regularly check the CEC website to look for updates without first getting information from the CEC. **P11-7**

17. At the CEC Evidentiary Hearing in El Centro May 24-25, 2010 there were numerous topics of the SA/DEIS that were not considered for testimony because the CEC Staff had not had sufficient time or opportunity and/or the Applicant had failed to provide the necessary information to complete Staff Analysis, and or public review. Piecemealing project components and intentionally withholding information relevant to the changed project description (such as an assured water supply for future) appears to violate certainly the intent of the law. **P11-10**

18. CEQA defines a project as "the whole of an action" which has the potential to result in a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. The "Project" refers to the activity being approved and which may be subject to several discretionary approvals by distinct governmental agencies. The analysis must embrace future development that will foreseeably occur if the agency approves the project and also include analysis of cumulative impacts associated with the changed project description which could not have been understood prior to the Applicant's posted changed description on May 10, 2010 **P11-11**

Response: The evidentiary hearing process is a California Energy Commission (CEC) process and is outside the purview or control of the United States Bureau of Land Management (BLM). The conduct of those meetings, including providing call-in opportunities, is entirely up the CEC. It should be noted that the meetings were held in El Centro so interested members of the general public had the opportunity to attend those meetings in person rather than by calling in. All of the CEC methods for public participation or pending decisions are explained in detail on the CEC website. The CEC use of its website and docketing to provide access to the public for materials related to a proposed project is also a standard CEC process and, again, is outside the purview or control of the BLM. It is also very easy to enroll in the CEC's notification process regarding new information and updates as they are posted on the CEC websites and dockets.

The BLM believes the opportunities for public participation under the National Environmental Policy Act (NEPA) were adequate and included opportunities to review the draft Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) on either the BLM or CEC websites and that the additional information provided by the applicant was readily available on the CEC website.

There was no intent to piecemeal the project. The information provided at the CEC evidentiary hearings was in addition to the information provided in the SA/DEIS and on the CEC and BLM websites. Some of that information has also been provided in supplemental information posted by the CEC on its website. The BLM has documented analysis of the modified project components based on the minor changes in the project description in Chapter 4, Environmental Consequences, in the FEIS, which is also summarized in Appendix B, Determination of NEPA Adequacy (DNA). Refer also to Section 4.21, Determination of NEPA Adequacy, for additional discussion of the analysis of the proposed modifications.

Any comments or issues related to CEQA, as noted in comment P11-11, are not within the purview of the BLM and are comments that will be addressed by the CEC.

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D.4.16 Determination of NEPA Adequacy

These comments raised questions regarding the adequacy of the NEPA analysis of the applicant proposed modifications to the Build Alternatives and of the Agency Preferred Alternative.

Comments: F2-26, O2-18, O6-2, O6-9, O6-12, O8-4, O8-15, O9-9, O9-11, O9-57, P11-6, and P11-39.

Newly Proposed Alternative Water Supply

The Supplement indicates the Project will rely on up to 50 acre-feet per year (afy) of withdrawals from an Alternative Water Supply (AWS) within the Ocotillo-Coyote Wells Groundwater Basin (OCWGB), a federally designated sole source aquifer, until water is made available from the upgraded SWWTF. The Supplement concludes the withdrawals from the AWS will have no significant impact on water levels in the area nor exacerbate overdraft of the OCWGB. It is our understanding from the Applicant that the AWS will result in no net increase in pumping. If this is so, this should be disclosed and adequately supported in the FEIS.

Information in the Supplement raises questions regarding whether adequate afy at the AWS is actually available. The AWS well is currently capped at a production rate of 40 afy, but the Project will require up to 50 afy. The Supplement does not provide information on how much of the 40 afy is already committed to other users. The most recent data provided in Appendix B in the URS Groundwater Evaluation Report (in the Supplement) indicate 42.1 afy was withdrawn from the AWS in 2004. This is the last year of withdrawal data provided in the Supplement. The Supplement appears to assume that Imperial County will allow additional withdrawals above the 40 afy, but there is no acknowledgement provided from the County. In fact, the opposite may be true. For example, the recently released draft Environmental Impact Report (DEIR) for the Coyote Wells (CW) project (aka, Wind Zero project) is proposed within the OCWGB and near the Boyer Well. The CW project intends to use up to 67 afy. The CW DEIR acknowledges the OCWGB is in an overdraft condition. It includes numerous groundwater mitigation measures not included in the Supplement. (See ftp://ftp.co.imperial.ca.us/icpds/eir/coyote-wells/19hydrology-water-quality.pdf.) It is not clear whether URS considered in its analysis the planned withdrawals by the CW project or the mitigation measures proposed for the CW project. F2-26

There are also questions concerning how long the AWS will be needed. The "Will Serve Letter" in Appendix A indicates the AWS will be required for six-to-eleven months, but the Supplement does not commit to a time frame for needing the water. Unanticipated delays in the upgrade of the SWWTF could occur.

Finally, the Supplement does not indicate whether the AWS withdrawals would impact nearby residential/private wells.

Recommendations:

- Confirm the AWS will result in no net increase in pumping from the OCWGB.
- Address the discrepancy between the current 40 afy cap on the AWS and the increased 50 afy demand, and provide documentation that the County supports additional withdrawals from the AWS.

- Because the OCWGB may already be in an overdraft condition, the FEIS should discuss the level of impact the AWS would have on the overdraft conditions in the OCWGB.
- Discuss the applicability of the mitigation measures included in the CW DEIR and whether the CW project water demand was considered in the Supplement's analysis.
- Address whether the AWS withdrawals would impact nearby residential/private wells.
- In light of the recommendations above, the FEIS should confirm the availability of a water supply for construction and operations of the Project and fully evaluate the environmental impacts associated with the ultimately proposed supply of water.

F2-26

The FEIS should also further describe groundwater availability for this Project in light of other projects within the region, as well as the uncertainty regarding potential cumulative impacts on groundwater resources. Given the potential for adverse impacts from pumping groundwater, it is important that all monitoring and mitigation information be provided to the public and decision makers. The proposed Project would permanently eliminate thousands of acres of wildlife habitat. In the arid Mojave Desert, habitat and the springs are critically important for several special status species that rely on water sources and wetland vegetation communities. Our recommendations are further discussed in this letter's 'Cumulative Impacts' section.

The Project Description is inaccurate in several respects including regarding the water source for the project and the hydrogen supply and extent of hydrogen transport on the site as well as others. For example, the DEIS assumed that water would be available from the Seeley plant that now it is clear will not be—at least not in time for the proposed construction schedule—the proponent now proposes to use groundwater from a sole source aquifer that is already heavily impacted by other uses. The likely impacts from the proposed use of water from alternative sources are not adequately addressed. Similarly, the proponent has revised the plans for hydrogen transport and storage on the site but the new plans were not evaluated in the DEIS, and although there is some discussion of the likelihood of fire, there is no discussion of the impacts of fire on wildlands.

O2-18

The Project Description may also (perhaps inadvertently) mislead the public by its characterization of the project as a 750 MW "nameplate" or "nominal". The DEIS notes that the project's actual capacity which is much lower—25% was used as an estimate in the DEIS E.4-2 and Appendix for Air Quality, Air-1-6, Greenhouse Gas Table 3, note c. Moreover, the Project Description and the DEIS as a whole fail to account for other power losses including line losses during hot days which can be significant. Because an accurate project description is vital to a fair comparison of alternatives, the DEIS should have more clearly discussed the capacity factor and other potential energy losses so that the actual output of this proposed project could be compared to similar projects.

The Yuha Desert, where the Project is to be located, is a pristine but extraordinarily sensitive landscape. Damage to it from this Project is likely to be irreversible. "Implementation of this [P]roject will forever change the landscape of this area,"[1] and also lead to "the permanent destruction of hundreds of cultural resources. . . ."[2] The environmental devastation that this Project will cause is permanent, but the Project's benefits are only temporary.[3] Nonetheless, the California Energy Commission ("CEC") and United States Bureau of Land Management ("BLM") are rushing through critical environmental reviews and omitting essential information for the sake of the Project applicant's arbitrary timetables. An applicant's supposed time constraints are not a recognized exception to the requirements of either the California Environmental Quality Act ("CEQA") or the National Environmental Policy Act ("NEPA"). It is crucial that a complete and thorough inquiry into the Project's impacts be made *before* the CEC and BLM commit themselves to allowing irreversible environmental damage.

The SA/DEIS fails to comply with CEQA and NEPA in seven distinct ways. First, it omits essential information and, as a result, fails as an informational document. Second, the SA/DEIS unlawfully defers the formulation of various studies and mitigation measures. Third, the assessment of the Project's environmental impacts is inadequate. Significant impacts are deemed insignificant and impacts that can be mitigated are mistakenly found to be unavoidable. Fourth, significant unstudied changes have been made to the Project since the SA/DEIS' release, and significant new information is planned to be added to the SA/DEIS at a future date, so the SA/DEIS must be recirculated and an additional public comment period provided. Fifth, the discussion of Alternatives is inadequate insofar as BLM declined to evaluate Site Alternatives on the sole basis that they are inconsistent with the *applicant's* purpose and need. Sixth, the SA/DEIS unlawfully segments the Project by failing to consider the impacts of the related Sunrise Powerlink project. Seventh, the Project applicant now proposes to satisfy the Project's water needs with well water, but such use of that water would violate the federal Safe Drinking Water Act because the underlying aquifer has been designated a "sole source aquifer" by the United States Environmental Protection Agency. O6-2

project." SA/DEIS, p. C.7-3. Yet the Project applicant has recently modified the Project so as to satisfy its water needs with groundwater. This substantial change must be recognized in the DEIS.

The DEIS' failure to acknowledge that the Project will use groundwater leads to the second inadequacy: the availability of this water, and the impacts of its use, are unknown because neither has been studied. As a result, it is impossible for members of the public to determine whether the Project's water needs can actually be satisfied in this manner. The environmental impacts of such use also have yet to be ascertained. CEC staff has noted that "the amount of water identified for project use . . . exceeds the permitted amount of groundwater extraction for the well." Staff Comments on Schedule Impacts of AFC Supplement, received May 17, 2010, p. 1. Furthermore, it is unknown how long groundwater will be used. The DEIS must be revised to include this critical information. O6-9

Third, the impacts that the Project will have on waters of the United States is unknown. The Project has the potential to cause massive amounts of runoff and erosion. Whether or not these impacts will be significant has yet to be determined because the Project applicant failed to include sufficient information in its application "to resolve uncertainties regarding the ability of the applicant-proposed measures to reduce sedimentation and stream morphology impacts to less than significant." The Project's consistency with section 404 of the Clean Water Act "cannot [be] determine[d] at this time." SA/DEIS, p. C.7-66.[8] This information must also be included in the SA/DEIS.

