



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

STONEGATE WELL AND PIPELINE BIOLOGICAL EVALUATION TRES PINOS, SAN BENITO COUNTY, CALIFORNIA

Prepared by

LIVE OAK ASSOCIATES, INC.

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EXECUTIVE SUMMARY

Live Oak Associates, Inc., completed an investigation of the biological resources occurring in the footprint of the approximately 3,460-linear-foot Stonegate well and pipeline site located along Bolado Road and Quien Sabe Road in Tres Pinos, an unincorporated area of San Benito County, California.

The proposed well is located in a fallow field, and the proposed pipeline alignment traverses the fallow field, a horse pasture, Bolado Road, and Quien Sabe Road. An electrical line has been proposed as a possible project element and would also be located in the fallow field.

The site provides no habitat for special status plant species. Although no special status animal species were observed on the site during the August 2009 field survey, several special status animal species may occur within the project boundaries. A number of special status animal species may regularly pass through or over the site during migration or may infrequently forage or roost on or adjacent to the site. For these species, the project would result in a less-than-significant impact on foraging or roosting habitat, as similar or higher quality habitat is regionally abundant.

Site development could result in direct mortality to migratory birds, including tree-nesting raptors and burrowing owls, should any of these species roost or nest on the site in the future. Such mortality may be considered a significant impact and could constitute a violation of state and federal laws. Should the required pre-construction surveys for raptors determine that these species are now roosting or nesting on the site, mitigations have been provided that would reduce impacts to these species to a less-than-significant level and that would ensure that the project is in compliance with state and federal laws.

Trenching activities may result in adverse impacts to trees occurring within the proposed pipeline alignment. If the pipeline cannot be realigned to avoid the dripline of these trees, then efforts to minimize impacts should be implemented in consultation with a certified arborist.

Jurisdictional waters are absent from the project site.

Impacts to habitat for native wildlife, wildlife movements, and degradation of water quality in seasonal creeks, reservoirs, and downstream waters would be considered less-than-significant.

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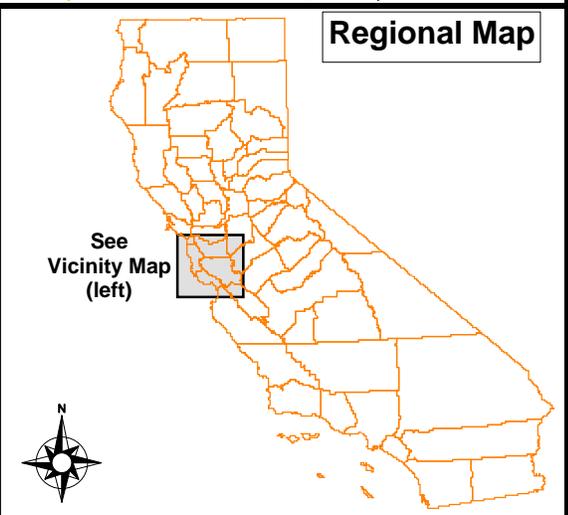
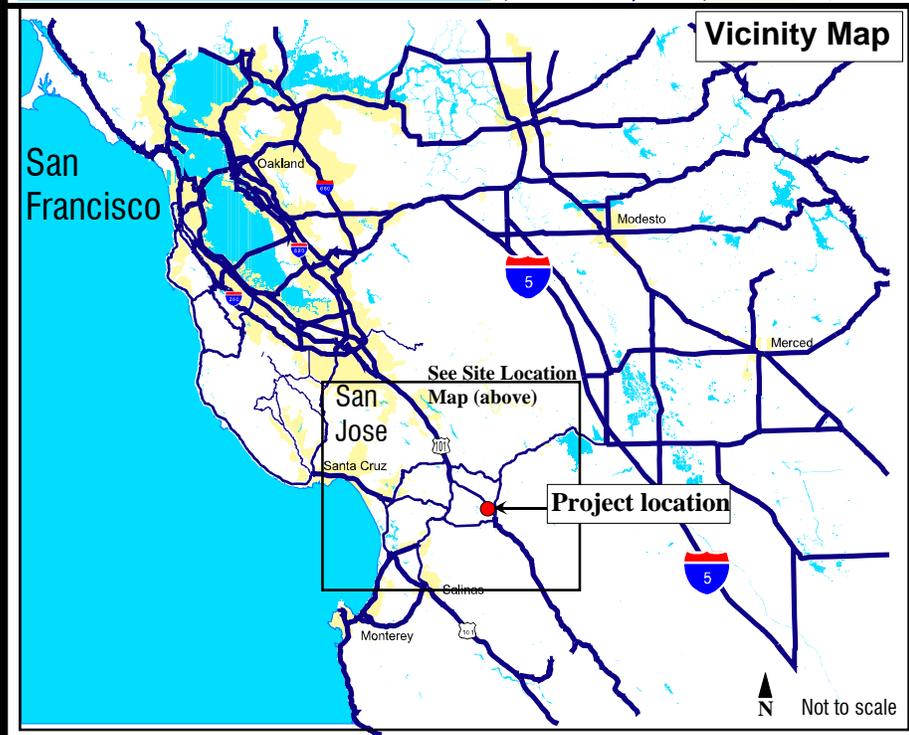
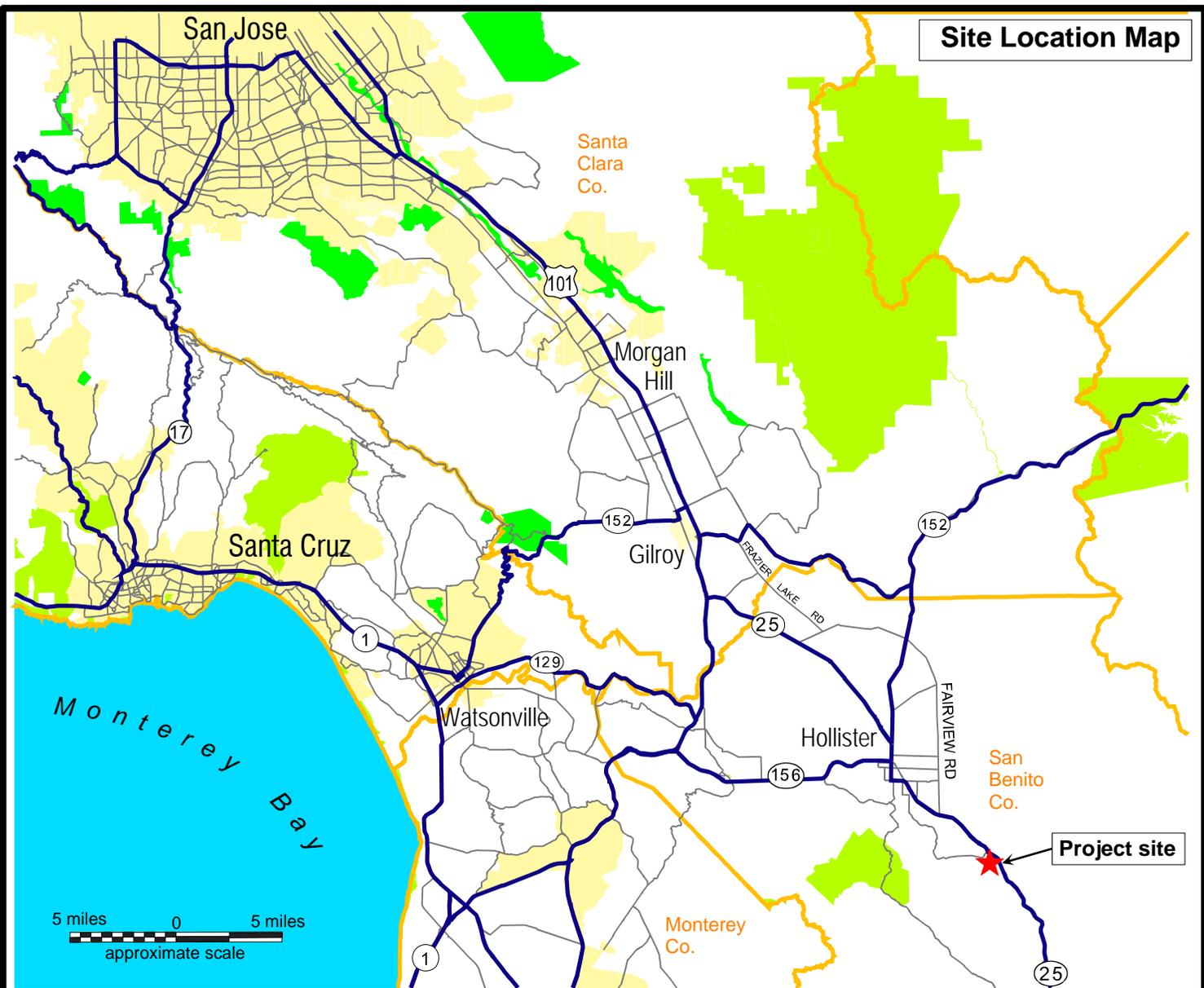
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1.0 INTRODUCTION

