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United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Region
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Oakland, California 94607-4807

IN REPLY REFER TO
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DOCKET
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DATE
RECD. MAY 04 2010

Christopher Meyer, Project Manager
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

Mr. Jim Stobaugh, National Project Manager
USDI Bureau of Land Management
BLM Nevada State Office
P.O. Box 12000
1340 Financial Boulevard
Reno, NV 89520-0006

Re: Comments regarding Proposed Imperial Valley Solar Project Draft EIS - Impacts to Anza National Historic Trail (CEC#: 08-AFC-5)

Dear Mr. Meyer and Mr. Stobaugh:

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

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

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 F1-3

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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.

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.

C.8 - Land Use and Recreation

With the exception of the reference on page C.8-7 this section does not specifically discuss the Anza NHT as a recreational resource, nor does it identify impacts to the Anza NHT. There is no analysis of impacts to the Anza NHT as a recreational resource. This omission needs to be rectified in the final EIS and the NPS is available to assist the Bureau in doing so. F1-9

The Anza Recreational Trail is mapped and identified by BLM through signs on designated routes-of-travel, both south of the project site in the Yuha Desert ACEC and also north of the

project site in the Plaster City OHV area. The gap between these two segments of the Anza Recreational Trail was intended to be connected via the I-8 Dunaway Road overpass to an alignment along Dunaway Road and then north of the site along Evan Hughes Highway. Implementation of the project would interfere with this connection of the existing segments by significantly degrading the quality of the recreational experience along the planned alignment, due to the construction of project related infrastructure and the resulting visual and noise impacts that would be experienced in close proximity to the project. F1-9

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.

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

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

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.*
>
> *<u>Verification</u>: 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

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.

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

<u>Interpretive Plan for Anza NHT within El Centro Field Office Territory</u>

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.

Sincerely,

George J. Turnbull
Acting Regional Director, Pacific West Region

F2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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75 Hawthorne Street
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Jim Abbott, Acting State Director
Bureau of Land Management
California State Office
2800 Cottage Way, Suite W-1623
Sacramento, CA 95825

Subject: Joint Draft Environmental Impact Statement and Staff Assessment for the Imperial Valley Solar Project (formerly known as SES Solar Two), Imperial County, California [CEQ# 20100050]

Dear Mr. Abbott:

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 F2-2

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

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

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

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

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 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. F2-6 F2-7

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

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

Sincerely,

Enrique Manzanilla, Director
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating Definitions
Detailed Comments
US EPA Comments on Public Notice SPL-2008-01244-MLM, May 12, 2010

Cc: Jim Stobaugh, Program Manager, Bureau of Land Management
Tom Pogacnik, Deputy State Director, Bureau of Land Management
Ron Wenker, Nevada State Director, Bureau of Land Management
Colonel Thomas H. Magness, U.S. Army Corps of Engineers
Chris Meyer, California Energy Commission
Michelle Matson, U.S. Army Corps of Engineers
Felicia Sirchia, U. S. Fish and Wildlife Service
Becky Jones, California Department of Fish and Game
Ray Brady, Energy Policy Team Lead, Bureau of Land Management

U.S EPA DETAILED COMMENTS ON THE JOINT DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) AND STAFF ASSESSMENT FOR THE IMPERIAL VALLEY SOLAR PROJECT, IMPERIAL COUNTY, CALIFORNIA, MAY 27, 2010

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.

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

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

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

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

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

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

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

[2] Compensatory Mitigation for the Loss of Aquatic Resources, Final Rule, 33CFR 325 and 332, April 10, 2008.

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.

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.
- 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

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.

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

[3] National Park Service, August 2008, Effects of the International Boundary Pedestrian Fence in the Vicinity of Lukeville, Arizona, on Drainage Systems and Infrastructure, Organ Pipe Cactus National Monument, Arizona,

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.

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.

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. F2-25
- Fully integrate the recent Supplement into the FEIS.

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.

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

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

F2-28

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

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.

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.

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

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.

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.

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.

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.

F2-36

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.

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.

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.

F2-38

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

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. F2-38
- 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.

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.

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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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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San Francisco, CA 94105-3901

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MAY 27 2010

Jim Abbott, Acting State Director
Bureau of Land Management
California State Office
2800 Cottage Way, Suite W-1623
Sacramento, CA 95825

Subject: Joint Draft Environmental Impact Statement and Staff Assessment for the Imperial Valley Solar Project (formerly known as SES Solar Two), Imperial County, California [CEQ# 20100050]

Dear Mr. Abbott:

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 days 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. F2-41

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.

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.

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. F2-41

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

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 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.

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.

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.

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. F2-41

Sincerely,

Enrique Manzanilla, Director
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating Definitions
Detailed Comments
US EPA Comments on Public Notice SPL-2008-01244-MLM, May 12, 2010

Cc: Jim Stobaugh, Program Manager, Bureau of Land Management
Tom Pogacnik, Deputy State Director, Bureau of Land Management
Ron Wenker, Nevada State Director, Bureau of Land Management
Colonel Thomas H. Magness, U.S. Army Corps of Engineers
Chris Meyer, California Energy Commission
Michelle Matson, U.S. Army Corps of Engineers
Felicia Sirchia, U. S. Fish and Wildlife Service
Becky Jones, California Department of Fish and Game
Ray Brady, Energy Policy Team Lead, Bureau of Land Management

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SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S EPA DETAILED COMMENTS ON THE JOINT DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) AND STAFF ASSESSMENT FOR THE IMPERIAL VALLEY SOLAR PROJECT, IMPERIAL COUNTY, CALIFORNIA, MAY 27, 2010

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.

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. F2-41

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.

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

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:

- 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.

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. F2-41

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

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. F2-41

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.

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) F2-41

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.

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).

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.

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.

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. F2-41

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).

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]

[2] Compensatory Mitigation for the Loss of Aquatic Resources, Final Rule, 33CFR 325 and 332, April 10, 2008.

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.
- Include in the FEIS a mitigation plan for unavoidable impacts to waters of the United States, as required by Corps and EPA regulations.

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). F2-41

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.

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.
- 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.

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.

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. F2-41

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.

[3] National Park Service, August 2008, Effects of the International Boundary Pedestrian Fence in the Vicinity of Lukeville, Arizona, on Drainage Systems and Infrastructure, Organ Pipe Cactus National Monument, Arizona,

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.

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.

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.

Water Supply and Groundwater Resources F2-41

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.

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.

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. F2-41

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.

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.

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. F2-41

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).

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.
- 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. F2-41
- 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.

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:

- 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. F2-41
- 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.

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.
- 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. F2-41

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:

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 F2-41
- 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

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.

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.
- 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. F2-41
- 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.

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.

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.