As discussed above, huge amounts of crucial information were omitted from the SA/DEIS. Moreover, the applicant's decision to modify the Project's water source would, as also discussed above, at the very least create a possibility of new significant environmental impacts. The public was significantly hindered in commenting on the Project by the absence of all of this information. In these situations, both NEPA and CEQA require recirculation of the environmental document. *See, e.g.*, Pub. Res. Code § 21092.1 (renotification required where significant new information is added to EIR prior to certification); Guidelines § 15088.5 (new information is significant, and recirculation accordingly required, where the EIR "deprives the public of a meaningful opportunity to comment upon" the project's significant impacts or mitigation measures); 40 C.F.R. § 1502.9(c)(1) (agencies "shall prepare supplements to . . . draft . . . environmental impact statements" where "substantial changes" are made to the Project or "significant new circumstances or information" was added to the document). Because NEPA and CEQA are intended to provide the public with access to high-quality information, it is unlawful to release the DEIS and then attempt to fix its problems out of the public eye. If significant new information is added to the SA/DEIS, it must be recirculated. O6-12

Applicant's pressure to move the CEC/BLM process forward without critical data for the "whole of the project", and for "overrides" is unconscionable

The CEC/BLM should deny the applicant's repeated request made at the May evidentiary hearings to move forward with project review /approval without waiting for the EIR for the Seeley Waste Water Treatment Facility (proposed permanent water source), the resolution of the legality and viability of exporting 40 acre feet per year of at risk desert ground water resources (backup water source) from the Ocotillo/Coyote Wells Sole Source Aquifer for industrial use, and the US Army Corps determination of the Least Environmentally Damaging Practicable Alternative project. The issues represent the whole of the project along with the other outstanding information and should be reviewed and analyzed by staff and the public. O8-4

Water source issues / Ocotillo -Coyote Wells Sole Source Aquifer / What is replacement water source for the residents of impacted rural desert communities when industrial use exports decrease and degrade their sole source aquifer?

- Like Sunrise Powerlink, the Solar Two / IV Solar water source is still unstudied and unsecured.
- The belated backup alternative to use groundwater from Ocotillo, is a non starter.
- The Applicant's response to CURE letter of May 10 is both ignorant and callus in its disregard for the significant negative impacts their proposed groundwater export represents to the low income rural desert communities that rely on the at-risk aquifer to sustain them.
- Figure 1-4 in the May 5 submittal shows the proximity of the proposed Ocotillo water well source and the US Gypsum wells.
- Section 2.5 of the Supplemental downplays the significance of the sole source aquifer designation.
- In 1996, I helped concerned citizens in Ocotillo apply for and secure federal designation of the Ocotillo / Coyote Wells Sole Source Aquifer, after our group BAD secured the Campo/Cottonwood Creek Sole Source Aquifer designation in 1993. These are the only two sole source aquifers in Southern California.
- Link to Ocotillo / Coyote Wells Sole Source Aquifer boundary map: http://www.epa.gov/safewater/sourcewater/pubs/grg_ssamap_ocotillocoyotewells.pdf
- The EPA's Sole Source Aquifer (SSA) Program was established under Section 1424(e) of the Safe Drinking Water Act (SDWA.) Since 1977, it has been used by communities to help prevent contamination of groundwater from federally-funded projects. It has increased public awareness of the vulnerability of groundwater resources. ***The SSA program allows for EPA environmental review of any project which is financially assisted by federal grants or federal***

O8-15

loan guarantees. These projects are evaluated to determine whether they have the potential to contaminate a sole source aquifer: http://www.epa.gov/region9/water/groundwater/ssa.html

- The State Water Resources Control Board (State Water Board) Clean Water State Revolving Fund Program Federal Cross-cutting Environmental Regulations Evaluation Form for Environmental Review and Federal Coordination questionnaire includes a Water Sources question that asks if the project is in the boundaries of a SSA. The Ocotillo/Coyote Wells Aquifer is one of the five California SSAs listed See the document at the link copied below: http://www.swrcb.ca.gov/water_issues/programs/grants_loans/srf/docs/envcompliance/federal_cross_cutting_evaluation_form.pdf
- At a minimum a site specific study and full EIR would be legally required to determine the impacts to the Ocotillo source well(s) and aquifer which are located wholly within the boundaries of the federally designated Ocotillo / Coyote Wells Sole Source Aquifer.
- The US Gypsum wallboard plant next door, already pipes in precious groundwater from Ocotillo 8 miles to the west. This has resulted in litigation. US Gypsum was supposed to stop using that groundwater when they got approval for 1,000 ac feet of canal water from Imperial Irrigation District. But they need a new pipeline similar to the one proposed for IV Solar / Solar Two.
- That pipeline needs a Biological Opinion from Fish & Wildlife, but due to the administration's pressure to fast track renewable energy projects like this one, that Biological Opinion has been placed on hold indefinitely (confirmed May 17 by FWS staff). O8-15
- As a result, US Gypsum continues to pump hundreds of acre feet of irreplaceable desert groundwater from a residential area that has no alternate water supply.
- Now this project wants to take another 40 acre feet from them which in my opinion is immoral, unlawful and unethical.
- Here is a quote from the attached July 14, 2006 RWQCB Memorandum, addressed to Donna Tisdale, regarding the proposed US Gypsum Expansion / Modernization Project (EIR/EIS Sch. No. 2001121133) and increased export / use of Ocotillo groundwater:

"We acknowledge the Regional Boards limitation to control groundwater extraction/pumping (i.e., lack of jurisdiction over water rights issues). Nevertheless, we feel obligated to weigh in the subject matter because the projected impact is on waters of the State, and the project as proposed practically could eliminate the Municipal Supply beneficial use of an aquifer . The impact may be economically irreversible, is in direct conflict with the Basin Plan, and short-changes water quality. Consequently, it is our intention to recommend the Regional Board use any and all of its available powers to protect the area's groundwater resources for current and future generations."

(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.[8]

Further, NEPA requires that a supplemental EIS be prepared when "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[9] A supplemental EIS is required if a new proposal "will have a significant impact on the environment in a manner not previously evaluated and considered."[10] The new water source from the Dan Boyer Water Company is one example of new information that necessitates recirculation of a supplemental EIS.

The CEQ Guidelines require agencies to "prepare supplements to either draft or final environmental impact statements if: (i) the agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[11] O9-9

Here, it is undisputed that the proposed Project cannot be constructed or operated without a reliable source of water. As with all development in the arid West, finding an assured water supply is one of the most important planning decisions that must be made before a Project can legally be approved. An identified reliable source of water for construction and operation of a project is largely determinative of the project's overall viability. Because the water supply is a critical part of the Project without which the Project cannot proceed, impacts resulting from the acquisition of water for the Project are connected actions that must be analyzed in a revised DEIS that is circulated for public review and comment.

B. GROUNDWATER – DAN BOYER WATER COMPANY

The DEIS unequivocally and repeatedly states that the Project **will not rely upon groundwater**[25] and will rely upon recycled wastewater from the SWWTP. This is simply false. On May 6, 2010, the Applicant docketed information with the Energy Commission and BLM that outlines the Applicant's plan to use groundwater as its primary water supply for the first three years and potentially for the life of the Project. This new water supply, the Dan Boyer Water Company, requires a whole new analysis by the reviewing agencies and the public. The Dan Boyer well that would be used for the Project is in the Coyote Wells Aquifer, an aquifer designated by the US Environmental Protection Agency ("EPA") as a "sole source" aquifer.[26] This means that the EPA has determined that the Coyote Wells Aquifer is the sole or principal source of drinking water for the communities of Ocotillo, Nomirage, Yuha Estates, and Coyote Wells and that if contaminated, this aquifer would create a significant hazard to public health.[27] As a result, all Federal financially assisted projects that could impact the Ocotillo-Coyote Wells aquifer will be subject to EPA review to ensure that these projects are designed and constructed such that they do not create a significant hazard to public health.[28] Personal communications with the EPA reveal that this review has not even begun.[29] In fact, the BLM had not even contacted the EPA's groundwater office as of May 13, 2010.[30] O9-11

The Coyote Wells aquifer is currently in overdraft condition, and additional drawdown could potentially result in degradation of the quality of the water for the residents of the surrounding communities that rely upon this aquifer for their drinking water supply.[31] The public should be given adequate notice that this water supply is proposed to be used for the life of the Project.[32] The Project's water supply is a core aspect of the proposed action under NEPA. Because the DEIS does not include any information about this water supply, the DEIS must be revised with a complete analysis of the potentially significant impacts from the use of groundwater in a revised DEIS and must recirculate the revised DEIS for public review and comment. O9-11

C. CONCLUSION

Both the Dan Boyer groundwater supply and the SWWTP are connected actions under NEPA and, as such, must be studied by the BLM in the same environmental document as the proposed action. Since this was not done in the DEIS, a revised DEIS must be prepared and circulated for public review.

a. Water Supply

The Applicant changed the water source for the Project, rendering many sections of analysis in the DEIS incomplete and/or incorrect. At the 11th hour, the Applicant determined that a wholly new water source would be used for the Project: the Dan Boyer well. This new water source will pump water from a depleted sole source aquifer. This is a wholly unanalyzed significant impact on the environment.

Supplemental EISs are required when "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[154] An SEIS is required if a new proposal "will have a significant impact on the environment in a manner not previously evaluated and considered."[155] O9-57

The CEQ Guidelines require agencies to "prepare supplements to either draft or final environmental impact statements if:

> (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
> (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[156]

12. IV Solar Project description has been a moving target and the SA/DEIS does not reflect the current state of the project description under the May 10, 2010 posting of the Applicant's Supplement to the Application for Certification URS Project No. 27657106.00806" (SAFC) P11-6

106. My conclusions about the proposed Alternative water source are that

a. First and most important, the monitoring data provided is not current even though it is possible to get current USGS data online.

b. In the absence of monitoring data it is not possible to reach the conclusion that impacts of well interference at the Boyer well location will not be significant. P11-39

c. Accordingly it would be inappropriate to conclude that the proposed well with its lack of pumping withdrawal information would not have an adverse impact if it began pumping and exporting 40 AF/y.

