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DOCKET	
09-RENEW EO-1	
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November 20, 2009

Via electronic mail to: doCKET@energy.state.ca.us (w/ hard copy in the mail)

California Energy Commission
Docket Unit, MS-4
RE: Docket No. 09-Renew EO-01
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket no. 09-Renew EO-01
(Comment on the draft Best Management Practices Manual)

Dear Sir/Madam:

On behalf of Defenders of Wildlife (“Defenders”) and our more than one million members and supporters in the U.S., 200,000 of which are in California, we are writing to provide comments to the Renewable Energy Action Team (“REAT”) for consideration in finalizing the “Best Management Practices and Guidance Manual: Desert Renewable Energy Projects” (“BMP Manual”). Comments in this letter pertain to the draft staff report published on October 5, 2009.

Jeff Aardahl attended the public workshop on the draft manual on October 13, 2009, in Victorville, California. We appreciated the time and effort of all of the agency participants at that meeting in explaining the purpose and intent of the manual; providing updated procedural guidance for addressing various environmental issues related to renewable energy development proposals; answering questions from the public participants; and receiving public comments. Jeff was able to provide the team with several comments on the draft plan at the meeting and this letter includes those earlier comments and additional recommendations for your consideration in finalizing the manual.

General Comments:

- 1. There needs to be a clearer delineation between pre-application guidance, siting criteria and best management practices.**

The BMP Manual contains a mix of recommendations for three specific uses -- pre-application guidance; criteria for where to site projects; and best management practices (“BMPs”) for projects once sited. Some of these recommendations are not clearly segregated into their appropriate categories. For example, some of the pre-application guidance criteria are actually BMPs and should be shifted to the BMP chapters. In addition, the insertion of pre-application guidance in a BMP Manual is confusing as pre-application guidance criteria are not best management practices. Thus, we suggest that the pre-application guidance and siting criteria are

removed from the BMP Manual and put into a separate document. And, we suggest that the agencies review and refine this document to clearly separate out the best management practices from the siting recommendations.

- 2. Any identification of suitable and unsuitable lands for siting of renewable energy projects should be conducted in an open, transparent process; based on sound science; and based on criteria that will minimize conflict between natural resource conservation and renewable energy projects.**

The BMP Manual states that the REAT will be producing a draft map of areas suitable for renewable energy projects. We support the concept of developing a map of locations suitable for renewable energy development. Indeed, we continue to support the two planning efforts that are specifically tasked with identifying suitable project areas -- the Solar Programmatic Environmental Impact Statement ("Solar PEIS") and the Desert Renewable Energy Conservation Plan ("DRECP"). While we are supportive of the REAT producing a map of suitable locations for development, we urge that this is done through an open and transparent process with the opportunity for all interests to review and provide comments. Also, we urge that the criteria used to identify such locations are chosen to maximize natural resource conservation, do not undermine the nascent effort to produce a DRECP, and based on sound scientific information. The conservation community has produced a document with criteria for identifying suitable and unsuitable areas for development of renewable energy projects. ("Renewable Siting Criteria for California Desert Conservation Area" (Attached)). We urge you to review this document and incorporate it into your suitability criteria as this represents the criteria that the environmental community believes would best represent sites with a low probability of conflict.

- 3. The BMP Manual should clearly indicate that the best management practices identified in the manual represent an initial effort and need further refinement.**

The best management practices identified in the BMP Manual vary widely in their applicability to renewable energy projects. Some practices, such as those developed in the California Energy Commission's "*California Guidelines for Reducing Impacts to Bird and Bats from Wind Energy Development*," have been widely vetted. Some practices appear to be lifted from other situations not necessarily applicable to the desert. For example, the permeable pavement materials recommendation on page 45 of the BMP Manual is more suited to urban settings than the desert. We believe that the best management practices set forth in this manual represent a "first cut" as potentially useful BMPs, but they need further vetting with experts. Therefore, we suggest that the BMPs are identified as an evolving set of practices that will be refined with further review and experience. We also suggest that additional effort is taken by the agencies to conduct such further vetting with specific experts.