F2-41

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.
- 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.

Cultural Resources and Coordination with Tribal Governments

F2-41

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).

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.

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.

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). F2-41

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.

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

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.

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. F2-41

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.

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. F2-41

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.

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/.

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. F2-41

F2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

MAY 12 2010

Colonel Thomas H. Magness
District Engineer, Los Angeles District
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

Subject: Public Notice (PN) SPL-2008-01244-MLM for the proposed Imperial Valley Solar Project, Tessera Solar North America, Imperial County, California

Dear Colonel Magness:

This letter is in response to your March 15, 2010 PN describing Tessera Solar North America's proposed 6,500 acre Imperial Valley Solar Project located in Imperial County, California. The project proposes discharges of dredged or fill material that would eliminate 167 acres of jurisdictional desert streams tributary 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). 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 waterbodies under the Clean Water Act (CWA) sect. 303(d). This letter identifies the permit action as a candidate for review by our respective headquarters pursuant to our agencies' established procedures.[1] F2-41

The 878 acres of jurisdictional desert streams on the project site are a critical part of the Salton Sea Transboundary Watershed. There has been significant federal, state and community investment in the protection and improvement of this watershed for its agricultural, environmental and recreational values. Since the mid-1960's, federal and state agencies have undertaken and funded efforts to address salinity and other water quality problems, including $1.5 million of EPA funding for water quality and wetland restoration projects at the Salton Sea, and $62 million of EPA funding for wastewater infrastructure to protect human health and improve water quality in the New River.

The streams that would be directly impacted by this project provide services such as sediment transport and deposition, energy dissipation, and ground water recharge. They provide hydrological, biological and geochemical connectivity to the New River and Salton Sea, including connectivity to the Salton Sea National Wildlife Refuge. These waters represent a critical stop on the Pacific Flyway for migrating birds, including several state and federal listed and threatened species. The project site also provides a variety of habitat types for reptiles and mammals, including the flat-tailed horned lizard (*Phrynosoma mcallii*), proposed for listing under the Endangered Species Act, and Peninsula bighorn sheep (*Ovus Canadensis nelsoni*), a listed endangered species. All of these important functions will be lost or degraded by the

proposed installation of 30,000 SunCatcher dish Stirling systems and their associated equipment and infrastructure. These impacts may result in an irreversible loss of biodiversity and ecosystem stability, and harm the State of California's efforts to control and reduce pollutants and stressors currently impairing the New River and Salton Sea, such as pesticides, nutrients, salinity and selenium. Wastewater, agricultural return flows and industrial discharges are likely sources of these impairments, and the modification of flow and sedimentation regimes upstream will further reduce watershed resiliency and impact beneficial uses throughout the watershed.

Section 404 of the Clean Water Act prohibits avoidable discharges of dredged or fill material to waters of the United States. Proposals for discharges must meet EPA's regulatory standards at 40 CFR 230.10, including a comprehensive evaluation of project alternatives that avoid and minimize impacts to the aquatic environment. The only permittable discharge is the "Least Environmentally Damaging Practicable Alternative" (LEDPA). The applicant has provided a preliminary draft 404(b)(1) alternatives analysis and we are anticipating additional information on offsite alternatives, and site design (*e.g.*, fencing and roads, additional avoidance of SunCatchers placed in desert streams, development of in holdings, alternative substation and building locations, etc.). On April 28, 2010, your staff met with us and the applicant to discuss the most recent project proposals which, if developed and approved, could further reduce impacts to aquatic resources. We are committed to continuing to work together to ensure authorization of the LEDPA and avoid elevation of this permitting decision to Washington DC.

If you wish to discuss this matter, please call me at (415) 972-3572 or have your staff contact Jason Brush, Supervisor of our Wetlands Office, at (415) 972-3483.

Sincerely,

F2-41

Alexis Strauss 12 May 2010
Alexis Strauss, Director
Water Division

cc: USFWS, Carlsbad
RWQCB (7), Colorado River Basin Region
Tessera Solar North America.

[i] This letter follows 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.

L1

DOCKET
08-AFC-5
DATE MAY 13 2010
RECD. MAY 27 2010

City of El Centro
Incorporated 1908
Shining with Opportunity

May 13, 2010

The Honorable Karen Douglas
Chairwoman
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: Tessera Solar Imperial Valley Solar Project

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.

L1-1

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.

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

L1

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.

Respectfully,

Cheryl Viegas-Walker
Mayor

CC: Vice Chair James Boyd
Commissioner Jeffrey Byron
Commissioner Anthony Eggert
Commissioner Robert Weisenmiller

L2

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES
PLANNING / BUILDING INSPECTION / ECONOMIC DEVELOPMENT / PLANNING COMMISSION / A.L.U.C.

JURG HEUBERGER AICP, CEP, CBO
PLANNING & DEVELOPMENT SERVICES DIRECTOR

DOCKET	
08-AFC-5	
DATE	MAY 27 2010
RECD.	JUN 01 2010

FedEx Tracking # 8718 2314 1283

May 27, 2010

Christopher Meyer, Project Manager
Energy Facilities Siting and
Compliance Office
Attn: Docket No. 08-AFC-5
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5112

SUBJECT: Response to "Imperial Valley Solar Project (IVSP)" (formerly SES Solar Two Project)/Application for Certification (08-AFC-5)

Dear Mr. Meyer:

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

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

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

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

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

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

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

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 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. L2-9 L2-10

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

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

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

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 site will also require biological studies to determine impacts to biological and wildlife habitat. L2-14 L2-15

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

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

Sincerely,

JURG HEUBERGER, AICP, Director
Planning & Development Services Department

By:
Jim Minnick
Planning Division Manager

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IV Solar Project (Stirling Energy Solar Two Energy) File
Files: 10.100, 10.105, 10.124, 10.130, 10.133, 10.134, 10.142

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Re: Quechan Indian Tribe Comments on Staff Assessment/Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan Amendment for Imperial Valley Solar Project (SES Solar Two)

Dear Mr. Stobaugh and Mr. Meyer:

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 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. NA1-1 NA1-2

I. Interest of the Quechan Indian Tribe

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.

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

NA1-5

[1] Due to a numbering error in the DEIS, page numbers in both the biological and cultural resources sections begin with "C.2." The page numbers in the cultural resources section should have begun with the designation "C.3."

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.

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. <u>The Analysis of Cultural Resource Impacts Is Incomplete and Based on Inadequate Data</u>.