Response: As described in the Final Environmental Impact Statement (FEIS), the Imperial Valley Solar (IVS) project and the other Build Alternatives include specific modifications to minimize project impacts and to incorporate modifications from the applicant. Those modifications are described and evaluated in Chapter 4, Environmental Consequences, in the FEIS. Appendix B, Determination of NEPA Adequacy (DNA), in the FEIS summarizes the

evaluations of each of those modifications and the determinations that they are within the range of the alternatives and impacts documented in the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) and the FEIS, and that the NEPA analyses in the SA/DEIS and FEIS are adequate to document the impacts of the Build Alternatives with those modifications. These modifications are considered part of the Build Alternatives and not connected actions.

The project modifications analyzed in Chapter 4 and documented in Appendix B in the FEIS for all the Build Alternatives are:

- Two minor shifts in the transmission line. The western transmission line alignment modification would occur over a 750 ft long span which would be shifted approximately 120 ft southeast of the original alignment in the IVS project. The second modification (north of the Imperial Valley San Diego Gas and Electric (SDG&E) Substation) would occur over a 1,025 ft long span which would be shifted approximately 300 ft east of the original alignment in the IVS project.

- Two minor shifts in the water pipeline between the project site and the Seeley Wastewater Treatment Plant (SWWTP) to follow the Evan Hewes Highway right-of-way (ROW) where feasible.

- Modifications in the onsite hydrogen storage system. The IVS project proposed a centralized hydrogen gas supply, storage, and distribution system. Modifications proposed to this system would require the amount of hydrogen stored for each SunCatcher to be increased from 3.4 to 11 standard cubic feet (scf). To support this increase in hydrogen storage for each SunCatcher, the high pressure supply tanks and low pressure dump tanks at each compressor group would accommodate 29,333 scf and 9,900 scf, respectively. In addition, each of the 30 high pressure tanks that supply hydrogen to the power conversion units within a group of 12 SunCatchers under the current design will have a capacity of 489 scf.

- An alternative water supply for initial construction and operations. This alternative water supply would be provided through the Dan Boyer Water Company in Ocotillo. That water source is potable and permitted for use by construction or personal consumption. It is expected that the Build Alternatives would require this temporary water supply for between 6 months and 3 years. Water would be transported to the project site by 7,000 gallon (gal) water trucks. It is anticipated that up to 13 truck trips per day would be required during construction and up to 7 truck trips per day would be required during operation until treated water from the SWWTP becomes available.

The alternative water source is not expected to adversely affect the Ocotillo-Coyote Wells sole source aquifer because it is a currently permitted well and the applicant will use only the amount of water currently permitted to be drawn from that well. Because that amount is currently permitted, it is assumed not to result in adverse impacts to the sole source aquifer. Appendix B, Determination of NEPA Adequacy (DNA), in the FEIS discusses the use of the alternative water source in greater detail.

D.4.17 No Response Necessary

These comments made statements or other comments which did not require a specific response.

Comments: F2-4, F2-8, F2-11, NA1-1, NA1-19, S2-1, S2-6, L2-1, L2-17, O1-17, O1-23, O3-1, O4-12, O6-1, O8-1, O8-3, O8-5, O8-8, O8-12, O8-13, O8-16, O8-23, O8-26, O8-27, O9-7, O9-12, O9-42, O10-1, P2-2, P7-8, P7-9, P8-1, P9-3, P10-3, P10-4, P10-5, P11-1, P11-4, P11-9, P11-17, P11-18, P11-20, P11-22, P11-26, P11-28, P11-29, P11-30, P11-32, P11-33, P11-34, P11-36, P11-37, P11-39, P11-40, P12-1, P12-2, P12-6, P12-7, and P12-8.

Based on our review of the DEIS, we have rated the document as *Environmental Objections – Insufficient Information* (EO-2). Please see the enclosed "Summary of EPA Rating Definitions." An "EO" signifies that EPA's review of the DEIS has identified potential significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may involve substantial changes to the Project. A "2" rating signifies that the DEIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment. **F2-4**

In the enclosed detailed comments, EPA further describes and provides specific recommendations pertaining to: 1) impacts to aquatic and biological resources; 2) impacts to endangered species and other species of concern; 3) impacts to air quality; 4) cumulative impacts from reasonably foreseeable future actions; 5) impacts to cultural resources and tribal consultation; 6) current justification for the Project purpose and need; and, 7) a reasonable range of alternatives. **F2-8**

Project Description

Tessera Solar North America (Applicant) has submitted a right-of-way application to the Bureau of Land Management (BLM) to construct a solar thermal power plant facility approximately 14 miles west of El Centro, California in Imperial County. The Imperial Valley Solar Project (Project) (formerly known as SES Two) would be constructed in two phases utilizing SunCatcher technology, and would include approximately 30,000 25 kilowatt (kw) solar power dishes with a total generating capacity of approximately 750 megawatts (MW). Phase I would consist of up to 12,000 SunCatchers configured in arrays of 200 1.5 MW solar groups (60 SunCatchers/1.5 MW group) with a generating capacity of about 300 MW. Phase II would consist of approximately 18,000 SunCatchers configured in 500 1.5 MW groups with a net generating capacity of 450 MW. Each SunCatcher system consists of a 38x40 foot wide solar concentrator dish that supports an array of curved glass mirror facets designed to automatically track the sun and focus solar energy onto a Power Conversion Unit which generates electricity. F2-11

Related structures include a main services complex, assembly buildings, a 230-kilovolts (kV) electrical substation, access roads, and a 10-mile 230kV transmission line from the Project site to the existing substation. Additionally, water needs for the proposed Project would be met by a new 12 mile water supply line from the Seeley Waste Water Treatment Facility (SWWTF). The Project would be located on approximately 6,500 acres of land, including 6,140 acres of BLM-administered public land and approximately 360 acres of privately owned land.

EPA recommends that the Final EIS (FEIS) provide additional analyses (including any necessary supporting documentation) and identify specific minimization or mitigation measures, as appropriate, regarding the issue areas below.

On behalf of the Quechan Indian Tribe, we submit these comments on the Staff Assessment/Draft Environmental Impact Statement (herein, "DEIS") and the Draft California Desert Conservation Area Plan Amendment for the Imperial Valley Solar Project (formerly known as Solar Two). At this time, given the significant presence of hundreds of cultural resources on the lands at issue, the inadequate efforts to identify cultural resources, and the improper deferral of evaluation of cultural resources until after the record of decision, the Tribe supports No Action Alternative #1 (deny ROW application and not amend the CDCA Land Use Plan of 1980). The preferred alternative for development, and proposed plan amendment, would severely and permanently impact an undisturbed sensitive area for cultural resources, in exchange for an energy development with an anticipated 40-year life span. BLM and the CEC should not approve the permanent destruction of pre-historic and historic resources in exchange NA1-1

IV. Conclusion.

In conclusion, the Tribe urges the BLM/CEC to revise the DEIS in accordance with these comments, to properly consult with the Tribe as required by law, and to ultimately select the no-action alternative, deny the ROW application, and not amend the CDCA Land Use Plan, based on the project's anticipated impacts to an area of high cultural sensitivity. Thank you for your consideration to these comments. NA1-19

The Colorado Desert District of the California Department of Parks and Recreation (State Parks) offers the following comments for the above project. S2-1

The Colorado Desert District of the California Department of Parks and Recreation (State Parks) appreciates the opportunity to provide comments on, and express our concerns, about the proposed Imperial Valley Solar project. **S2-6**

The County Planning & Development Services staff has reviewed the proposed project and the environmental document that the CEC and the BLM are preparing for the above project, i.e. Supplemental Staff Assessment (SSA)/Draft Environmental Impact Statement (DEIS). The County has previously submitted comments on the 10-square miles, approximately 6,500 acres (360 acres of private lands), with approximately 275 miles of roads. The deadline for comments on the Imperial Valley Solar Project (IVSP) project is **May 27, 2010** and these additional comments are hereby provided: **L2-1**

We look forward to working with the BLM and the CEC staff in the continued processing of the Imperial Valley Solar Project.

If you have questions on the above, please contact me at (760) 482-4236, extension 4278, or via e-mail at jimminnick@co.imperial.ca.us. **L2-17**

p. B.2-117. The assumption that 5-10 projects smaller than 750 MW would be required to create a capacity equivalent to SES Solar Two has a very shaky foundation of effectively only two examples. Geothermal has a much higher capacity factor than solar, so would require much less land than solar for equivalent electricity production. **O1-17**

D.5 Transmission System Engineering
Has nothing relevant to environment

Section C also was searched for discussion of LORS relevant to site "restoration" in keeping with the statement made on page E-11 cited above about the location of LORS pertaining to facility closure, with the following results **O1-23**

Thank you for the opportunity to submit comments on the Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) for the proposed Solar Two Project. These comments are submitted on behalf of Defenders of Wildlife ("Defenders"), a non-profit public interest conservation organization with over 1,000,000 members and supporters nationally, 200,000 of whom are in California.

Defenders is dedicated to protecting wild animals and plants in their natural communities. To achieve this end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to impede the accelerating rate of extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

Defenders strongly supports the emission reduction goals found in the Global Warming Solutions Act of 2006, AB 32, including the development of renewable energy in California. However, we urge that in seeking to meet our renewable energy portfolio standard in California, project proponents design their projects in the most sustainable manner possible. This is essential to ensure that project approval moves forward expeditiously and in a manner that does not sacrifice our fragile desert landscape and wildlife in the rush to meet our renewable energy goals. O3-1

We strongly support renewable energy production and utilization, but we do not consider the construction of large-scale projects, and especially the very large solar energy projects proposed on undisturbed public lands in the California Desert Conservation Area, to be the primary way to meet our renewable energy goals. We believe such large scale solar projects must be located on degraded or disturbed land such as abandoned agricultural fields, industrial sites, and near existing structures before public lands containing natural plant and animal communities are considered.