Live Oak Associates, Inc. (LOA), has prepared the following report, which describes the biotic resources of the approximately 3,460-linear-foot Stonegate well and pipeline site located along Bolado Road and Quien Sabe Road in Tres Pinos, an unincorporated area of San Benito County, California, and evaluates likely impacts to these resources resulting from construction of a well and water transmission pipeline. The project site is located in the Tres Pinos 7.5" U.S. Geological Survey (USGS) quadrangle in section 21, township 13 south, range 6 east.

Construction projects can damage or modify biotic habitats used by sensitive plant and wildlife species. In such cases, these projects may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA), and/or covered by policies and ordinances of San Benito County. This report addresses issues related to: 1) sensitive biotic resources occurring on the site; 2) the federal, state, and local laws regulating such resources, and 3) mitigation measures which may be required to reduce the magnitude of anticipated impacts. As such, the objectives of this report are to:

- Summarize all site-specific information related to existing biological resources;
- Make reasonable inferences about the biological resources that could occur onsite based on habitat suitability and the proximity of the site to a species' known range;
- Summarize all state and federal natural resource protection laws that may be relevant to possible future site development;
- Identify and discuss project impacts to biological resources likely to occur on the site within the context of CEQA or any state or federal laws; and
- Identify avoidance and mitigation measures that would reduce impacts to a less-than-significant level as identified by CEQA and that are generally consistent with recommendations of the resource agencies for affected biological resources.



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Stonegate Water Supply B.E.
Site / Vicinity Map

Date	Project #	Figure #
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The analysis of impacts, as discussed in Section 3.0 of this report, is based on the known and potential biotic resources of the site, discussed in Section 2.0. Sources of information used in the preparation of this analysis included: 1) the *California Natural Diversity Data Base* (CDFG 2009), 2) the *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2009), and 3) manuals and references related to plants and animals of San Benito County. A reconnaissance-level field survey of the study area was conducted on August 27, 2009, by LOA ecologists Davinna Ohlson and Melissa Denena, at which time the principal biotic habitats and land uses of the site were identified, and the constituent plants and animals of each were noted.

1.1 PROJECT DESCRIPTION

The proposed project consists of the construction of a well and installation of a six-inch diameter transmission pipeline for conveyance of pumped groundwater from the well site to the existing system of the Stonegate subdivision.

The well will be located on Graniterock property approximately 50 ft. north of their southeastern boundary within a 140 ft. x 170 ft. construction area. Less than 500 sq. ft. of area is expected to be permanently impacted by construction of the well.

The first pipeline segment will extend approximately 520 ft. from the well site to Bolado Road. The second segment of the Project pipeline will be approximately 2,300 ft., extending southeast beneath Bolado Road, then turning to the northeast, where approximately 120 ft. of the pipeline will run through a horse pasture, and finally running beneath Quien Sabe Road to Highway 25. Once across Highway 25, the third segment of the Project pipeline will extend approximately 600 ft. beneath Quien Sabe Road. The final segment will be approximately 40 ft. and cross the road to connect into an existing six-inch, potable water pipeline that extends along a shared Stonegate driveway southwest of Diablo Hills Road to serve water to the southernmost Stonegate homes. The total approximate length of the pipeline alignment is 3,460 linear ft. Trenching for the pipelines will be 10 ft. wide, and the pipelines will have approximately 3.5 ft. of cover. With the exception of the first pipeline segment, which will run beneath the unpaved Graniterock

property, and the small segment going through the horse pasture, the pipeline will run beneath paved roads.

An electrical line has been proposed as a possible project element and would extend approximately 680 ft. southwest past the well to an existing electrical pole. At the time this report was prepared, however, this alignment was not part of the final project. The electrical line alignment was surveyed by LOA with the rest of the site on August 27, 2009.

2.0 EXISTING CONDITIONS

The project site is located along Bolado Road and Quien Sabe Road in Tres Pinos, an unincorporated area of San Benito County approximately four miles southeast of Hollister. Surrounding lands consist of a walnut orchard and other agriculture, rural residential development, and open space. Tres Pinos Creek is located approximately 0.15 miles southwest of the site. The site ranges in elevation from approximately 455 ft. (140 m) National Geodetic Vertical Datum (NGVD) at the well site southeast of Bolado Road to approximately 555 ft. (170 m) NGVD on Quien Sabe Road north of Highway 25. The site itself consists of a fallow agricultural field, horse corral, and two public roads.

