Comments on the Draft Desert Tortoise Relocation/Translocation Plan for the Genesis Solar Energy Project (January 4, 2010).

Comments by: Carlsbad Fish and Wildlife Office (April 15, 2010)

**General comments:**

1. Where appropriate, indicate who would conduct specific actions (e.g., translocation will be conducted by an Authorized Biologist and the methodology that would be used [(e.g., DT would be moved following handling procedures outlined in the FWS *Desert Tortoise Field Manual* (December 2009) or more recent guidance]. To ensure that you are referring to the most current guidance and protocols, contact your local USFWS field office or see http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/, where the following can be accessed: Pre-project Survey Protocol (for the 2010 field season); Desert Tortoise Field Manual (December 2009) that includes the 2010 Pre-project Survey Protocol and updated Clearance Survey Guidelines, Handling Guidelines*, and Exclusion Fence Specification; Qualifications and Requirements for Authorized Biologists; and Desert Tortoise Authorized Biologist Request Form (September 2009).

   *Please note that the temperature thresholds outlined in the current Handling Guidelines (December 2009) have been revised (see Step 6 below).

2. Where appropriate, indicate when, relative to desert tortoise (DT) active and inactive periods, each specific action would start and end.

3. Clearance surveys of linear facilities (i.e., transmission lines) and subsequent moving of DT out of harm's way can be conducted in any season (see Step 4 below). Clearance surveys of the perimeter fence can also be conducted in any season. However, any DT found during clearance of the perimeter fence should be moved out of harm's way, fitted with a transmitter, and treated as a translocatee (see Step 4 below). Clearance surveys of the power plant site and subsequent DT translocation should only be conducted during DT active periods (see Step 4 below).

4. In order to monitor the effectiveness of translocation to minimize take of DT, monitoring should include an equal number of translocated, residents, and control DTs (see Step 7 below).

5. The USFWS would like to meet with the Applicant, BLM, and CDFG to identify specific (a) translocation sites for DT found in the power plant area, the central water diversion channel, and along the perimeter fence and (b) control sites necessary for monitoring.

**The following is a general procedure that should be detailed in a translocation plan for a large-scale solar project during which fewer than 10 DT are likely to be moved on the day of collection to a translocation site less than 5 km from the point of collection. Please note that if translocation greater than 5 km from the point of collection is necessary, additional steps would be required including, but not limited to, disease testing of all translocated DT and an equivalent number of resident DT at the translocation site.**

**NOTE:** Steps 1 thru 3 may be conducted prior to FWS issuance of a biological opinion.

1. **Estimate the number of DT to be affected by the proposed action** at the project site; provide data on carcasses encountered according to data collected during pre-project surveys. These data will be used to estimate take and assist in identifying potential translocation sites.

2. **Identify potential translocation recipient and control sites** in coordination with Federal and State wildlife and land management agencies, and obtain approval of the landowner/manager for use of the sites. Potential translocation recipient sites should close to or contiguous with the project site (i.e., no barriers to movement) and should have no designated ROWs or other encumbrances, support DT habitat suitable for all life stages, and be managed for conservation so that potential threats from future impacts are precluded in perpetuity. Potential control sites should be equivalent in habitat type/quality DT population size/structure as the project and recipient sites. Control sites should not have been previously used as a recipient site for other projects and should be a minimum distance of 10km from the project site if the site is unfenced or no substantial anthropogenic or natural barrier exists to prevent the interaction of control, resident, and translocated DT.

3. **Confirm presence of DT (live DT or sign) at agreed upon recipient and control sites** using the most recent USFWS pre-project DT survey protocol; include data on carcasses. Incidental observations of clinical signs of disease[1] should be noted during the surveys to estimate general abundance of disease at potential recipient and control sites. If these surveys are conducted prior to FWS issuance of a biological opinion, no handling of DT is authorized.

**NOTE:** Steps 4 thru 8 may be conducted upon FWS issuance of a biological opinion.

4. **Conduct clearance surveys for linear facilities (i.e., transmission lines) and perimeter fencing during any season. Conduct clearance surveys of the power plant site during**

[1] Clinical signs of upper respiratory tract disease: nasal or moderate-to-severe ocular discharge, eroded nares, partially or completely occluded nares. Signs of dried nasal and ocular discharge must be obvious and should not be confused with dried dirt or mud on the beak and nares from recent rain events. Clinical signs of herpesvirus: plaques on the tongue, palate, and other parts of the mouth.

**DT active periods.** Clearance surveys of the power plant site are complete when no additional DTs are detected after two consecutive surveys.

Linear Facilities - DT found during clearance of linear facilities should be moved out of harm's way following clearance and handling procedures outlined in the FWS *Desert Tortoise Field Manual* (December 2009) or more current guidance.

Perimeter Fence - All DT found during clearance surveys of the perimeter fence will be treated as translocatees and moved to the translocation site during the active season. If clearance of the perimeter fence is conducted outside of the DT active season, then any DT found should be moved out of harm's way but to the inside of the perimeter fence (i.e., onto to power plant site), be fitted with a transmitter, blocked into an artificial or empty natural burrow and monitored. Boards used to block the burrow should be placed so that the animal can exit if desired and be removed the last week of February. The blocked burrow should be monitored one time per day during the first week then one time per week for the next three weeks, then two times per month until power plant clearance surveys. If clearance of the perimeter fence is conducted during the DT active season, then follow procedures outlined below for clearance of the power plant site.