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

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

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)

iii) Sunrise Gateway South Solar farm (proposed 200 MW facility located south of I-8 on eastern edge of Yuha desert, along Mexico border, on approx. 903 acres)

iv) USS Imperial PV Solar project (proposed 136 MW facility located south of I-8 on eastern edge of Yuha desert, on approximately 1400 acres). NA1-8

There are also two proposed solar projects on BLM land near the proposed project that do not appear to be addressed in the DEIS:

i) Sunpeak Solar (proposed 500 MW facility located west-northwest of the City of Westmoreland, on approximately 5,517 acres of BLM land)

ii) SDG&E solar project proposed for 351 acres of BLM land adjacent to Imperial Valley substation in the Yuha desert.

We understand that Solar Millenium is also currently evaluating several potential sites for a solar facility. One of the proposed locations is on approximately 7,000 acres land in the Plaster City area, to the north of the project.

Given the number of projects in the immediate area proposed for already disturbed lands, there is simply no basis to approve the use of this sensitive cultural area, and the permanent destruction of hundreds of cultural resources, for temporary solar development.

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

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

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

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.

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

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.

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

The record is clear that this project is proposed in an extremely sensitive area, that there are numerous solar developments in and around the project area on BLM and private/non-federal lands, and that this area is designated as open space by local land use officials. A balanced, multiple-use, approach to land management mandates that this parcel not be developed for large-scale solar. This project, combined with the cumulative effect of one million or more acres of other renewable projects would dramatically shift the use of BLM's California Desert lands toward energy development at the direct expense of resource protection. Development of the project on this site could also result in the permanent impairment of the land's resources in conflict with 43 U.S.C. § 1702 (defining "multiple use" to require "coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment"). NA1-18

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

Sincerely yours,

MORISSET, SCHLOSSER & JOZWIAK

Frank R. Jozwiak
Thane D. Somerville
Attorneys for the Quechan Indian Tribe

cc: President Mike Jackson, Sr.
Vice-President Keeny Escalanti, Sr.
Members of the Quechan Tribal Council
Pauline Jose, Chairperson, Quechan Cultural Committee
Bridget Nash-Chrabascz, Quechan Historic Preservation Officer
Nancy Brown, Advisory Council of Historic Preservation
Wayne Donaldson, California State Historic Preservation Officer
Dave Singleton, Native American Heritage Commission

Attachment A: Quechan Tribe's Comments on Draft Programmatic Agreement

T:\WPDOCS\0267\10057\SES Solar Two\Comments on DEIS_01.doc
tds.5/17/10

EXHIBIT A

May 4, 2010 Letter to Carrie L. Simmons, Comments on Draft Programmatic Agreement

NA1-20

QUECHAN INDIAN TRIBE
Ft. Yuma Indian Reservation

P.O. Box 1899
Yuma, Arizona 85366-1899
Phone (760) 572-0213
Fax (760) 572-2102

May 4, 2010

Carrie L. Simmons, Archaeologist
El Centro Field Office
Bureau of Land Management
1661 S. 4th Street
El Centro, CA 92243

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. <u>BLM Has Not Fulfilled Its Government-to-Government or Section 106 Tribal Consultation Obligations</u>.

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 6, states that identification, determination of effects, and consultation on mitigation will occur prior to issuance of any "Notice to Proceed." This is misleading and inaccurate. Stipulation IX of the Draft PA, on page 11, confirms that BLM does intend to authorize construction activities while the Section 106 evaluations take place. Permitting construction to proceed prior to concluding the Section 106 process (including the identification and evaluation of affected resources) conflicts with clear language in the NHPA.

- The Draft PA, pages 6-7, notes BLM's obligation to consult with interested Indian tribes. To date, BLM has not formally consulted on a government-to-government basis with the Quechan Tribe. It would be inappropriate to sign the Draft PA prior to formal consultation with the Tribe. In addition, the Tribe's ability to meaningfully consult in this matter has been, and continues to be, impaired since it has not yet received any cultural resources report specifically identifying the resources discovered to date. The tribal consultation requirements of Section 106 and the ACHP regulations have not been complied with.

- 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.

Sincerely,

QUECHAN INDIAN TRIBE

Bridget Nash-Chrabascz
Quechan Tribe Historic Preservation Officer

cc: President Mike Jackson, Sr.
Vice-President Keeny Escalanti, Sr.
Members of the Quechan Tribal Council
Pauline Jose, Chairperson, Quechan Cultural Committee
Kenneth Salazar, Department of the Interior, Secretary of the Interior
Jim Abbott, Bureau of Land Management, Acting State Director
Teri Rami, Bureau of Land Management, California Desert District Manager
Daniel Steward, Bureau of Land Management, El Centro
Brian Turner, National Trust for Historic Preservation, Regional Attorney, Western Office
Jim Bartel, Fish and Wildlife, Field Supervisor
Michelle Mattson, US Army Corps of Engineers
Nancy Brown, Advisory Council on Historic Preservation
Chris Meyer, California Energy Commission Project Manager
Wayne Donaldson, California State Historic Preservation Officer
Dave Singleton, Native American Heritage Commission

NA2

DOCKET	
08-AFC-5	
DATE	MAY 16 2010
RECD.	MAY 28 2010

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

16 May 2010

CARRIE SIMMONS
El Cento BLM Archaeologist
1661 South 4th Street
El Centro, California 92243-4561

Reference: Our phone conversation the first part of May 2010

Subject: All applications for implementing Energy Systems be it SDG&E, Power Lines and Sub-Station, Stirling Solar Energy, other Solar Energy Companies, Wind Energy Projects, GEO Thermo and any others that have applied and or will come in the future, etcetera!

Enclosure (1) My later to Vicki Wood Field Manager BLM dated 23 March 2007
(2) Copy reference Just Before Sunset
(3) Two photographs of prehistory trails
(4) One Photograph of Olla Sacrifice area
(5) One Photograph of Lithic work area

Dear Carrie

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.

Sincerely,

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

Copy to:

Larry Myers Native American Heritage Commission
Courtney Ann Coyle Attorney at Law

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."

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.

NA2-1

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 of 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.

