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Working to protect and restore Western Watersheds

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By E-mail

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RE: Draft Desert Tortoise Translocation/Relocation Plan for the Ivanpah Solar Electric Generating System March 2009.

Dear Mr. Kessler:

Western Watersheds Project would like to offer the following comments regarding the Draft Desert Tortoise Translocation/Relocation Plan for the Ivanpah Solar Electric Generating System dated March 2009 for your consideration.

The proposed ISEGS project would be constructed within the small portion of the Northeastern Mojave Desert Tortoise Recovery Unit that occurs within the State of California. The Northeastern Mojave Recovery Unit is one of the six Recovery Units identified in the 1994 Desert Tortoise (Mojave Population) Recovery Plan. Given the inordinate impact that the ISEGS and similar projects will have on this important population ensuring the continued survival of the displaced desert tortoises requires detailed and thoughtful consideration.

The Draft Translocation/Relocation Plan ("plan") provides for both moving tortoises out of harms way within their home range ("relocation") and for moving tortoises that cannot be so relocated to more distant designated translocation sites ("translocation"). We concur with the agencies that the draft plan is a starting point that provides insufficient detail on both these proposals. This insufficiency should be remedied.

We offer the following specific comments, many of which echo concerns raised by the agencies themselves in their review.

1. SAC Recommendations on Translocation

The Desert Tortoise Recovery Office (DTRO) Science Advisory Committee (SAC) has made the following recommendations on desert tortoise translocations that should be considered in preparing the plan.

> [C]onsensus (if not unanimity) exists among the SAC and other meeting participants that translocation is fraught with long-term uncertainties, notwithstanding recent research showing short-term successes, and should not be considered lightly as a management option. When considered, translocation should be part of a strategic population augmentation program, targeted toward depleted populations in areas containing "good" habitat. The SAC recognizes that quantitative measures of habitat quality relative to desert tortoise demographics or population status currently do not exist, and a specific measure of "depleted" (e.g., ratio of dead to live tortoises in surveys of the potential translocation area) was not identified. Augmentations may also be useful to increase less depleted populations if the goal is to obtain a better demographic structure for long-term population persistence. Therefore, any translocations should be accompanied by specific monitoring or research to study the effectiveness or success of the translocation relative to changes in land use, management, or environmental condition. [March 13, 2009, SAC Meeting Summary]

2. Relocation

Relocations should only be undertaken during optimal periods for the various reasons laid out by the agencies in their comments, preferably in the spring in a wet year. The basic premise of relocation versus longer distance translocation is that the tortoises will more likely be moved within their home range and are therefore more likely to survive. While relocation to nearby sites is preferable on empiric grounds to longer distance translocation this assumption should be explicitly mentioned in the plan since the actual home ranges of the tortoises to be moved is unknown and some of the tortoises may well be relocated to unfamiliar terrain. Female desert tortoises have significantly smaller home ranges than males and thus are more likely to be moved to unfamiliar terrain outside their home range. The relocated tortoises should be carefully monitored to ensure that relocation does not lead to excessive loss of valuable adult females and a skewing of sex ratios in favor of males. An imbalance in the sex ratio may cause some males to undergo long distance movements resulting in additional take and the possible spread of disease etc.

The plan should explain how nests, hatchlings and small tortoises will be detected, how they will be relocated, and to where they will be relocated. Because of predator issues associated with Interstate-15 the proposed translocation sites would not be suitable for nests, hatchlings, or small juvenile tortoises. The plan should recognize that eggs may be found in nests from spring through fall, and hatchlings may overwinter in the nest. Measures to avoid kit fox predation on any relocated tortoise eggs should be considered in the plan.

3. Translocation

Translocation sites should have comparable habitat quality to that from which the tortoises are removed. The plan does not explain how the proposed translocation sites were selected. The habitat quality of the proposed areas along the freeway is not described in the plan but appears to be less than optimal. Why were locations with better habitat such as to the west of the proposed generating plant not considered?