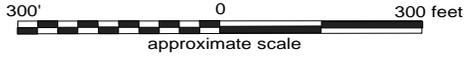
Four soil types from four soil series—Antioch, Metz, Pleasanton, and Sorrento—were identified on the project site (Fig. 2; Table 1). These soils range from medium acidic to moderately alkaline; therefore, the site may have, at one time, supported plant species adapted to such conditions. None of these soils are considered hydric, although hydric inclusions may occur. Not considered an official soil type, terrace escarpments consist of even fronts of terraces and long narrow streambanks that have slopes of 20 to 50%. They have rapid to very rapid runoff (NRCS 2009).

Table 1. Soils occurring on the Stonegate site (NRCS 2009).

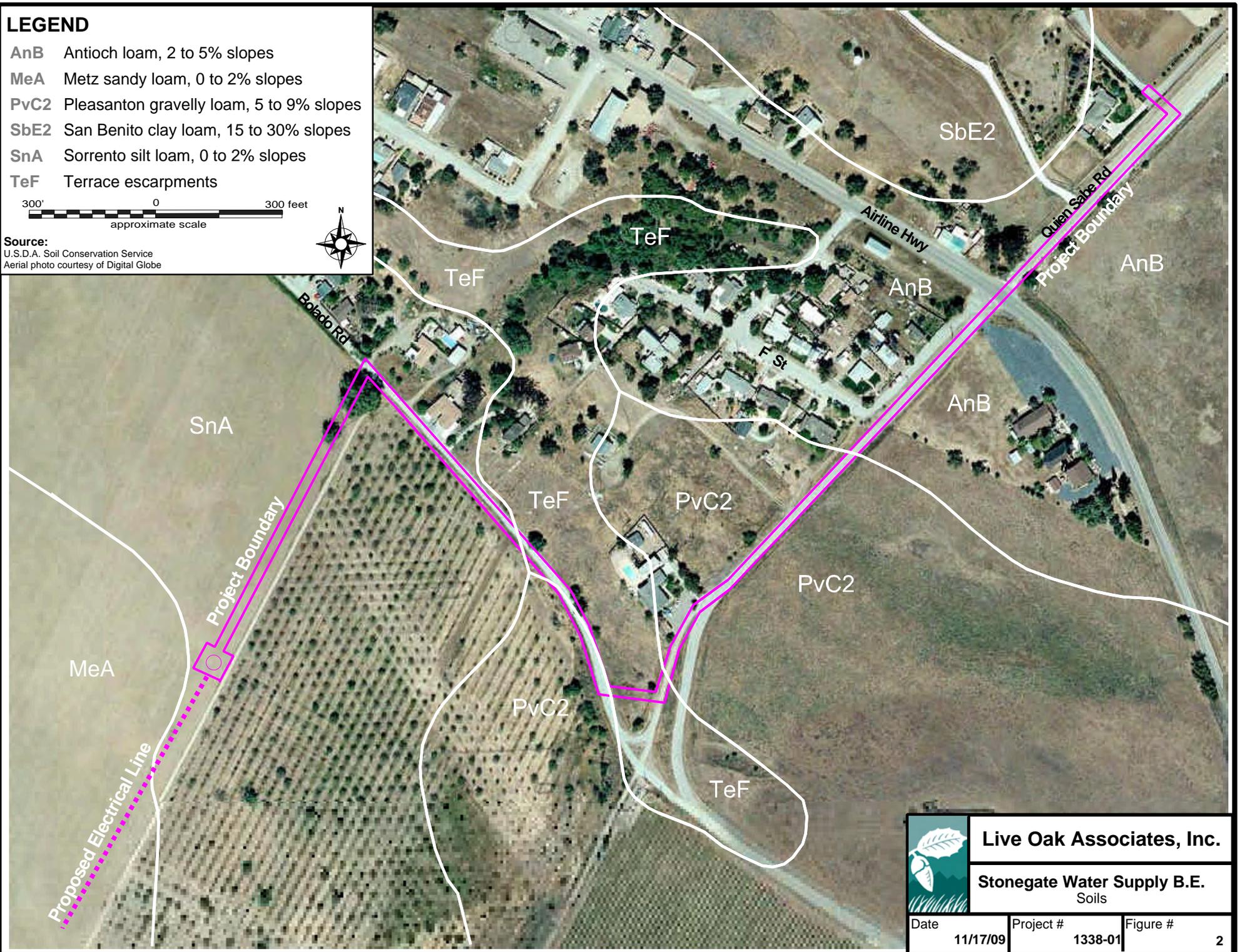
Soil Series/Soil	Map Symbol	Parent Material	Surface Permeability	Drainage Class	Hydric
ANTIOCH SERIES Antioch loam, 2 to 5% slopes	AnB	Alluvium derived from a wide range of sedimentary rocks	Very slow	Moderately well-drained	No
METZ SERIES Metz sandy loam, 0 to 2% slopes	MeA	Alluvial material from mixed but dominantly sedimentary rocks	Moderately rapid	Somewhat excessively drained	No
PLEASANTON SERIES Pleasanton gravelly loam, 5 to 9% slopes	PvC2	Well-drained loamy and gravelly loamy soils underlain by stratified alluvium at a depth of more than 48 inches.	Moderately slow	Well-drained	No
SORRENTO SERIES Sorrento silt loam, 0 to 2% slopes	SnA	Alluvium mostly in sedimentary rocks	Moderate to moderately slow	Well-drained	No

LEGEND

- AnB Antioch loam, 2 to 5% slopes
- MeA Metz sandy loam, 0 to 2% slopes
- PvC2 Pleasanton gravelly loam, 5 to 9% slopes
- SbE2 San Benito clay loam, 15 to 30% slopes
- SnA Sorrento silt loam, 0 to 2% slopes
- TeF Terrace escarpments



Source:
U.S.D.A. Soil Conservation Service
Aerial photo courtesy of Digital Globe



Live Oak Associates, Inc.

Stonegate Water Supply B.E.
Soils

Date	11/17/09	Project #	1338-01	Figure #	2
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San Benito County has a Mediterranean climate with warm to hot dry summers and cool winters. Annual precipitation in the general vicinity of the site averages 13.5 inches, most of which falls between November and April. Nearly all precipitation occurs in the form of rain. Stormwater runoff readily infiltrates the site's soils; when field capacity has been reached, gravitational water drains into roadside ditches as shallow groundwater or as surface sheet flow.

While lands immediately surrounding the site have been somewhat degraded by agriculture and rural development, lands around Tres Pinos, particularly to the south and east, mostly consist of rangelands or open space. Creeks, seasonal drainages, ridgelines, and valleys serve as wildlife movement corridors; therefore, plant and animal species occurring in the natural habitats in the region could access the site with relative ease.

2.1 BIOTIC HABITATS

One biotic habitat and two land uses were identified on the project site. For the purposes of this report, the habitat has been classified as “fallow agricultural field,” and the land uses are classified as “horse pasture” and “paved road.” A list of the vascular plant species observed on the project site and the terrestrial vertebrates using, or potentially using, the site are provided in Appendices A and B, respectively.

