



December 10, 2010

Mr. Randy Kinder
Chief Operating Officer
Califia Farms/Sun Pacific
33374 Lerdo Highway
Bakersfield, CA 93308

RE: Reconnaissance-level Biological Survey Conducted for Califia Farms/Sun Pacific New Facility/Boiler Project in Central Kern County, California.

Dear Mr. Kinder,

At the request of Califia Farms/Sun Pacific, Quad Knopf, Inc. (Quad Knopf) was retained to conduct a reconnaissance-level biological survey of the new facility/boiler project located in western Kern County, California. This biological survey was conducted for the proposed new facility/boiler project along Lerdo Highway. The area surveyed for the new facility/boiler (hereafter referred to as the proposed project area) is located in Section 11, Township 28 South, Range 26 East, Mount Diablo Base and Meridian (MDB&M), within the Famoso U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. **Figure 1** depicts the proposed project area.

The project area is currently an active construction site which has been fully enclosed by chain link fencing and recently graded to bare mineral soil. The project location is void of any vegetation or habitat, and is bordered by a citrus packing house to the west, Lerdo Highway to the south and active vineyards to north and south.

A search of the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB 2010) was conducted to identify reported historical occurrences of special-status plant and wildlife species and sensitive habitats within the Famoso USGS 7.5-minute topographic quadrangle, as well as, eight surrounding quadrangles (Oildale, Rosedale, Rio Bravo, Wasco, Pond, McFarland, Deepwell Ranch, and North of Oildale). The results of the CNDDDB inquiry were subsequently reviewed to evaluate the potential for occurrence of special-status species within or near the proposed project area. The California Native Plant Society's (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2010) was also reviewed to provide information on rare plants anticipated to occur in the nine quadrangles.

In addition to the review of pertinent literature, a Quad Knopf environmental scientist conducted the field survey of the proposed project area and a 250-foot buffer zone on December 6, 2010. Although species-specific surveys were not conducted as part of this project, the reconnaissance-level field survey was conducted in an attempt to identify known, occupied, and potential San Joaquin kit fox dens on the site and within a 250-foot buffer zone. The field survey was also conducted to identify sign or presence of other special-status plant and wildlife species. No sign of (e.g., dens, scat, tracks, dry plant remains, small or large mammal burrows, prey remains etc.) any special-status species as observed during the field survey. Photographs taken during the field survey of the proposed project area and the associated 250-foot buffer zone are attached (**Photoplates**).

Special-status plant and wildlife species include those listed as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA), species proposed for listing, species of special concern, and other species identified either by the U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS), CDFG, CNPS, or the Native Plant Protection Act (NPPA) as unique or rare, and which have the potential to occur within the project area.

Eight special-status plant species, eleven wildlife species, and one sensitive habitat community were identified by the CNDDDB and CNPS databases as occurring within the Famoso and eight surrounding quadrangles. These nineteen species and one community, including their status, habitat requirements, and potential to occur within the project area are presented in **Table 1**. Only those species whose distributional ranges overlap those of the project site and/or have similar habitat requirements to habitats present at the site were selected from this list for further evaluation. Of these species, two have either a “moderate” or higher potential to occur in the project vicinity. The remaining species listed as “low” or “absent” are not expected to occur on or adjacent to the proposed project due to specific habitat requirements not identified in the project area. Species that have been documented as “occurs” were either observed directly or through observation of the individual species sign (precincts, dens, tracks, scat etc.) within the project area.

TABLE 1
List of Special-Status Plant and Wildlife Species

Species	Habitat	Status	Potential Occurrence in Project Area
Wildlife			
American badger (<i>Taxidea taxus</i>)	Abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Needs sufficient food source of burrowing rodents, friable soils, and open, uncultivated grounds.	CSC	Low: CNDDDB records occur within 5 miles of the project area. Habitat for the American badger does not exist on the project area. No American badgers or its sign were observed during the biological survey.

