

Appendix 1-1

Las Camas Solar Project Proposed Draft Habitat Conservation Plan (HCP) Avoidance and Minimization Measures

The Habitat Conservation Plan (HCP) and state incidental take permit for the solar project is being prepared as part of the incidental take permit process in coordination with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). The Draft HCP will be released for public review and comment by USFWS in accordance with Endangered Species Act (ESA) requirements. This appendix lists the proposed avoidance and minimization measures that are anticipated to be included in the Draft HCP to avoid or minimize the taking of covered species. The primary focus of these measures is to avoid or minimize take of individual kit foxes (i.e., death, injury, or harm) and impacts on habitat, such as grassland areas that may be affected by covered activities. While substantial changes to these measures are not anticipated, it is noted that these measures are subject to change based on feedback from USFWS and CDFW.

Any changes to the HCP affecting any impact identified in this Draft SEIR will be identified and evaluated in the Final SEIR along with any required changes to mitigation measures identified in the Draft SEIR.

Project Design Features

The following measures will be incorporated into the design of the project to avoid and minimize impacts on San Joaquin kit fox.

- **PD-1:** Security fences installed on the perimeter of the solar facility shall be designed to enable passage of kit foxes and their prey, while impeding the passage of kit fox predators, such as coyotes and larger domestic dogs. All fencing will leave a 4- 6-inch opening between the fence mesh and the ground. The bottom of the fence fabric will be knuckled (wrapped back to form a smooth edge) to protect wildlife that pass under the fence. Where topography results in a ground to fence fabric gap that is larger than 4- to 6-inches (e.g., at drainages or transitions between flat and steep slopes), hog-wire fencing with 4 x 4-inch openings may be used to achieve permeability. Fences shall be monitored regularly to ensure that any damage or vandalism is quickly repaired.
- **PD-2:** Areas of the project site not permanently converted to infrastructure or roads shall be reseeded as grassland and managed (e.g., grazed or mowed) to allow annual grassland species and prey species to recolonize the project site.
- **PD-3:** Three underground utility easements remain open with a total area of approximately 92.79 acres have been identified to facilitate wildlife passage through the permit site (Figure 2-4).
- **PD-4:** Lighting would be used from dusk to dawn for the project substation to conform to National Electrical Safety Code (NESC) requirements and all applicable Merced County outdoor lighting codes. Other lighting requirements specifically designed to minimize effects on San Joaquin kit fox will include:

- The number of lighting fixtures shall be limited to the minimum required for worker safety and site security.
- All illuminated areas not occupied on a continuous basis shall have switches to light the area only when it is occupied.
- All lighting shall be designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary and neither the lamp nor the reflector interior surface would be visible from outside the footprint of the facilities. Narrow spectrum bulbs shall be used to limit the range of species affected by lighting. All lighting poles, fixtures, and hoods shall be of dark-colored material.
- Unless determined necessary by Merced County for safety or security reasons, any signs at the entry of the project site shall not be lit (reflective coating is acceptable).

General Avoidance and Minimization Measures

The following avoidance and minimization measures will be implemented when covered activities occur.

■ **GEN-1:** All employees, consultants, and contractors shall receive environmental training prior to their participation in construction activities. The avoidance and minimization measures will be outlined in the training. All personnel on the construction site shall follow these measures to avoid or reduce effects on covered species. The training shall include a printed handout (printed in both English and Spanish) that will be handed to all personnel. All employees and contractors will be required to sign a sign-in sheet indicating that they attended the training and understand the material presented. The handout will contain the following information.

- Descriptions of the San Joaquin kit fox (including photographs) and its habitat needs.
- A current report of the occurrences of the San Joaquin kit fox in the permit area.
- An explanation of the protected status of San Joaquin kit fox under the federal and state endangered species acts and legal obligations.
- Avoidance and minimization measures that shall be followed to reduce impacts on San Joaquin kit fox during project activities for which the personnel is engaged: construction, O&M, and/or decommissioning, and the penalties for not following the avoidance and mitigation measures.
- Instructions on the procedures that will be implemented if a San Joaquin kit fox is found onsite, including contact information of a biological monitor, USFWS, and CDFW personnel.