The resident desert tortoise population at potential translocation areas should be surveyed and demographic data complied. This will provide useful data on the suitability of these areas as translocation sites. Because major highways have a sink effect which depletes nearby tortoise populations it would seem that locating translocation sites along the freeway would be less likely to impact resident tortoises – assuming that the translocated tortoises stay there. However, the plan does not discuss any intention to enclose the translocation areas other than with the barrier fence along Interstate 15.

The carrying capacity of the translocation areas must be determined to ensure that they can support the number of desert tortoises to be moved there. The USFWS Guidelines for the project quotes a guideline of 39 tortoises/sq km (i.e. 100/sq mile) based on the Fort Irwin translocation of West Mojave desert tortoises. The USFWS Draft 2007 Monitoring Report estimates that desert tortoise abundance in the Northeastern Mojave Recovery Unit is only about 40% of that found in the West Mojave Recovery Unit. The limited historical data for the project area also indicates that the 39 tortoises/sq km is too high. Berry (1984) estimated tortoise density in the area of the ISEGS footprint to be in the range 50-100/sq mile (i.e. 19-38/sq km) with most of the lower lying habitat along Interstate 15 being 20-50/sq mile (i.e. 8-19/sq km). Therefore, the 39 tortoises/sq km should not be used as a constraint since this would result in the carrying capacities of the proposed translocation areas being exceeded.

Comparison of Figure BR5-3 with the map presented in Berry (1984) indicates that the area along the freeway where proposed Ivanpah Translocation areas 1 and 2 are located is within an historically lower density tortoise area. For convenience, a copy of the map from Berry (1984) is attached.

The translocation areas depicted on Figure BR5-3 are also problematic for other reasons including adjacency to Interstate 15. Ravens forage along the interstate and the proximity of the golf course with its water, roosting sites and cover provides opportunities for both ravens and coyotes to flourish. The raven presence makes these areas unsuitable sites for translocating hatchling and juvenile tortoises. Loss of adult tortoises to coyote predation has been a major issue in the Fort Irwin translocation. Predator abundance should be one of the considerations factored into the selection of translocation areas.

The entire project area lies within the BLM's Clark Mountain cattle grazing allotment. Translocation area 1 appears to include one of the allotment corrals. Areas of high livestock concentration make poor habitat for desert tortoises. This reinforces the need for a thorough analysis of the quality of habitat of any proposed translocation area.

4. Fencing

Tortoises frequently make long distance movements within a few days of being translocated. Therefore all barrier fencing along the Interstate, roads and round the project site should be in place prior to any desert tortoise relocations or translocations.

The plan needs to recognize that the area south of Interstate-15 and west of Ivanpah Dry Lake is also desert tortoise habitat. Fencing only the north side of the intestate will increase the risk of

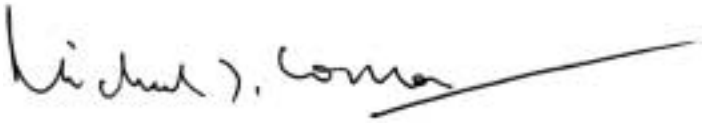
take of any tortoises that attempt to move across the road from the south and get trapped at the barrier. This is a clearly foreseeable impact. Both sides of Interstate-15 should be fenced.

Tortoise barrier fencing along major highways is highly effective at reducing road kill and thus reducing foraging opportunities for ravens. However, again this is effective only if both sides of the highway are barrier fenced. Without this, small mammals and reptiles moving north across the freeway would be blocked at the tortoise barrier fence and end up as either an easy meal for a predator or end up as road kill as they attempt to move back.

We thank you for considering our comments. I will be visiting the ISEGS project site again tomorrow to view the translocation/relocation areas and may submit additional comments based on my observations.

Please feel free to contact me by telephone at 818-345-0425 or by e-mail at <mjconnor@westernwatersheds.org> if you would like me to provide any additional information or materials.

Yours sincerely,



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Attachments:

Page 6-30 Desert Tortoise Crucial Habitat in California Ivanpah Valley from Berry, K. H. (1984) The Status of the Desert Tortoise (*Gopherus agassizii*) in the United States. US Fish and Wildlife Services on Purchase Order No. 11210-0083-81.

DESERT TORTOISE CRUCIAL HABITAT
in California
Ivanpah Valley

Plate 6-13

Tortoise Density