



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

November 23, 2009

Will Boschman
General Manager
Semitropic Water Storage District
1101 Central Avenue, Wasco, CA 93280-0877

RE: Trapping Results for the 2009 ARRA Pond Poso Spreading Grounds Project, Kern County, California

Dear Mr. Boschman,

The following letter report provides the results of a small mammal trapping inventory conducted at the Pond Poso Spreading Grounds located in northwestern Kern County, California.

Semitropic Water Storage District met with Bureau of Reclamation representatives to tour the site and noticed a burrow (Photoplate 1). The project is obligated to comply with NEPA and is being funded in part by a grant through the American Recovery and Reinvestment Act (ARRA); therefore, the biologist from Reclamation requested that a trapping effort be completed to determine species, specifically whether or not the burrow is occupied by Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*).

The trapping site is located 0.5 miles west of the intersection of Scofield Avenue and Nanawalt Avenue in Section 17, Township 26 South, Range 24 East, Mount Diablo Base and Meridian (MDBM) in the Wasco NW United States Geological Survey (USGS) 7.5 minute quadrangle Figures 1-2). The GPS coordinates are Latitude W35°39.666' Longitude N119°24.585 (Datum WGS84).

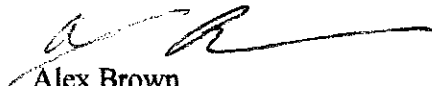
The trapping methodology followed was consistent with the *California Department of Fish and Game Region 4 Approved Survey Methodology for Sensitive Species* (Attached). Sherman live traps were placed in close proximity to the burrow complex from November 16-19, 2009. A total of 20 traps were set each night for four consecutive evenings for an equivalent of 80 trap nights for approximately 4-5 hours in duration. Bait consisted of wild birdseed. Paper towels were provided for insulation purposes should an animal be captured. Temperatures during trapping ranged from 62.3-45.6 degrees Fahrenheit. Wind speed ranged from 0.8-2.9 mph. The Live Oak biologists conducting this small mammal investigation were Waring Laurendine [SC-009207 currently under the California Department of Fish and Game Permit Renewal process] and Alex Brown [SC-004685]. This trapping effort was completed under Mr. Brown's permit.

In summary, one (60 gram) non-reproductive adult female Heermann's kangaroo rat (*Dipodomys heermanni*) was captured (Photoplate 1). If you have any questions or require additional information, please do not hesitate to call us at (661) 369-8762.

Sincerely,



Waring E. Laurendine
Environmental Biologist



Alex Brown
Wildlife Biologist

attachments

cc: Susan Jones, USFWS
Shauna McDonald, USBR
Alex Brown, LOA

Photoplate 1



Burrow location was at the bottom of an intake canal.

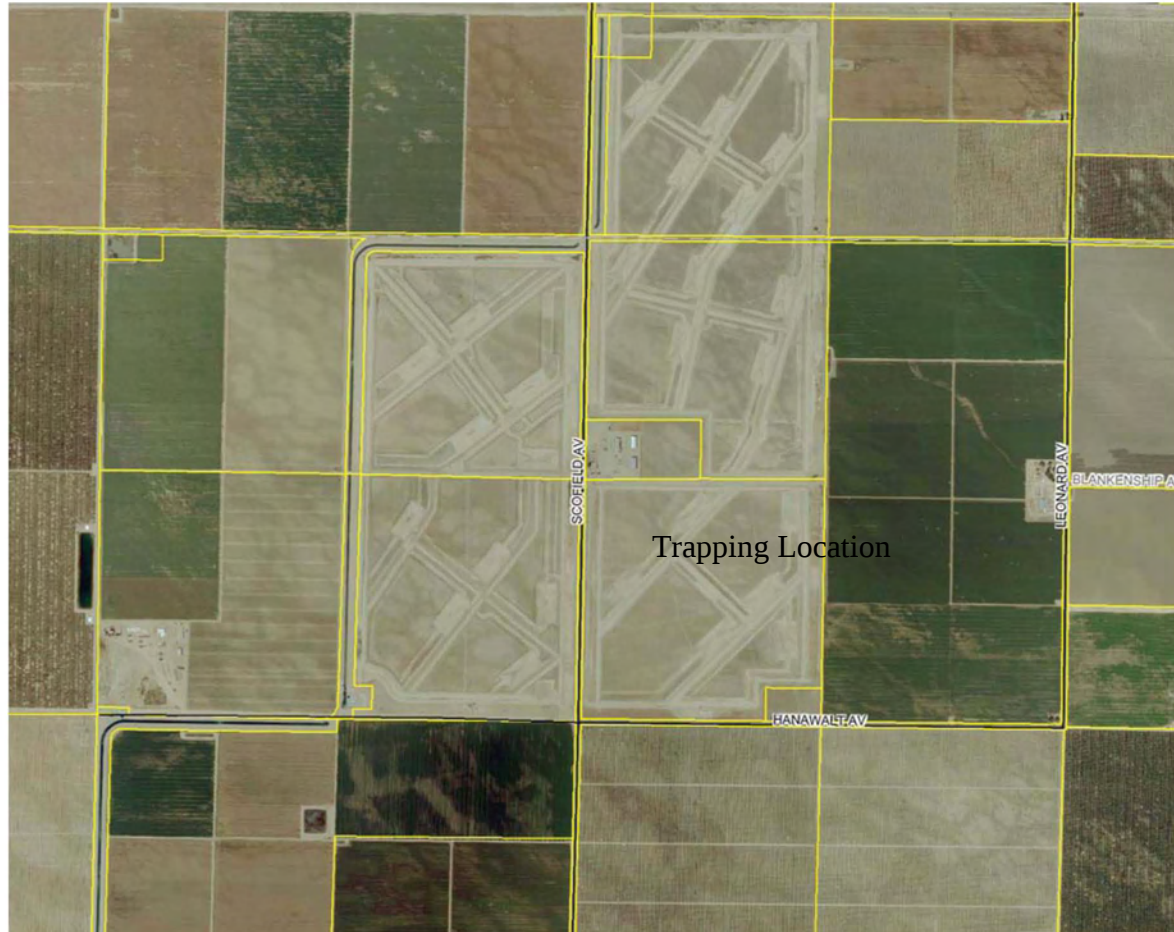


Twenty Sherman live traps were placed around the burrow complex.



