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19 May 2010

California Energy Commission
Attention: Eric K. Solorio, Project Manager
1516 Ninth Street, MS-15
Sacramento, CA 95814-5512

RE: Comments of the Staff Assessment / Draft Plan Amendment / Draft Environmental Impact Statement for the proposed Ridgecrest Solar Power Project, Application for Certification (09-AFC-9)

Dear Mr. Solorio:

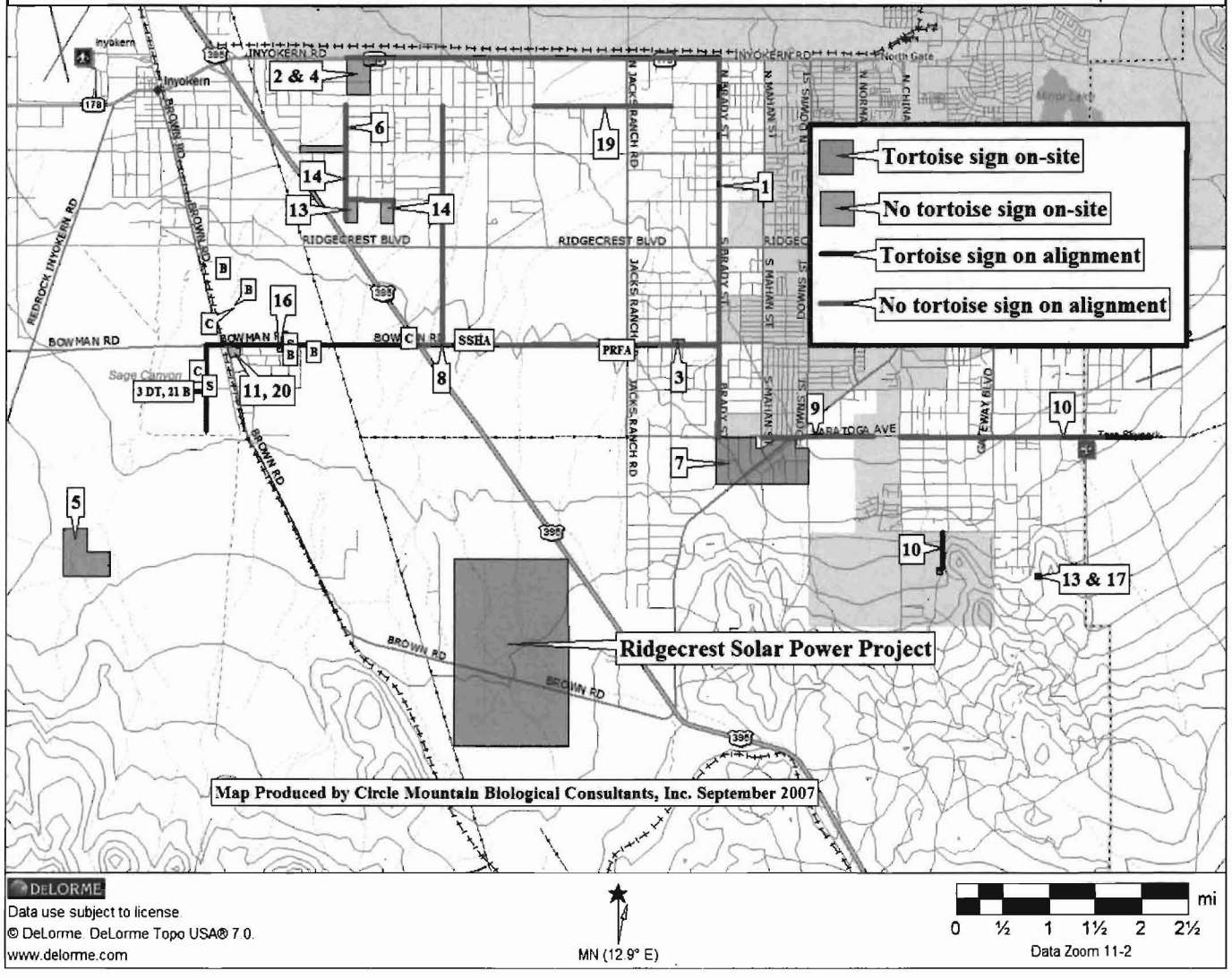
My name is Edward L. LaRue, Jr. I have been a biological consultant mostly working in the West Mojave Desert since 1989. My main focus in that time has been desert tortoise. I served as one of two biologists (along with Dr. Larry LaPre) working for the U.S. Bureau of Land Management on the West Mojave Plan between 1998 and 2004 when the planning documents were finalized. I was responsible for developing the conservation strategies for the desert tortoise and Mohave ground squirrel while Dr. LaPre considered a 100 other species and developed strategies for those eventually covered by the plan.