2.1.1 Fallow Agricultural Field

The well site, electrical line, and pipeline extending from the well site to Bolado Road consists of a fallow agricultural field dominated by annual grasses and forbs of European origin. The dominant species observed include slender wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), milk thistle (*Silybum marianum*), and dwarf mallow (*Malva neglecta*). Along the proposed alignment near Bolado Road are one large and several smaller valley oaks (*Quercus lobata*).

Compared to more natural habitats, managed agricultural lands tend to provide relatively low habitat value for wildlife due to the lack of understory vegetation that typically provides food and cover for these species. Annual management practices for agricultural lands such as the site

itself and the adjacent walnut orchard would eliminate breeding and foraging habitat for many birds and terrestrial vertebrates native to the region. Nevertheless, because of its close proximity to Tres Pinos Creek, wildlife occurring in and along the creek may occasionally move into this habitat.

The absence of rock piles and woody debris suggests that the site is relatively poor habitat for amphibians and reptiles. Some amphibians that potentially occur in Tres Pinos Creek, such as pacific chorus frogs (*Pseudacris regilla*) and western toads (*Bufo boreas*), may move into the fields during the winter and spring, but the site provides, at best, marginal habitat for these species. Western fence lizards (*Sceloporus occidentalis*) and gopher snakes (*Pituophis catenifer*) may also seek cover in the fallow field and forage for insects, spiders, small mammals, and birds.

A red-tailed hawk (*Buteo jamaicensis*) was observed perching in the large valley oak, but no raptor nests were observed in any of the oaks occurring in this habitat. Other resident avian species observed on the site include the turkey vulture (*Cathartes aura*), acorn woodpecker (*Melanerpes formicivorus*), western scrub-jay (*Aphelocoma californica*), and northern mockingbird (*Mimus polyglottos*). Raptor species potentially resident in the area include northern harriers (*Circus cyaneus*) and white-tailed kites (*Elanus leucurus*). Other resident avian species expected to forage on the site include western meadowlarks (*Sturnella neglecta*), European starlings (*Sturnus vulgaris*), and red-winged blackbirds (*Agelaius phoeniceus*). Winter migrants may include the ferruginous hawk (*Buteo regalis*) and merlin (*Falco columbarius*).

Fossorial and burrowing mammals are largely absent from this habitat, as evidenced by the presence of very sparse California ground squirrel (*Spermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*) burrows. Other small mammal species that could also occur include the cottontail (*Sylvilagus audubonii*), ornate shrew (*Sorex ornatus*), western harvest mouse (*Reithrodontomys megalotis*), and California meadow vole (*Microtus californicus*). Small mammals often attract predators, including reptiles and birds previously discussed. The occurrence of small mammals may also attract larger mammalian predators known to occur in the region, including coyotes (*Canis latrans*) and gray foxes (*Urocyon cinereoargenteus*). Bat

species such as the Mexican free-tailed bat (*Tadarida brasiliensis*) may forage over the fields for flying insects.

2.1.2 Horse Pasture

The north corner of Bolado Road and Quien Sabe Road consists of a small horse pasture that was mostly barren of vegetation. The sparse vegetation that was present included summer mustard (*Hirschfeldia incana*), coyote brush (*Baccharis pilularis*), and Peruvian pepper (*Schinus molle*).

The same wildlife species that could potentially occur in the fallow agricultural field may also incidentally occur in the pasture. Other birds that would be expected to occur include the American kestrel (*Falco sparverius*), which was seen perched on the fence enclosing the pasture, American crows (*Corvus brachyrhynchos*) and northern mockingbirds (*Mimus polyglottos*). No small mammal burrows appeared to be present.

2.1.3 Paved Road

The majority of the site consists of paved roads. No plant or animal species were observed on the paved road. The road shoulders, however, supported predominant non-native ruderal vegetation. Ruderal vegetation observed mostly consisted of forbs such as the non-native common groundsel (*Senecio vulgaris*), summer mustard, field bindweed (*Convolvulus arvensis*), common knotweed (*Polygonum arenastrum*), and the native California poppy (*Eschscholzia californica*) and panicked willowherb (*Epilobium brachycarpum*). Trees occurring near the road shoulders included coast live oak (*Quercus agrifolia*), blue gum (*Eucalyptus globulus*), and Peruvian pepper.

The same wildlife species that could potentially occur in the fallow agricultural field and horse pasture may also incidentally occur along the paved roads. Domestic dogs (*Canis familiaris*), and feral house cats (*Felis catus*) would also be expected to occur along the roads.

2.2 MOVEMENT CORRIDORS

Many terrestrial animals need more than one biotic habitat in order to perform all of their biological activities. With increasing encroachment of humans on wildlife habitats, it has become important to establish and maintain linkages, or movement corridors, for animals to be able to access locations containing different biotic resources that are essential to maintaining their life cycles. Terrestrial animals use ridges, canyons, riparian areas, and open spaces to travel between their required habitats.

The importance of an area as a movement corridor depends on the species in question and its consistent use patterns. Animal movements generally can be divided into three major behavioral categories:

- Movements within a home range or territory;
- Movements during migration; and
- Movements during dispersal.

While no detailed study of animal movements has been conducted for the study area, knowledge of the site, its habitats, and the ecology of the species potentially occurring onsite permits sufficient predictions about the types of movements occurring in the region and whether or not proposed development would constitute a significant impact to animal movements.

Tres Pinos Creek, which is located approximately 0.15 miles southwest of the well site, facilitates wildlife movement through the region. Therefore, as noted in Section 2.1, a number of reptiles, birds, and mammals may use the adjacent fallow field as part of their home range and dispersal movements. The field itself, however, does not function as a wildlife movement corridor. The remainder of the site provides minimal dispersal habitat for native wildlife and, as such, contributes very little to regional movement pathways.

2.3 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered “rare” and are vulnerable to extirpation as the state’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as “threatened” or “endangered” under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as “species of special concern” by the CDFG. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered (CNPS 2001). Collectively, these plants and animals are referred to as “special status species.”

A number of special status plants and animals occur in the site’s vicinity (Fig. 3 and 4). These species and their potential to occur on the site are listed in Table 2 on the following pages. Sources of information for this table included *California’s Wildlife, Volumes I, II, and III* (Zeiner et. al 1988), *California Natural Diversity Data Base* (CDFG 2009), *Endangered and Threatened Wildlife and Plants* (USFWS 2009), *State and Federally Listed Endangered and Threatened Animals of California* (CDFG 2009), and *The California Native Plant Society’s Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2009). This information was used to evaluate the potential for special status plant and animal species that occur on the site. Figures 3 and 4 depict the location of special status species found by the California Natural Diversity Data Base (CNDDDB). It is important to note that the CNDDDB is a volunteer database; therefore, it may not contain all known or gray literature records.