The proposed project would entail the exclusive use of approximately 6,500 acres, nearly all of which is public land administered by the Bureau of Land Management (BLM). The project would entail the construction, operation, and eventual decommissioning of a Sterling solar dish engine facility with a rated power output of up to 750 MW. The proposed project would entail the construction, installation and operation of approximately 30,000 dish engine units. Various alternatives to the applicant's proposed project are identified in the SA/DEIS, some of which would be located on smaller land areas, have fewer dish engine units and have reduced electrical energy generation. O3-1

Lastly, we are concerned, as indicated above, about the new information, including the new proposal, new project features and new biological information that have been developed since the O4-12

DEIS was printed. BLM should make every effort to ensure that this information is made available to the public (and other agencies) along with assessments and analyses of the information as well as that the public is given an opportunity to comment thereon. Public input on agency proposals is one of the hallmarks of NEPA review and it is to prevent the undermining of that critical aspect that limits have been imposed on agency efforts to "load up" final EISs with excessive amounts of new information.

O4-12

In conclusion, this project appears to have fewer resource conflicts than some of the other sites currently being reviewed for fast-track projects, but nonetheless the impacts to the resources identified in these comments and to other desert resources must be fully analyzed and mitigated through the BLM process. As we have previously noted, renewable development is not appropriate everywhere on the public lands and must be balanced against the equally urgent need to protect unique and sensitive resources of the CDCA. California is lucky indeed that we have sufficient renewable resources, including solar resources, to do their development in an environmentally responsible manner.

O6-1

On behalf of Backcountry Against Dumps, the Protect Our Communities Foundation, the East County Community Action Coalition, and the Desert Protective Council, we respectfully submit the following comments regarding the Staff Assessment/Draft Environmental Impact Statement ("SA/DEIS") and Draft California Desert Conservation Area ("CDCA") Plan Amendment for the Imperial Valley Solar Project (formerly the SES Solar Two Project) ("Project"). We support the No Project/No Action Alternative (as well as the No Action/CDCA Amendment to make area unavailable for future solar development Alternative), but the SA/DEIS has a number of significant flaws which require revision and recirculation of the document before any action may be taken.

These comments are being submitted on behalf of myself as an individual, my extended family that resides in the Imperial Valley, and Backcountry Against Dumps (BAD), an all-volunteer public benefit non-profit I co-founded in 1989. Our attorney is also filing comments on our behalf. Just like agency staff, we are overwhelmed with these many fast tracked large-scale energy / transmission projects, and a lack of adequate time and money.

Our group originally formed to fend off a private 600 acre landfill on tribal land abutting private properties reliant on well water. To date, that landfill has not been built despite repeated efforts. We have since expanded our efforts to address other inappropriate development that negatively impacts rural and communities and the natural resources that sustain them and the wildlands and open spaces that surround them that add value and beauty to rural properties and quality of life. These scenic resources support an abundant and diverse wildlife population. They also provide a much needed respite from urban sprawl, traffic, hustle, and noise levels, allowing one to commune with nature and get a sense of what our ancestors and the ancient ones saw, knew, and enjoyed. They also generate recreational tourism and much needed income for our local businesses. It has been reported that gazing upon an open vista can reduce a person's blood pressure by 10 degrees. O8-1

We support increased energy conservation and efficiency and renewable energy at or close to the point of use that utilizes existing structures and already disturbed lands, and that do not need extensive, expensive and destruction transmission lines and corridors, like SDG&E's Sunrise Powerlink, that fragment and degrade sensitive habitat, dissect rural communities, take land through eminent domain, displace an /or kill wildlife, and introduce new threats of wildfire ignition in high fire danger areas with dense vegetation that are prone to high wind events. Powerlines have started numerous catastrophic wildfires in Eastern San Diego County in 2003, 2007, 1970 and more. More remote renewables means

more powerlines strung through our ruggedly beautiful and fire prone Eastern San Diego wildlands and rural neighborhoods, including the McCain Valley Resource Conservation Area, McCain Valley recreation area the Cleveland National Forest, and more.

We offer these comments in the hope that our state and federal decision makers will experience an epiphany and recognize that these large scale remote energy projects are not the best, the shortest, the least expensive, or the least damaging path to reach stated goals of weaning our state and our country from reliance on fossil fuels.

Cold project "location description" leaves out beauty of the area

If you did not know the area, you would never know from the project description that the area is a gently rolling desert landscape with glistening desert pavement made up of millions of small and individually unique and beautiful multi-colored stones, criss-crossed with braided desert washes that carry storm water to the Sony Bono Salton Sea National Wildlife Refuge, with the most diverse array of bird species of any national wildlife refuge. Nature's storm channels are ripe with diverse and wonderful desert vegetation that survives blistering summers and droughts yet bursts into amazingly lush bloom when the rains come at the right time and in the right amount. Their rippled sandy bottoms show evidence of many tiny feet and tail trails leading to secret burrows in the channel banks and under sheltering bushes. The vegetation is tempting enough to entice the Bighorn sheep that were photographed on the site last spring and who no doubt have returned, and will return, for many more meals. The area also serves as forage for many and varied raptors and other species. O8-1

Late stage name change from SES Solar Two to Imperial Valley Solar

Project name changes can create problems for the public to follow the project and/or to conduct research on previous project reviews / issues / articles. Unfortunately, this tactic is a not uncommon practice for controversial projects. Once a project starts the environmental review process they should not be allowed to change the name. O8-3

We Support the No Action / No Project / CDCA Plan Amendment to make the area *unavailable* for future solar or other development. It is not the best use of public lands and /or funds

For the reasons stated in this letter, and those stated by others during this process, this project should not move forward. It is not needed and is not the best and highest benefit use of public lands. Nor is it in the best interest of the public, taxpayers, ratepayers, the environment, wildlife, historic, cultural, visual, and / or recreational resources. The land and resources should be protected from development and remain open for limited public use and enjoyment as is currently allowed. O8-5

- If the project moves forward, a smaller demonstration project should be required prior to transforming environmentally and culturally sensitive public recreation lands and sacred sites into a privately owned industrial facilities--at the expense of tax and rate payers.
- Disturbed farmland identified east of Dunaway Road on both sides of I-8 could be used for the demo project. It is close to an existing substation near Evan Hewes Hwy and is closer to potential water sources.

D.3.13 Power plant efficiency (SA/DEISpg D.3-12): If constructed and operated as proposed SES Solar Two would occupy approximately eight acres per MW of power output, almost double that of other solar technologies. *"Staff believes Solar Two represents one of the least land use-efficient solar technologies currently available."* This impact alone should stop the project. O8-8

- **SDG&E's ECO Substation:** Scoping comments on PUC/BLM EIR/EIS , February 10, 2010, Bill Powers, P.E., another Sunrise Powerlink "connected action" and "Indirect Effect".

- **Southern California Edison (SCE) has unveiled plans to install 16,300 solar panels on the roof of a 436,000sqft facility in Rialto, California:** http://solar.energy-business-review.com/news/sce_to_install_solar_panels_in_rialto_california_100319/

  PUC Press Release: Docket A 08-03-015: Edison's 500 MW Solar Roof program: quoted Commissioner John A. Bohn, author of the decision: ***"This decision is a major step forward in diversifying the mix of renewable resources in California and spurring the development of a new market niche for large scale rooftop solar applications. Unlike other generation resources, these projects can get built quickly and without the need for expensive new transmission lines. And since they are built on existing structures, these projects are extremely benign from an environmental standpoint, with neither land use, water, or air emission impacts. By authorizing both utility-owned and private development of these projects we hope to get the best from both types of ownership structures, promoting competition as well as fostering the rapid development of this nascent market."***

- The 500 MW SCE urban warehouse PV project is meeting the price range identified by RETI Phase 2B for thin-film PV. SCE just signed a contract with Sunpower for Sunpower to provide 200 MW of panels to SCE to develop a portion of this project. SCE says in the press release it has entered this deal with Sunpower to fulfill its obligation (under the CPUC authorization) to install the PV systems for $3.50/Wdc (~$4.00/Wac).
- **SEC's estimated cost for their 200 MW rooftop PV is a reported $875 million and does not need new transmission (see attached SNL Financial 3-10-10), while the Sunrise Powerlink alone, without any generation is $1.9 - $3 billion**

O8-12

- **Stirling Solar needs Sunrise Powerlink so the cost of the reportedly necessary transmission has to be considered as part of the whole of the project/action**

- **The USEPA in its comments on the Solar Energy Development PEIS (September 8, 2009) stated that wholesale and retail distributed generation deserves further consideration.** It notes that an estimated 27,000 MW potential has been identified with small-scale projects near existing power substations throughout California. The EPA further states that distributed generation benefits include fewer environmental impacts than large scale projects, reducing generation costs through reduced line loss, reduced congestion, reduced peak demand loads, which enhance the efficiency, reliability and operational benefits of the distribution system and improve the overall security of our energy supply.

- **The Department of Energy is the advancing the Net-Zero Energy Commercial Building Initiative.** See some examples, including the near zero Audubon Debs Park building at: http://www1.eere.energy.gov/buildings/commercial_initiative/zero_energy_projects.html

- **New Calgreen building codes require new energy efficiency.** "CALGREEN will use the long-standing, successful enforcement infrastructure that the state has established to enforce its health, safety, fire, energy and structural building codes. Many of the mandatory provisions in

the code are already part of the statewide building code, making verification of CALGREEN an easy transition for local building inspectors." http://gov.ca.gov/press-release/14186/

- **The County of San Diego has plugged into the CaliforniaFIRST program** to allow San Diegans to spread the cost of the rooftop solar electric systems over 20 years on the their property tax bill. The County also sponsored State legislation signed into law in October to compensate solar customers for surplus energy. The new County Operations Center will meet the US Green Building Council LEED standards. The County won the 2009 "Organizational Excellence Sandee" award from the California Center for Sustainable Energy beating out other regional governments.

O8-12

- **Solar PV panel systems can now be leased through several companies with or without upfront costs.** Our research indicates that the cost for a 1,400 sq ft home (most of our rural homes are modest) and 20-year agreement with PV system maintenance included, would be approximately $135 per month–with an option to buy the system outright. Organizations like One Block Off the Grid also offer ways for neighborhoods and communities to go solar at discounted prices.

- **CPUC's Distributed Generation page is copied below:** http://www.cpuc.ca.gov/PUC/energy/DistGen/

Utility Solar and Fuel Cell Procurement

" **Southern California Edison**

- On June 18, 2009, Decision (D.) 09-06-049 authorized Southern California Edison (SCE) to build and own 250 megawatts of utility-owned solar photovoltaic capacity and to execute contracts up to 250 MW for generation from similar facilities owned and maintained by Independent Power Producers (IPP) through a competitive solicitation process.

- The CPUC oversight of the SCE Solar Program is handled as part of A.08-03-015.

