United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
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Eric K. Solorio
Siting, Transmission and Environmental Protection Division
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, California 95814

Subject: Solar Millennium Solar Power Project, Ridgecrest, California

Dear Mr. Solario:

The California Energy Commission (CEC) has completed a staff assessment for the Solar Millennium Ridgecrest Solar Power Project, in which it has determined that it cannot mitigate the impacts associated with a solar project at this location because of adverse effects on the desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Xerospermophilus mohavensis*), and other biological resources. The applicant has questioned CEC's findings through recent analysis of existing information. The CEC has requested that the U.S. Fish and Wildlife Service (Service) review the applicant's comments. Because the Service does not have experience applying the regulatory mitigation standards used by CEC in its staff assessment, this letter provides no conclusions relative to the ability for CEC to mitigate the impacts of this project. This letter provides the Service's perspective relative to the importance of the location for desert tortoises and reiterates many of the comments that we provided during the Bureau of Land Management's (Bureau) public scoping period. We have also provided additional comments on issues relevant to the potential Federal listing of the Mohave ground squirrel.

Importance of the Site to Desert Tortoises

The Service's Desert Tortoise Recovery Office used line distance sampling (LDS) (Service 2009) to estimate desert tortoise densities in 2007 for designated critical habitat and other areas that are managed to conserve and recover desert tortoises. Average densities for sampled areas ranged from 1.2 to 8.2 desert tortoises per square kilometer. The density estimates for each sampled unit were weighted by area and used to determine an average density for such areas in each desert tortoise recovery unit. The average desert tortoise density for the Western Mojave Recovery Unit, where the proposed Ridgecrest Solar Power Project is located, is 4.7 desert tortoises per square kilometer.

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In the draft revised recovery plan for the desert tortoise, the Service has identified specific desert tortoise conservation areas where we plan to focus recovery implementation. These areas include critical habitat, desert wildlife management areas, areas of critical environmental concern, and other areas with similar levels of protection and management (Service 2008). The LDS sampling units correspond primarily to these desert tortoise conservation areas. The current sampling methodology places transects randomly throughout sampling units, without regard for differences in habitat suitability, to obtain an average density for the sampling unit as a whole. Variability between sampled transects confirms that desert tortoises do not occur at a homogeneous density across the entire geographic extent of the sampled area. This larger area is therefore composed of many smaller areas, some with densities that are higher and others with densities that are lower than the average density reported for the recovery unit as a whole.

The comparison of site-specific density estimates for the Ridgecrest Solar Power Project's proposed location 9.8 desert tortoises per square kilometer over an area of 7 square kilometers) with the much larger areas sampled using LDS does not support the idea that the densities at the site of the proposed facility are low compared to the average density for all areas sampled through LDS. In particular, the estimated density of desert tortoises at the site of the proposed Ridgecrest Solar Power Project is substantially greater than the average density for desert tortoise conservation areas in the Western Mojave Recovery Unit, of which the proposed solar site is part. Given the difference in spatial scales of the data collection and the uneven density of desert tortoises on the landscape, the fact that the Ridgecrest Solar Power densities are so high indicates that this location represents a patch of habitat with above average desert tortoise density within the Western Mojave Recovery Unit. We believe the comparison of these densities to LDS densities indicates that this site has a high density of desert tortoises relative to other locations and relative to areas that are managed for the conservation of desert tortoises. The data are inconsistent with any interpretation of lower densities at the Ridgecrest Solar Power Project site compared to more protected areas of the Western Mojave Recovery Unit.

Although the Service's current recovery efforts may focus on existing desert tortoise conservation areas, populations and habitats outside of these areas may also contribute to recovery of the species and their importance to recovery should not be discounted; conversely, actions that would adversely affect these populations and habitats may hamper the recovery of the desert tortoise. Consequently, patches of habitat outside of tortoise conservation areas with high-density populations can play a role in desert tortoise recovery despite their location. For this reason, the Ridgecrest Solar Power site is of high value for desert tortoise conservation and should not be dismissed because of its location outside of an identified conservation area.

Solar Millennium's Analysis of the Site

We would like to provide the Service's perspective of Karl's (2010) analysis of the Ridgecrest Solar Power Project site's importance to desert tortoises.

1. The applicant contends that desert tortoise densities observed on the Ridgecrest Solar Power Project do not represent a high-density population in a historic context when compared to density data from nine permanent study plots in the western Mojave Desert, surveyed between 1979 and 1982.

Comment: The importance a particular site's density estimate in comparison to historical permanent study plot data from the 1970s and 1980s has no relevance in determining the site's current value to desert tortoises. We are unlikely to see current desert tortoise densities as high as those reported in the 1970s and 1980s in any portion of the desert tortoise's range.

2. The applicant contends that the Ridgecrest Solar Power Project site does not have a high density of desert tortoises when compared to 19 sites in the western Mojave Desert with recent survey information.