Species	Habitat	Status	Potential Occurrence in Project Area
Burrowing owl (<i>Athene cunicularia</i>)	Occurs in open, dry grasslands, deserts, and ruderal areas along ditch levees. Requires burrows for refuge and subterranean nesting; frequently utilize California ground squirrel burrows.	CSC, MBTA	Low: CNDDDB records indicate occurrences of burrowing owl within 3.5 miles of the project area. Habitat for the burrowing owl does not exist on the project area. Burrowing owls were not observed during the biological survey.
Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low lying topographic relief.	FE, CE	Low: CNDDDB records indicate occurrences of blunt-nosed leopard lizard within 3 miles of the project area. Habitat for the blunt-nosed leopard lizard does not exist on the project area.
California horned lark (<i>Eremophila alpestris actia</i>)	Desert, foothills and dry grasslands near sea level. Usually found where trees and shrubs are absent.	DFG:WL, MBTA	Low: No CNDDDB records occur within 5 miles of the project area. Habitat for the California horned lark does not exist on the project area. California horned larks were not observed during the biological survey.
Hoary bat (<i>Lasiurus cinereus</i>)	Frequents wooded areas where it roosts in the open by hanging from a branch or twig.	WBWG:M	Low: No CNDDDB records occur within 5 miles of the project area. No roosting habitat for the hoary bat occurs within the vicinity of the project area. No evidence of hoary bat was observed during the biological survey.
Kern shoulderband (<i>Helminthoglypta callistoderma</i>)	Little known about habitat. Known to occur in vegetation at waters edge	--	Absent: No CNDDDB records occur within 5 miles of the project area. No habitat for the Kern shoulderband exists within the project area.
San Joaquin pocket mouse (<i>Perognathus inornatus inornatus</i>)	Annual grassland and desert shrub communities, especially where plant cover is not dense and soils are friable.	CSC	Low: CNDDDB records exist within 1 mile of the project area. Habitat for species is not present within project area. The species was not observed during biological survey.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	Chenopod scrub, grasslands, open areas with scattered shrubby vegetations; sometimes forage in agricultural areas. Requires loose-textured sandy soils for burrowing, and suitable prey base.	FE, CT	Moderate: San Joaquin kit fox have historically been documented within 5 miles of the project area. Kit fox are known to inhabit disturbed urban areas and could potentially utilize the project site for foraging, denning or as transients. No sign (scat, tracks, prey remains etc) were observed on the project area.
Silvery legless lizard (<i>Anniella pulchra pulchra</i>)	Sandy or loose loamy soils under sparse vegetation of beaches, chaparral, pine-oak woodlands, sycamores, cottonwoods on riparian terraces.	CSC	Low: No CNDDDB records indicate occurrences of the species within 5 miles of the project area. Habitat for the silvery legless lizard does not exist on the project area.
Tipton kangaroo rat (<i>Dipodomys nitratiodes nitratioides</i>)	Saltbrush scrub and sink scrub communities. Needs soft friable soils which escape seasonal flooding.	FE, CE	Low: No CNDDDB records indicate occurrences of the species within 5 miles of the project area. Habitat for the Tipton kangaroo rat does not exist on the project area.

Species	Habitat	Status	Potential Occurrence in Project Area
Western mastiff bat (<i>Eumops perotis californicus</i>)	Diurnal refuge in crevices in rocks that form vertical or nearly vertical cliffs. The roost entrances typically are horizontally oriented, have moderately large openings, and face downward so they can be entered from below.	CSC, WBWG:H, BLMS	Low: No CNDDDB records for western mastiff bats occur within 5 miles of the project area. No suitable roosting habitat was identified during the biological survey.
Plants			
Bakersfield cactus (<i>Opuntia basilaris</i> var. <i>treleasei</i>)	Chenopod scrub, valley and foothill grassland, cismontane woodland; coarse or cobbly well-drained granitic sand on bluffs, low hills, and flats within grassland <i>Elev: 90 – 550m</i> <i>Blooms: Apr – May</i>	FE, CE, 1B.1	Absent: Although CNDDDB indicate occurrences of the species within 5 miles of the project area, habitat for the species does not occur and no individuals were identified during the biological survey.
California jewelflower (<i>Caulanthus californicus</i>)	Chenopod scrub, valley and foothill grassland, pinyon juniper woodlands. <i>Elev: 70 – 1000m.</i> <i>Blooms: Feb – May</i>	1B.1	Absent: No CNDDDB records of California jewel flower occur within 5 miles the project area, habitat for the species does not occur and no individuals were identified during the biological survey.
California satintail (<i>Imperata brevifolia</i>)	Chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkaline), and riparian scrub (mesic) <i>Elev: 0 – 500m</i> <i>Blooms: Sep – May</i>	2.1	Absent: No CNDDDB records of California jewel flower occur within 5 miles the project area, habitat for the species does not occur and no individuals were identified during the biological survey.
Earlimart orache (<i>Atriplex erecticaulis</i>)	Valley and foothill grassland. <i>Elev: 40 - 100m.</i> <i>Blooms: Aug – Sept</i>	1B.2	Absent: No CNDDDB records of California jewel flower occur within 5 miles the project area, habitat for the species does not occur and no individuals were identified during the biological survey.
Hoover's eriastrum (<i>Eriastrum hooveri</i>)	Chenopod scrub, pinyon and juniper woodland, valley and foothill grassland. <i>Elev: 50 – 915m</i> <i>Blooms: Mar – Jul</i>	4.2	Absent: Although CNDDDB indicate occurrences of the species within 5 miles of the project area, habitat for the species does not occur and no individuals were identified during the biological survey.
Horn's milk-vetch (<i>Astragalus hornii</i> var. <i>hornii</i>)	Meadows and seeps, playas and lake margins; alkaline soils. <i>Elev: 60 – 850m</i> <i>Blooms: May – Oct</i>	1B.1	Absent: CNDDDB does not indicate occurrences of the species within 5 miles of the project area, habitat for the species does not occur and no individuals were identified during the biological survey.
Recurved larkspur (<i>Delphinium recurvatum</i>)	Alkaline soils in chenopod scrub, cismontane woodlands, and grasslands. <i>Elev: 3 – 750m</i> <i>Blooms: Mar – May</i>	1B.2	Absent: CNDDDB records do not indicate occurrences of the species within 5 miles of the project area. Habitat for the species does not occur within the project area. Recurved larkspur was not identified during the biological survey, although protocol floristic surveys were not conducted.