A search of published accounts for all relevant special status plant and animal species was conducted for the Tres Pinos USGS 7.5” quadrangle in which the project site occurs and for the eight surrounding quadrangles (San Felipe, Three Sisters, Mariposa Peak, Quien Sabe Valley,

Cherry Peak, Paicines, Mt. Harlan, and Hollister) using the California Natural Diversity Data Base Rarefind (CDFG 2009). All species listed as occurring in these quadrangles on CNPS Lists 1A, 1B, 2, 3, or 4 were also reviewed.

No federal or state threatened or endangered plant species appeared in a search of published biological data for these quadrangles.

Some plant species occur in habitats not present on the site (e.g., serpentine habitats, wetlands, marshes and swamps, coniferous forest, chaparral, coastal scrub, etc.) or at elevations well above or below those of the site; therefore, these species are considered absent from the site. These species include the Gabilan Mountains manzanita (*Arctostaphylos gabilanensis*), Pajaro manzanita (*Arctostaphylos pajaroensis*), chaparral harebell (*Campanula exigua*), Hernandez spineflower (*Chorizanthe biloba* var. *immemora*), Pinnacles buckwheat (*Eriogonum nortonii*), Hoover's button-celery (*Eryngium aristulatum* var. *hooveri*), woolly-headed lessingia (*Lessingia hololeuca*), and San Antonio Hills monardella (*Monardella antonina* ssp. *antonina*).

Species more likely to occur on the project site itself or in the surrounding vicinity are discussed further below.

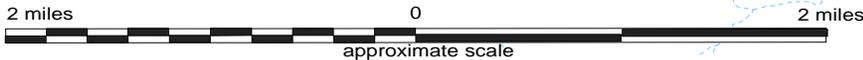
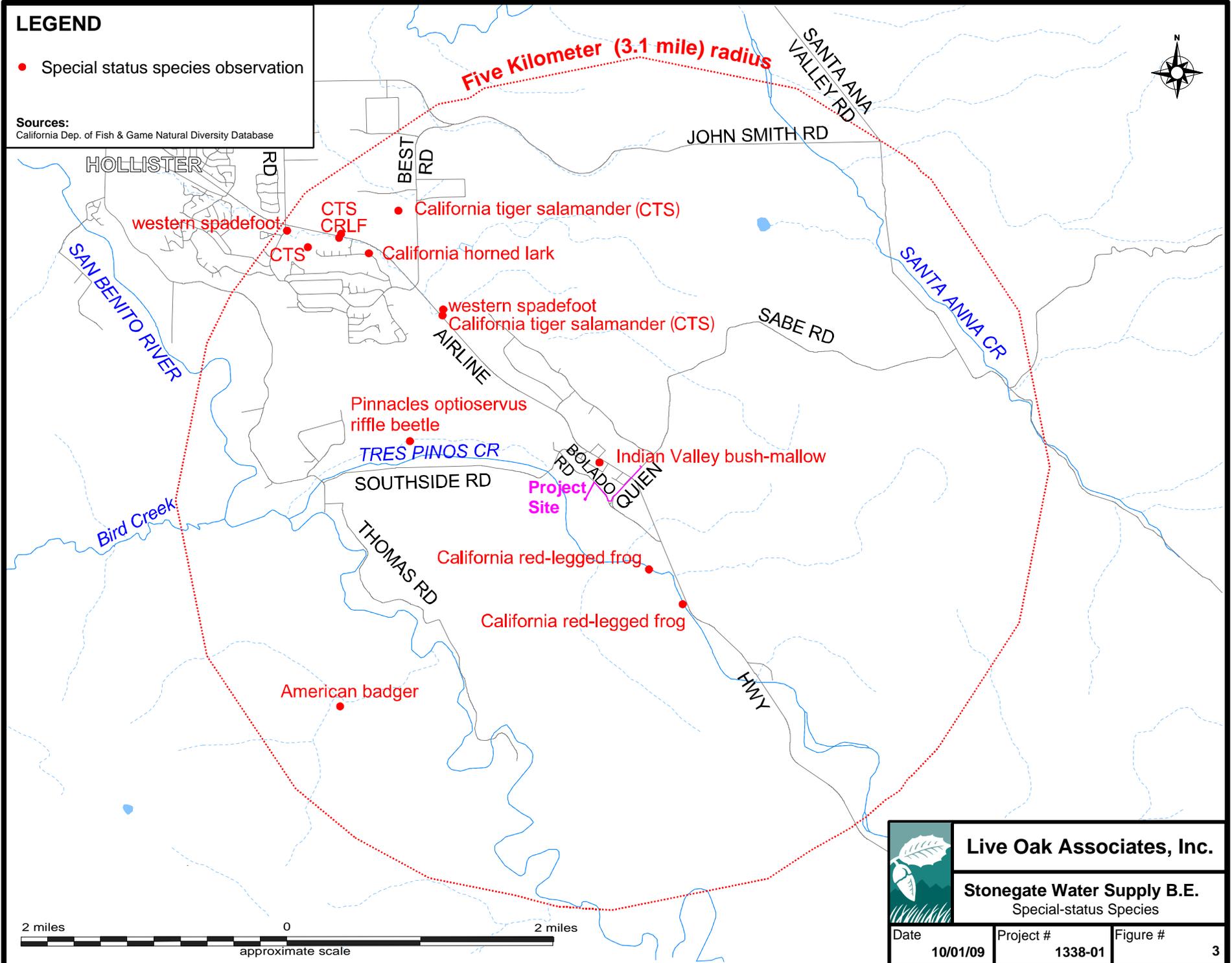
LEGEND