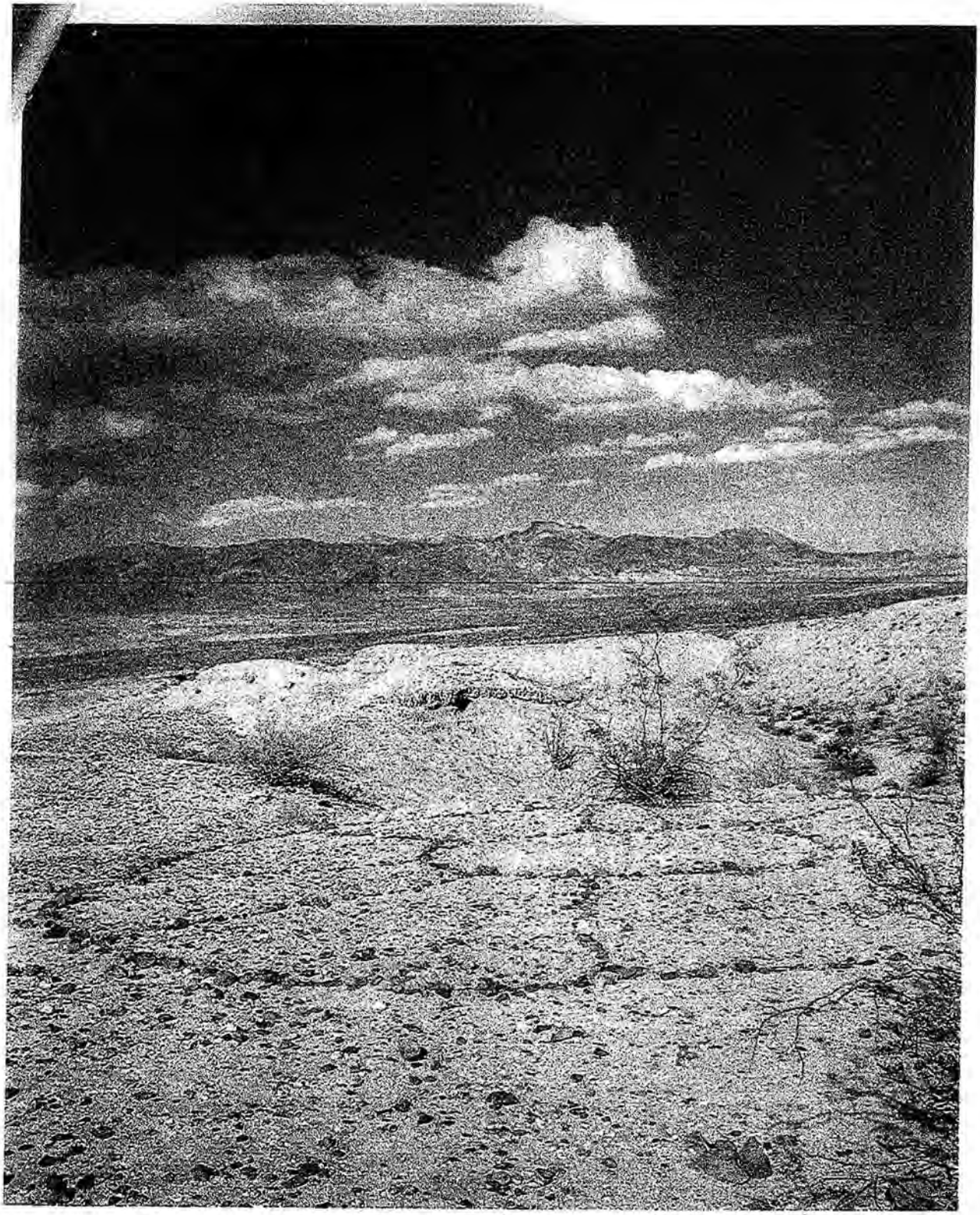
Sincerely

NA2-1

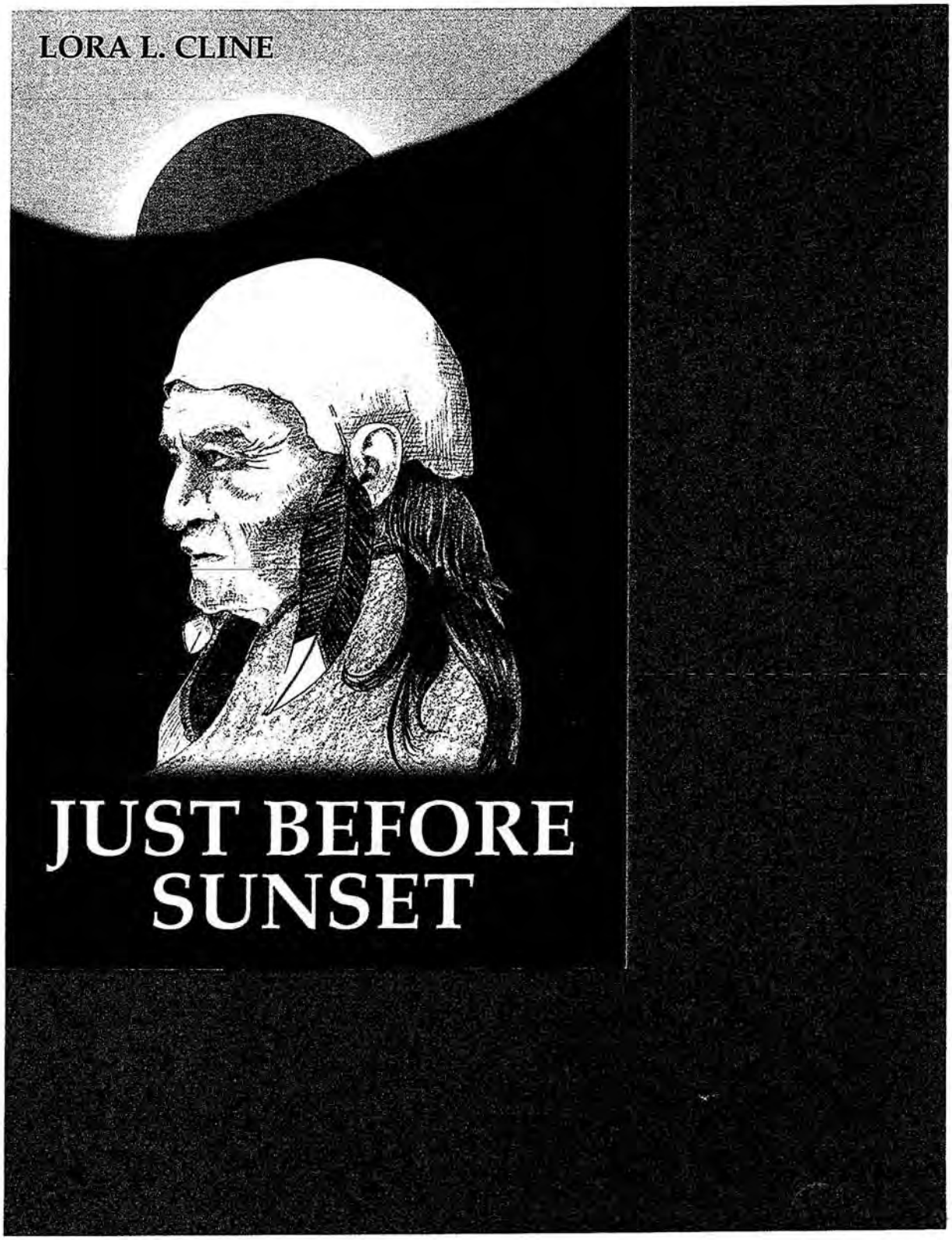
CARMEN LUCAS
Kwaaymii, Laguna Band of Indians
Laguna Mountain, California

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

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 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.