■ **GEN-2:** At least 30 days prior to the onset of ground-disturbing (i.e. any activity which requires removal or relocation of topsoil and/or subsoil) construction, O&M, or decommissioning activities, permittee will submit to the Service for approval the name(s) and credentials of a supervisory project biologist responsible for overseeing biological avoidance and minimization measures. If needed, the supervisory project biologist would oversee additional project biological monitors.

- **GEN-3:** At least one approved biological monitor will be required onsite while ground disturbing construction activity is occurring. Monitoring may cease once all ground disturbing construction activity has ceased.
- **GEN-4:** Biological monitors will have the authority to halt construction activities and shall do so in the following instances: 1) the monitor observes activities that may result in mortality or harm to covered or other listed species or 2) the monitor observes any of the avoidance and minimization measures described in this HCP are not being implemented. Work shall not resume until the situation has been rectified to the satisfaction of the supervisory project biologist. If a biological monitor orders a halt to construction activities, he or she shall immediately contact the supervisory project biologist for further instructions. As directed by the biological monitor, construction activities may resume elsewhere so long as those activities comply with all relevant avoidance and minimization measures described herein.
- **GEN-5:** All construction-related activities shall occur within designated work areas, including designated traffic and access routes.
- **GEN-6:** All construction activities shall terminate 30 minutes before sunset and shall not resume until 30 minutes after sunrise, except as described below. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located. Some discrete maintenance activities must occur when the facility is not generating power, at night. Those activities are authorized provided they follow all other applicable avoidance and minimization measures described herein.
- **GEN-7:** To prevent inadvertent entrapment of San Joaquin kit foxes or other animals during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials. Any covers that are installed will be able to be removed quickly by construction staff should the need arise. If covers require heavy equipment to lift them, some means of inspecting the inside of the hole shall be installed (e.g., Plexiglas windows) so that biological monitors can ensure no animals are trapped inside. Holes and trenches less than 2 feet deep may either be covered or be provided with escape ramps at a rate of one ramp every 100 feet. Escape ramps may be constructed of earth fill or wooden planks with a slope no steeper than 45 degrees. If wooden planks are used, perpendicular grooves or rungs shall be provided to aid in traction. All holes and trenches, whether covered or uncovered, more than 2 feet deep shall be inspected prior to the start of the construction day, around midday, and at the end of each construction day as they are being covered for the night. These inspections shall occur whether or not work is occurring in that area. Before holes or trenches are filled, they shall be thoroughly inspected for trapped animals. Work shall not continue until trapped animals have moved out of or are removed from the open trench and relocated to a location outside of the active construction area.
- **GEN-8:** San Joaquin kit fox are attracted to den-like structures such as stored pipes. All construction pipes, culverts, or similar structures with a 4-inch or greater diameter that are stored at the construction site for one or more overnight periods shall be closed off at both ends and thoroughly inspected before they are buried, capped, or otherwise used or moved in any way. If a kit fox is discovered in a pipe, that section of pipe shall not be moved until the kit fox is allowed to leave on its own volition or the USFWS and CDFW have been consulted.
- **GEN-9:** All materials staged on the project site that have the potential to attract denning kit fox shall be inspected thoroughly by the biological monitor daily and prior to being moved.

- **GEN-10:** Speed limits within the project site shall be limited to 15 miles per hour (mph) during the day and 10 mph at night. During construction, all project-related vehicles and equipment shall be restricted to established roads, construction areas, and designated staging areas.
- **GEN-11:** Food-related trash shall be disposed of in closed containers and removed from the project site at least once daily.
- **GEN-12:** Construction personnel will not be permitted to bring pets or firearms onto the project site. Firearms may be carried by authorized security personnel if deemed necessary during construction or operations, so long as security personnel attend all training required herein.
- **GEN-13:** Within 1 working day of finding a dead, sick, or injured covered species on the project site, the biologist shall notify the USFWS and CDFW orally and within 3 working days in writing. Notification in writing shall include the date, time, and location where the specimen was found and information about the conditions under which it was found.
- **GEN-14:** A map of the location of all observations of covered species observed during preconstruction surveys and during monitoring shall be prepared and submitted to the USFWS and CDFW. This information will also be submitted to the California Natural Diversity Database.
- **GEN-15:** A Revegetation Plan shall be prepared for the project. Prior to project commercial operation date, all areas temporarily subject to ground disturbance, including staging areas, will be reseeded or otherwise treated to achieve a revegetated state according to the timelines outlined in the Revegetation Plan. The plan will be informed by and consistent with any requirements under the Stormwater Pollution Prevention Plan for the project.
- **GEN-16:** Rodenticide use on site is prohibited.