One captured non-reproductive adult female Heermann's kangaroo rat.





CALIFORNIA DEPARTMENT OF FISH AND GAME
REGION 4
APPROVED SURVEY METHODOLOGIES
FOR SENSITIVE SPECIES

TIPTON KANGAROO RAT, Dipodomys nitratoides nitratoides

Status: CE, FE

Methods: Live-trapping is the primary method for reliable Tipton kangaroo rat (TKR) identification (Williams, pers. comm.), but in many instances it may be possible to determine the probable presence of TKR on a site based on a variety of factors. Preliminary surveys to determine the probable presence of TKR should be based on range, presence of habitat, burrow characteristics, scat size, track measurements, and skeletal remains found in owl pellets. The locations of suitable habitat, potential burrows, and other sign should be reported to DFG and USFWS to determine if trapping will be necessary. Please note; these criteria can only be used for the determination of presence. The Department will not accept the use of these criteria to determine that the site is unoccupied by TKR.

Live-traps should be placed close to burrow entrances, along runways, and near rodent sign to increase trapping success. Flagging should be located at each trap or trap cluster with the number of traps at that location noted on the flagging to assure that all traps are checked. Traps should be baited with rolled oats, oatmeal, peanut butter or other appropriate bait. Traps should be monitored for four consecutive nights or until presence is confirmed. A minimum of 100 traps per 160 acres should be used.

Timing: TKR are active year around, but optimum activity periods occur from April 1 to June 30. If trapping studies are required by the agencies, the traps should be opened at sunset and checked and closed for the night after approximately four hours. Insulating materials may be placed in traps; but must be changed each time an animal is trapped. Species experts recommend using tightly wadded paper towels as insulating material. Dacron or similar materials should not be used in the traps.

**Proposed Pond-Poso Spreading Grounds Unit of the
Semitropic Groundwater Bank**

Prepared for:

Semitropic Water Storage District

Prepared by:

**QUAD KNOPF, Inc.
5080 California Ave., Suite 400
Bakersfield, CA 93309
(661) 616-2600**

November 22, 2006

Table of Contents

	Page
Introduction	1
Study Methodology	1
Existing Conditions	1
Disked Agricultural Fields	2
Field or Row Crops	2
Orchards	2
Vineyards	2
Poso Creek	2
Results: Important Biological Resources in the Project Area	3
Project Impacts	3
Cumulative Impacts	3
Mitigation Measures	3
Figure 1	6
Photoplate 1	7
Photoplate 2	8
Table 1	9
Table 2	11
Figure 2	13
Figure 3	14
Letter from Army Corps of Engineers	15
USFWS Kit Fox Recommendations	17

Project Description

The Semitropic Water Storage District (SWSD) proposes to acquire lands to develop two and a quarter Sections into the Pond-Poso Spreading Grounds Unit of the Semitropic Groundwater Bank in Township 26 South, Range 24 East in the Pond and Wasco NW USGS 7.5-minute quadrangles (Figure 1, Photoplates). The proposed location for this development is located approximately four miles North of the city of Wasco and encompasses the South half of Section 8, the Southwest quarter of Section 9, the West half of Section 16, and Section 17. Two parcels have been excluded from this area: the South half of the Southwest quarter of the Northwest quarter section of Section 16; and the 5 acres in the Southeast quarter of the Southwest quarter of Section 16 (Figure 1). Future phases of this project could include facilities in Sections 2 through 5, 7, 10, 11, 14, 15, and additional portions of Sections 8, 9, and 16. The project will provide the SWSD with the ability to take deliveries of surface water for recharge. The spreading grounds may also function as a short-term reservoir with the water returned after storage to the Pond-Poso Canal which runs through the property. The project will include supply facilities to deliver water from Pond-Poso Canal, spreading grounds, supply pipelines and pumps, return structures (to Pond-Poso Canal), overflow structures (to Poso Creek), and production and monitoring wells. Delivery from Pond Poso Canal may be made by either the reconfiguration of an existing reverse-flow pumping plant or the installation of a new pumping plant (possibly portable pumps). Spreading basins would consist of dikes up to five feet high configured to allow spreading on approximately 75% of each quarter section. The spreading grounds may be used to regulate Pond-Poso Canal. This would be accomplished by changing the rate water is put into the spreading grounds or by delivering water from the spreading grounds into the Pond-Poso Canal. Overflow from the basins would be accomplished by lowering a section of the Pond-Poso Canal levee set as a weir. Production wells would be installed within the spreading grounds.

Study Methodology

Prior to the initiation of reconnaissance surveys, a survey of the California Department of Fish and Game (CDFG) Natural Diversity Data Base (CNDDB) (CDFG 2006) and California Native Plant Society (CNPS) online inventory of rare and endangered plants (CNPS 2006), was conducted for the Pond and Wasco NW USGS 7.5 minute quadrangles to ascertain existing sensitive species occurrences within the area (Table 1). Surveys were performed from October 16-20, 2006 and covered Sections 2 through 11 and 14 through 17 in Township 26 South, Range 24 East in the Pond and Wasco NW USGS 7.5-minute quadrangles. An additional quarter mile buffer zone was also surveyed around the project area. A combination of walking and driving (5-10 MPH) was used to survey for sensitive species within the project area. Species observed can be found in Table 2.