San Diego Gas and Electric

O8-13

- On July 11, 2008, San Diego Gas and Electric (SDG&E) filed A.08-07-017, seeking CPUC approval of its proposal to install 52 MWs (dc) of distributed solar PV systems with single-axis tracking at the distribution level. SDG&E proposes to spend $250 million on the project, which it would later recover in rates.

- On March 20, 2009 SDG&E and three other parties filed a settlement that would modify the original application by reducing to 26 MWs the utility-owned portion of the project and adding a competitive procurement mechanism for solar PPAs from IPP-owned projects, as well as an experimental competition between utility and IPP-owned projects and a fund for innovative technologies. Testimony from parties on the settlement agreement is due in August 2009.

Pacific Gas and Electric (PG&E) Solar Program

- On February 24, 2009, PG&E filed A.09-02-018, a five-year program to develop up to 500 MW of mid-sized (typically 1 to 20 MW) solar PV projects in PG&E's distribution grid. Under the proposal, ownership

of the projects would be split between PG&E and non-utility IPPs. PG&E would own 250 MW at an anticipated capital cost of $1.45 billion, and it would execute contracts for electricity from 250 MW of projects owned by non-utility developers.

SCE and PG&E Fuel Cells

- On April 8th, 2010, the Commission approved, with modifications, the applications of Pacific Gas and Electric Company (PG&E) and Southern California Edison Company (SCE) for approval of each utility's Fuel Cell Project to install utility-owned fuel cells on several University of California and California State University campuses. The decision finds it reasonable for the utilities to proceed with their respective Fuel Cell Projects, as long as the projects are modified in two respects. First, PG&E and SCE shall each reduce their project capital costs to reflect a lower contingency percentage. Second, PG&E shall remove contingency costs and education and outreach labor costs from its estimated non-fuel operations and maintenance costs. "

Note how pitifully small SDG&E's distributed solar projects are when compared to SCE's and PG&E's 500 MW distributed PV projects as listed on the PUC page, and then read the article below:

- **Utilities take a dim view on DG Solar(8-25-09):** http://www.newsweek.com/id/213468:

> *"In 2008, 33,500 rooftop solar systems were installed in the United States, a 63 percent increase over the amount of capacity installed in 2007. In California, the solar capital of country, the increase was 95 percent. Meanwhile, the outlook for the other side of the solar industry—the large, centralized power plants—isn't so sunny. These megaprojects—think acres of desert landscape covered in thousands of solar panels sending electricity through transmission lines—controlled mostly by utility companies that have had a monopoly over the country's electricity grid since the turn of the last century, were supposed to be the key to the future of the solar industry. So far, they're getting vastly outpaced by the decentralized rooftop approach. According to the Interstate Renewable Energy Council's 2006-08 count, consumers added 522 megawatts to the grid; whereas utility generated sites added just 96 megawatts".*

O8-13

If SDG&E and others put their money into projects similar to SCE and PG&E's distributed PV projects, instead of projects like IV Solar and the $2-3 billion Sunrise Powlerink, which generates no energy whatsoever (but lots of profits for shareholders at ratepayers expense), they could potentially install an estimated 1,000 MW of distributed PV for approximately $4.3 billion (based on SCE's reported $875 million for 200 MW), without the added expense and time expended on the Sunrise Powerlink and related issues. An estimated 2,500 to 5,000 MW on existing structures and disturbed lands, close to the point of use, exists in the San Diego urban basin.

Instead, we are looking at ratepayers funding the $2-3 billion Sunrise Powerlink, another $250 million for SDG&E's ECO Substation, plus multiple large scale remote projects such as IV Solar for another $2 billion, many on public land with public funds (an estimated $600 million at least for IV Solar alone), at great cost both financially and through loss of value of impacted public and private lands, habitat, wildlife, public access, visual, recreational, cultural and other resources. Some impacts cannot even have a dollar amount placed on them because of the nature of their value.

Environmental Justice

- Imperial Valley Solar and US Gypsum are alarming examples of Environmental Justice (EJ) issues where big corporate interests use and abuse small rural low-income, and often minority,

O8-16

communities and their resources for their own financial gain--at the expense of the often defenseless community.

- Exporting finite desert groundwater resource, in a basin with virtually no recharge, from low-income rural community, and transforming sensitive lands, habitat and cultural resources, including open views, and culturally significant properties and landscapes, in order to generate energy and wallboard for use in distant urban areas is a classic EJ scenario. O8-16
- The *promise* of jobs, few if any for Ocotillo area residents, does not make up for the rape of the area's resources, property values, and quality of life.

Cultural & Historic Resources:

We share the concerns and values expressed by the NPS, the Quechan tribal representatives, Carmen Lucas, Preston Arrow-weed, Edie Harmon, and others who have raised issues and alarms regarding the necessary and desired protection of significant cultural and historic resources that play a part in so many lives. They need to be preserved and protected for current and future generations. A quiet sense of time, open space and place , with distant views, is part of our American West culture and tradition. O8-23

Conclusion:

For all the reasons stated here, the SA/DEIS must be recirculated to incorporate the whole of the project / action and to comply with both CEQA and NEPA. We request that the No Project / No Action alternative be adopted and this sensitive site be protected from potential future development via a CDCA Plan Amendment that prohibits future development of solar or other projects. O8-26

Exhibit list for Tisdale / Backcountry Against Dumps comments on IV Solar / Solar Two SA/DEIS: Docket 08-AFC-5

1. Federal Complaint against Sunrise Powerlink filed 2-16-10
2. Hurricane Kathleen photo showing damage in Ocotillo: September 1976
3. Sandia News Release 7-7-09: New SunCatcher unveiled at national thermal test facility
4. Renewables need helping hand from gas: San Diego UT 5-23-10
5. Congressman Filner's letter to DOI Sec. Salazar re: David Hayes conflict: 4-13-10
6. CPUC's Sunrise Powerlink Modification Report: 5-14-10
7. Cleveland National Forest Press Release: 45-day comment on Sunrise Powerlink: 5-15-10
8. Energy Business Review 3-19-10: SCE To Install Solar Panels in Rialto, California
9. CEC Cancels Gas-Fed Peaker, Suggesting Rooftop PV Equally Cost-Effective: Nat. Gas & Elec. 8-09
10. Bill Power's Ivanpah Solar testimony: 12-16-09
11. Bill Power's ECO Substation scoping comments: 2-10-10
12. DOE Net Zero Commercial Building Initiative: 10-29-10
13. Governor Announces First-In-Nation Statewide Green Building Standards Code: 1-12-10 O8-27
14. CPUC decision on SCE's 500 MW Solar Photovoltaic program: 6-18-09
15. SDG&E's application for 52 MW DG Solar PV
16. CPUC decision adopting PG&E's 500 MW DG PV program: 4-22-10
17. Utilities: Taking a Dim View of Solar Energy: Newsweek: 8-24-09
18. USEPA Ocotillo- Coyote Wells Sole Source Aquifer Designated Area map: December 2001
19. SWRCB Federal Cross-cutting Environmental Regulations Evaluation Form
20. SNL Financial: SDG&E, SoCalGas set out on 5-year, $10.6B CapEx Program: 3-26-10
21. Map Shows 50 new California Faults: Fox 5 San Diego: 4-28-10
22. Ground displacement photos of Laguna Salada Fault from 4-4-10 7.2 quake: Dr. FS Vidal 4-28-10
23. USGS Historic Earthquakes 1892 02 24 Magnitude 7.8: 1993
24. Ecosystem Services: Their Economic Value and Place in Land Use Planning: An incorrect link was provided in our 5-27-10 letter. Correct Link: http://www.wildconnections.org/images/Ecosytem_Services_Economic_Value_Land_Use_Planning-_Wild_Connections_2010.pdf

Many of these significant environmental resources on the Project site are irreplaceable. Once these resources are destroyed, they will be lost forever. In fact, the Project applicant submitted testimony and documentation to the California Energy Commission admitting that in the Applicant's opinion, this Project will pose significant environmental impacts that **cannot be mitigated**. O9-7

IV. THE DEIS FAILED TO ADEQUATELY DESCRIBE THE AREA AFFECTED BY THE PROPOSED ACTION

An EIS must "succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration."[33] The DEIS fails to adequately describe the affected environment because it omits any discussion of traditional cultural properties on and adjacent to the Project site, and fails to accurately characterize the Project's soil and water conditions in the regional watershed that includes the Salton Sea, the New River and the Salton Sea National Wildlife Refuge. O9-12

VI. THE DEIS MUST DESCRIBE EFFECTIVE MEASURES TO MITIGATE EACH ADVERSE ENVIONMENTAL EFFECT

The DEIS must include a discussion of the means to mitigate adverse environmental impacts.[117] Mitigation measures must be discussed for all adverse impacts, even those that by themselves would not be considered significant.[118] All relevant, reasonable mitigation measures that could O9-42

alleviate the environmental effects of a proposed action must be identified, even if they are outside the lead or cooperating agencies' jurisdiction.[119] O9-42

Thank you for the opportunity to comment on the Staff Assessment/Draft Environmental Impact Statement for the Imperial Valley Solar Project (formerly SES Solar 2). O10-1

Our comments follow:

May 26, 2010

My name is Anita Nicklen, I am a resident of Imperial Valley, I am a mother of two kids, I don't have grand children yet, but I expect to have them one day, and I want them to enjoy the landscape and the open space that is being reduced more and more. P2-2

I want to let you know that I am 100% for solar and renewable energy but done the smart way.

Sunrise Powerlink is a bad idea. I can't believe that 6,140 acres of federal land are about to be ruined forever because the ecosystem in the desert is completely different from other areas and it is very fragile. My 12 year old daughter has a trampoline in our yard, guess what happens when we leave it on the same spot for too long, the grass dies. This is what's going to happen with those solar dish suncatchers.
I think that distributed rooftop photovoltaics will do the job. You should also offer incentives to family and business that reduce energy consumption. I think that the government has to set the example because many public buildings are wasting energy
unnecessarily, for example, buildings are being built with no windows (e.g school, classrooms, and the building where we had the hearing last night) the lights have to be on the whole day, plus the heater/airconditioning because of the lack of insulation. You can enforce certain type of regulations to avoid this type of situation. By remodeling these buildings, installing rooftop photovoltaics, by putting more insulation, plenty of jobs will be created.
Why do we always have to sell to big businesses, why don't you motivate small business and more entrepreneurship, this way the capital will stay in our community, this money will circulate and generate more jobs. This big companies usually take the profit and never reinvest a single penny in our community. **P2-2**

As a mom and as a citizen, I am embarrassed to continue taking away more resources that belong to future generations, and on top of that we are worse than rodents because we are destroying the environment.