*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.

O10

California Native Plant Society

DOCKET
08-AFC-5
DATE MAY 27 2010
RECD. MAY 28 2010

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California Energy Commission
1516 Ninth St., MS-15
Sacramento, CA 95814
Attn.: Christopher Meyers

May 27, 2010

RE: CNPS Comments Regarding Imperial Valley Solar SA/DEIS, Docket #08-AFC-5

Dear Mr. Meyers:

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:

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.

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.

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.

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.

Thank you for consideration of our comments.

Sincerely,

Tom Beltran

c.c. Greg Suba – CNPS, Sacramento
Carrie Schneider – CNPS, San Diego
Daniel Steward, BLM – El Centro

O1

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April 20, 2010

DOCKET
08-AFC-5
DATE RECD. APR 20 2010 APR 23 2010

Christopher Meyer
Project Manager/CEC
1516 Ninth Street, MS-15
Sacramento, CA 95814

RE SES Solar Two SA/DEIS in Imperial County

Dear Mr. Meyer,

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

GENERAL COMMENTS

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

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

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

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

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

COMMENTS LINKED TO SPECIFIC DOCUMENT CITATIONS

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 prpposed 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

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.2-6. 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

Distributed Solar Technology

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.

Wind Energy

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

Geothermal Energy

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

Water Use

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

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

Joint Agency General Conditions Including Compliance Monitoring and Closure Plan

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."

O1-21

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.

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:

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

p. 5.3-2 D.1.4.2 **Assessment of Impacts and Discussion of Mitigation**

Relates only to assurance of public health and safety

D.4 Reliability

Has nothing relevant to environment

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

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.

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

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"

O1-26

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.

REFERENCES

[1] J. Paidipati et al., Rooftop Photovoltaics Market Penetration Scenarios, *National Renewable Energy Laboratory*, NREL/SR-581-42306, February 2008

[2] U.S. Government Accountability Office, *Brownfields Redevelopment: Stakeholders Report That EPA's Program Helps to Redevelop Sites, but Additional Measures Could Complement Agency Efforts*, GAO-05-94 (Washington, D.C.: December 2, 2004)

[3] U.S. Green Building Council, Green Building Research, 2010. http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1718

[4] J. R. Kuipers, *Hardrock Reclamation Bonding Practices in the Western United States* (Boulder, Colorado: National Wildlife Federation, 2000)

[5] H. G. Wilshire, Environmental effects of pipeline corridors in the Mojave Desert: Geol. Soc. America, Abstracts with Programs, v. 24, 1992; H. G. Wilshire, Environmental Impacts of Pipeline Corridors in the Mojave Desert, California. *U.S. Geological Survey* Open-File Report 92-447 (1992); H. G. Wilshire et al. Geologic Processes at the Land Surface. *U.S. Geological Survey* Bulletin 2149 (1996)

[6] Howard Wilshire and Douglas Prose. 1987. Wind Energy Development in California, USA. *Environmental Management* 11:13-20; H. G. Wilshire et al. Geologic Processes at the Land Surface. *U.S. Geological Survey* Bulletin 2149 (1996):

Howard Wilshire, Jane Nielson, and Richard Hazlett. The American West at Risk: Science, Myths, and Politics of Land Abuse and Recovery (New York, Oxford University Press) 2008, Chapter 12.

[7] R. H. Webb et al., Perennial Vegetation Data From Permanent Plots on The Nevada Test Site, Nye County, Nevada, *U. S. Geological Survey* Open-File Report 03-336 (2003)

[8] See J. R. Kuipers, *Hardrock Reclamation Bonding Practices in the Western United States* (Boulder, Colorado: National Wildlife Federation, 2000)

Sincerely,

Howard G. Wilshire Ph.D. (Geology)
Chairman, Board of Directors
Public Employees for Environmental Responsibility

O2

CENTER *for* BIOLOGICAL DIVERSITY

VIA EMAIL AND FEDERAL EXPRESS OVERNIGHT DELIVERY

May 26, 2010

DOCKET
08-AFC-5
DATE MAY 26 2010
RECD. JUNE 04 2010

Jim Stobaugh,
BLM Project Manager,
P.O. Box 12000,
Reno, Nevada 89520
Jim_Stobaugh@blm.gov

Re: Comments on Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan Amendment for the SES Solar Two Project (08-AFC-5), Imperial County

Dear Sirs:

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

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

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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.

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

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.

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. O2-6
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

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

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

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

[1] http://www.solideas.com/DeAnza/TrailGuide/pdfs/Anza_Trail_Imperial_Guide.pdf
[2] http://www.blm.gov/pgdata/etc/medialib/blm/ca/images/elcentro/weco.Par.65338.Image.-1.-1.1.jpg

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

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

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

D. BLM Failed to Inventory the Resources of these Public Lands Before Making a Decision to Allow Destruction of those Resources

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[3] This is just one of the many oversights and failing associated with the analysis of the proposed translocation which is discussed in depth below.

[4] http://solarcis.anl.gov/documents/maps/studyareas/Solar_Study_Area_CA_Lit_7-09.pdf

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.

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.

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.

2. *Project Description:*

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.

B. The DEIS Does Not Adequately Describe Environmental Baseline

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.

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

[6] FTHL ICC 2003, BLM 1980

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

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).

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.

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[7] 75 FR 9377

[8] Barrows and Allen 2009

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

[9] *See* maps and data available on BLM website for renewable energy projects at http://www.blm.gov/ca/st/en/fo/cdd/alternative_energy.html

[10] Documents available at http://www.tlma.co.riverside.ca.us/planning/content/temp/sp375.html

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.

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

[11] 2008 FTHL Monitoring Report
[12] Barrows and Allen 2009.

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.

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

4. Migratory and Other Birds and Burrowing Owls

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

[13] Audubon IBA Imperial Valley http://ca.audubon.org/maps/pdf/Imperial_Valley.pdf

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).

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

[14] McCrary 1986
[15] Ibid
[16] IBP 2008.

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

O2-26

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.

6. Cryptobiotic soil crusts

O2-27

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].

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.

7. Decommissioning and Reclamation Plan

O2-28

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

[17] Long 1973, Goodrich and Buskirk 1998
[18] http://imperialcounty.net/AirPollution/Web%20Pages/SALTON%20SEA.htm
[19] Belnap 2003, Belnap et al 2003, Belnap 2006, Belnap et al. 2007.
[20] Lovich and Bainbridge 1999

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.