Existing Conditions

The proposed location for the Pond-Poso Spreading Grounds Unit of the Semitropic Groundwater Bank is bordered by Poso Creek to the North, Jumper Avenue to the West, Hanawalt Avenue to the South, and Leonard Avenue to the East. Future project boundaries are enclosed by Peterson Road to the North, Wildwood Road to the West, Hanawalt Avenue to the

South, and Palm Avenue to the East. The elevation of the entire area ranges from approximately 240 to 290 feet. With the exception of where Poso Creek runs through the project area, the entire site, excluding farm service roadways and irrigation sumps, is actively farmed and planted in cultivated agricultural crops on a rotational basis. At the time of the biological survey, five principal biotic habitats were present on-site. These were identified as disked agricultural fields, field or row crops, orchard, vineyard, and Poso Creek (Figure 2).

Disked Agricultural Fields

A large portion of the project area was disked at the time of the field survey. Essentially no standing vegetation remained. It was likely planted with alfalfa or row crops and will continue to be planted with these crops on a rotational basis.

Field or Row Crops

At the time of the field survey, the field or row crops present were alfalfa, corn, cotton, garlic, and millet. These crops provide limited foraging opportunities for species. Nesting, denning, and burrowing are limited or do not occur as a result of agricultural practices.

Alfalfa fields and row cropland can also be utilized to a limited extent by mammalian predators such as coyote (*Canis latrans*) and foxes (*Vulpes* spp.). The value of a given alfalfa field to such mammalian predators is largely dependent upon the availability and abundance of a suitable prey base. Small mammals including house mice (*Mus musculus*), deer mice (*Peromyscus maniculatus*), California voles (*Microtus californicus*) and western harvest mice (*Reithrodontomys maniculatus*) may occur in alfalfa fields, although intensive agricultural practices would tend to restrict their abundance. Coyotes and San Joaquin kit foxes (*Vulpes macrotis mutica*), which are common mammalian predators in the region, may occasionally forage on the project site for small mammals.

Orchards

Though not directly in the immediate project area, a large portion of the area was presently used as almond or pistachio orchards. Because of the agricultural land management practice of disking, and possibly other practices such as the spraying of herbicides for weed control, relatively no ground cover vegetation existed in the orchards. With the lack of ground cover vegetation and the application of rodenticides to control small mammals, the area offered little use to wildlife during the time of the survey for denning or foraging.

Vineyards

One section surveyed supported grape vineyards. Vineyards offer forage opportunities to many birds and some rodents. Shelter and denning potential is low in vineyards due to the frequent disking performed between rows to control weeds. Coyotes, and foxes to a lesser extent, utilize vineyards to scavenge for fruit and prey.

Poso Creek

Poso Creek traverses approximately one and a half miles of the immediate project area and five miles of the future potential project area. The habitat associated with this segment of Poso Creek is a mixture of riparian scrub and riparian forest vegetation communities. Dominant trees along the creek in the project area consist of red willow (*Salix laevigata*), Goodding's black willow (*Salix gooddingii*), and Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), with mulefat (*Baccharis salicifolia*) well represented in the understory. Because of the scouring

characteristics of the flows in the creek, significant portions of the banks and channel are either free of vegetation or dominated by mulefat or annual herbaceous species such as London rocket (*Sysimbrium irio*). The denning potential for foxes and rodents within this habitat is low as a result of seasonal inundation.

Results: Important Biological Resources in the Project Area

The survey of the CNDDDB and CNPS found seven sensitive animal species, five sensitive plant species, and one sensitive habitat that occur within the Pond and Wasco NW USGS 7.5 minute quadrangles. Figure 3 illustrates the locations of these observations. Because the Poso Creek Spreading Grounds project is proposed to be constructed and operated on highly disturbed agricultural land, and because agricultural operations have taken place on the project site for many years, the project site provides limited opportunities for special-status animal species to utilize the property. In addition, because natural habitats that may have existed on the property at one time in the past have long since been converted to agriculture, and ongoing farming practices such as disking, rodent and lagomorph control measures, and other activities required by farming that result in essentially continual disturbances to the land, no habitat for special-status plant species exists on the project site.

The survey of the degraded habitat of the project site found no sign (e.g., tracks, scat, dens, prey remains, etc.) of San Joaquin kit fox presence, though a foraging potential still exists. The primary small mammal holes observed on the property were several California ground squirrel (*Spermophilus beecheyi*) burrows, primarily along the ditches and roadways. The survey also did not find any sign of burrowing owls (*Athene cunicularia*) within the project area. Additionally, the fields are routinely flood-irrigated, further limiting small mammal burrowing opportunities. Also observed in the area was a white-tailed kite (*Elanus leucurus*) which has fully protected state status. White-tailed kites utilize farmland to forage for prey and will roost in trees. No nest sites were observed within the immediate project area.

Project Impacts

The initial development for the proposed Pond-Poso spreading ground unit project shall impact approximately 1,360 acres of intensive cultivated agricultural cropland. No significant impacts to sensitive species are expected to result from impacts to the agricultural lands.

Cumulative Impacts

No significant cumulative impacts to biological resources are expected as a result of the implementation of the proposed project.

Mitigation Measures

Although no nest sites were observed during the field survey, trees adjacent to farm residences may be removed for the project. Due to the presence of the fully state protected white-tailed kite, as well as other raptors, trees should be removed during the winter non-nesting season (November 15 to January 15) to avoid impacting any potential nesting activities. If these trees cannot be removed during the non-nesting season, a qualified biologist should conduct a nest survey prior to tree removal to determine if any nesting activities are occurring. If nesting activities are observed, tree removal should be postponed until nesting activities have completed and any young have fledged.