Species	Habitat	Status	Potential Occurrence in Project Area
San Joaquin woolly threads (<i>Monolopia congdonii</i>)	Chenopod scrub and sandy valley and foothill grasslands. <i>Elev: 60 – 800m.</i> <i>Blooms: Feb. – May</i>	FE, 1B.2	Low: The biological survey was not conducted during optimum time periods for detecting this species and the project site is currently void of all vegetation. CNDDDB records indicate occurrences of woolly threads within project area.
Natural Vegetation Communities of Concern		Potential Occurrence in Project Area	
Valley Saltbush Scrub		Valley Saltbush Scrub is documented by the CNDDDB as occurring approximately 6 miles southwest the project area. Valley Saltbush Scrub was observed in Section 7, T29S, R26E. This vegetation community does not occur in the project area.	

Sources:

California Department of Fish and Game. 2010. California Natural Diversity Database, California Department of Fish and Game, Sacramento, CA.
 CNPS. 2010. Online Inventory of Rare and Endangered Plants of California. California Native Plant Society. Sacramento, CA.
 U.S. Fish and Wildlife Service. 2010. Sacramento Office Online Endangered Species Lists. Sacramento, CA.

Abbreviations:

FE	Federal Endangered Species
FT	Federal Threatened Species
FP	California Department of Fish and Game Fully Protected
MBTA	Species Protected Under the Auspices of the Migratory Bird Treaty Act
CE	California Endangered Species
CT	California Threatened Species
CSC	California Department of Fish and Game Species of Special Concern
Rare	California Rare
BLMS	Bureau of Land Management Sensitive
USFS:S	U.S. Forest Service Sensitive
CDF:S	California Department of Forestry Sensitive
WBWG:M	Western Bat Working Group Medium Priority Species
WBWG:H	Western Bat Working Group High Priority Species

CNPS

1B	California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and elsewhere
2	California Native Plant Society List 2 Species- Plants Categorized as Rare, threatened, or endangered in California, but more common elsewhere.
3	California Native Plant Society List 3 Species- Plants Categorized needing more information about, a review list
4	California Native Plant Society List 4 Species- Plants Categorized as having limited distribution, a watch list.

Degree of Threat Codes:

.1	Seriously endangered in California.
.2	Fairly endangered in California.
.3	Not very endangered in California.

The “potential for occurrence” ranking is based on the following criteria:

- **Absent.** Species was not observed during focused surveys conducted at an appropriate time for identification of the species or species is restricted to habitats that do not occur within the proposed project.
- **Low.** No records exist of the species occurring within the proposed project or its immediate vicinity and/or habitats needed to support the species are of poor quality.
- **Moderate.** Either a historical record exists of the species within the immediate vicinity of the proposed project (approximately 10 miles) or the habitat requirements associated with the species occur within the proposed project.
- **High.** Both a historical record exists of the species within the proposed project and its immediate vicinity (approximately 10 miles) and the habitat requirements associated with the species occur within the proposed project.
- **Occurs.** Species or their sign was observed within the proposed project at the time of the survey.

Although CNDDDB records indicate sensitive plant species within 5-miles of the project site, no plant species or its remnants were identified during the survey. As illustrated in **Table 1**, sensitive plant species are not expected to occur on the project site based on the sites current conditions. Although the proposed project will occur within an area that does not contain habitat for listed sensitive species and direct impacts to listed wildlife species are not expected to occur, the San Joaquin kit fox has been known to live in areas of heavy disturbance and human inhabitation. As mentioned, direct impacts are not expected; however they are possible and are discussed below.