- Special status species observation

Sources:
California Dep. of Fish & Game Natural Diversity Database



Five Kilometer (3.1 mile) radius



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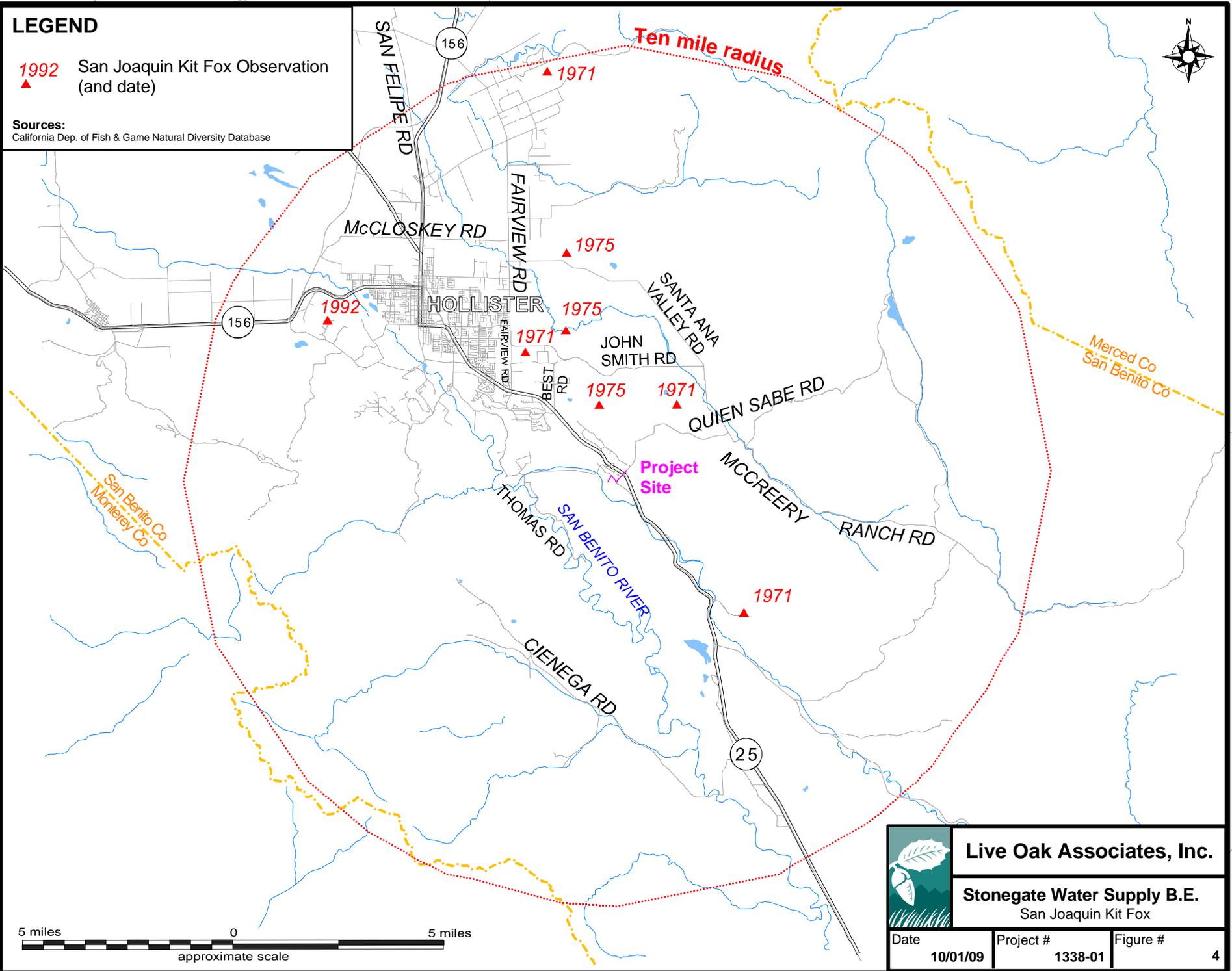
Stonegate Water Supply B.E.
Special-status Species

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LEGEND

▲ 1992 San Joaquin Kit Fox Observation
(and date)

Sources:
California Dep. of Fish & Game Natural Diversity Database



Live Oak Associates, Inc.

Stonegate Water Supply B.E.
San Joaquin Kit Fox

Date	Project #	Figure #
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TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS (adapted from CDFG 2009 and CNPS 2001)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence in the Study Area
No plants on or in the vicinity of the site are listed under the State or Federal Endangered Species Acts.			

Other special status plants listed by CNPS

Species	Status	Habitat	*Occurrence in the Study Area
Alkali milk-vetch (<i>Astragalus tener</i> var. <i>tener</i>)	CNPS 1B	<u>Habitat</u> : Alkaline soils of playas, adobe clay valley and foothill grasslands, and alkali vernal pools. <u>Elevation</u> : 0-60 meters. <u>Blooms</u> : March–May.	Absent. The fallow agricultural field has been heavily managed for agricultural purposes, and the horse pasture is heavily disturbed. While moderately alkaline soils may persist there, clay soils are absent, and any suitable habitat that may have once been present has been eliminated. This species would not occur elsewhere on the site (i.e., pavement).
San Joaquin spearscale (<i>Atriplex joaquiniana</i>)	CNPS 1B	<u>Habitat</u> : Chenopod scrub, meadows and seeps, playas, and valley and foothill grasslands on alkaline soils. <u>Elevation</u> : 0-835 meters. <u>Blooms</u> : April–October.	Unlikely. The fallow agricultural field has been heavily managed for agricultural purposes, and the horse pasture is heavily disturbed. While moderately alkaline soils may persist there, any suitable habitat that may have once been present has likely been eliminated. However, this species was documented in 1995 approximately 4.5 miles southwest of the site. This species would not occur elsewhere on the site (i.e., pavement).
Round-leaved filaree (<i>California macrophylla</i>)	CNPS 1B	<u>Habitat</u> : Cismontane woodlands and valley and foothill grasslands on clay soils. <u>Elevation</u> : 15-1200 meters. <u>Blooms</u> : March–May.	Absent. The fallow agricultural field has been heavily managed for agricultural purposes, and the horse pasture is heavily disturbed. While moderately alkaline soils may persist there, clay soils are absent, and any suitable habitat that may have once been present has been eliminated. This species would not occur elsewhere on the site (i.e., pavement).
Vernal barley (<i>Hordeum intecedens</i>)	CNPS 3	<u>Habitat</u> : Coastal dunes, coastal scrub, saline flats and depressions of valley and foothill grasslands, and vernal pools. <u>Elevation</u> : 5-1000 meters. <u>Blooms</u> : March–June.	Absent. The fallow agricultural field has been heavily managed for agricultural purposes, and the horse pasture is heavily disturbed. While saline soils may persist there, any suitable habitat that may have once been present has been eliminated. This species would not occur elsewhere on the site (i.e., pavement).
Indian Valley bush mallow (<i>Malacothamnus aboriginum</i>)	CNPS 1B	<u>Habitat</u> : Chaparral and cismontane woodlands on rocky or granitic substrates and often in burned areas. <u>Elevation</u> : 150-1700 meters. <u>Blooms</u> : April–October.	Absent. This species was documented in 1918 less than 0.5 miles from the site. However, suitable habitat for this species is absent from the site.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS – cont’d.

Other special status plants listed by CNPS (cont’d.)