The United States Army Corps of Engineers (USACE) has determined that Poso Creek, West from Highway 65, and located within the Tulare Lake Basin, is an isolated water currently not regulated under Section 404 of the Clean Water Act. In addition, this non-jurisdictional determination is a case specific determination (Letter attached). The USACE was contacted for clarification with regards to this project's location and whether this determination remains valid. As of yet, no clarification has been provided. Construction activities on Poso Creek will require permitting from the Regional Water Quality Control Board (RWQCB) and CDFG. A Streambed Alteration Agreement with CDFG, pursuant to Section 1601 of the Fish and Game Code will also be required for this project. RWQCB and CDFG will require proof of CEQA compliance prior to issuing the Clean Water Certification or Waiver, and Streambed Alteration Agreement.

Although no sign of San Joaquin kit fox presence in the project area was observed during the field survey, the project does occur within the known range of this species. Poso Creek is dry for part of the year and any kit foxes in the area could potentially use the creek as a migratory corridor to reach foraging or denning areas located upstream or downstream of the project area. As a result, construction activities should be minimized around Poso Creek. Moreover, since San Joaquin kit fox are active at night, construction activities should be conducted only during the daylight hours. In addition, it is recommended that the following measures developed by the USFWS (1999) for the protection of San Joaquin kit fox be implemented for this project.

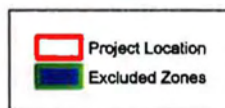
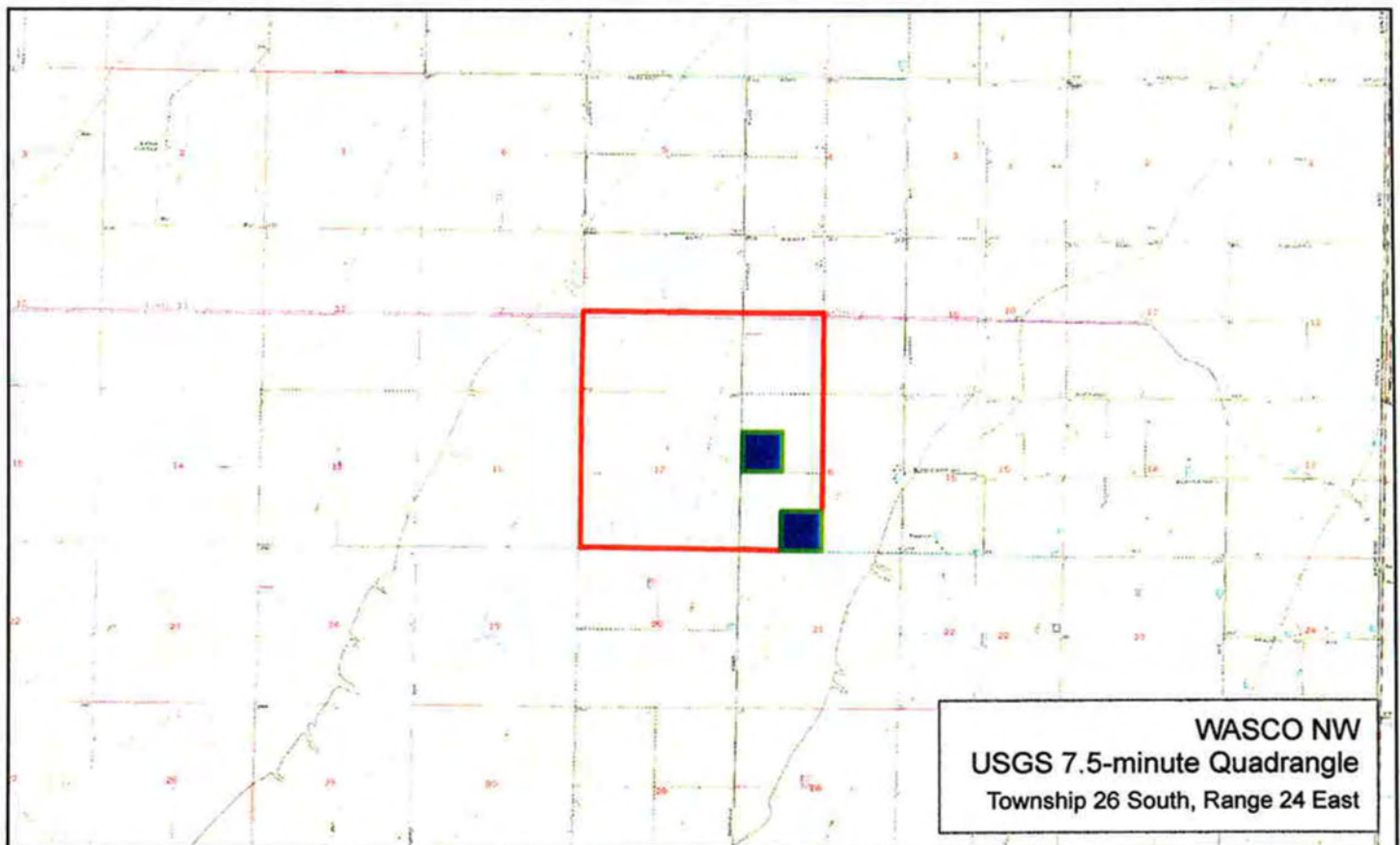
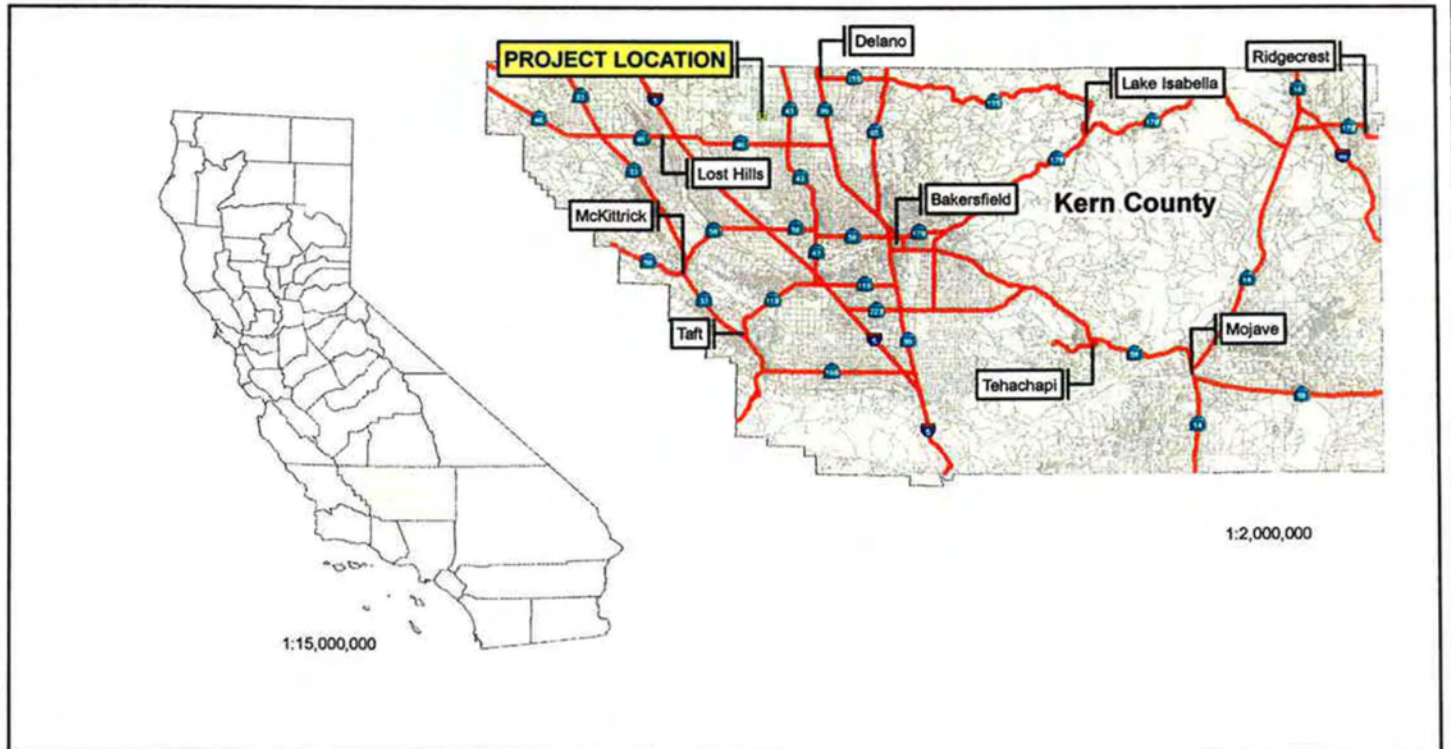
1. Project-related vehicles should observe a 20-mph speed limit in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. To the extent possible, night-time construction should be minimized. Off-road traffic outside 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.
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. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be recontoured 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 Fish and Wildlife Service, California Department of Fish and Game (CDFG), and revegetation experts.
9. 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.