The San Joaquin kit fox is a federally endangered and a State threatened species. They occur in annual grassland, Valley Saltbush Scrub, and Valley Sink Scrub habitats as well as in agricultural and developed areas. The San Joaquin kit fox can also be found in a variety of non-native, highly disturbed habitats, including canals, vacant lots, commercial and light industrial developments, railroad, power and other utility right of ways, oil fields, parks, golf courses, schools, and storm water retention basins/sumps.

The CNDDDB identifies several occurrences of San Joaquin kit fox within a 1/4 mile of the proposed project area (see **Figure 2**). No San Joaquin kit fox or its sign (scat, tracks, dens, prey remains etc.) was directly observed during the biological survey of the proposed project area. However, the species has the potential to forage, den or occur as a transient throughout the project area. Several project related activities have the potential to result in adverse impacts to the species. Individuals have the potential to be killed or injured by direct vehicle strikes as a result of increased project-related traffic volume, through inadvertent den collapses, or by chemical spills. Individual kit foxes have the potential to be subject to harassment as a result of increased levels of human disturbance and vehicle use.

Based on historical occurrences of San Joaquin kit fox and the fact that kit foxes can occupy highly disturbed and developed urbanized areas such as the project site, it is recommended that a pre-construction biological survey is conducted prior to any additional ground disturbance. This survey should be completed within 30 days prior to any ground disturbing activities and in accordance with measures outlined by the USFWS in the *Standardized Recommendations for the Protection of the San Joaquin Kit Fox Prior to Ground Disturbance*. In addition to implementing these standardized recommendations, the current chain link fencing will be inspected by a qualified biologist to identify any openings that could potentially allow kit fox to enter the site unimpeded. If such openings are identified, repairs will be made or additional fencing will be installed based on recommendations made by the biologist. If San Joaquin kit fox are identified during this pre-construction survey, USFWS and CDFG will be notified for further guidance.

If you have any questions, comments, or require additional information, please do not hesitate to call me at (661) 616-2600.

Sincerely,



Paul D. Rosebush
Senior Associate Environmental Scientist
Quad Knopf Inc.

Attachments:

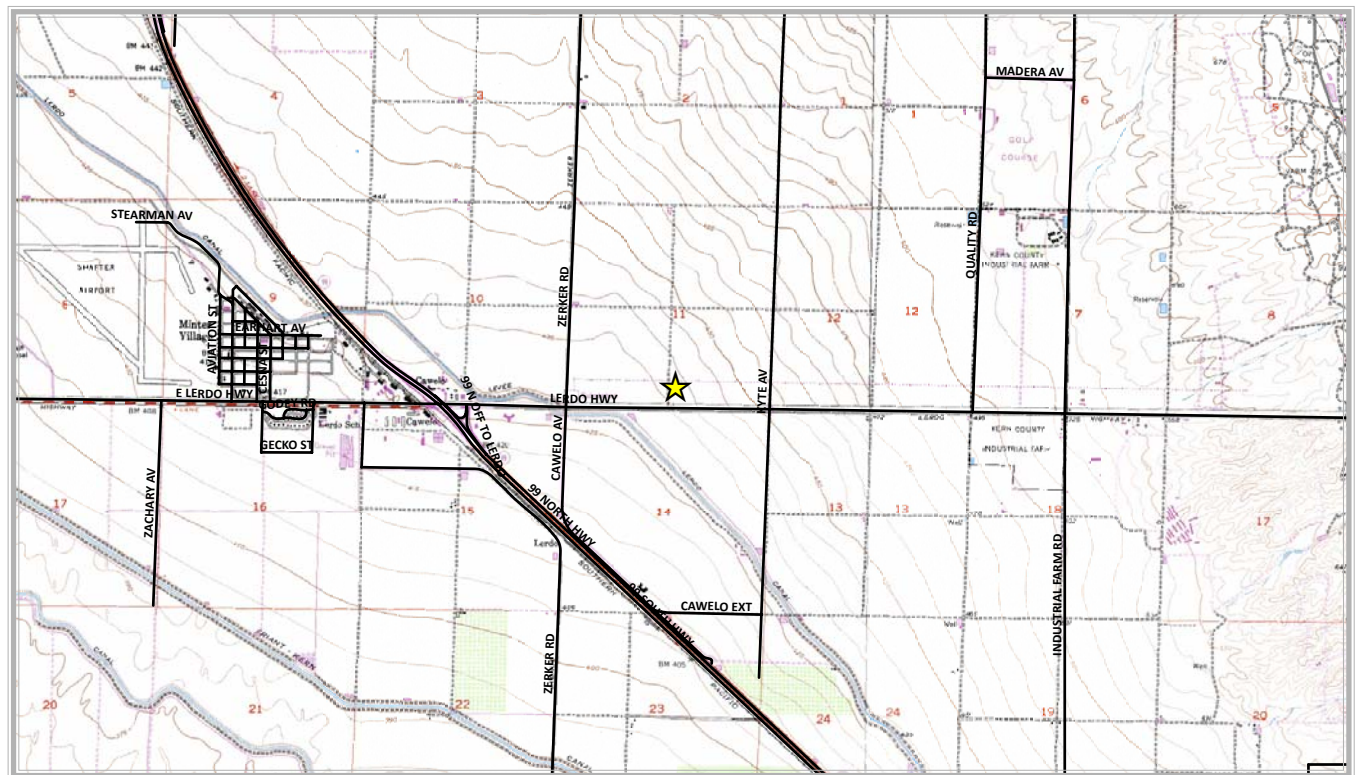
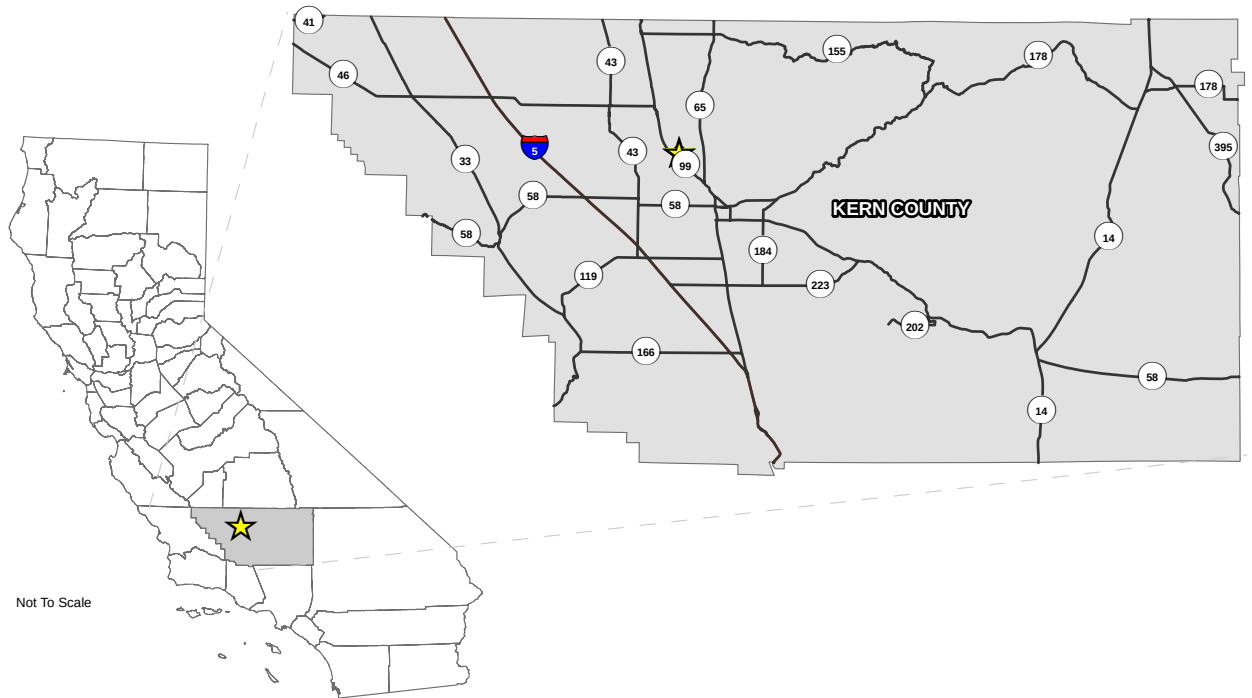
- Figure 1 - General Vicinity and USGS 7.5-Minute Quadrangle Map
- Photoplates
- Figure 2 - California Natural Diversity Database Historical Observations of Special Status Wildlife Species
- Figure 3 - California Natural Diversity Database Historical Occurrences of Special Status Plants
- USFWS Standardized Recommendations for the Protection of the San Joaquin Kit Fox Prior to Ground Disturbance

