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John McKenzie, Project Manager
County Planning & Building Department
976 Osos St., Rm. 300
San Luis Obispo, CA 93408-2040

SUBJECT: California Valley Solar Ranch (High Plains Ranch II, LLC, aka 'SunPower') Conditional Use Permit, and Twisselman Conditional Use Permit/Reclamation Plan (DRC2008-00097, DRC2009-00004)

Dear Mr. McKenzie:

On behalf of Audubon California's 150,000 members and supporters, Morro Coast Audubon Society's 1,000 members, and Kern Audubon Society's 400 members, and Santa Barbara Audubon Society's 1,000 members, we thank you for the opportunity to submit our comments on the Draft Environmental Impact Report (DEIR) for the California Valley Solar Ranch Project (Project), a large scale solar project proposed by SunPower, Inc., in San Luis Obispo County.

Audubon California is firmly committed to fighting global warming. In recognition of the growing threats to human and ecological communities presented by the unabated release of greenhouse gases, we have championed the aggressive development of both energy conservation and renewable energy generation. In locations throughout our state, Audubon at the state level and our chapters at a local level have successfully collaborated on the development of renewable energy facilities—striking a balance between landscape conservation priorities and renewable energy. That said we have several concerns about the California Valley Solar Ranch project proposed in the Carrizo Plain because of the considerable cumulative ecological impacts to this location both locally and regionally for multiple special status species and rare habitats. The cumulative impacts are potentially even greater for this project considering that another solar project proposed by First Solar, Topaz Solar Farm, is in close proximity with impacts to many of the same species and habitats, in addition to another project proposed in Panoche Valley. Based on our analysis of the project as presented in the DEIR, Audubon is most supportive of the following alternatives:

Reduced Acreage alternative. Audubon supports this alternative because it would eliminate the most severe impacts from the proposed project by reducing the project size by 65% and avoiding the most sensitive areas and many of the project impacts. In addition to reducing impacts to sensitive species, we prefer this alternative because it causes less habitat fragmentation and provides for larger patches of habitat between solar arrays that should be restored and might be more suitable to the needs of impacted species than smaller areas between solar arrays.

Westlands CREZ alternative. Based on our preliminary analysis, Audubon also supports this as one of the most desirable alternatives presented in the DEIR. The 30,000 acres of fallow, degraded farmland of Westlands Water District in Fresno and Kings County is one of the most promising locations in the state for large scale solar development outside of the desert. The Westlands CREZ site could provide up to 5,000 MW (5GW) of renewable energy with seemingly low impact to biological resources and high potential for more certainty in environmental review and permitting. A project built within the Westlands CREZ would allow for a full-scale project without the significant and unmitigable impacts on biological resources by placing a project in a globally recognized area of conservation importance such as the Carrizo Plain.

Carrizo Plain is notable for its extensive grassland and alkali-scrub habitats, which are rare and declining ecosystems throughout California and the United States. It remains the largest and one of only a few remaining places along the southern Central Valley that still contains a suite of upland San Joaquin Valley species, three of which are federally endangered (San Joaquin Kit Fox, Blunt-nosed Leopard Lizard, and Giant Kangaroo Rat). Carrizo Plain contains the most extensive habitat for these species due to its size, relative isolation, largely undeveloped character, and because it contains expansive grasslands that have not been converted to row crops. A large proportion of the Carrizo Plain has been protected by Bureau of Land Management (BLM), Department of Fish and Game (DFG) and The Nature Conservancy. The Recovery Plan for the Upland Species of the San Joaquin Valley[1] cites Carrizo Plain as important to the recovery of many San Joaquin species that formerly occupied large areas of the San Joaquin Valley floor.

Carrizo Plain is also biologically significant because it attracts a large number of bird species that specialize in grassland ecosystems; many of these species are listed in California and considered declining throughout their range. For example, the DEIR states that **nine** special status bird species were observed within the project area based on limited surveys in March 2010 and anecdotal observations, and another **five** species have a moderate to high chance of occurring on the project site. In addition to multiple listed bird species, Carrizo Plain is generally considered high in avian diversity. For example, records from birding databases indicate that more than 170 bird species (based on Carrizo Plain Christmas Bird Count[2] and eBird[3] records) have been recorded.