--
"LET NOT EDUCATION BE DOGMA THAT BRUTALIZES, KILLS CREATIVITY AND ENSLAVES"
anita n.

"Do not follow the voice of fear and doubt." May God bless your heart and give you peace!

BLM should choose the No Action Alternative with a CDCA plan amendment disallowing industrial development of this important area. **P7-8**

Additionally, BLM and CEC should do more to promote rooftop solar and other forms of distributed energy, rather than enabling the destruction of our precious open landscapes. **P7-9**

I am writing today to share my thoughts and love for the California desert.
Just outside of Plaster City, CA lies a beautiful stretch of Mojave desert that has been proposed as a sight for a large Solar project. This land is special, with a number of living animals and plants making it its home. I have lived on that land for weeks at a time, donating my mind, soul, and body to restoring, repairing, and loving it.

For the last few years a solar project has been proposed for this spot in the desert, and I am writing to tell you, or anyone who will listen that this is a mistake! Do not allow a solar field to be installed here, or anywhere that is not on top of a roof that already exists. By covering the desert with solar panels all animal and plant life will forever be altered, most likely depleting the precious habitat for the flat-tailed horned lizard, and many other species. **P8-1**

We can no longer pretend that our actions on the Earth do not have repercussions. I believe solar is the answer, but not as pavement in the desert. Solar panels should be installed on every house and business, not on the crust of Mother Earth.

Thank you for your time and consideration.

This project is inappropriate for this area. There are many disturbed abandoned farmlands that this project could go up on. The company chose to site it on relatively untouched BLM land because its' cheaper- because BLM does not charge enough for leasing, and is giving away our Public Land on the cheap. Alternative sitings that would not have ecological impacts to the desert should be explored. **P9-3**

3. I call your attention to the 2003 Energy Action Plan and the resulting loading order that was referenced by one of the CEC officials during the public meeting on May 24th. In that meeting one of the CEC officials referred to the second priority (after energy conservation) for future energy needs as "renewable energy sources". In my public comments, I mentioned that the second priority is renewable energy sources AND DISTRIBUTED GENERATION. I believe that the omission of the distributed generation is an omission of an important goal, which is renewable energy in the metropolitan areas where the demand for energy is most needed. Using distributed generation eliminates the need for ill conceived projects like the aborted Green Path North project and the hotly contested proposed Sunrise Powerlink project. **P10-3**

4. One of the CEC officials in summarizing the results of the public meeting on May 24th referred to the RETI as a source for getting more details as to why we needed these desert renewable projects such as IV. In his discussion, the official stated that ALL groups were represented in RETI and that we should follow closely their actions and meetings. I pointed out to the CEC official that RETI **P10-4**

DOES NOT represent the opinions of the "people on the ground" here in the desert. I also indicated that the environmental groups represented were two national organizations (NRDC and Sierra Club) and their representatives Joanna Wald and Carl Zichella and their opinions are not those opinions of the people here in the desert. I went to a RETI meeting in Palm Desert last Fall/Winter, and we demanded further representation with people on the ground and we were ignored. There is no one on the RETI board other than developers and utilities from the area where all this destruction is planned to occur. **P10-4**

5. One of the CEC officials stated that we needed renewables in the desert due to the mandates of 20 percent and 33 percent and that his opinion is that we can't do this with rooftop solar in cities alone. Well I say that you need to prove your point. I referenced the San Diego Smart Energy 2020 Plan http://www.etechinternational.org/new_pdfs/smartenergy/52008_SmE2020_2nd.pdfand to the official and he said he has read the plan and he is not convinced that we can do enough in basin generation of energy. This sounds like a problem that needs to be solved. I challenge the CEC to have an open debate with the author of the plan, Bill Powers, before you approve this project and other desert projects. It is not proper to ignore the above plan without vetting it properly. Projects like the proposed IV project which will desecrate our beloved desert should not be approved without discerning the facts and analyzing them. **P10-5**

1. Please accept these comments on the SA/DEIS for the IV Solar Project Docket No. 08-AFC-5.

   Unfortunately, my computer just obliterated all evidence of about 15 pages of text so I will do the best I can in the remaining time. I will also incorporate by reference all comments and Exhibits submitted to the CEC for the Evidentiary Hearings on May 24, and 25, 2010 and the comments submitted to the US Army Corps of Engineers. I apologize for repetition, but I have been having computer difficulties and been unable to catch what are probably many duplications., and simply run out of time to remedy what the computer decided to vanish.

2. The numbering of my exhibits will be continuing with the numbers for my testimony before the CEC as a witness for Intervenor Tom Budlong, beginning with Exhibit Number 515. Because of lack of time, comments will go to both agencies and address issues which may be considered for both CEQA and NEPA and the BLM Plan Amendment Process as referenced in BLM materials.

P11-1

5. After Van Paten's testimony of May 25, 2010 re need to rush to get taxpayer monies, please, as an alternative to using taxpayer funds to go to the applicant, consider what could be accomplished if that $2 billion were to go to use known reliable human-scale options that would result in avoidance, reduction, or elimination of some of the anthropogenic emissions of greenhouse gases as a means of meeting the goals of the problems for which solutions are being sought. It seems more prudent to put the largest quantities of funds to making changes that will reduce emissions and reduce or eliminate generation of such emissions in the future. Please note that from the February SA/DEIR the pricetag has gone up from $1.4 to $2 billion.

6. Creative solutions and careful zoning and planning should come before widespread destruction of relatively undisturbed public lands financed by taxpayer funds. Again, when will we return to the 55 mph speed limit and require that public buildings and schools have windows that open so that forced air and air conditioning are not required for places with large concentrations of people? Please consider the wisdom of the Native American elders and the knowledge of your parents and grandparents as they lived far more lightly on the environment than those today and created far less adverse impacts on the environment.

7. Mandating the use of new or unproven technologies without first having experience with prototype operations of scale and duration to be assured of reliability seems extremely ill advised use of public funds, especially when there are tight budgets. This IV Solar/Solar 2 applicant and project seem to view the US Treasure as an endless pot of gold awaiting their grab, and with no assurances that this is a workable project on a scale of 30,000 units over almost 6,500 acres!

8. A country that can afford a space program and can afford to be engaged in two wars can certainly afford to spend the money to improve insulation and housing stock so that there are not health problems associated with summertime high temperatures or wintertime cold temperatures by means far more effective than simply increasing energy to avoid making significant changes that will have long term benefits that do not require ever increasing amounts of energy. Using funds NOW to improve the places where people live would most likely play a more significant role in meeting the emission standards than speculative technologies funded by taxpayers.

9. Anyone who has ever lived in rural parts of Africa in Botswana or Namibia knows first hand that the traditional African home construction with extremely thick walls (12-18" of "mud and wattle" style with 12-15" of bundled grass thatched roofs were very comfortable during the

P11-4

coldest parts of winter and hottest parts of the summer because the homes worked without the addition of external energy sources. But contrast those to the thin 4-6 inch thick concrete walls with corrugated metal roofs of the British, and one instantly sees the wisdom of centuries of traditional knowledge of what works. Water would freeze in basins in my British style home in winter, but those fortunate enough to live in traditional housing did not experience such swings in temperatures of the home. Early homes in the southern parts of the US in days before air conditioning looked to the proper placement of windows to take advantage of breezes to cool in the summer. How sad that in an age of technology we have lost the ability and desire to learn from the wisdom of those who came before us.

10. As decision-makers, you have the opportunity to make the decisions that will reinforce public statements when you say you will not short change the processes and that you will insist that serious solutions to problems are truly deserving of taxpayer funding, not only speculative projects that have a large component interest in "return of monies to the investors". What about the need to invest in a better quality of life for future generations by considering something other than massive destruction of public lands with their treasures cultural and biological resources so necessary for intact ecosystems in a changing world. Why not insist that all the investments will be for implementing technologies and solutions in the communities where lands had already been disturbed for human development in the form of commercial, industrial and agricultural lands in addition solving the problems of existing construction.. **P11-4**

16. US Gypsum environmental review took almost 6 years to produce a DEIR/EIS and then another year and half to produce a final EIR/EIS, and two years after the release of the FEIS, BLM still has not issued its Record of Decision for a right of way for a simple water line adjacent to the road, for which the boundaries of IID were changed almost 30 years ago! And that is a far less damaging project in terms of surface disturbances. It tool BLM probably 4-5 years of review before deciding to not approve the Plan of Operations for the Glamis Imperial Mine project. (See NAFTA Tribunal decision of 2008.) **P11-9**

29. When it comes to the issue of power plant reliability, the staff seems quite accurate in asserting that:

> Staff cannot determine whether the applicant's availability goal is achievable and cannot predict what the actual availability might be, given the demonstration status of this Stirling engine and limited data on large-scaled deployments of Stirling engines. (The availability factor of a power plant is the percentage of time it is available to generate power; both planned and unplanned outages subtract from this availability.) Staff believes it possible that the project may face challenges from considerable maintenance demands, reducing its availability. (ES-35)

30. Given the unproven nature of the proposed technology and lack of larger scale or longer duration demonstration of success, it seem more than ill-advised to use federal funding to finance a private investor company whose "renewable energy " activities would cause irreparable harm to the public lands and their resources, both for the IV Solar Project site and for the public lands that would be impacted by the activities whether the project succeeded or failed. Accordingly the wise decision in light of the very significant cultural resources and wildlife habitat would appear to be to support the No Action Alternative with Plan Amendment to ensure that no other solar projects submit AFCs in the future. This would be the resource protective and staff would not have to engage kin seemingly endless hours reviewing projects which should not have merited the expenditure of time and effort. **P11-17**

31. How curious it is to review the Staff summary of **Socioeconomics and environmental justice** in the SA/EIS.) At the Evidentiary hearings the applicant spoke of a $2 billion project, but when one considers the $8.92 million for local operation annual payroll, property taxes of S0.84 million, 7.4 million for operations and maintenance, etc, it appears that relatively little money would stay in Imperial County. **P11-18**

33. With reference to staff discussion of Noteworthy public benefits,(ES-47) there is inadequate information for comparisons to ascertain if the same benefits could be achieved by other means. **P11-20**

35. The section on Noteworthy Public Benefits is absolutely unconvincing and appears to be a **P11-22**

desperate attempt to say to find something positive to say about the project, without considering any meaningful alternative solutions and reducing demand. The alternatives suggested in this letter should be able to qualify for loan guarantees under Title XVII of the Energy Policy Act of 2005 (ENACT) given a strict interpretation of the text provided at p. A-3.

