California Native Plant Society

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California Energy Commission
1516 Ninth St., MS-15
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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).

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.

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.

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.

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.

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.

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.

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:

"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)."

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.
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