National Audubon Society recognizes Carrizo Plain as a globally significant **Important Bird Area.** The Important Bird Areas Program[4], administered by the National Audubon Society in the United States, is part of an international effort to designate and support conservation efforts at sites that provide significant breeding, wintering, or migratory habitats for specific species or concentrations of birds. Sites are designated based on specific and standardized criteria and supporting data. Carrizo Plain was labeled as "globally significant" because of the presence of a significant portion of the global population of Mountain Plover wintering here. Mountain Plover is currently being reviewed by the United States Fish & Wildlife Service (USFWS) for listing under the Endangered Species Act as Federally Threatened[5] and is listed under the International Union for the Conservation of Nature Red List as "Near Threatened" and is considered decreasing in population[6]. The Carrizo Plain Important Bird Area[7] is also notable for providing breeding habitat for multiple grassland bird species listed as California Bird Species of Special Concern (BSSC) (including Burrowing Owl and Short-eared Owl) and for its high concentrations of wintering raptors and migratory shorebirds.

While Audubon California supports renewable energy to reduce the impacts of climate change, we advocate for avoidance of habitat disturbance over mitigation. We are especially concerned about the inadequate level of effort in the DEIR on the many species of birds in the project vicinity.

Our specific comments are as follows:

1. The analysis in the DEIR of impacts on rare, threatened and endangered species of birds is inadequate.

The DEIR presents **six species of State or Federally listed birds and ten California Bird Species of Special Concern** that were observed or have a moderate to high probability of being present on the project site. However, it fails to analyze in depth the direct and indirect impacts of the project on the environment in which these species occur, and how those impacts will affect the species of birds. In particular, the DEIR:

A. **Fails to conduct adequate biological surveys**. Only general surveys for all biological resources were conducted, aside from the federally endangered species. In addition, most surveys were inadequate in scope or time to allow for in depth analysis of the impacts of the projects. These failures are central to the inadequacies of the DEIR under CEQA[8]. For example, the applicant conducted only four surveys in March 2009 to document wintering birds but admitted that the winter season is generally December through February and during March some birds may have begun migration north out of the area. Therefore, it is unlikely that the data in the DEIR provides a complete picture of wintering bird use in the project area. The applicant also uses the Audubon Christmas Bird Count (CBC) as supplemental data from January 2010. A CBC circle is 15 miles in diameter and the project area is only in the northern most end of the circle and there is no way to determine from CBC data whether a bird was observed in the project area or somewhere else in the circle. In addition, CBCs have been conducted on the Carrizo Plain since 1971 and data is available online – the applicant made no attempt to incorporate previous years' data despite the annual fluctuations inherent in CBCs and in particular in places like the Carrizo Plain. Thorough field surveys covering at least one full year should be conducted in order to capture bird distribution and abundance throughout breeding, migration, and wintering seasons.

B. **Fails to conduct breeding bird surveys.** No breeding bird surveys, aside from surveys for Burrowing Owl, were conducted despite the potential presence of several BSSC species during the breeding season, including Short-eared Owl, Grasshopper Sparrow, and Tricolored Blackbird.

C. **Utilizes an insufficient literature review**. A literature search does not provide enough data for an in depth analysis especially on a site with an unprecedented number of sensitive species; unfortunately the California Natural Diversity Database (CNDDB) lacks sufficient data from which to base opinions on species occurrences on site (particularly on private lands); other sources such as Audubon Christmas Bird Count, California Avian Data Center, and eBird databases should be consulted. Annual BLM surveys of Mountain Plovers on the Carrizo Plain were also not utilized.

D. **Fails to analyze in depth the direct or indirect impacts of the project** on the local, regional, statewide, national and/or global populations of these species of birds. While the DEIR lists **16** special status bird species with some potential of occurring in the project area, no targeted surveys were done for any of these species with the exception of Burrowing Owls. Of these species, the frequency and timing with which these species occur in grasslands varies across the year and between years based on weather conditions (rainfall in particular). Probabilities of detection of some grassland species may be low and thus targeted specific surveys need to be conducted year-round by specifically trained biologists.