Specific Comments:

The following specific comments are arranged by chapter, page, line and topic:

1. Executive Summary:

Page 2, lines 16-18; study areas: Identification of environmentally suitable renewable energy development study areas is urgently needed for both reducing permit processing time and costs, and for directing project applicants toward the best sites for development. Ideally, we would like to have the California Energy Commission (CEC) and/or Bureau of Land Management (BLM) establish a policy that permit applications for renewable energy projects will only be accepted if they are located within a formally approved study area and conform to all of the requirements contained in a final pre-application and siting guidance manual.

The current situation, where many large-scale renewable energy projects have been proposed throughout the California Desert on public land administered by the BLM, has resulted in a significant number of proposed projects being located on high value habitats for many species, including those protected under provisions of the state and federal endangered species acts, and fully protected under the California Fish and Game Code. This is undesirable for all parties involved in the permitting process for a variety of reasons: 1) Potential loss of significant amounts of habitat occupied by legally protected species of plants and animals, 2) High cost environmental compliance reports paid by the applicant, 3) Uncertainty of obtaining permits for projects in areas with high biological resources values, and 4) High cost of mitigation, monitoring and species translocation costs if projects are ultimately approved.

As discussed above in our general comments, we urge the REAT to utilize our attached suggested criteria for identifying lands suitable for development.

Page 2, line 19; ground water: We recommend that no naturally occurring groundwater, either fresh or brackish, be used to cool power plants. We specifically add brackish water because many groundwater basins in the California Desert contain naturally occurring brackish water that is the source of some of the most unique and valuable habitats and species, namely salt and brackish water marshes. These habitats on BLM administered lands are classified as Highly Sensitive Unusual Plant Assemblages in the California Desert Conservation Area Plan. We urge the permitting agencies to adopt a strict policy prohibiting any naturally occurring groundwater from being used to cool power plants. Based on literature reviews¹ and the fact that several solar thermal projects proposed in the California Desert have specified air cooling for power plants, we believe the slight reduction in power plant efficiency is outweighed by the benefits of avoiding use of groundwater. (Comment also pertains to Page 8, lines 10-11)

Page 2, line 22; biological assessment: We strongly recommend that impact mitigation standards for species that are both federal and state listed be established. The “fully mitigated” standard under the California Endangered Species Act is more demanding than the “minimization” standard in the federal Endangered Species Act. A single set of standards needs to be adopted so that impacts to listed species and their habitats satisfy the more stringent standard, that being the “fully mitigated.”

Page 2, line 37; Williamson Act, etc.: Lands potentially suitable for renewable energy development may be unwisely eliminated from consideration simply because a contract under the Williamson Act is involved, or that a zoning change or plan amendment would be required. Some abandoned agricultural lands may have old Williamson Act contracts but are essentially useless for agriculture because irrigation water is unavailable either physically or economically. A

good example of this situation is in the Antelope Valley where large agricultural production areas have been idle for decades because once-abundant groundwater has been depleted by excessive pumping.

Otherwise suitable lands may also be inappropriately excluded from consideration simply because a zoning change or plan amendments needs to be adopted by the local agency. Rather than categorically eliminate certain projects from consideration because of a conflict with zone or plan designation, we urge the Commission to actively work with local jurisdictions in identifying potentially suitable areas for developing the Desert Renewable Energy Conservation Plan (DRECP) as required by Executive Order S-14-09.

2. General Pre-Application Activity Guidance:

Page 10, lines 41-44; meeting with interested entities: The recommendation of meeting with the environmental community at least six months before filing an application with the appropriate lead agencies should be changed to at least 12 months prior to filing an application. We believe that project developers should meet with interested parties at the same time they are starting the meeting process with the various agencies.

Page 12, lines 29-34; Biological Resources, opening paragraph: The overall approach for selection of sites for potential renewable energy project development should stress the importance of avoiding and minimizing adverse impacts to special status species of plants and animals. The paragraph in the draft suggests that the primary purpose for early discussions with the agencies and local governments is to identify specific survey protocols that will be required. Although adhering to appropriate survey protocols is essential for collecting accurate and timely data on biological resources in potential project areas, the primary goal should be to identify potentially suitable areas for project development that avoid or minimize impacts to sensitive or special status species, and naturally occurring plant and animal communities on public lands.