Species	Status	Habitat	*Occurrence in the Study Area
Marsh microseris (<i>Microseris paludosa</i>)	CNPS 1B	<u>Habitat</u> : Closed-cone coniferous forest, cismontaine woodland, coastal scrub, and valley and foothill grassland. <u>Elevation</u> : 5-300 meters. <u>Blooms</u> : April–June.	Absent. The fallow agricultural field has been heavily managed for agricultural purposes, and the horse pasture is heavily disturbed. Any suitable habitat that may have once been present has been eliminated. The nearest documented occurrence of this species was in 1937 more than six miles northeast of the site. This species would not occur elsewhere on the site (i.e., pavement).
Shining navarretia (<i>Navarretia nigelliformis</i> ssp. <i>radians</i>)	CNPS 1B	<u>Habitat</u> : Cismontane woodland, valley and foothill grassland, and vernal pools. <u>Elevation</u> : 76-1000 meters. <u>Blooms</u> : May–July.	Absent. The fallow agricultural field has been heavily managed for agricultural purposes, and the horse pasture is heavily disturbed. Any suitable habitat that may have once been present has been eliminated. This species would not occur elsewhere on the site (i.e., pavement).
Prostrate navarretia (<i>Navarretia prostrata</i>)	CNPS 1B	<u>Habitat</u> : Mesic soils of coastal scrub, meadows and seeps, alkaline valley and foothill grassland, and vernal pools. <u>Elevation</u> : 15-700 meters. <u>Blooms</u> : April–July.	Absent. The fallow agricultural field has been heavily managed for agricultural purposes, and the horse pasture is heavily disturbed. While moderately alkaline soils may persist there, any suitable habitat that may have once been present has been eliminated. This species would not occur elsewhere on the site (i.e., pavement).
Hairless popcorn-flower (<i>Plagiobothrys glaber</i>)	CNPS 1A	<u>Habitat</u> : Alkaline meadows and seeps and in salty marshes and swamps. <u>Elevation</u> : 15-180 meters. <u>Blooms</u> : March–May.	Absent. The fallow agricultural field has been heavily managed for agricultural purposes, and the horse pasture is heavily disturbed. While moderately alkaline soils may persist there, any suitable habitat that may have once been present has been eliminated. This species would not occur elsewhere on the site (i.e., pavement).
Caper-fruited tropidocarpum (<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>)	CNPS 1B	<u>Habitat</u> : Marshes and swamps, vernal pools, and mesic, alkaline soils of valley and foothill grasslands. <u>Elevation</u> : 0-300 meters. <u>Blooms</u> : April–June.	Absent. The fallow agricultural field has been heavily managed for agricultural purposes, and the horse pasture is heavily disturbed. While moderately alkaline soils may persist there, any suitable habitat that may have once been present has been eliminated. This species would not occur elsewhere on the site (i.e., pavement).

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (adapted from CDFG 2009 and USFWS 2009)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence in the Study Area
California tiger salamander (<i>Ambystoma californiense</i>)	FT, CSC	Breeds in vernal pools and stock ponds of central California; adults aestivate in grassland habitats adjacent to the breeding sites.	Absent. Breeding habitat is absent from the site and adjacent areas, and aestivation habitat is poor due to the relative lack of burrows and other ground surface crevices. The nearest documented occurrence of this species is nearly two miles northwest of the site. Critical habitat designated by the USFWS for this species is approximately one mile northwest of the site.
California red-legged frog (<i>Rana draytonii</i>)	FT, CSC	Rivers, creeks and stock ponds of the Sierra foothills and coast range, preferring pools with overhanging vegetation. May also be found in a variety of upland habitats.	Absent. This species is known to breed in Tres Pinos Creek and was documented in 2002 and 2003 in the creek, less than one mile southeast of the site. The well site, electrical line, and a short segment of the alignment between the well site and Bolado Road fall within critical habitat designated by the USFWS for this species. The remainder of the project site appears to border the designated critical habitat area. However, breeding habitat is absent from the site and immediately adjacent lands, and aestivation habitat is poor due to the relative lack of burrows and other ground surface crevices.
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	FC, CE	Nests in dense riparian forests. Inhabits broad, lower flood bottoms of larger river systems	Absent. This species has not been observed within San Benito county since 1899 in the vicinity of Paicines. Furthermore, suitable habitat for this species is absent from the project site.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE, CT	Frequents annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose-textured sandy soils for burrowing and suitable prey base. Utilizes enlarged (4 to 10 inches in diameter) ground squirrel burrows as denning habitat. May forage in adjacent agricultural habitats.	Unlikely. At best, marginally suitable breeding and foraging habitat for this species occurs onsite. However, the nearest observation of this species was documented approximately 1.7 miles north of the project site in 1975. This was one of seven sightings documented in the region in the 1970s. Since then, only one occurrence, which took place in 1992, approximately 8 miles from the site, has been documented in the region. Numerous regional surveys conducted before and since the date of the 1992 occurrence have failed to detect this species. In total, eight occurrences of this species have been recorded within ten miles of the project site over the past 38 years. In the off chance that a migrating kit fox is found in the region, the marginal quality of the project site suggests that they would not choose this site for denning or breeding.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS – cont’d.

California Species of Special Concern and Protected Species

Species	Status	Habitat	*Occurrence in the Study Area
Coast Range newt (<i>Taricha torosa torosa</i>)	CSC	Breeds in ponds, reservoirs and slow moving water. May also occur in large streams and rivers.	Absent. Suitable habitat for this species is absent from the project site. The nearest documented sighting of this species occurred in 1998, approximately 7.5 miles to the west of the site.
Western spadefoot (<i>Spea hammondi</i>)	CSC	Primarily occurs in grasslands, but also occurs in valley and foothill hardwood woodlands. Requires vernal pools or other temporary wetlands for breeding.	Absent. This species was documented less than two miles northwest of the project site in 1978. It is known to breed within the golf course ponds of Ridgemark Golf Course, located approximately three miles northwest of the site. However, breeding habitat is absent from the site itself, and aestivation habitat for the spadefoot is poor due to the relative lack of burrows and other ground surface crevices.
Foothill yellow-legged frog (<i>Rana boylei</i>)	CSC	Found primarily in swiftly flowing creeks.	Absent. Suitable habitat for this species is absent from the project site. The nearest documented occurrence of this species is more than ten miles from the site.
Western pond turtle (<i>Actinemys marmorata</i>)	CSC	Open slow-moving water of rivers and creeks of central California with rocks and logs for basking.	Absent. Suitable habitat for this species is absent from the project site. The nearest documented occurrence of this species is more than three miles from the site.
San Joaquin whipsnake (<i>Masticophis flagellum ruddocki</i>)	CSC	Frequents chaparral habitats, specifically scrublands, rocky hillsides, gullies, canyons, and stream courses of the foothills.	Unlikely. Suitable habitat for this species is marginal to absent from the project site. While this species has been known to utilize farmland habitats, this site is heavily managed, which would preclude it from supporting a suitable prey base to attract or support this species.
White-tailed kite (<i>Elanus leucurus</i>)	CP	Open grasslands and agricultural areas throughout central California.	Possible. The fallow field provides suitable nesting and foraging habitat for this species.
Northern harrier (<i>Circus cyaneus</i>)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; uncommon in wooded habitats.	Possible. The fallow field provides suitable nesting and foraging habitat for this species.
Burrowing owl (<i>Athene cunicularia</i>)	CSC	Open, dry grasslands, deserts and ruderal areas. Requires suitable burrows. This species is often associated with California ground squirrels.	Possible. Although sparse, ground squirrel burrows in the fallow field provide potentially suitable nesting habitat. The field also provides suitable foraging habitat for this species. The nearest documented occurrence of this species was approximately six miles northwest of the site in 2000.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS – cont’d.