Additional measures that should be implemented for this project can be found in *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* developed by the USFWS (1999) (see attached.)

SEMITROPIC WATER STORAGE DISTRICT Proposed Pond-Poso Spreading Ground Unit Project Vicinity Map





Looking North at Section 8.



Looking Northeast at Section 9



Looking North at Section 16.



Looking North at Section 17



Looking East along Poso Creek

Table 1

Special-status Species Reported on the Wasco NW and Pond USGS 7.5-Minute Quadrangles

Species	Habitat	Status	Potential Occurrence in Project Area
Animals			
<i>Ammospermophilus nelsoni</i> (San Joaquin antelope squirrel)	Dry, sparsely vegetated loam soils. Need widely scattered shrubs, forbs and grasses in broken terrain with gullies and washes.	CT	Absent. Habitat for this species is not present within the project area.
<i>Athene cunicularia</i> (Burrowing owl)	Open, dry grasslands, deserts, and sometimes, ruderal areas along ditch levees. Requires burrows, principally those made by California ground squirrels.	FSC, CSC, MBTA	Low. Owls not observed during survey. Little undisturbed habitat is present for this species to nest, but owls may forage within the project area. Owls not observed within five miles of project.
<i>Dipodomys nitratoideus nitratoideus</i> (Tipton kangaroo rat)	Saltbush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin Valley. Requires soft friable soils, which escape seasonal flooding where it will dig burrows in elevated soil mounds at the base of shrubs.	FE, CE	Absent. Habitat for this species is not present within the project area.
<i>Gambelia sila</i> (Blunt-nosed leopard lizard)	Inhabits sparsely vegetated alkali and desert scrub habitats in areas of low topographic relief. Preferred habitat includes semiarid grasslands, alkali flats, and washes.	CFP, FE, CE	Absent. Habitat for this species is not present within the project area.
<i>Perognathus inornatus inornatus</i> (San Joaquin Pocket mouse)	Typically found in grasslands and blue oak savannas. Needs friable soils.	---	Low. Limited habitat present in project area.
<i>Phrynosoma coronatum frontale</i> (Coast (California) horned lizard)	Valley-foothill hardwood, conifer and riparian habitats as well as in pine-cypress, juniper and annual grass habitats. Prefers open country, especially sandy areas, washes, and flood plains.	FSC, CSC	Absent. Habitat for species is not found within project area.
<i>Vulpes macrotis mutica</i> (San Joaquin kit fox)	Chenopod scrub, grasslands, and other habitats. Sometimes forage in agricultural areas.	FE, CT	Moderate. No evidence of kit fox was observed on the property. There is still a foraging potential for this species.
Plants			
<i>Atriplex cordulata</i> (Heartscale)	Chenopod scrub, valley and foothill grassland, meadows. Alkaline flats and scaled, sandy soils.	1B	Absent. Site has been heavily disturbed by agricultural use for many years. No habitat remains in Poso Creek. No plants observed during survey.
<i>Atriplex erecticaulis</i> (Earlimart orache)	Saline or alkaline soils of chenopod scrub and sandy valley and foothill grasslands. Found primarily in alkaline flats and scalds in the Central Valley	1B	Absent. Site has been heavily disturbed by agricultural use for many years. No habitat remains in Poso Creek. No plants observed during survey.