E. **Fails to mitigate adequately to avoid or lessen the impacts of the proposed project on rare, threatened and endangered species birds**. The only mitigation proposed for any bird species is for Burrowing Owl, described in mitigation measure MMRB 22.1. Despite the known presence of listed bird species, the project applicant does not propose any specific mitigation to offset the net loss of nesting, foraging, and/or overwintering habitat. Proposed mitigation should include both preservation and restoration at a **ratio of greater than 1:1**. Furthermore, specific species habitat requirements should be taken into consideration to ensure that the mitigation is appropriate for each of the individual species intended to benefit.

2. The DEIR fails to adequately survey and therefore fails to adequately analyze in depth the effects of the project on the following rare and sensitive grassland bird species likely to be impacted by the project:

Mountain Plover (California Bird Species of Special Concern; candidate for federal listing)

Mountain Plovers breed in the western Great Plains and Rocky Mountain States from the Canadian border to northern Mexico. They winter primarily in California and also in southern Arizona, Texas and Mexico. California's Sacramento, San Joaquin, and Imperial Valleys are believed to support the greatest number of wintering Mountain Plovers. Unlike other plovers, Mountain Plovers are not found near water, and only inhabit flat areas with short grass or bare ground. In the Central Valley, plovers are found on flat tilled or burned fields or heavily grazed annual grasslands. Movement patterns of wintering birds vary, including the potential for birds to move within local areas as well as between sites up to 127 km. California is estimated to have 50-88% of the world's population and up to 95% of the total plovers reported in the U.S. during annual (from 1988 to present) Christmas Bird Counts. The global population estimates range from 11,000-14,000 birds. The North American population was recently estimated at 8,000 to 10,000 birds[10]. Based on sporadic birding surveys and Christmas Bird Count data[11] (0 to 500 birds reported 1971 – 2009), Carrizo Plain can contain from 1-5% of the global population in a given year and upwards of 10% of the US population.

The DEIR states that the annual grasslands within the project play an important role in the ecology of many wintering birds by providing a wide range of foraging opportunities and that the loss of 1,755 acres of annual grasslands would be considered significant to wintering birds absent mitigation.

Although the DEIR states that Mountain Plovers are known to winter on the Carrizo Plain and have been observed intermittently across the project site, we are concerned that no systematic surveys were conducted in the winter time period when Mountain Plovers would be present. It is therefore impossible to assess the level of direct and indirect impacts of the project on this species. Without data on the existing environmental conditions regarding Mountain Plover, it is impossible to determine if the impacts of the project on Mountain Plover are significant or mitigable.

Because Mountain Plovers are a candidate for federal listing and USFWS has announced their intention to produce a final decision on their listing status by May 2011, we recommend that thorough weekly winter surveys be conducted on both the proposed project and mitigation lands, noting exact locations and habitat types in order to better understand how this species utilizes the site. Furthermore, the DEIR should provide an analysis of the impacts to this species and from there determine appropriate mitigation measures, including both land conservation and habitat management strategies.

Burrowing Owl (California Bird Species of Special Concern)

We appreciate that the applicant conducted Burrowing Owl surveys to ascertain presence, distribution, and use of the project area. The DEIR states that the heavily grazed annual grassland distributed broadly across the project area are known to support Burrowing Owls, and the surveys conducted determined that at least 4 breeding pairs are supported within the project area. The loss of occupied habitat or reductions in this rare species, directly or indirectly through nest abandonment or reproductive suppression, would constitute a significant impact absent mitigation.

We concur that mitigation in accordance with the guidelines of 6.5 acres per pair is an acceptable and adequate ratio.

Golden Eagle (California Fully Protected Species)

We appreciate that the applicant conducted surveys to locate Golden Eagle nests (22 nests were identified, 9 of which were active with nestlings). The DEIR states that since the closest nest was 3 miles away from the project boundary, that the project would not be expected to result in nest abandonment or disrupt breeding activity. We disagree that Golden Eagle presence and reproductive success will not be affected by the project at a one mile buffer as the DEIR proposes. Currently, USFWS recommends a 4-6 mile buffer zone for wind projects and although this is a different type of project, the amount of foraging habitat encompassed within the project area is extensive[12].