Power Plant Site - DT found during clearance of the power plant site (or during clearance of the perimeter fence during the active season) should be given a health assessment[2]. If no clinical signs of disease, these animals should be assigned a unique identifier (provided by USFWS), fitted with a transmitter by qualified personnel approved by the USFWS (via the biological opinion) and State wildlife agencies, moved to the agreed upon translocation site following clearance and handling procedures outlined in the FWS *Desert Tortoise Field Manual* (December 2009) or more current guidance, and monitored following procedures outlined in Step 7 below.

DTs showing clinical signs of disease should be sent to the Desert Tortoise Conservation Center (DTCC) in Las Vegas where they will undergo further assessment, treatment, and/or necropsy; some DT will be rehabilitated and potentially be eligible for subsequent release (advance coordination with the USFWS, State wildlife agencies, and the DTCC is recommended to facilitate prompt transport of DTs). Project proponents will be charged a flat fee of $9,000 for each DT sent to the recovery center commensurate with the cost to provide housing, care, treatment, and other services for 5 years ($3,000 for year 1, $1,500 for years 2-5). No additional funds will be requested from project proponents for DTs remaining at the center after 5 years

Data collected during clearance surveys should include detailed information about the exact site of collection (UTMs from GPS, description of location, etc.) and will be standardized for all projects.

[2] A health assessment will include a physical inspection (*i.e.*, notation of clinical signs of acute disease infection, body mass, and carapace measurements). These assessments can only be conducted during the DT active season.

5. **If DT are found during clearance of the perimeter fence or power plant site, then locate an equal number of DT at the agreed upon recipient and control sites and monitor following procedures outlined in Step 7 below.**
6. **Translocate individual DT on the day of collection under the following conditions:**

- Translocations should occur in spring (approximately April-May), but fall (August-October) may also be considered.
- Releases should occur when temperatures range from 18-30°C (65-85°F) and are not forecasted to exceed 32° (90°F) within 3 hours of release and 35° (95°F) within 1 week of release. Additionally, daily low temperatures should not be cooler than 10° (50°F).
- DTs should be transported to their release sites in clean, ventilated protective containers. If re-used, these containers must be disinfected using 10 percent household bleach or other solution approved by USFWS and the State wildlife agency before being used for another DT.
- Within 12 hours before release, all DTs to be translocated should be hydrated according to existing protocols.
- DTs should be released at unoccupied, shelter sites. Shelters include unoccupied soil burrows, spaces within rock outcrops, caliche caves, and the shade of shrubs.
- Data fields will be standardized and provided to the project proponent by USFWS during the planning process.

7. **Implement post-translocation monitoring (5-yr minimum) and adaptive management**. In order to monitor the effectiveness of translocation to minimize take of DT, monitoring should include an equal number of translocated, residents, and control DTs. For example, if six DT are to be translocated, six resident, and six control DTs should also be monitored at even sex ratios (regardless of whether or not the group of translocatees has an even sex ratio), if possible. In situations where fewer resident DTs exist at the recipient site than translocatees being added (likely in targeted depleted areas), all residents should be monitored. When applicable, prior to the translocation, resident and control DTs should be located monthly at minimum.

Frequency of Monitoring: Monitoring refers to pinpointing the exact location of the DT and attempting to view it without disturbance unless entrapment or a scheduled body condition assessment requires handling.

Translocated DTs (with transmitters) should be monitored as follows:

- Once within 24 hours of release,
- A minimum of twice weekly for the first two weeks, and
- A minimum of once a week during the active season (approximately March through early November) and once every other week from November to February starting after the third week of release.

Resident and control DTs should be monitored as follows:

- A minimum of once a week during the active season (approximately March through early November); and

- A minimum of once every other week from November to February.

Annual assessments of condition (*i.e.*, measurements of body mass and carapace, health assessment, calculation of body condition) should be conducted both prior to and subsequent to over-wintering. Any health problems observed (*e.g.*, rapid declines in body condition, perceived outbreaks of disease, mortality events) should be reported to the USFWS and State wildlife agency such that implementation of approved adaptive management measures occurs in a timely fashion. Mortalities should be investigated as thoroughly as possible. Information on health concerns or mortalities, including DT unique identifier, location, and cause of death (if determined) should be provided to USFWS and State wildlife agency upon discovery (verbally within 48 hours or via email within 5 business days). Fresh carcasses should be submitted for necropsy (details to be provided during project planning and coordination with USFWS) and the cost covered by the proponent.

In addition to monitoring the DTs, we recommend that vegetation transects at representative sampling locations within the site be repeated annually to capture potential changes in habitat characteristics. At a minimum, monitoring of the annual species component is recommended to identify changes in forage availability. The USFWS will provide additional guidance to project proponents on appropriate methods of vegetation monitoring and sampling during the consultation process.

Explicit triggers for implementation of adaptive management will be project specific and developed through coordination with USFWS and State wildlife agencies. Upon conclusion of the 5-year monitoring period, health assessments should be performed on all remaining monitored DTs and transmitters should remain attached until the USFWS and State wildlife agencies have determined whether or not further action is warranted at the site.

8. **Compile and synthesize data throughout duration of translocation**. The DT translocation plan should outline Reporting Requirements including who will be responsible for submitting the information collected under the plan, the type of information that will be submitted, and how often and when the information will be submitted to the appropriate agencies.