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

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

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[21] Longcore 1997
[22] http://www.blm.gov/ca/st/en/prog/planning.html
[23] BLM 2002
[24] Ibid
[25] Brown and Minnich 1986, Lovich and Bainbridge 1999, Brooks 2000, Brooks and Draper 2006, Brooks and Minnich 2007
[26] Ducher 2009

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.

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 O2-31

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

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].

[27] Dodd and Seigel 1991

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

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

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.

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

[28] P. Forster et al., *Changes in Atmospheric Constituents and in Radiative Forcing, in* CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Solomon, S., et al. eds., Cambridge University Press 2007) at p. 212, Table 2.14.

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.

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 O2-36

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

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).

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

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

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

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.

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

Sincerely,

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May 26, 2010

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Re: Comments on the Draft Environmental Impact Statement/Staff Assessment for the Stirling Energy Systems Solar Two Project and Possible California Desert Conservation Area Plan Amendment, 75 Fed. Reg. 7624 (Feb. 22, 2010).

Dear Mr. Meyer:

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

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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

Our comments on the DEIS are as follows, arranged by subject:

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

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).

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).

II. Biological Resources

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

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 O3-6

[1] Flat-tailed Horned Lizard Interagency Coordinating Committee. 2003. Flat-tailed horned lizard rangewide management strategy, 2003 revision. 78 pp. plus appendices.

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

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

III. Climate Change

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

O3-11

expanded analysis should include cumulative effects and mitigation measures, including those associated with climate change.[2]

Thank you for considering our comments. If you have any questions, please contact me at (916) 313-5800 x110 or via email at jaardahl@defenders.org.

Sincerely,

Jeff Aardahl
California Representative

[2] *See* Secretarial Order 3226, *Evaluating Climate Change Impacts in Management Planning* § 4 (January 16, 2009) ("Each bureau and office of DOI shall, in a manner consistent and compatible with their respective missions: Consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, and/or when making major decisions affecting DOI resources"); Council on Environmental Quality, *Considering Cumulative Effects under the National Environmental Policy Act* 24, 42 (1997) (including documentation and analysis of global warming in the affected environment and effects), *available at* http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm (last visited Apr. 20, 2010).

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DATE MAY 26 2010
RECD. MAY 27 2010

O4

NATURAL RESOURCES DEFENSE COUNCIL
THE WILDERNESS SOCIETY

May 26, 2010

Jim_Stobaugh@blm.gov

Re: Draft Environmental Impact Statement and California Desert Conservation Area Plan Amendment for the Proposed SES Solar Two Project

Mr. Jim Stobaugh:

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

[1] California's Renewable Energy Transition Initiative found, for example, that the state potentially could access 500 GW of renewable energy, an order of magnitude greater than the state's peak demand and far beyond the ability of our electric grid could handle.

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 fast 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

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

<u>Hydrogen Use:</u> 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.

O4-5

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

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

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

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.

[2] This quotation is from Secretary Salazar himself.

> 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.

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

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.

Thank you in advance for considering our comments. If you have any questions about them, please do not hesitate to contact us.

Sincerely,

Johanna Wald
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cc: Jim Abbott, Acting California State Director, BLM
cc: Chris Meyer, Project Manager, California Energy Commission

Audubon California * California Wilderness Coalition
Center for Biological Diversity * Defenders of Wildlife * Desert Protective Council
Mojave Desert Land Trust * Natural Resources Defense Council * Sierra Club
The Nature Conservancy * The Wilderness Society * The Wildlands Conservancy

June 29, 2009

The Honorable Ken Salazar
1849 C Street, NW
Washington, DC 20240

The Honorable Arnold Schwarzenegger
State Capitol
Sacramento, CA 95814

Re: Recommendations for Renewable Energy Development and Resource Conservation in the California Desert

Gentlemen:

We write on behalf of our tens of thousands of California members regarding an issue of critical importance: achieving the state's ambitious renewable energy goals while protecting its unique and sensitive resources including, in particular, the California Desert Conservation Area (CDCA). Our groups recognize that both the state and the federal government share this over-arching objective and have made progress toward achieving it. State agencies, for example, are moving ahead in compliance with Governor Schwarzenegger's Executive Order to develop a conservation strategy for the desert, and the Bureau of Land Management (BLM), an Interior Department agency, is moving ahead in an effort to fast-track a subset of solar applications that have been filed in the desert as well as with a programmatic review of potential solar zones. Our groups too have been engaged in efforts to achieve this objective.

In particular, our groups have developed a set of criteria for use in identifying appropriate areas for solar development in the CDCA as well as a vision for both the kind of planning and the kind of plan needed to protect the desert's remarkable resources while addressing the climate challenge effectively. Fundamentally, success in selecting appropriate areas and achieving the over-arching objective which we all share will require an unprecedented degree of state and federal cooperation as well as close collaboration with our community. Given what is at stake, such cooperation is unquestionably warranted and it is our hope that this letter will contribute to that result.

I. Introduction

The California Desert is a unique and special environment, as recognized by Federal Land Policy Management Act in establishing the California Desert Conservation Area. The vast landscape is home to diverse biological communities, cultural sites, scenic and wild places, and other valuable areas which survive despite pressures from various human activities over the past century. The desert lands also potentially sequester carbon in the fragile desert crust, a benefit in the state's effort to reduce carbon emissions. These lands also are attractive for renewable energy projects, and have fueled a rush by companies to file applications on public lands for potential projects. The need to find alternatives to carbon based energy is great. In California, we are moving forward to meet a Renewable Portfolio Standard of 33% by 2020, a goal which is widely

supported as necessary to address climate change. Our groups strongly endorse increased conservation, energy efficiency and demand-side management actions of the sort that California has pioneered, but we recognize that, despite those efforts, it is likely that some utility scale projects will be sited in the desert, potentially as early as December 2010. It is of critical importance that they be sited appropriately. To that end, our groups have developed a set of criteria which are attached to this letter.

II. Environmentalists' Siting Criteria

Our criteria are designed to help guide renewable development, principally solar development, to appropriate locations. More specifically, the criteria are intended to inform current and future planning processes and to provide ecosystem level protection to the CDCA (including public, private and military lands) by giving preference for development to disturbed lands, steering development away from lands with high environmental values, and protecting the desert's undeveloped cores. Developed with input from field scientists, land managers and conservation professionals, the criteria in essence seek to steer renewable energy projects to areas with comparatively low potential for conflict and controversy in order to facilitate their timely development. In other words, the "message" our criteria are intended to deliver is that to expedite development, avoid areas that will generate significant controversy. In the section below, we describe how our criteria could be used in the two federal processes that are now underway as well as in the comprehensive desert-wide planning that we believe is necessary.