36. "The ENACT established a Federal loan guarantee program for eligible energy projects that employ innovative technologies. Title XVII of ENACT authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects, including those that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and employ new or significantly improved technologies as compared to commercial technologies in service in the U.S. at the time the guarantee is issued." The two principal goals of the loan guarantee program are to encourage commercial use in the U.S. of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. DOE can comply with the requirements under ENACT by selecting eligible projects that meet the goals of the Act." (A-3) **P11-22**

49. I am appending a letter submitted to the US ACE for its comments and included a number of exhibits related to the question of new, and alternatives solutions.(Exhibit 572) **P11-26**

NEPA No Action Alternatives

60. Discussion of the three different BLM No Action Alternatives (SA/DEIS B.2-18) is more than a little confusing without the specific text of any CDCA Plan Amendment related to interpretation of the definition for Multiple Use Class L.

61. I strongly recommend the No Action Alternative, and believe that it makes sense to deny any future consideration of industrial scale solar development at the proposed project site. However, if such a plan amendment would open the door to all Class L lands being available for industrial scale wind and solar in the future, it would be better to have no plan amendment, but what a waste of time energy and resources to have to go through the same process again! **P11-28**

62. A Plan Amendment that would prohibit consideration of any other solar projects at the site and denying the IV Solar Project would best serve the interests of public lands. But Please be extremely careful about the text and I urge that there be NO change in the definition of Multiple Use Class L.

Importance of place to the public, or feeling of sacred sites may be something universal

63. I have been participating in the Section 106 consultation process because I have had a long time concern about the issues of sacred lands, sacred geography and had the extraordinary opportunity to get to know indigenous people living in North America and from all continents except Antarctic.. I understand the pull of the land, of certain places that change forever how one related to the environment and world in which one finds oneself. For more than a decade I have been invited to participate in conferences where the vast majority of participants are indigenous people coming together to try to find solutions to problems that threaten traditional cultures, ways of life and traditional lands. Each gathering has been inspirational and I have learned so much more than I have been able to share.

64. I have been with Tibetan refugees on several occasions at the site of the proposed Glamis Imperial Mine project in eastern Imperial County and experienced their reluctance to leave, because for them they were in a place that took them back to similar places in Tibet. It is the land, the viewshed, the rocks and diversity of short vegetation that does not interfere with the views of the mountains that gave Tibetans peace in Imperial County. Something about the universality of the sacred and the understanding of sacred geography that pulled Tibetans to the place that has long been sacred to Native American peoples along the Colorado River. And, yes, My husband and I also spent many days there because it was an incredible and awe-inspiring viewshed where one could never get lost, a place to find peace and purpose in life, a place where land matters. P11-29

65. So, I was surprised when I left the 106 PA meeting last week and drove west on Interstate 8 through agricultural lands and out into the open desert, a trip I have made hundreds of times in

recent decades. I have always loved the washes and topographic diversity between I-8 and Old Hwy 80, the very lands proposed for the IV Solar project.

66. As I told Carrie Simmons in a phone message after returning home and also mentioned in public comment at the CEC hearing on Monday May 24, 2010, the first word that came to my mind after leaving Ag lands and getting into the open desert was "safe". Over and over again the word "safe" told me about that place, safe and peace. I had not realized just how much this very part of the desert had come to mean to me. For me the IV Solar project site, looking out across the desert, feeling the life associated with the washes all with the Coyote Mountains in the distance, there is a sudden overwhelming sense of suddenly feeling safe and at peace, the washes are almost magical, healthy with vegetation showing no signs of die-back as elsewhere in the western part of the County. In the 33 years I have lived here, this special part of the desert has become sacred to me, because it is bringing me home, close to the desert I love, and away from the technologies and chaos of a fast paced world that often makes no sense in terms of what is important. I was in tears before I got to Ocotillo because the thoughts of losing this open desert and healthy washes was a hurt that caught me off guard, and I am in tears as I write this as Carrie Simmons requested that I share with others at BLM.

67. For those of us who are not city folk and live with the desert as our neighbor, sacred lands are a part of our lives. One does not have to be a Native American or have generations of cultural ties to the land to understand that the concept of sacred sites and viewsheds that encompass the sacred are a part of everyday life, even if we are not physically there every day. Last week I finally understood that for me the north side of I-8 with the lands proposed for IV Solar...that is land and a viewshed that has become part of who I am and what I value and I cannot imagine what losing that viewshed will mean for me. I understand Carmen Lucas and Preston Arrowweed, their passions and concerns, and how difficult it is to get others to understand something that cannot be easily described with written words..

P11-29

68. The Imperial County desert is not a wasteland to be exploited or sacrificed so people a hundred miles away, who know nothing of the land or its resource values, can have ever increasing consumptive lifestyles. There are other solutions to energy issues that do not involve loss of significant public lands.

69. City people too often see the deserts as sacrifice areas necessary to support affluent urban lifestyles and higher levels of consumption. They can't recognize prehistoric evidence of the desert dwellers hundreds and thousands of years ago. Some seem to prefer Interstates, paved streets, vs. foot trails going from water source to water source with distant mountain peaks to guide the way. Some of us need to see and feel a wide horizon to have any hope for the future. The biological diversity in so much of the desert far surpasses that of the forests...that from my sister who is a botanist for the National Forest Service doing plant surveys in NH and ME, but regularly visits here in the desert.

70. On the day we spent exploring part of the project site it was most amazing twhat we found.. What a wonderful experience that was, with wildflowers and healthy washes beyond my wildest imagination. And how many hundreds of times have I driven past the site during the past 33 years. It has become part of my sacred geography. One doesn't have to be a Native American to become extremely attached to those open public lands with exciting washes and mountains on the horizon to understand the overwhelming sense of peace and safety that overcomes you as soon as you eliminate the view of agriculture and modern human activities from the horizon. "Safe" was the word I felt as soon as I reached the open desert by the proposed project site after leaving a day of 106 meetings last week. Traveling west, by the time I got to Ocotillo I was in tears at the thoughts that it might all be destroyed for an unneeded project. I had not realized

how much that area had come to mean to me each time I left Imperial Valley agricultural fields for the open desert as it has been left for us all to find peace. Yes, I understand why Native Americans have such a difficult time trying to explain why this area is so important. They speak for the future of all living things, and they are right to care. P11-29

Environmental Justice

71. All this really points to is looking at areas with low levels of education, high unemployment and majority non-anglo populations as areas where damaging projects are acceptable to many in remote urban areas, projects that would be rejected near more affluent communities. This **environmental justice** issue was brought home to the CEC during public comment by a faculty member at the college. What is in it for residents of Imperial County, increased air pollution, likely increased asthma rates and an eyesore to remind them of their second class status every time they leave or return to the County, something to remind them that others have found the low income desert communities acceptable sacrifice areas. Siting a project such as Solar 2 adjacent to the Interstate is to be sure that the local people will not be able to ignore how others have chosen this place where they live to be a sacrifice area.

72. Yes, it is an environmental justice issue! If people really cared about the jobs issue, the money would go to distributed rooftop PV and insulating homes to make them use less electricity both winter and summer in the desert. $2 Billion (that is for Solar 2 only, transmission line is extra) would go a lot further for improving the quality of life for people in Imperial County if NOT spent on an industrial scale solar project not needed by San Diego. Should I find some comfort that it is the electric rate-payers who get their electricity from SDG&E that will have to face the increased electric bills, rather than increasing rates for electricity in Imperial County. But what have the average electric users in San Diego done to deserve what this will cost them? I don't understand why they are not getting very upset. And I don't understand why CEC and BLM are not evaluating serious alternatives to industrial scale remote generation. P11-30

73. The only winners would be the investors of the project applicant and SDG&E...and then only maybe. This project is one of many slated for the destruction of Imperial County deserts. Individually ugly, but cumulatively an impending disaster for the species that have adapted to extremely harsh conditions and for the people who call this area home.

Noise

75. I was shocked to see and hear the incredible noise of the SunCatchers at the Maricopa site. It would be enough to drive anyone crazy unless the person is already deaf, but animals cannot obtain hearing protection. Until Monday I had not realized how much noise would be generated! P11-32

De Anza Trail

76. From what I am learning I believe that there is serious concern about proposals for moving the De Anza trail, which of course was originally an Native American trail going from water source to water source. Hundreds of years ago, and even when Europeans first arrived, there were still P11-33

small surface bodies of water. Many were destroyed when the canal broke banks and the New River was formed in 1905, That flood destroyed many historic lakes that are memorialized only in name now. Of course, the original inhabitants knew where the water sources were.

77. San Diego residents who are members of environmental organizations including the Sierra Club and others know the IV Solar project is not needed based on the research and writings of Bill Powers.

P11-33

Alternatives and what the $2 billion could do to solve energy issues

78. Based on all I know, I am more convinced than ever that the preferred Alternative that makes the most sense is the No Project, BLM Plan Amendment to deny the project and prohibit solar projects on the project site. That recommendation was made in public comments and in my comments as an individual to the Army Corps of Engineers. Yesterday ,the project applicant explained that this is a $2 billion project and that the deadlines are driven by the Applicant's need to get federal funding.

79. In my mind there are serious questions about whether there can be any justification for using taxpayers' money to destroy fragile desert public lands with important cultural resource/sacred sites values when there are so many viable alternatives that combined would reduce electrical demands, improve quality of life, and reduce greenhouse gases. Does anyone know how much distributed PV and home insulation to reduce demand could be done with the $2 billion that the industrial scale solar would require for financial viability? $2 billion for alternatives would mean lots more jobs closer to where people live.

P11-34

103. There is ongoing litigation related to the Court requirement for the preparation of the Draft and Final EIR/EIS for the US Gypsum project and said that litigation is ongoing. I do not know if the mitigation and monitoring measures required when the County certified the EIR have been implemented since 2008. I was told by USGS staff that they are doing no additional monitoring of any new wells. So that makes me think that not all mitigation has been implemented or enforced.