As shown on the map on the next page, I have completed 17 focused desert tortoise surveys in the Indian Wells Valley. Using this and other information garnered for the completion of the West Mojave Plan, I'd like to provide the following comments:

Desert Tortoise

1. It is my understanding that 12 of the 40 tortoises (30%) encountered were judged to be subadults, less than 180 mm mid-carapace length. Regulatory personnel responsible for assessing the significance of impacts associated with this project should be aware that this is a very unusual, a very unique and important resource for this part of the West Mojave Desert. During surveys of the West Mojave in the region bounded by SR 395 to the east, SR 58 to the south, SR 14 to the west, and Garlock Road to the north, I was responsible for overseeing focused tortoise surveys for some 350 square miles. Importantly, in those 350 square miles, we found only 14 subadult tortoises! Thirteen of these tortoises were inside the Desert Tortoise Natural Area and the 14th tortoise was found one-half mile west. So, you see, there are nearly as many subadult tortoises on fewer than 2,000 acres of the proposed solar facility than were found in over 350 square miles of that portion of the West Mojave, located 10 miles south of the site.

Results of 17 Focused Tortoise Surveys Between 1991 and 2010



2. The figure on the previous page depicts the findings of 17 focused tortoise surveys I've performed in the Indian Wells Valley between 1991 and 2010. You can see that tortoises have been mostly extirpated from the urbanizing portions of Ridgecrest. No tortoise sign was found east of SR 395 except for around Cerro Coso College, located south of Ridgecrest. We began finding tortoise sign just west of SR 395, but have never found as dense a concentration of tortoises in the Indian Wells Valley as were found on the proposed solar facility in the spring of 2009. It would appear that the cumulative direct and indirect impacts of the urbanizing portions of Ridgecrest extend westward to about SR 395. Now, for the first time, this project threatens to compromise habitats and concentrations of tortoises that have thus far escaped the cumulative effects of the urbanization of the Indian Wells Valley.

3. Of these 17 sites, no tortoise sign was found on 130 acres and tortoise sign was found on 350 acres. Now, this one project stands to affect 1,900 acres of occupied tortoise habitat, which is five times more than the seven sites where tortoise was found over the past 20 years. As such, the Indian Wells Valley has not experienced a single project that would affect more occupied tortoise habitat than the proposed solar project.

4. There have been scientific studies that reveal the importance of washes to tortoises, including those performed by Jennings at the Desert Tortoise Natural Area in the 1990's and by Baxter at Twentynine Palms in the mid-1980's. I have personally found tortoises concentrated around McCoy Wash west of Blythe at 500 feet elevation. Tortoises are mostly absent from such low elevations. It is my conviction that McCoy Wash provides some unknown resource (perhaps shade, water, and/or forage) that allows those tortoises to live at such low elevations. In another case at Copper Mountain College in Joshua Tree, there was clear evidence that tortoises were concentrated around a large wash running through that site. The available data for the solar site do not cover a sufficiently large area to know how important El Paso Wash may be to tortoises in the region. I suspect that El Paso Wash serves as a source for the reproduction and persistence of tortoises in the region. Or, equally important, serves as an attractant to tortoises that allows them to exist in the elevated concentrations found in 2009 at the solar site. In either case, El Paso Wash may be a vitally important resource to the regional persistence of tortoises in the south Indian Wells Valley, and this development will clearly compromise that resource.

5. Whereas the listed population of the desert tortoise extends approximately 300 miles south-southeast to the southern border of California, the northwestern extent of the range is only about 40 miles north of this site in Rose Valley and the western extent of the range is less than 15 miles west of the site in the Sierra Nevada. Principles of conservation biology suggest that animals living near the edges of a threatened population likely possess genetic variability that could be important to the remainder of the population. Excepting the cumulative impacts of the urbanizing portions of Ridgecrest and China Lake, no projects the size of this solar facility have thus far threatened the desert tortoise so near to the northwestern extent of its range.

6. The location of the proposed facility is unfortunately situated right in the middle of the main travel corridor connecting tortoises in the Indian Wells Valley with those in areas to the south extending into the Spangler Hills area. Urban development to the east and rugged lava flows to the west constrict this corridor to an area not more than 2.5-to-3.0 miles wide. The solar facility would significantly constrict this corridor to the point of it not functioning.