Cc: Travis Crawford – Quad Knopf
Jeremy Wiggins – Quad Knopf

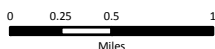
CALIFIA FARMS/SUN PACIFIC

General Vicinity and USGS 7.5-Minute Topographic Map

New Facility/Boiler Project



1:60,000



Project Location



Quad Knopf

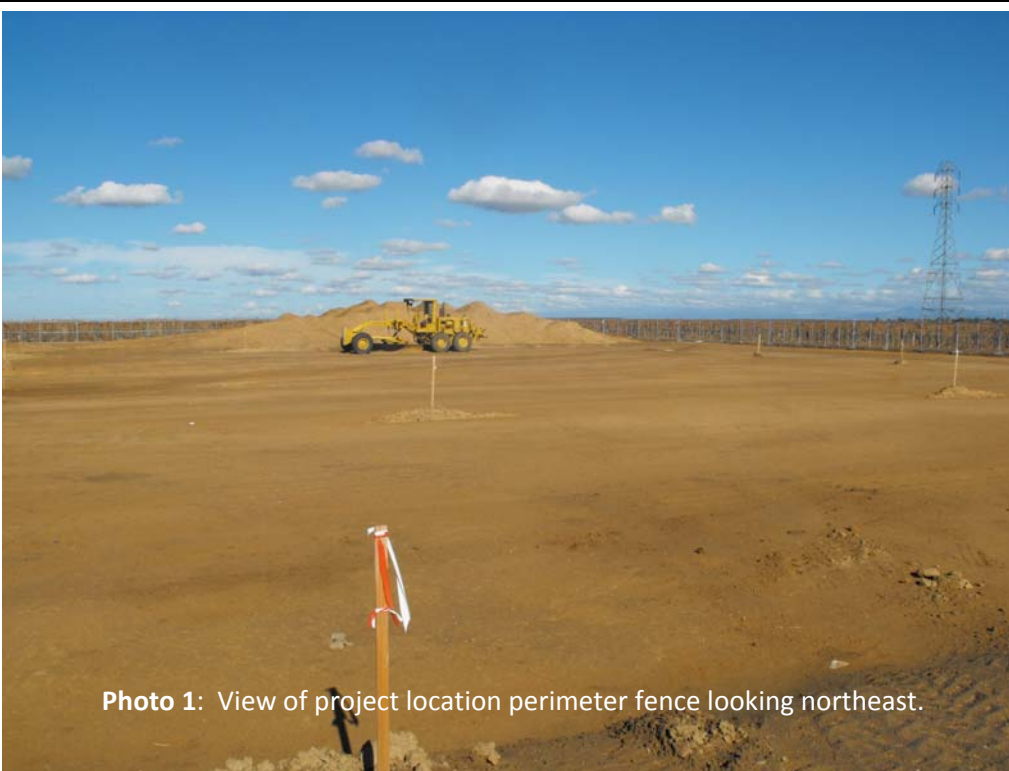
Figure 1



Photo 1: View of project location looking to the east.