San Joaquin Kit Fox-Specific Avoidance and Minimization Measures

The following measures will be incorporated during construction, O&M, and decommissioning of the facility to avoid and minimize effects on San Joaquin kit fox. The guidelines described in U.S. Fish and Wildlife Service 2011, or the most recent version of these guidelines will be implemented, except as modified by other measures below.

- **SJKF-1:** A preconstruction survey shall be conducted before the beginning of ground disturbance, or any activity likely to affect San Joaquin kit fox. The survey may be targeted in specific areas of the project planned for ground disturbing activities, and multiple surveys may be conducted to align with construction phasing. The biologists shall conduct den searches by systematically walking transects through the project site. Transect distance will be based on the height of vegetation such that 100% visual coverage of the project site is achieved. If a potential or known den is found during the survey, the biologist will measure the size of the den, evaluate the shape of the den entrances, and note tracks, scat, prey remains, and recent excavations at the den site. Dens will be classified into the den status categories defined by U.S. Fish and Wildlife Service (2011). A report of the preconstruction survey shall be submitted to the USFWS.
- **SJKF-2:** If potential San Joaquin kit fox den sites are located on the project site and within 200 feet of active construction, during or prior to ground disturbing activities, the status of the dens shall be evaluated and they shall be monitored by an approved biologist. The biologist will use an infrared beam camera and track plates or powder, to determine if the den is currently being used. The camera and track plates will be placed at the burrow for a minimum of 5 consecutive days. Other

signs of occupancy (e.g., scat, fur) will be searched for in and around the burrow and, if found, documented with photographs.

- **SJKF-3:** Construction activities shall be prohibited within exclusion zones around suitable burrows, based on their type. There would be an exception for vehicle traffic on roads that existed prior to discovery of the suitable burrow. The configuration of exclusion zones around San Joaquin kit fox dens should have the radius measured outward from the entrance or cluster of entrances, as follows.
 - *Potential den:* a 50-foot avoidance buffer will be used when kit fox occupation is expected but not confirmed.
 - *Known den:* a 100-foot avoidance buffer will be used if kit fox activity is observed.
 - *Natal/pupping den:* USFWS must be contacted for technical advice but buffer would be at least 100 feet and not exceed 200 feet.
- **SJKF-4:** When potential den sites are monitored as described above in measure SJKF-2, and it is determined that kit foxes are not using a den site, it will be demoted to the status of unoccupied burrow. Unoccupied burrows can be collapsed under the supervision of a biologist, provided no other listed species are inside, or they can be temporarily blocked with sandbags or similar methods, so that they do not become occupied during construction. This latter approach is preferred for unoccupied burrows that will not be excavated during construction activities.
- **SJKF-5:** The Applicant shall install artificial escape tunnels every 500 feet along the western boundary of the project fence and every 500 feet along each of the movement corridors inside of the project fence. The escape tunnels should be of similar design as those presented in Harrison et al. (2011).
- **SJKF-6:** The supervisory project biologist will be the contact for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The supervisory project biologist will be identified during the employee education program and their name and telephone number shall be provided to all project employees.
- **SJKF-7:** Immediately upon notification to the supervisory project biologist of an inadvertent killing or injury to a San Joaquin kit fox, the supervisory project biologist will contact the CDFW State Dispatch at (916) 445-0045 and the USFWS, Endangered Species Division, Sacramento California at (916) 414-6600.