Species	Habitat	Status	Potential Occurrence in Project Area
<i>Caulanthus californicus</i> (California jewel-flower)	Sandy soils within chenopod scrub, pinyon and juniper woodland, and grasslands.	FE, CE, 1B	Absent. Site has been heavily disturbed by agricultural use for many years. No habitat remains in Poso Creek. No plants observed during survey.
<i>Delphinium recurvatum</i> (Recurved larkspur)	Alkaline soils in chenopod scrub, cismontane woodlands, and grasslands.	1B	Absent. Site has been heavily disturbed by agricultural use for many years. No habitat remains in Poso Creek. No plants observed during survey.
<i>Layia munzii</i> (Munz's tidy-tips)	Chenopod scrub, valley and foothill grassland. Hillsides, in white-grey alkaline clay soils, with grasses and chenopod scrub associates.	1B	Absent. Site has been heavily disturbed by agricultural use for many years. No habitat remains in Poso Creek. No plants observed during survey.
Habitats			
Valley Saltbush Scrub		Absent	

STATUS CODES

CFP	California Fully Protected
FE	Federal Endangered Species
CE	California Endangered Species
CT	California Threatened Species
FSC	Federal Species of Concern
CSC	California Species of Concern
1B	California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere.
---	None

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 of the species exists within the immediate vicinity of the proposed project (approximately 5 miles) or the habitat requirements associated with the species occur within the proposed project.
High	A historical record of the species exists within the project site or its immediate vicinity (approximately 5 miles) and the habitat requirements associated with the species occur within the proposed project.
Occurs	Species was observed within the proposed project at the time of the survey.

Sources:

California Department of Fish and Game. 2006. California Natural Diversity Database, California Department of Fish and Game, Sacramento, CA.

California Native Plant Society. 2006. Online Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society, Sacramento, CA.

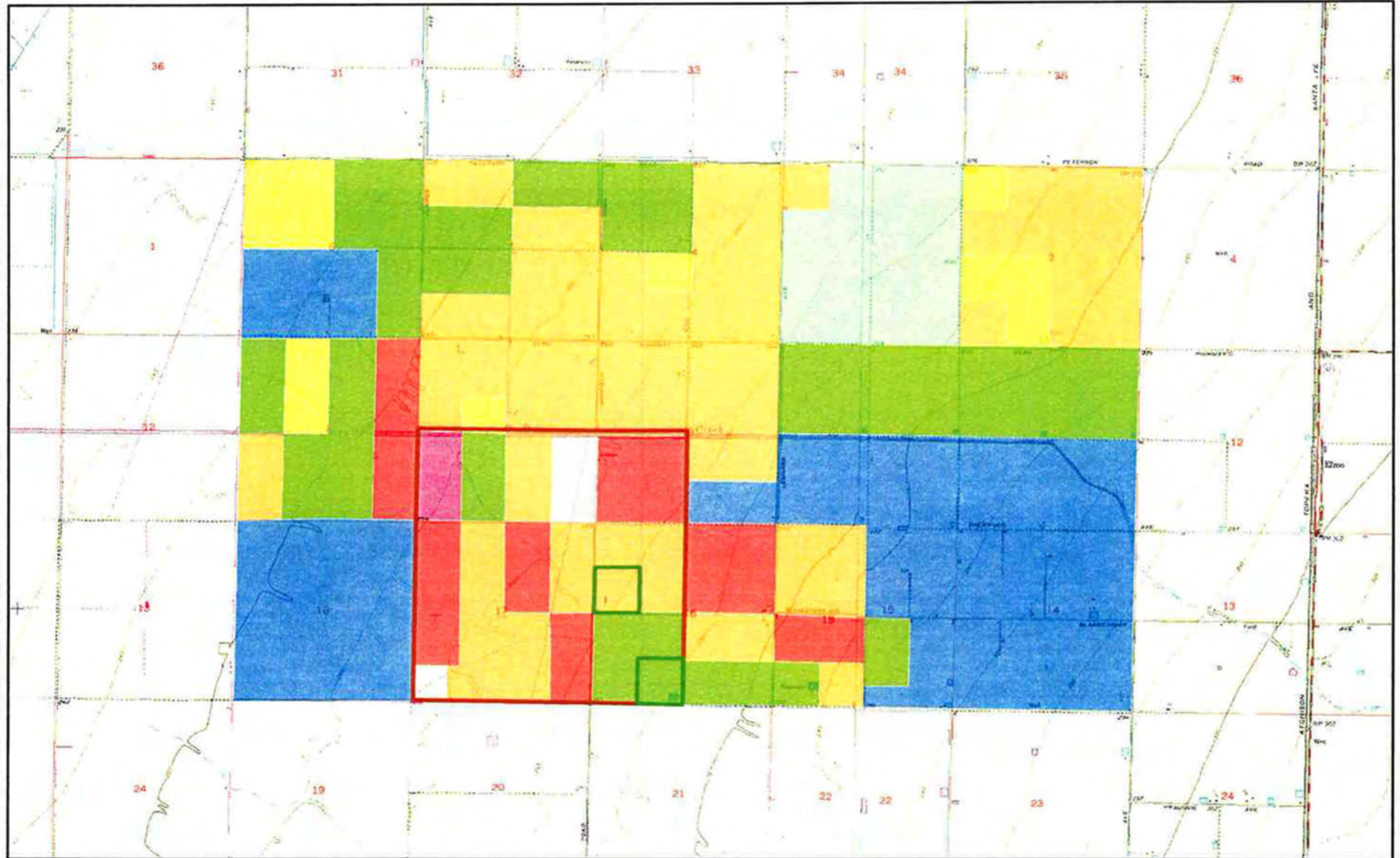
Table 2
List of Animal and Plant Species Observed on the Project Site
During the Field Survey