7. As one of the primary authors of the West Mojave Plan, it is now painfully obvious that we did not fully consider the explosive and exploitive use of public lands for wind and solar developments. Additionally, the planning team fully expected Alternative A to be selected, which would have protected tortoises on *both* public and private lands. Had we known that Alternative B, the BLM-only alternative, would have been adopted, the Desert Wildlife Management Areas (DWMAs) would have been substantially larger to make up for the lack of private-land involvement in the plan. Although it's an oversight, all public lands south of Bowman Road should have been considered for DWMA status had we known that the BLM-only alternative would have been chosen.

8. It does not appear that the 2009 surveys were sufficiently extensive to consider the entire *action area* affected by this development. The data do not show the extent of tortoise populations occurring north and south of the constrictive corridor that would be affected by stopping the gene flow through this narrow corridor. The project is also likely to displace both sheep grazing and motorcycle recreation from approximately 2,000 acres into adjacent areas, yet none of the areas into which these uses would be redirected have been surveyed. These displaced uses will predictably affect many more than the 70 tortoises estimated to occur in the area.

Mohave Ground Squirrel (MGS)

1. In addition to tortoise conservation, I was also responsible for devising the conservation strategy for the MGS. Importantly, I provided a draft conservation strategy that had the MGS Conservation Area boundary extending northwards to Bowman Road, which would have included the entire proposed solar project area. As part of the consensus building efforts to devise the plan and seek public support, economic considerations expressed by the local economic development authority succeeded in retracting this line to its current location. The reduction in the area *was not due to biological considerations*, which would have prevailed if biology had been the only driving factor in devising the West Mojave Plan. Given the recent failure to trap MGS throughout much of the southern and central portions of its range, it now appears to be a mistake to have reduced this part of the conservation area, particularly since it seems to continue to support MGS (see next point).

2. I reviewed a map with the following reference that showed connecting corridors to the east and west for the MGS: Ridgecrest Solar Power Project [09-AFC-9] CEC Staff Data Request Number S3-78 Technical Area: Biological Resources [AFC Section 5.3] Response Date: 25 January 2009. This figure fails to identify a third corridor to the north. On 6 May 2010 while performing protocol trapping surveys for the MGS, I trapped a post-reproductive female MGS in the navy's 1.5-mile-wide flight corridor, located only 4.5 miles due north of the proposed solar project. As with the tortoise, the placement of the solar facility in the proposed location may significantly and adversely affect the movement of MGS to the north and south. This new information about MGS occurrence to the north must be addressed in any new analysis of the impacts to MGS dispersal by this project.

3. If, as suspected, this project will significantly detract from the movement of MGS through the naturally narrow corridor through which SR 395 currently runs, it may have significant and deleterious impacts to the regional occurrence of MGS even where development is relatively light. For example, MGS was first encountered in the late 1800's at Rabbit Springs in Lucerne Valley. Although Lucerne Valley is relatively undeveloped compared to the urbanizing portions of Apple Valley, Hesperia, and Victorville to the west, MGS apparently no longer occurs in Lucerne Valley because it was isolated from the main population of MGS located west and northwest of the Victor Valley. The MGS populations occurring in the Indian Wells Valley and north are dependent on the corridors along SR 14 and along SR 395, which may be lost as a result of this proposed project. This reduced connectively may significantly impact the local and regional occurrence of MGS north of the project.

4. Dr. Phil Leitner's research in the nearby Coso Range suggests drastic fluctuations of the MGS in suitable habitats that remain undeveloped and minimally impacted. These fluctuations may be natural; persisting populations rely on the protection of habitats through which future generations may disperse. This project would result in direct impacts that would remove habitats that Debi and Tom Clark and Ron Remple showed to be occupied in the early 1990's and may significantly affect the regional population of MGS in the Indian Wells Valley by isolating them from the more extensive areas of occupied habitats to the south.

5. Recent trapping efforts have shown the round-tailed ground squirrel to be expanding its range westward into habitats once solely occupied by the MGS. Thus far, no round-tailed ground squirrels have been found as far west and north as the solar project, which suggests that this segment of the population is important to the overall species persistence.

I appreciate the opportunity to comment on this project. Had the project been proposed west of Lancaster within hundreds of square miles of fallow agriculture, I would have had little to say. However, choosing a site such as this one comprised of public lands and situated as it is in a corridor that may be extremely important to both the desert tortoise and Mohave ground squirrel, is short-sighted and detracts from the conservation of these two species in the West Mojave with its many forms of persisting threats.

Sincerely,

Edward L. LaRue, Jr.
Consulting Biologist