P11-36

104. BLM has NOT made its Record of Decision to approve the Right of Way for the USG waterline to the WestSide Main canal to use Colorado River water for at least a part of the factory use and this ultimately has a significant adverse impact on downgradient water levels .

a. US Gypsum is currently getting gravity flow groundwater through w water pipeline from Ocotillo.

b. USG is not using the up to 1000 AF/Y of Colorado River water authorized by IID because BLM has not issued its Record of Decision for the 2008 USG FEIS.

c. BLM cannot issue a ROD until Fish and Wildlife Service completes its Biological Opinion because other projects related to energy are forcing the Service to rush certain reviews and let others wait.

P11-37

106. My conclusions about the proposed Alternative water source are that

a. First and most important, the monitoring data provided is not current even though it is possible to get current USGS data online.

b. In the absence of monitoring data it is not possible to reach the conclusion that impacts of well interference at the Boyer well location will not be significant.

c. Accordingly it would be inappropriate to conclude that the proposed well with its lack of pumping withdrawal information would not have an adverse impact if it began pumping and exporting 40 AF/y.

P11-39

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521 USG FEIR/S 4.0 Collective Responses Table 4.0-1 Water quality info from USGS

522 USG FEIR/S 4.0 Collective Responses Fig. 4 Wells with Water Quality Data

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524 BE 2004 Table 4-2 Historic Groundwater Pumping in 2006 USG DEIR/S

525 Ocotillo Express Wind Draft Plan of Development 2009

526 SES Applicant's Submittal of Opening Testimony re Van Patten re well 16S/9E-36G4

527 Terms for Well 16S/9E-436G4

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531 USG DEIR/S Mitigation & Monitoring re Hydrology See Applicant's Appendix C for hydrology and USG DEIR/S Impacts and Mitigation in Summary Table at pp S-7 through S-11

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555 Table Westwind Water Sales History & water levels well 16S/9E-36G4 vs USG 16S/9E-36H1

556 Hamilton 16S/9E-34B1 well location and water level graph from USGS website

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558 Discrepancies in groundwater pumping (AF/Y) by USG wells in Ocotillo-Nomirage area as submitted by Bookman-Edmonston's Richard Rhone in January and September 2003 (Table 16-17 of Sierra Club comments on 2008 USG FEIR/S)

559 USG Annual Pumping and water levels in 3 USG wells in Ocotillo area (Table 14 of Sierra Club comments on 2008 USG FEIR/S) source of orriginal information is in Exhibits 560 and 561.

560 USG Annual Reports 1993-2002 (originally Sierra Club Exhibit 242 for 2008 USG FEIR/S)

561 Rhone 2003 email re USG Annual pumpage for three wells combined (originally Sierra Club Exhibit 236 for 2008 USG FEIR/S)

562 Map depicting location of private land and water wells in relation to local geology

563 Bookman-Edmonston 2004 text and tables related to Westwind Water Company water use from well 16S/9E-26G4 at Painted Gorge and West Texas

564 Bookman-Edmonston 1996 text and tables related to Westwind Water Company water use from well 16S/9E-26G4 at Painted Gorge and West Texas . Figures depicting cones of depression

centered at wells pumping more than 10 AF/Y

565 ICPDS Minnick 2004-09-07 response letter to Brammer re property and Well 16S/9E-36G4.

566 Harmon Testimony dated May 10, 2010 for Intervenor Budlong re Alternative Water Supply from well 16S/9E-36G4. Overlying the Ocotillo-Coyote Wells Sole Source Aquifer.

567 Harmon Testimony dated May 10, 2010 for Intervenor Budlong re Alternative Water Supply from well 16S/9E-36G4. Overlying the Ocotillo-Coyote Wells Sole Source Aquifer.

568 Rush is on for desert solar project. San Diego Union Tribune May 26, 2010. Account of CEC Evidentiary Hearing and public comments.

569 Supervisor Fuentes to BOS re EPA ltr and air quality in Imperial County 2010-05-26

570 US EPA to Nichols 2010-05-24 re Imperial County air regs

572 EH comments to the US ACE re IV Solar Project, including discussion of need.

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As a private citizen and a consulting party on the National Historic Preservation Act 106 process, I would like to respectfully submit the comments below on the draft EIS (DEIS) for the Imperial Valley Solar Project (listed as docket CEC #08-AFC-5 and formerly known as the SES Solar Two Project). First, I would like to mention that that I am a 8th generation Californian and a descendent of members of the Juan Bautista de Anza expedition of 1775-1776 (Anza expedition). I have written the on-line and printed version of the Juan Bautista de Anza National Historic Trail (JUBA NHT) guide[1] for the National Park Service, NPS. In addition, I have 20 years of R&D experience in the field of solar energy and solar materials and have served as an editor for an international journal in that field during that time. I am also a peer reviewer for

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government-funded photovoltaic solar R&D in the U.S. and abroad, and for venture capitalists investing in renewable energy. More about all of these activities can be learned at my web site. This said, **I wish to express my concurrence and support for comments submitted by the George J. Turnbull, Acting Regional Director, Pacific West Region, NPS** L7615 (PWR-JUBA), received in the docket May 4, 2010. I offer my own comments below on the DEIS.

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The sites related to the JUBA NHT include Anza expedition campsites #47 (Yuha Well, coordinates UTM: 605238 E, 3620362 N; Lat/Long: 32 degrees 42' 57.98" N, 115 degrees 52' 37.90" W) and #48 (within 500 meters east & west of Lat/Long: 32 degrees 48' 58.68" N, 115 degrees 51' 05.15" W along the arroyo north of Plaster City). These are south and north of the proposed project site, respectively. Campsites #47 and #48 are separated by an open and foreboding desert landscape that is unique in both its scale and importance in the history of the colonization of California and the founding of San Francisco, San José and Los Angeles. Our historical, cultural and archaeological resources should be protected and preserved so that future generations of American citizens can enjoy recreational activities and first-hand experiences that could enhance our appreciation of our collective history and heritage. **Some effort should therefore be made in the final EIS to describe whether similar projects on other U.S. National Historic Trails (e.g. the Lewis and Clark trail) set a precedent for construction on such** historical, cultural and archaeological **resources.**

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Another aspect relates to the land itself. The proposed site of this solar project is in close proximity to the Anza campsite #47 at Yuha Wells which is an oasis and sensitive environmental, archeological and cultural site important for the history of all Americans. The EIS suggests that there could be significant visual and auditory impacts at this historic Anza campsite and at the surrounding recreational and cultural areas. There is a strong possibility that the **project will disturb** the thin layer of compacted **soil & rock** that prevents the **dust** underneath from blowing in the strong winds at the site of the proposed solar project. This could result in the loss of the topology and habitat (e.g., at arroyos, washes and historic paths) at or near the project site such that future users of the land might not be able to experience the landscape as it is now or was at time of the Anza expedition. Future uses of the land would then be limited. Soil, dust and erosion studies suggest that the project site might not easily be restored later to allow the meaningful recreational and cultural use that is possible there today. Although the DEIS does discuss (on pages **C. 2-50 and -51**) the reclamation of the site once the plant closes and it outlines a condition of certification specific to the development of a more detailed plan decommissioning plan, this text and the a closure plan submitted in 2008 does not go far enough to protect the future uses of the land. **A strong recommendation to address this deficiency would be to more fully detail these dust and soil deposition aspects and to mitigate damages by monitoring (at sensitive areas within and outside of the project) dust erosion and settling (deposition) rates both prior to and during the lifetime of the project.** **P12-6**

Lastly, I wish to point out that the **Power Plant Efficiency section in the DEIS** does not adequately or completely report the performance of the proposed plant compared to baseline or alternative generation technologies. One should point out that the Imperial Valley Solar technology is still unproven on the 100s of MW scales represented by the proposed project. It may have a greater solar conversion efficiency than solar photovoltaic (PV) technologies for a single unit or module, but this may not be the case for the overall efficiency for the complete array of solar collectors. To illustrate this, we can begin with the CEC website which describes that *Capacity* is the amount of electric power for which a generating unit, generating station, or other electrical apparatus is rated either by the user or manufacturer. *Installed* or *Nameplate Capacity* is the total manufacturer-rated capacities of equipment such as generators and other system components. When staff reports on page **D.3-5 of the EIS** that the "Project would produce power at the rate of 750 MW net...", the installed capacity is confused with dependable and peak capacity. This should be clarified in the final DEIS by using additional text and terms and simple calculations such as those below. The CEC website defines a *Capacity Factor* as a percentage that tells how much of a power plant's capacity is used over time. For a solar plant, it is defined by: **P12-7**

Capacity Factor =
[Annual kWh generated for each kW ac of peak capacity (in kWh per kWp)]/8760 hours per year

As disclosed in the proposed project's application (on the CEC web site), the total annual capacity factor for the plant is anticipated to be 25 percent. We can therefore translate the nameplate power rating to an expected annual energy production from:

750 MWp x 0.25 x 8760 = 1,642,500 MWh/year.

This compares favorably with the value cited on page **D.3-5 of the DEIS**, and its associated land use efficiency value of 249 MWh/acre-year. **The applicant's peak power rating is therefore consistent with their anticipated annual energy production and this should be reported in the final EIS. This should be clearly presented along with the calculations, details and assumptions for correcting this value using the expected hydrogen use rate.** Within the final EIS, however, one must then compare this to 312.5 MWh/acre-year with a 34% capacity factor for a large array of SunPower T20 tracker and 520 MWh/acre-year for a 26% capacity factor fixed-tilt PV installation. While these values are verified for PV, they are not for the applicant's solar thermal technology (e.g. the SunCatcher). Comparison values such as these should be reported in **the Efficiency Table 1 on pg. D.3-6** of the EIS and **more text should be associated with the table** to describe that the Beacon Solar Energy Project is an established solar trough technology, the Ivanpah Solar plant is a solar tower technology and one should include the Calico Solar Project is a Tessera Solar 850 MW Stirling engine project. **If the cultural, visual, soil and environmental conditions of the land managed by the BLM are to be irrevocably changed at the site, a full disclosure of the technical merits of several Concentrating Solar Power (CSP) and Photovoltaic (PV) alternatives at the site should be described in the EIS, together with at least a qualitative comparative analysis of mitigation that would be involved in these solar technologies.** **P12-7**

If you have any questions on what I have written herein, or if I can be of assistance to you on matters relating to solar energy, please do not hesitate to contact me. Thank you for your attention to this matter. **P12-8**

Response: Noted. No response necessary.