The strategy of avoiding and minimizing impact to sensitive and special status species is emphasized on page 13, item 3, lines 3-26. These requirements simply need to be reflected in the opening paragraph as noted above.

Page 15, lines 10-14; burrowing owl: We believe that this section should emphasize the avoidance of impacting burrowing owl habitat, particularly burrows, before discussing translocation of owls.

Page 15, lines 21-25; facility closure and habitat restoration: Assuming permitted renewable energy facilities will have a lifespan of 20 to 30 years, the costs of facility closure and habitat restoration should be based, in part, on the projected cost of energy and materials necessary to complete these tasks at the time facility closure.

Page 16, lines 41-42; degraded lands: The use of degraded lands for renewable energy projects should be given the highest priority and encouraged through incentives available to local governments and renewable energy developers. The importance of using these lands before consideration is given to locating industrial-scale projects on public lands containing intact plant and animal communities needs stronger emphasis. The draft simply indicates “Consider use of degraded lands, to the extent feasible...”

Page 17, lines 1-11; agricultural lands: Some fallow agricultural lands may be highly suitable for certain types of renewable energy projects. Although some lands may be classified as “agricultural” based on soil characteristics and former irrigation water availability, the current trend has left many areas fallow for lack of adequate water to sustain irrigated cropland. In the California Desert this situation occurs throughout large areas of the Antelope Valley and portions of the southern Fremont Valley north of Mojave. We encourage a review and update of viable agricultural lands, including whether or not areas under Williamson Act contract should be continued or terminated, with the overall goal of increasing the availability unviable agricultural lands for renewable energy development.

Page 20, lines 21-23; roads: The requirement that any necessary roads associated with renewable energy project facilities “...avoid use of traffic routes that cross BLM-designated Open Routes of Travel” to the extent possible, appears to be overly restrictive and could ultimately lead to increased road construction in areas that are free of BLM-designated Open Routes. We recommend that this requirement be revised to reflect that conflicts between vehicular traffic associated with renewable energy projects and casual users of Open Routes on BLM lands should be minimized on a case by case basis that does not result in increased road construction.

Page 23, lines 13-24; lighting: Minimization of night-time illumination of renewable energy project facilities should be mandatory since many of the proposed renewable energy projects are in rural or remote areas. High intensity security lighting should be strictly avoided, such as equipment that uses sodium or mercury vapor bulb technology. We recommend that directional light-emitting diode (“LED”) technology be strongly considered in any illumination plans submitted as part of their applications for permits. Protection of dark sky and preventing illumination of naturally occurring plant and animal communities adjacent to project areas should be mandatory.

Page 23, lines 25-39; water supply: We are pleased that strong emphasis is given to using air for power plant cooling. We strongly recommend that no project proposal should be accepted for consideration that relies on any naturally occurring ground or surface water for power plant cooling. Naturally occurring brackish ground and surface water supports significant plant and animal communities in the California Desert.

Page 24, line 4 through page 25, line 28, water resources, generally: We are pleased the draft manual contains strong measures to protect surface and groundwater from industrial uses other than power plant cooling. Such uses typically involve mirror washing and on-site sanitary water for human consumption. We recommend mandatory use of viable alternatives to using ground and surface water for mirror washing, and under no circumstances should naturally occurring ground or surface water be used to irrigate landscape vegetation such as wind or visual screens, shade trees or lawns.

3. General Best Management Practices/Renewable Energy Technology Specific BMPs:

Page 30, lines 1-9; biological resources, generally: This introductory paragraph should be revised to reflect the goals of the BMPs with respect to biological resources. We suggest that it include the goals of avoiding or minimizing adverse impacts to natural plant and animal communities, all

special status species of plants and animals, and all unusual plant assemblages on public lands in the California Desert. The remainder of this section for species of interest appears comprehensive.

Page 35, lines 4-5; decommissioning, site rehabilitation: In calculating the amount of funding necessary for completing decommissioning, site rehabilitation and revegetation, we strongly recommend that the costs be based, in part, on energy and materials cost projections for the lifespan of the project, which will be typically 30 years or longer.