III. Current Federal Planning Efforts

The federal government is currently engaged in two planning efforts – one that focuses on a number of projects that might potentially be approved by December 2010 (the "fast-track projects") and the other on identifying "energy zones" in the California Desert as areas appropriate for solar development. The areas under consideration are known as "solar energy zones" or SEZ. Both of these efforts are moving forward more or less simultaneously and both to date involve only federal lands. We will be employing the criteria set out above in both of these planning efforts, and we urge that you both do as well. As helpful as the criteria will be, however, they are not the complete solution.

What is needed in the long run is a comprehensive and strategic landscape level plan for the Desert – one that addresses the siting of all types of renewable energy development, that is coordinated with state and local agencies across the region, and that addresses private and public lands. The planning processes underway by the federal government at this time are not comprehensive and will not produce the kind of plan that is needed. They will nonetheless provide the opportunity for both the state and the federal government to begin working together in a coordinated and effective way and, we hope, will set the stage for the comprehensive desert planning process that is so urgently needed.

A. Fast-track process

The fast-track initiative involves a limited number of proposed solar projects. It offers an opportunity to gain experience with processing these projects in compliance with existing environmental laws. As indicated above, the environmental community will be applying our criteria to the fast-track projects, and we encourage you both to do so as well. Our criteria

should be helpful in this effort. Since the overarching objective is to get some projects approved by a specific deadline and on line as fast as possible, it is important to know which, if any, of the projects under consideration are likely to generate controversy and, if so, how much. Applying our criteria to the lands covered by those applications will provide information for use in answering those key questions, information that can help the BLM, the state and project proponents prioritize their respective investments of time, staff and money.

We also hope that the state and federal agencies will take this opportunity to begin to work together in new and effective ways. In particular, because of the importance of ensuring that California's renewable energy needs are met from a combination of private and public lands – a principle adopted by the state's Renewable Energy Transmission Initiative – the state and the federal government should incorporate a landscape perspective in evaluating where facilities should be sited, including lands beyond their respective jurisdictional boundaries. For example, the state should evaluate the fast-track projects located on federal lands specifically in terms of 1) their adjacency to private lands that meet our criteria, and 2) the potential suitability of those lands for renewable development. Because BLM only manages public lands, the agency is unlikely to engage in such analysis on its own. Where projects have this potential advantage it should not be ignored as it will likely mean more public support for them.

B. The PEIS process

We support the BLM's decision to prepare a programmatic environmental impact statement (PEIS) on large-scale solar development on public lands and its decision to identify particular public land areas for that development. We emphatically believe that some areas are better for such development than others and support clustering large-scale projects in such areas, rather than see them strewn across California's deserts. Again, however, the agency's PEIS process is not a comprehensive effort – like the fast track effort, it will focus only on public land and only on solar projects. Nonetheless, it offers the opportunity to make progress toward the critically important comprehensive plan that is urgently needed.

The state should supplement the BLM's analysis of federal lands with its own contemporaneous analysis of the suitability of private lands adjacent to at least some of proposed SEZ for renewable development. Such an examination would have multiple benefits. It would assist both BLM and the state in assessing the cumulative impacts of proposed renewable development in the Desert. It would also assist both the BLM and the state in rating the zones and determining which of them should actually be designated as pilot project areas. And it would provide a forum for integrating the current Renewable Energy Action Team (REAT) planning and mapping into the SEZ planning.

This kind of integrated planning across the state-federal boundary is absolutely necessary. It can only happen, however, if both of you commit to it and instruct your staffs to engage in it. Without direction, past experience has shown that communication and coordination will be fragmented and progress toward shared goals will be delayed and in some cases compromised.

IV. Long-term planning

In the end, what is needed is a long-term blueprint for the CDCA: a comprehensive, strategic planning process for renewable energy development that addresses the multiple land uses and values in the desert, including conservation, recreation, tourism, cultural sites, military testing and training, local economic development, and transportation infrastructure, as well as renewable energy. We urge the federal and state agencies to commit to working together in a transparent public process to develop such a common plan. This blueprint should include well-defined, measurable standards, developed via public involvement processes (e.g. habitat condition and/or population-level objectives).

The blueprint should also reflect the best science available and specifically assess:

- Direct and indirect cumulative impacts
- Rare, sensitive, threatened and endangered species and wildlife corridor needs
- Climate change adaptation needs
- Carbon sequestration value of intact habitat
- Ecological process needs
- Ecological thresholds /limits for development
- Maintenance of hydrology in these arid environments

Finally, this planning process must also provide meaningful opportunities for public participation by a broad array of stakeholders.

The Desert Renewable Energy Conservation Plan, created as a state Natural Community Conservation Plan (NCCP) and coupled with the federal Habitat Conservation Plan (HCP) process, would provide an appropriate framework for a long-term blueprint, but will require a strong commitment between the federal and state agencies to work in partnership to produce this plan. In addition, local jurisdictions with land use authority (e.g., counties) should also be included as partners in this effort since they permit the other renewable energy facilities outside of the California Energy Commission's jurisdiction. The NCCP process provides sound conservation standards for long-term regional planning, independent science, and a broad public process. The NCCP with an HCP will also result in streamlined endangered species permitting, a considerable benefit for renewable energy companies.

Our groups look forward to discussing the attached criteria with you and your staffs as well as the processes underway and the long-term blueprint summarized above. In conclusion, we again urge you to use our criteria in these processes and to work closely together to maximize the protection of biologically important lands across land ownerships in the California Desert.

Sincerely,

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National Parks Conservation Association
Natural Resources Defense Council * Sierra Club * The Nature Conservancy
The Wilderness Society * The Wildlands Conservancy

Renewable Siting Criteria for California Desert Conservation Area

Environmental stakeholders have been asked by land management agencies, elected officials, other decision-makers, and renewable energy proponents to provide criteria for use in identifying potential renewable energy sites in the California Desert Conservation Area (CDCA). Large parts of the California desert ecosystem have survived despite pressures from mining, grazing, ORV, real estate development and military uses over the last century. Now, utility scale renewable energy development presents the challenge of new land consumptive activities on a potentially unprecedented scale. Without careful planning, the surviving desert ecosystems may be further fragmented, degraded and lost.

The criteria below primarily address the siting of solar energy projects and would need to be further refined to address factors that are specific to the siting of wind and geothermal facilities. While the criteria listed below are not ranked, they are intended to inform planning processes and were designed to provide ecosystem level protection to the CDCA (including public, private and military lands) by giving preference to disturbed lands, steering development away from lands with high environmental values, and avoiding the deserts' undeveloped cores. They were developed with input from field scientists, land managers, and conservation professionals and fall into two categories: 1) areas to prioritize for siting and 2) high conflict areas. The criteria are intended to guide solar development to areas with comparatively low potential for conflict and controversy in an effort to help California meet its ambitious renewable energy goals in a timely manner.

