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GUIDELINES FOR CLEARANCE AND TRANSLOCATION OF DESERT TORTOISES FROM THE IVANPAH SOLAR ELECTRIC GENERATING SYSTEM (ISEGS) PROJECT

U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, California, 93003

The Fish and Wildlife Service (Service) is providing these guidelines for clearance and translocation of desert tortoises as technical assistance to permitting agencies and project proponents for developing a comprehensive set of procedures to follow for translocating desert tortoises from the ISEGS project. Upon issuance of our biological opinion, all procedures to be used in translocation activities and subsequent monitoring will become mandatory and must be fully implemented to avoid violating the provisions against the taking of federally listed species, as defined in section 9 of the Endangered Species Act.

All methods used for handling desert tortoises during translocation must be in accordance with the *Guidelines for Handling Desert Tortoises During Construction Projects* (Desert Tortoise Council 1999) or the most recent handling guidance provided by the Service. Biologists that handle desert tortoises during translocation activities must have the appropriate authorizations from the Service and the California Department of Fish and Game.

In this document, we refer to both translocation and relocation activities and the specific instances when each is appropriate. For the purpose of this guidance, a translocation is required when a desert tortoise must be moved more than 1000 meters to clear it from the project site, while a relocation requires a movement of less than 1000 meters.

Bureau of Land Management (Bureau) will direct Bright Source Energy (BrightSource) to prepare a desert tortoise translocation plan that adopts the guidance below. The Bureau-approved plan will be part of the proposed action for which the Service will render its biological opinion. The Bureau will seek California Department of Fish and Game (CDFG) concurrence with the plan prior to initiating formal consultation, and will obtain CDFG input during plan implementation.

I. Translocation Area Identification

- A. Prior to clearance of desert tortoises from the project site, BrightSource, must identify a specific translocation area(s) with boundaries that encompass an area of desert tortoise habitat of sufficient size to accommodate resident and translocated desert tortoises at a density that will not exceed 39 individuals per square kilometer. This density is consistent with that identified in the Fort Irwin translocation plan. This translocation area will be used to accommodate all project-site desert tortoises that cannot be moved to safe locations within 1000 meters of their capture location (see I.E below).
- B. Translocation areas must be on Federal or State lands in California that are located outside of desert tortoise critical habitat, off-highway vehicle management areas, and desert wildlife management areas that the Bureau of Land Management (Bureau) has

established through its resource management plans. The translocation area(s) must not have any proposed rights-of-way or other encumbrances at the time of its establishment.

- C. To minimize potentially adverse genetic effects and to provide suitable habitat for translocated individuals, the translocation area(s) must be in Ivanpah Valley, below 4200 feet, and it must be composed of desert tortoise habitat that resembles the habitat on the project site. Analysis of the habitat must consider precipitation, soils, vegetation community, vegetation density and abundance, perennial plant cover, forage species, geomorphology, and slope.
- D. To minimize the potential for loss of desert tortoises due to vehicle strikes, the translocation area must be at least 10 kilometers away from major highways (e.g. Interstate 15) to provide a safety buffer for long-distance movements that some desert tortoises are likely to make following translocation. If BrightSource cannot identify a suitable translocation area (i.e., area that meets I.A. through I.C) outside of this buffer distance, it must fence the highway with desert tortoise proof fencing prior to translocation of desert tortoises. BrightSource should work with CalTrans regarding the appropriate location for this fencing along the I-15 if it is required. To effectively prevent movement of desert tortoises onto I-15 the fence should at least cover the distance between Nipton Road and the Ivanpah Lake. BrightSource should also consider the location of the proposed Joint Port of Entry in this area when planning this fencing.
- E. Desert tortoises that the authorized biologist can relocate outside of the project site to an area that meets the requirements of I.A through I.D within 1000 meters of their capture location must not be translocated to the more remote translocation area. BrightSource must identify zones within the project site where these shorter distance relocations would apply. Other desert tortoises within the project site that will require movement of greater than 1000 meters to meet the requirements of I.A through I.D must be translocated to the identified translocation area. This measure will help to minimize the number of project-site desert tortoises that are moved outside of their natural home range.
- F. BrightSource must obtain approval of the translocation area and timing of the translocation activities from the Service, CDFG, and the Bureau prior to initiating any translocation activities. Translocations shall not be permitted if these agencies determine that environmental conditions such as an extended drought might significantly reduce the survival of the translocated desert tortoises.

Note: Based on our own cursory analysis of the translocation issue for ISEGS, we believe that fencing of I-15 will probably be necessary to minimize the loss of desert tortoises. We also believe that desert tortoises will have to be translocated to the west and/or south of the proposed facility to avoid another proposed solar facility. If it become necessary to fence I-15 in order to translocate desert tortoises from the project site, we recommend that the translocation area be located as close to the fence line as possible to minimize adverse effects to resident populations. As discussed in I.E, desert tortoises that can be relocated to an appropriate location (i.e., one that complies with I.A through I.D) outside of the project site without moving them more than 1000 meters must not be translocated to the identified translocation site.