Scientific Name	Common Name
Animals	
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Canis latrans</i> ¹	Coyote ¹
<i>Cathartes aura</i>	Turkey vulture
<i>Corvus corax</i>	Common raven
<i>Elanus leucurus</i>	Black-shouldered kite
<i>Falco sparverius</i>	American kestrel
<i>Sayornis nigricans</i>	Black phoebe
<i>Spermophilus beecheyi</i>	California ground squirrel
<i>Sturnella neglecta</i>	Western meadowlark
<i>Sylvilagus audubonii</i> ²	Audubon's cottontail ²
<i>Uta stansburiana</i>	Side-blotched lizard
<i>Zenaida macroura</i>	Mourning dove
Plants	
<i>Amaranthus blitoides</i>	Prostrate amaranth
<i>Amaranthus retroflexus</i>	Rough pigweed
<i>Amaranthus</i> sp.	Amaranthus
<i>Ambrosia acanthicarpa</i>	Burweed
<i>Avena fatua</i>	Wild oats
<i>Baccharis salicifolia</i>	Mulefat
<i>Bromus diandrus</i>	Ripgut brome
<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red brome
<i>Chamaesyce maculata</i>	Spurge
<i>Chloris virgata</i>	Fingergrass
<i>Citrullus lanatus</i> var. <i>citroides</i> ²	Citron melon ²
<i>Conium maculatum</i> ²	Poison hemlock ²
<i>Calystegia</i> sp.	Morning-glory
<i>Conyza bonariensis</i>	Asthmaweed
<i>Conyza canadensis</i> ³	Horseweed ³
<i>Cucurbita palmata</i>	Coyote melon
<i>Cynodon dactylon</i>	Bermuda grass
<i>Cyperus esculentus</i>	Nutgrass
<i>Datura wrightii</i>	Jimsonweed
<i>Distichlis spicata</i>	Salt grass
<i>Eucalyptus</i> sp. ³	Eucalyptus ³
<i>Helianthus annuus</i>	Common sunflower
<i>Heliotropium curvassavicum</i>	Salt heliotrope
<i>Hemizonia pungens</i>	Spikeweed
<i>Hirschfeldia incana</i>	Shortpod mustard
<i>Lactuca serriola</i>	Prickly lettuce
<i>Malva parviflora</i>	Cheese mallow
<i>Medemia</i> ³	Palm tree ³

<i>Melilotus alba</i> ²	White sweetclover ²
<i>Morus</i> sp. ³	Mulberry ³
<i>Nerium oleander</i> ³	Oleander ³
<i>Nicotiana glauca</i>	Tree tobacco
<i>Physalis lanceifolia</i>	Groundcherry
<i>Pinus</i> sp. ³	Pine tree ³
<i>Polygonum aviculare</i>	knotweed
<i>Polygonum lapathifolium</i>	Willow weed
<i>Populus fremontii</i> ssp. <i>fremontii</i> ^{2,3}	Cottonwood ^{2,3}
<i>Portulaca oleracea</i>	Purslane
<i>Rumex crispus</i> ²	Curly dock ²
<i>Salix</i> sp. ²	Willow ²
<i>Salsola tragus</i>	Tumbleweed
<i>Sida hederacea</i>	Alkali mallow
<i>Sisymbrium irio</i>	London rocket
<i>Sisymbrium orientale</i> ³	Indian hedgemustard ³
<i>Solanum elaeagnifolium</i>	Silverleaf nightshade
<i>Solanum nigrum</i>	Black nightshade
<i>Sonchus oleraceus</i>	Sowthistle
<i>Sorghum halepense</i>	Johnson grass
<i>Tamarix</i> sp.	Tamarisk
<i>Tribulus terrestris</i>	Puncture vine
<i>Typha latifolia</i> ³	Broadleafed cattail ³
<i>Urtica dioica</i> ssp. <i>holosericea</i>	Stinging nettle
<i>Xanthium strumarium</i>	Cocklebur