Page 35, line 18; Avian species: The BMP Manual needs to include a specific reference to the California Energy Commission's ("CEC") "*California Guidelines for Reducing Impacts to Bird and Bats from Wind Energy Development*" as the document that provides specific best management practices for wind energy project for birds. There is no mention of this document in the either Chapter 3 or 4 of this document. Further, there needs to be a section in this document on bats with the appropriate reference to the CEC's guidelines.

Page 36, lines 29-30; lighting: We recommend that high intensity lighting of any kind at a facility in a remote location be prohibited, including the use of sodium and mercury vapor bulbs. We strongly encourage consideration of LED technology and low intensity, directional lighting for meeting general illumination requirements. Illumination of adjacent natural plant and animal communities should be prohibited to the extent practicable.

Pages 36 through 39; specific species, generally: A brief statement of the goals and objectives of the BMP manual for each of the species highlighted would emphasize the importance of avoiding and minimizing adverse impacts. Careful selection of potentially acceptable project sites should be done through a public process so that project proponents are aware of the most appropriate locations in advance of filing applications for individual projects. Avoidance areas for certain species and their habitats should be established immediately. Further refinements can be made through preparation of the DRECP.

Pages 38-39, Mohave Ground Squirrel (MGS): Please clarify if mitigation requirements for the MGS will include relocation of animals off project sites through live trapping or excavation from burrows. If this will become a new policy, will such relocation be subject to monitoring and evaluation to determine its effectiveness?

Page 39, recommended addition: Please add the Desert Bighorn Sheep to the list of species of special interest. Strong protective management goals and objectives need to be identified, and areas essential for herd viability and movements need to be preserved. A qualified biologist approved by the DFG should be designated to perform any studies, analysis and monitoring for this species in relationship to project environmental review, permitting or operation.

Page 47, lines 23-25; landscaping: The size and height of average renewable energy project structures makes it relatively impossible to screen them from human view by vegetation planting. Drought tolerant plants, suggested here, would probably be highly ineffective in this regard. As stated earlier in our comments, we do not support using any naturally occurring ground or surface water for irrigating landscape vegetation, including visual screens. Visual screens using landscape vegetation planting will likely attract Common Ravens to project sites, which is

contrary to the goals and objectives of the BMPs and conservation programs for the Desert Tortoise.

Page 48, lines 11-13; bird impacts: If research and monitoring demonstrate that bird blinding, heat stress mortality or incineration occur frequently at solar energy project facilities, such as those using heliostats aimed at solar thermal towers, there should be an immediate requirement to address documented bird mortality problems through impact mitigation measures.

Page 55, lines 1-19; water supply, geothermal power plants: We strongly support the proposed practices with regard to use of water for geothermal power plant cooling. Air cooled condensers should be mandatory for binary plants operating during the fall through spring seasons. We support the use of geothermal fluid as the major source of cooling water. Finally, we urge the adoption of strong BMPs with regard to protection of naturally occurring ground and surface water for power plant cooling and steam field rehabilitation.

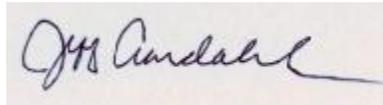
Conclusion

Thank you for the opportunity to provide these comments. Please contact us at your convenience if needed to clarify any aspect of the above comments.

Sincerely,



Kim Delfino
California Program Director



Jeff Aardahl
California Representative

cc: **Karen Scarborough, Undersecretary**
California Natural Resources Agency

Karen Douglas, Chair
California Energy Commission

Kevin Hunting, Deputy Director
California Department of Fish and Game

Michael Picker
Office of the Governor

ⁱ U.S. Department of Energy. 2008. Concentrating solar power commercial application study: Reducing water consumption of concentrating solar power electricity generation. Report to Congress. 24 pp. + appendices.

**Audubon California * California Wilderness Coalition * 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**

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.³

- Locations that support sensitive biological resources, including: federally designated and proposed critical habitat; significant⁶ 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

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).