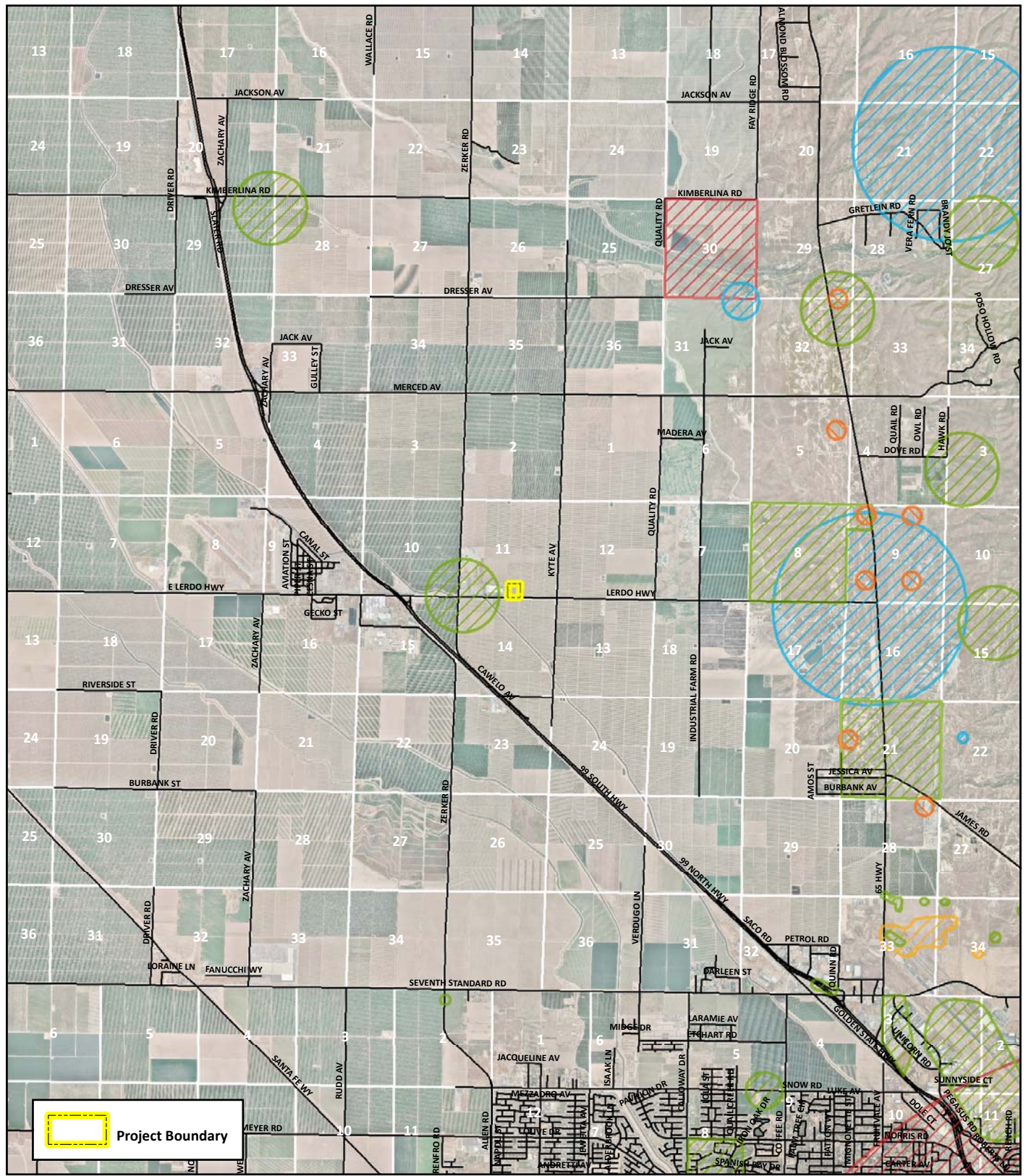
Photo 2: View of project location looking to the west.



CALIFIA FARMS/SUN PACIFIC

California Natural Diversity Database Historical Observations of Special Status Wildlife Species