Comment: We have no relative context for these plots and do not know whether the plots used for comparison represent high or low relative densities. Without this knowledge of the relative context, we cannot compare the density of the Ridgecrest site to densities at these other plots. Regardless of the issue of relative context, to provide an accurate direct comparison of density between the Ridgecrest Solar Power Project site and other plots of similar spatial scale, it is important to compare the data that have been collected around the same period of time. Much of the data cited by the applicant is more than 8 years old; some data are more than 14 years old. Without current information on plot densities, a comparison of the Ridgecrest Solar Power Project site to other plots is likely to result in erroneous conclusions because the comparison has not accounted for changes in densities over time. The applicant identified data collected from 2009 that would provide an accurate direct comparison of density data. However, as stated above, we do not have a relative context for this density information, so we cannot use it to examine the Ridgecrest Solar Power Project site's importance to the conservation of desert tortoises.

3. The applicant contends that the areas in the vicinity of the Ridgecrest Solar Power Project site were not considered areas of high density or high relative abundance in past regional survey efforts for density or relative abundance.

Comment: The regional desert tortoise population information cited by the applicant from Berry and Nicholson (1984) is several decades old; the sign transects conducted for the West Mojave Plan are over a decade old. Consequently, these data cannot be used to draw conclusions about the number of desert tortoises currently in the area. In addition, it is inappropriate to use a comparison of these two data sets to indicate that desert tortoises consistently occur at low relative densities on or near the Ridgecrest Solar Power Plant site.

Transects that use sign to predict the density of desert tortoises are inherently imprecise. They should only be used to document the relative abundance (as judged by sign counts) and general distribution of desert tortoises across vast geographic areas; they should not be considered as a surrogate for more precise desert tortoise densities. The Bureau of Land Management (Bureau) used the1999 sign counts to identify areas of low sign counts in the West Mojave Plan; however, it used the sign count data from each transect and extrapolated it so that each transect represented an entire square mile, even though statistical analysis indicates that each transect is only sufficient to survey about 1.3 percent of a square mile (8.3 acres) (Bureau 2005). The Bureau even states in the West Mojave Plan that the data from individual transects have very low predictive value for the square mile that the transect is seeking to characterize. Consequently, it may be appropriate to use this information as an index of the relative desert tortoise abundance

of the Indian Wells Valley as a whole, in comparison to other regions of similar size, but these data provide little information with respect to how the Ridgecrest Solar Power Project site fits into the larger context of desert tortoise abundance. The Indian Wells Valley, as a whole, probably has a low relative abundance of desert tortoises; however, some patches of higher densities of desert tortoises likely persist within this larger area of overall low relative abundance and these areas retain a high value for conservation of desert tortoises.

4. The applicant contends that the site of the Ridgecrest Solar Power Project does not contain habitat that would support higher density desert tortoise populations.

Comment: We do not have sufficient information to provide a relative comparison of habitat quality on the Ridgecrest Solar Power Project site to other sites that are important to desert tortoise conservation. However, the persistence of a high-density population on this site indicates that the habitat provides the necessary components to sustain reproduction and survivorship. The ability of a species to reproduce and survive in a specific area provides important information when considering the value of the site to its long-term conservation.

Relevance to Mojave Ground Squirrel Listing

On April 27, 2010, the Service published a positive 90-day finding on a petition to list the Mohave ground squirrel. This finding initiates a status review for this species, which will conclude with a determination on Federal listing of this species. During this status review, the Service will analyze the current status of this species and all existing threats to populations and habitat. The Service will consider removal of habitat and loss of connectivity between core populations in its review.

If the Service determines that listing of the Mohave ground squirrel as an endangered or threatened species is warranted, we would publish a proposed rule in the Federal Register through which we would seek additional information on the status of the species, the threats it faces, and any ongoing conservation efforts; we would request public comment on our proposal. Approximately one year after the publication of the proposed rule, the Service would publish a final rule in which we would provide our decision regarding listing. During this process, we would also consider whether the designation of critical habitat was prudent and determinable.

If we listed the Mohave ground squirrel, Federal agency would be required to consult with the Service, pursuant to section 7(a)(2) of the Endangered Species Act, on any actions they proposed to fund, permit, or carry out that may affect the Mohave ground squirrel (or its critical habitat, if designated). Federal agencies would need to consider whether consultation would be needed on any ongoing action that they had funded, permitted, or were implementing; the Bureau would be required to evaluate whether re-initiation of consultation on the California Desert Conservation Area Plan would be appropriate. Additionally, the Endangered Species Act's prohibitions against take of individuals of the species would be in effect. (Section 3(18) of the Endangered Species Act defines take to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.) If a If any non-federal action was likely to result in the take of Mohave ground squirrels, we would recommend that the proponents of

such actions apply to the Service for an incidental take permit, pursuant to section 10(a)(1)(B) of the Endangered Species Act.

We appreciate the opportunity to provide you with this information and hope that you find it useful in your planning process. If you have any questions regarding this letter, please contact Brian Croft of the Ventura Fish and Wildlife Office at (951) 697-5365.

Sincerely,

Raymond Bransfield

Raymond Bransfield
Senior Biologist