Areas to Prioritize for Siting

- Lands that have been mechanically disturbed, i.e., locations that are degraded and disturbed by mechanical disturbance:
    - Lands that have been "type-converted" from native vegetation through plowing, bulldozing or other mechanical impact often in support of agriculture or other land cover change activities (mining, clearance for development, heavy off-road vehicle use).[1]
- Public lands of comparatively low resource value located adjacent to degraded and impacted private lands on the fringes of the CDCA:[2]
    - Allow for the expansion of renewable energy development onto private lands.
    - Private lands development offers tax benefits to local government.
- Brownfields:
    - Revitalize idle or underutilized industrialized sites.
    - Existing transmission capacity and infrastructure are typically in place.

- Locations adjacent to urbanized areas:[3]
  - Provide jobs for local residents often in underserved communities;
  - Minimize growth-inducing impacts;
  - Provide homes and services for the workforce that will be required at new energy facilities;
  - Minimize workforce commute and associated greenhouse gas emissions.
- Locations that minimize the need to build new roads.
- Locations that could be served by existing substations.
- Areas proximate to sources of municipal wastewater for use in cleaning.
- Locations proximate to load centers.
- Locations adjacent to federally designated corridors with existing major transmission lines.[4]

High Conflict Areas

In an effort to flag areas that will generate significant controversy the environmental community has developed the following list of criteria for areas to avoid in siting renewable projects. These criteria are fairly broad. They are intended to minimize resource conflicts and thereby help California meet its ambitious renewable goals. The criteria are not intended to serve as a substitute for project specific review. They do not include the categories of lands within the California desert that are off limits to all development by statute or policy.[5]

- Locations that support sensitive biological resources, including: federally designated and proposed critical habitat; significant[6] populations of federal or state threatened and endangered species,[7] significant populations of sensitive, rare and special status species,[8] and rare or unique plant communities.[9]
- Areas of Critical Environmental Concern, Wildlife Habitat Management Areas, proposed HCP and NCCP Conservation Reserves.[10]
- Lands purchased for conservation including those conveyed to the BLM.[11]
- Landscape-level biological linkage areas required for the continued functioning of biological and ecological processes.[12]
- Proposed Wilderness Areas, proposed National Monuments, and Citizens' Wilderness Inventory Areas.[13]
- Wetlands and riparian areas, including the upland habitat and groundwater resources required to protect the integrity of seeps, springs, streams or wetlands.[14]
- National Historic Register eligible sites and other known cultural resources.
- Locations directly adjacent to National or State Park units.[15]

EXPLANATIONS

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[1] Some of these lands may be currently abandoned from those prior activities, allowing some natural vegetation to be sparsely re-established. However, because the desert is slow to heal, these lands do not support the high level of ecological functioning that undisturbed natural lands do.

[2] Based on currently available data.

[3] Urbanized areas include desert communities that welcome local industrial development but do not include communities that are dependent on tourism for their economic survival.

[4] The term "federally designated corridors" does not include contingent corridors.

[5] Lands where development is prohibited by statute or policy include but are not limited to:

National Park Service units; designated Wilderness Areas; Wilderness Study Areas; BLM National Conservation Areas; National Recreation Areas; National Monuments; private preserves and reserves; Inventoried Roadless Areas on USFS lands; National Historic and National Scenic Trails; National Wild, Scenic and Recreational Rivers; HCP and NCCP lands precluded from development; conservation mitigation banks under conservation easements approved by the state Department of Fish and Game, U.S. Fish and Wildlife Service or Army Corps of Engineers a; California State Wetlands; California State Parks; Department of Fish and Game Wildlife Areas and Ecological Reserves; National Historic Register sites.

[6] Determining "significance" requires consideration of factors that include population size and characteristics, linkage, and feasibility of mitigation.

[7] Some listed species have no designated critical habitat or occupy habitat outside of designated critical habitat. Locations with significant occurrences of federal or state threatened and endangered species should be avoided even if these locations are outside of designated critical habitat or conservation areas in order to minimize take and provide connectivity between critical habitat units.

[8] Significant populations/occurrences of sensitive, rare and special status species including CNPS list 1B and list 2 plants, and federal or state agency species of concern.

[9] Rare plant communities/assemblages include those defined by the California Native Plant Society's Rare Plant Communities Initiative and by federal, state and county agencies.

[10] ACECs include Desert Tortoise Desert Wildlife Management Areas (DWMAs). The CDCA Plan has designated specific Wildlife Habitat Management Areas (HMAs) to conserve habitat for species such as the Mohave ground squirrel and bighorn sheep. Some of these designated areas are subject to development caps which apply to renewable energy projects (as well as other activities).

[11] These lands include compensation lands purchased for mitigation by other parties and transferred to the BLM and compensation lands purchased directly by the BLM.

[12] Landscape-level linkages provide connectivity between species populations, wildlife movement corridors, ecological process corridors (e.g., sand movement corridors), and climate change adaptation corridors. They also provide connections between protected ecological reserves such as National Park units and Wilderness Areas. The long-term viability of existing populations within such reserves may be dependent upon habitat, populations or processes that extend outside of their boundaries. While it is possible to describe current wildlife movement corridors, the problem of forecasting the future locations of such corridors is confounded by the lack of certainty inherent in global climate change. Hence the need to maintain broad, landscape-level connections. To maintain ecological functions and natural history values inherent in parks, wilderness and other biological reserves, trans-boundary ecological processes must be identified and protected. Specific and cumulative impacts that may threaten vital corridors and trans-boundary processes should be avoided.

[13] Proposed Wilderness Areas: lands proposed by a member of Congress to be set aside to preserve wilderness values. The proposal must be: 1) introduced as legislation, or 2) announced by a member of Congress with publicly available maps. Proposed National Monuments: areas proposed by the President or a member of Congress to protect objects of historic or scientific interest. The proposal must be: 1) introduced as legislation or 2) announced by a member of Congress with publicly available maps. Citizens' Wilderness Inventory Areas: lands that have been inventoried by citizens groups, conservationists, and agencies and found to have defined "wilderness characteristics." The proposal has been publicly announced.

[14] The extent of upland habitat that needs to be protected is sensitive to site-specific resources. For example: the NECO Amendment to the CDCA Plan protects streams within a 5-mile radius of Townsend big-eared bat maternity roosts; aquatic and riparian species may be highly sensitive to changes in groundwater levels.

[15] Adjacent: lying contiguous, adjoining or within 2 miles of park or state boundaries. (Note: lands more than 2 miles from a park boundary should be evaluated for importance from a landscape-level linkage perspective, as further defined in footnote 12).