The project would have significant impacts on Golden Eagle absent mitigation. As the DEIR also states, USFWS requires applicants to obtain take permits for incidental bird mortality or habitat loss. Mitigation ratios are not indicated in the DEIR, but a ratio greater than 1:1 should be implemented to avoid a net loss and mitigation lands should be available for use within the same foraging radius as those birds that are affected by the project.

Short-eared Owl (California Bird Species of Special Concern)

No surveys were targeted for Short-eared Owl so we are unable to determine their current status during the breeding season or winter months. As a diurnal owl that forages at dawn and dusk and roosts in long grasses during the day, this owl is challenging to detect, and specialized surveys should be conducted in both the project area and on mitigation lands from October through March, when most birds occur in California, as well as during the breeding season[13]. Birds are more likely to be nesting in Carrizo Plain during El Nino years so general surveys only in March 2009 are not sufficient, particularly during this past El Nino year, to determine presence of nests. The DEIR states that Short-eared Owls are well known on the Carrizo Plain and there is appropriate habitat within the project area, but the DEIR fails to properly address potential loss of habitat for this species and adequate mitigation strategies. Furthermore, mitigation for this species requires expansive grasslands. For example, conservation of breeding and foraging habitat is recommended to be at least 250 acres of appropriate grassland habitat[14]. Due to the extensive habitat requirements of Short-eared Owls, greater attention to mitigation lands should be considered.

Loggerhead Shrike (California Bird Species of Special Concern)

The entire project area provides foraging habitat for Loggerhead Shrike both during the breeding and winter months, and like many grassland birds this species will move around Carrizo Plain and numbers will fluctuate annually based on availability of prey species. Although the DEIR states that shrikes were found during biological surveys, no attempt to quantify or map their presence or nesting locations was conducted. Nesting locations for this species may be located throughout the project area and are difficult to find and therefore targeted breeding season surveys need to be conducted to determine nesting locations and numbers of breeding pairs. Due to lack of quantitative data and known locations of use by this species, the DEIR is inadequate to evaluate the impacts of the project on Loggerhead Shrike.

Loggerhead Shrikes are experiencing significant declines in California, particularly in the Central Valley due to habitat loss and degradation[15]. Carrizo Plain CBC[16] annually records between 12 and 98 birds in the winter suggesting this area's regular occurrence of the species. Habitat requirements for Loggerhead Shrikes are complex, and therefore mitigation strategies can not be lumped wholesale with other grassland species or grassland habitat in general. We are also concerned that impacts to insect and small mammal populations within and adjacent to the construction area, including in the "mitigation" lands might eliminate the entire project site as foraging habitat.

Grasshopper Sparrow (California Bird Species of Special Concern)

While much of the grassland within the project area is heavily grazed and therefore probably not suitable for Grasshopper Sparrow, this species is known to nest within Carrizo Plain (A. Jones, pers. comm.), particularly along the base of the foothills in longer grasses and in areas with scattered shrubs or forbs. However, without targeted surveys during the appropriate time of year, the species can not be considered either present or absent. Grasshopper Sparrows are extremely difficult to detect except during the period when they are singing within a nesting territory (only for several weeks during April – July) and no surveys were conducted during this period.

The consideration of this species in the DEIR is inadequate. Biologists trained and able to hear Grasshopper Sparrows (many people can not hear the range within which they sing) need to conduct weekly spot-mapping surveys before determining impacts from this project. In addition, the applicant should ask DFG for all records of rare, threatened and endangered species of birds that have may have been submitted to but not yet entered into the CNDDB.

Grasshopper Sparrows typically only utilize grasslands as nesting and foraging habitat that are a minimum of 50 acres, and preferably more than 100 acres of continuous open grassland, with scattered shrubs or forbs[17]. It is unlikely that birds, if occurring within the project footprint, would continue to occur following construction as the layout of solar panels will break the appearance of a contiguous large grassland. Mitigation strategies need to determine if the species occurs within the mitigation lands, and maintain or restore the types and acreage of grassland required for this species.

In summary, habitat requirements for Mountain Plover, Short-eared Owl, Loggerhead Shrike and Grasshopper Sparrow, while all grassland specialists, are considerably different in their ecology so that a "one size fits all" approach will not be an adequate mitigation strategy without habitat management and/or restoration aimed at specific life history and habitat needs of each species. In addition, because many grassland bird specialists require

large areas of unfragmented habitat, the applicant needs to consider whether lands potentially proposed for mitigation between the solar arrays will in fact support these species after construction.