New Facility/Boiler Project



1:90,000

0 0.375 0.75 1.5
Miles



American badger



San Joaquin kit fox



San Joaquin pocket mouse



Tipton kangaroo rat



blunt-nosed leopard lizard



burrowing owl



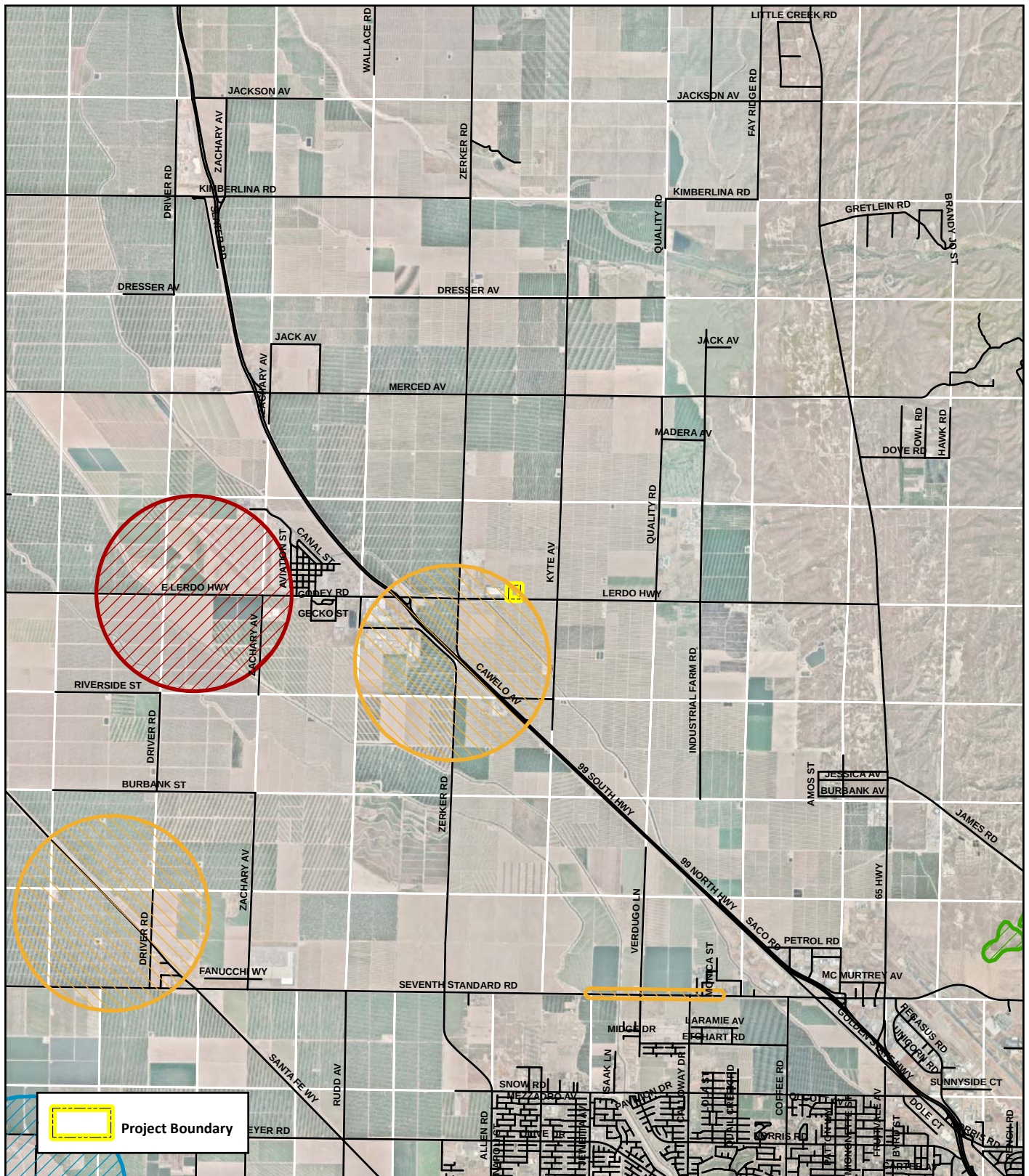
Quad Knopf

Figure 2

CALIFIA FARMS/SUN PACIFIC

California Natural Diversity Database Historical Occurrences of Special Status Plants

New Facility/Boiler Project



 Project Boundary



1:90,000

0 0.375 0.75 1.5
Miles



Bakersfield cactus



San Joaquin woollythreads



Hoover's eriastrum



Valley Saltbush Scrub



Quad Knopf

Figure 3

**U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office
June 1999

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act). Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Formal authorization for the project may be required under either section 7 or section 10 of the Act. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). Such protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

All surveys, den destructions, and monitoring described in this document must be conducted by a qualified biologist. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, biologist(s) must be able to identify coyote, red fox, gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints such as an individual in-fill oil well, communication tower, or bridge repair. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a

future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features, and make recommendations on situating the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then preconstruction surveys should be conducted.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, and assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol).

Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities. If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping dens (active or inactive). Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project, and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances. The following radii are minimums, and if they cannot be followed the Service must be contacted:

Potential den	50 feet
Known den	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted
Atypical den	50 feet

Known den: To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

Potential and Atypical dens: Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Construction and other project activities should be prohibited or greatly restricted within these exclusion zones. Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited within the exclusion zones.

DESTRUCTION OF DENS

Disturbance to all San Joaquin kit fox dens should be avoided to the maximum extent possible. Protection provided by kit fox dens for use as shelter, escape, cover, and reproduction is vital to the survival of the species. Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection. **Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.**

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use. If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities. The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgement of the biologist, the animal has escaped from the partially destroyed den.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then destruction shall cease and the Service shall be notified immediately.

CONSTRUCTION AND OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of project-related disturbance should be minimized. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting project goals to be achieved. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be

included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a 20-mph speed limit in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. To the extent possible, night-time construction should be minimized. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep should be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the procedures under number 13 of this section must be followed.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipe becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped.
4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets should be permitted on project sites.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control

must be conducted, zinc phosphide should be used because of proven lower risk to kit fox.

8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped individual. The representative will be identified during the employee education program. The representative's name and telephone number shall be provided to the Service.
9. An employee education program should be conducted for any project that has expected impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the above-mentioned people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but that after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.
11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for advice.
12. Any contractor, employee, or military or agency personnel who inadvertently kills or injures a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or biologist.
13. The Sacramento Fish and Wildlife Office and CDFG will be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during

project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers given below. The CDFG contact is Mr. Ron Schlorff at 1416 9th Street, Sacramento, California 95814, (916) 654-4262.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.