II. Translocation Procedures and Guidance

A. Clearance surveys

1. BrightSource must not commence clearance surveys on any portion of the project site unless it has fenced that area with desert tortoise-proof fencing. Specifications for desert tortoise-proof fencing can be found at the following website:

http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/dt/DT_Exclusion-Fence_2005.pdf

Clearance surveys must consist of two consecutive surveys of the site using 10-foot wide transects. The direction of transects from the second survey must run perpendicular to those of the first. BrightSource must perform all clearance survey and translocation procedures for any portion of the project site during the spring (i.e., March - May) or fall (i.e., late August to early October) to avoid extreme temperatures. Two consecutive clearance surveys will be sufficient to declare the site free of desert tortoise as long as the site is completely fenced with desert tortoise exclusion fencing prior to the surveys. BrightSource must perform clearance surveys to coincide with each phase of development as opposed. Clearing all three phases at one time will allow for adaptive management on each phase's translocation to benefit from the monitoring information gathered from the previous phases. Any desert tortoises found within the project area fencing after completion of the official clearance surveys must be removed from harm's way and moved to the translocation area as described below.

2. BrightSource must mark and affix transmitters to all desert tortoises cleared from the project site, so that they can be located and identified during post-translocation monitoring (see below).
3. During clearance, the authorized biologist(s) may remove desert tortoises that are in burrows through tapping or careful excavation following the *Guidelines for Handling Desert Tortoises During Construction Projects* (Desert Tortoise Council 1999). Multiple visits will be necessary if desert tortoises are inaccessible in burrows during clearances. Construction must not proceed until BrightSource has cleared all desert tortoises from the project site.
4. All clearance and translocation activities (capture, transportation, release, etc.) must occur when ambient temperatures are below 35°C and not anticipated to rise above 35°C before handling and processing are completed. Temperature must be measured in the shade at a height of 5 centimeters above the ground. If additional guidance on temperature tolerances becomes available, the Service will provide it to BrightSource for use.
5. Prior to translocation, authorized biologist(s) for BrightSource, trained to identify clinical signs of disease in desert tortoise, must evaluate all desert tortoises to be translocated from the project site for overall condition, trauma, and clinical signs of upper respiratory tract disease (URTD), herpes virus, and cutaneous dyskeratosis. The authorized biologist(s) must remove and quarantine any desert tortoises showing clinical signs of disease. They must then contact the Service within 24 hours to determine the disposition of these individuals. Desert tortoises that are relocated based on I.E do not require health assessments prior to relocation.

B. Transportation and release

1. During translocation, BrightSource must move desert tortoises to the translocation area and distribute them evenly through the site. The specific location of each desert tortoise release point must be recorded for use in analyzing data gathered through post-translocation monitoring.
2. During translocation, authorized biologists will transport all desert tortoises in clean protective containers to ensure their safety. These containers must be sterilized using a 10 percent bleach solution before being used to translocate other desert tortoises.
3. Immediately prior to release, all desert tortoises must be provided drinking water for 15 to 20 minutes (preferably by placing water a few centimeters deep directly into each tortoise's plastic tote), after which they must be released into an unoccupied desert tortoise burrow (if available) or in the shade of a shrub. If the desert tortoise's tote is fouled by urine or feces during transportation, it must be cleaned prior to use for desert tortoise hydration.
4. All clearance and translocation activities (capture, transportation, release, etc.) must occur when ambient temperatures are below 35°C and not anticipated to rise above 35°C before handling and processing are completed. Temperature must be measured in the shade at a height of 5 centimeters above the ground.
5. If workers locate desert tortoises during construction activities that the initial clearance surveys missed, BrightSource must utilize an authorized biologist to complete translocation of the desert tortoise according to these guidelines.

III. Post-translocation Monitoring and Reporting

1. Following translocation, the translocated and relocated desert tortoises must be located at least once per month for 3 years to monitor for homing behavior and to determine how translocated animals are adapting to their new location. These surveys must note the location of the translocated tortoises, overall condition, health status, translocation area threats (type and intensity), and identify any mortalities among the translocated population. All mortalities within the translocation area should be reported to the Ventura Fish and Wildlife Office, California Department of Fish and Game (Victorville Office), and the Bureau's Needles Field Office within 48 hours of discovery. BrightSource in coordination with the Service will use the information gathered through this monitoring to inform adaptive management decisions for the translocation program on subsequent phases of the project.
2. In addition, adaptive management of the translocation area may be required if monitoring identifies abnormally high mortality rates among the translocated desert tortoises. If monitoring shows a mortality rate of 10 percent or higher among the translocated population, BrightSource will consult with the Service, CDFG, and the Bureau to develop a remedial action plan prior to further phased translocation activities.
3. BrightSource must submit annual translocation area monitoring reports to the Ventura Fish and Wildlife Office and California Department of Fish and Game (Victorville Office) that detail the results of the radio telemetry and transect

monitoring by January 31 of each year. These reports should analyze the effectiveness of the translocation program and identify any needed adaptive management strategies.

References Cited

Desert Tortoise Council. 1994 (Revised 1999). Guidelines for Handling Desert Tortoises During Construction Projects. Edward L. LaRue, Jr., editor. Wrightwood, California.



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
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1516 NINTH STREET, SACRAMENTO, CA 95814
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APPLICATION FOR CERTIFICATION
FOR THE *IVANPAH SOLAR ELECTRIC
GENERATING SYSTEM*

DOCKET No. 07-AFC-5

PROOF OF SERVICE
(Revised 12/22/08)

INSTRUCTIONS: All parties shall 1) send an original signed document plus 12 copies OR 2) mail one original signed copy AND e-mail the document to the web address below, AND 3) all parties shall also send a printed OR electronic copy of the documents that shall include a proof of service declaration to each of the individuals on the proof of service:

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DECLARATION OF SERVICE

I, Teraja` Golston, declare that on January 09, 2009, I deposited copies of the attached Guidelines for Clearance and Translocation of Desert Tortoises (07-AFC-5) in the United States mail at Sacramento, CA with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.

Original Signature in Dockets
Teraja` Golston

Attachments