Tricolored blackbird (California Bird Species of Special Concern)

Although the DEIR appendices discuss the presence of Tricolored Blackbird, no attempt to quantify or map their use of the project area was conducted. As a result, the DEIR fails to adequately analyze the impacts of the project or address mitigation on Tricolored Blackbird.

3. The DEIR fails to survey, consider or analyze the effects of the project on other State or Federally listed birds or on California Species of Special Concern with the potential to occur in the project area:

- **Northern Harrier (BSSC)**
- **Swainson's Hawk (State Threatened):** exhaustive information regarding recent nesting activity of Swainson's Hawk in San Luis Obispo County was not included in the DEIR. In the last two years, two Swainson's Hawk nests were documented within the area: one just south of Carrizo Plain and the other just north of the project area along Highway 46 in San Luis Obispo County (J. Moonjian, pers. comm.). Al1 indications are that these birds are re-inhabiting their historic range, therefore the potential for Swainson's Hawks to utilize the project area during the nesting season is likely to increase in the future. Mitigation for this species should take into consideration this species' expansion into old nesting territories.
- **Long-eared Owl (BSSC)**
- **White-tailed Kite (State Fully Protected)**
- **Oregon Vesper Sparrow (BSSC)**
- **California Condor (State and Federally Endangered)**
- **American Peregrine Falcon (State Fully Protected)**
- **Bald Eagle (State Endangered and Fully Protected)**
- **Lesser Sandhill Crane (BSSC)**

4. The proposed mitigation contained in the DEIR to avoid or lessen the significant impacts of the proposed project on species of rare, threatened and endangered wildlife is lacking in sufficient detail to determine its overall effectiveness. Designation of specific land parcels to be used for mitigation needs to be included. Enclosed with this letter is one attachment, "Morro Coast Audubon Society's Solar Generated Energy Policy", which lists land types thought to be suitable for mitigation.

We commend the project proponents for proposing mitigation of 4:1 for the Giant Kangaroo Rat and San Joaquin Kit Fox. However, we are concerned that some of this mitigation might include lands within the project area rather than the purchase of lands outside the project area. The science is insufficient to know with a reasonable degree of certainty whether a mobile species, such as the Kit Fox or Pronghorn Antelope, will utilize the corridors between solar arrays, or whether foxes will pass through the fencing and use the solar array areas themselves. Some species may completely avoid the area, considering the fragmentation too great, whereas some species may adjust and move between the solar project arrays.

We urge the county, DFG, and USFWS to work with SunPower to identify lands outside of the project footprint and particularly between the SunPower and Topaz projects, as the most suitable locations for purchasing and restoring lands for mitigation. Lands should only be purchased on the Carrizo Plain valley floor that are a known part of the Kit Fox corridor and contain suitable habitat for Kangaroo Rats, and address the habitat needs of the host of impacted bird species described herein. Furthermore, a restoration and habitat management fund and plan needs to be established to ensure that these lands continue to provide habitat into the future.

The mitigation plan as written is sufficiently vague and specific lands are not identified. It is difficult to determine whether or not the mitigation plans are suitable to replace the impact of the project.

At a minimum, lands with occupied and more than equivalent habitat value for all species should be provided. Lands purchased for mitigation should be on a greater than 1:1 ratio for sensitive bird species and should either consist of currently suitable habitat or should be restored in such a way as to enhance bird populations based on specific life history needs of individual species affected.

Thank you for your consideration of our comments.

Sincerely,

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Audubon California

Stephanie Little
President, Morro Coast Audubon Society

Madeline Elsea
President, Kern Audubon Society

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cc: Harry Love, Conservation Chair, Kern Audubon Society
Andrea Jones, Conservation Chair, Morro Coast Audubon Society
Darlene Chirman, President, Santa Barbara Audubon Society
David Hacker, CA Department of Fish and Game

Attachment: Morro Coast Audubon Society, "Solar Generated Energy Policy", May 2010.

ENDNOTES

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[13] Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
[14] Wiggins, D. A., D. W. Holt and S. M. Leasure. 2006. Short-eared Owl (*Asio flammeus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/062.
[15] Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
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