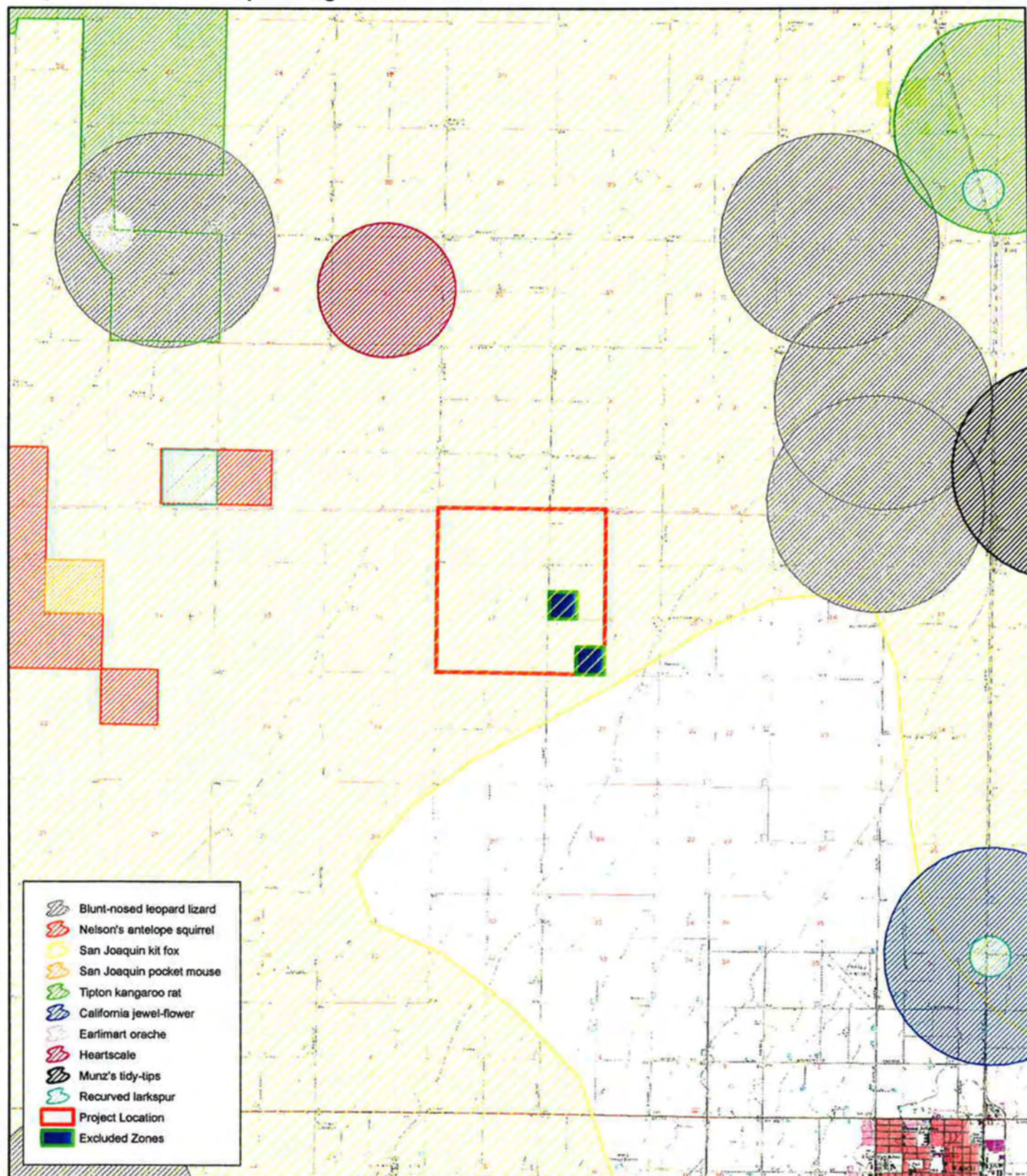
- 1- Coyote tracks and scat were identified
- 2- Species observed only in Poso Creek
- 3- Trees or shrubs observed at or near residences

SEMITROPIC WATER STORAGE DISTRICT Proposed Pond-Poso Spreading Grounds Unit




Quad Knopf
Figure 2

SEMITROPIC WATER STORAGE DISTRICT Proposed Pond-Poso Spreading Grounds Unit





REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

April 26, 2004

RECEIVED

APR 29 2004

McMURTRY
& HARTSOCK

Regulatory Branch (200300265)

Mr. John Jones
Cawelo Water District
17207 Industrial Farm Road
Bakersfield, California 93308

Dear Mr. Jones:

This is in reply to a letter dated August 11, 2003, from your attorney, Mr. James Worth, in which he requested we reconsider a jurisdictional determination for Poso Creek, west of Highway 65, Kern county, California.

Following coordination with our Headquarters, we have determined that Poso Creek, west of Highway 65, and located within the Tulare Lake Basin, is an intrastate, non-navigable, and isolated water currently not regulated under Section 404 of the Clean Water Act.

This jurisdictional determination is a case-specific determination. It sets no policy or precedent with respect to any other situation, or with respect to the validity of the regulations at 33 CFR 328.3(a)(3). The finding presented herein does not speak on the segment of Poso Creek east of Highway 65. Furthermore, this disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, State, and local laws may apply to your activities. In particular, you may need authorization from the California State Water Resources Control Board and/or the U.S. Fish and Wildlife Service.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. **Please note that a significant effort is currently underway which will address the issue of jurisdiction over many waters in the Tulare lake Basin. Based on the results of this effort, the jurisdictional status of Poso Creek, west of Highway 65, may change.**

A Notification of Administrative Appeal Options and Process and Request for Appeal form is enclosed. If you wish to appeal this approved jurisdictional determination, please follow the procedures on the form. You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

Please refer to identification number 200300265 in any correspondence concerning this project. If you have any questions, please contact Nancy Haley at our San Joaquin Valley Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *Nancy.A.Haley@usace.army.mil*, or telephone 916-557-7772.

Sincerely,

ORIGINAL SIGNED

Michael S. Jewell
Chief, Central California/Nevada
Section

Copy furnished:

R. L. Schafer, R. L. Schafer & Associates, 2904 West Main Street, Visalia, California 93291

✓ James Worth, McMurtrey, Hartsock & Worth, 2001 22nd Street, Suite 100, Bakersfield, California 93301

Dale Harvey, California Regional Water Quality Control Board, 1685 E Street, Fresno, California 93706-2020

Oscar Balaguer, Chief, Water Quality Certification Unit, California State Water Resources Control Board, 1001 I Street, Sacramento, California 95814

U.S. Fish and Wildlife Service, Wetlands Branch, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901

U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901

Tim Vendlinski, U.S. Environmental Protection Agency, Region IV, Wetlands Section (WTR-8), Water Management Division, 75 Hawthorne Street, San Francisco, California 94105

**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 siting 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 Service must be contacted

(occupied and unoccupied)

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.