California Species of Special Concern and Protected Species

Species	Status	Habitat	*Occurrence in the Study Area
Black swift (<i>Cypseloides niger</i>)	CSC	Migrants and transients found throughout many habitats of state. Breeds on steep cliffs or ocean bluffs, or in cracks and crevasses of inland deep canyons.	Unlikely. Suitable breeding and foraging habitats are absent from the site. However, this species may occasionally pass through the site.
Vaux’s swift (<i>Chaetura vauxi</i>)	CSC	Migrants and transients move through the foothills of the western Sierra in spring and late summer. Breeds in coniferous forests.	Unlikely. Suitable breeding and foraging habitats are absent from the site. However, this species may occasionally pass through the site
Yellow-breasted chat (<i>Icteria virens</i>)	CSC	Breeds in brushy tangles, briars, and stream thickets. May occur in overgrown pastures and upland thickets.	Unlikely. Suitable breeding habitat is absent from the site, and foraging habitat is marginal to absent. However, this species may occasionally pass through the site.
Tricolored blackbird (<i>Agelaius tricolor</i>)	CSC	Breeds near fresh water, primarily emergent wetlands, with tall thickets. Forages in nearby grassland and cropland habitats.	Unlikely. Suitable breeding habitat is absent from the site, and foraging habitat is marginal. However, this species may occasionally pass through the site.
Western red bat (<i>Lasiurus blossevillii</i>)	CSC	Roosts primarily in trees. Prefers habitat edges and mosaics with trees.	Possible. Marginally suitable foraging habitat is present in the fallow field. While some trees are present, roosting habitat on the site is poor.
Western mastiff bat (<i>Eumops perotis californicus</i>)	CSC	Forages over a variety of semiarid to arid habitats. Roosts in crevices in cliff faces, tall buildings, trees, and tunnels.	Possible. Marginally suitable foraging habitat is present in the fallow field. While some trees are present, roosting habitat on the site is poor.
American badger (<i>Taxidea taxus</i>)	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils.	Unlikely. Marginally suitable habitat is present on the project site for this species, although no badger dens were observed. This species has been documented approximately three miles southwest of the project site in 1997.
Ringtail (<i>Bassariscus astutus</i>)	CP	Occurs in dry, rocky, and mountainous areas with oaks and conifers.	Absent. Habitat occurring on the project area is unsuitable for this species.

***Explanation of Occurrence Designations and Status Codes**

- Present: Species observed on the sites at time of field surveys or during recent past.
- Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
- Possible: Species not observed on the sites, but it could occur there from time to time.
- Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.
- Absent: Species not observed on the sites, and precluded from occurring there because habitat requirements not met.

STATUS CODES

- | | | | |
|-----|---------------------------------|----|-----------------------|
| FE | Federally Endangered | CE | California Endangered |
| FT | Federally Threatened | CT | California Threatened |
| FPE | Federally Endangered (Proposed) | CR | California Rare |

FC	Federal Candidate	CP	California Protected
		CSC	California Species of Special Concern
CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	3	Plants about which we need more information – a review list
1B	Plants Rare, Threatened, or Endangered in California and elsewhere	4	Plants of limited distribution – a watch list
2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere		

2.4 JURISDICTIONAL WATERS

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the California Regional Water Quality Control Board (RWQCB). See Section 3.2.4 of this report for additional information.

Jurisdictional waters are absent from the site.

3.0 IMPACTS AND MITIGATIONS

3.1 SIGNIFICANCE CRITERIA

Approval of general plans, area plans, and specific projects is subject to the provisions of the California Environmental Quality Act (CEQA). The purpose of CEQA is to assess the impacts of proposed projects on the environment before they are carried out. CEQA is concerned with the significance of a proposed project's impacts. For example, a proposed development project may require the removal of some or all of a site's existing vegetation. Animals associated with this vegetation could be destroyed or displaced. Animals adapted to humans, roads, buildings, pets, etc., may replace those species formerly occurring on the site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed.

Whenever possible, public agencies are required to avoid or minimize environmental impacts by implementing practical alternatives or mitigation measures. According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest."

Specific project impacts to biological resources may be considered "significant" if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a “mandatory findings of significance” if the project has the potential to

Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory.

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 Threatened and Endangered Species

State and federal “endangered species” legislation has provided the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as “species of special status.” Permits may be required from both the CDFG and USFWS if activities associated with a proposed project will result in the “take” of a listed species. “Take” is defined by the state of California as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” (California Fish and Game Code, Section 86). “Take” is more broadly defined by the federal Endangered Species Act to include “harm” (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFG and the USFWS are responding agencies under the California Environmental Quality Act (CEQA). Both

agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.2 Migratory Birds

State and federal laws also protect most birds. The Federal Migratory Bird Treaty Act (16 U.S.C., sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

3.2.3 Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5, which states that it is “unlawful to take, possess, or destroy any birds in the order *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the CDFG.

3.2.4 Wetlands and Other Jurisdictional Waters

Natural drainage channels and adjacent wetlands may be considered “Waters of the United States” (hereafter referred to as “jurisdictional waters”) subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;

- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As recently determined by the United States Supreme Court in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (the SWANCC decision), channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. However, the U.S Supreme Court decisions *Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers* (referred together as the Rapanos decision) impose a "significant nexus" test for federal jurisdiction over wetlands. In June 2007, the USACE and Environmental Protection Agency (EPA) established guidelines for applying the significant nexus standard. This standard includes 1) a case-by-case analysis of the flow characteristics and functions of the tributary or wetland to determine if they significantly affect the chemical, physical, and biological integrity of downstream navigable waters and 2) consideration of hydrologic and ecologic factors (EPA and USACE 2007).

The USACE regulates the filling or grading of such waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by “ordinary high water marks” on opposing channel banks. Wetlands are habitats with soils that are intermittently or permanently saturated, or inundated. The resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytic vegetation, hydric soils (soils saturated intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987).

All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE (Wetland Training Institute, Inc. 1991). Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards. The filling of isolated wetlands, over which the USACE

has disclaimed jurisdiction under the SWANCC decision, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

The California Department of Fish and Game has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1601 and 1602 of the California Fish and Game Code (2003). Activities that would disturb these drainages are regulated by the CDFG via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

3.2.5 Local Ordinances, Policies, and Habitat Conservation Plans

San Benito County has an ordinance (Chapter 19.33 of the county's code of ordinances) requiring that a tree pruning/removal permit be obtained from the County's planning director prior to the cutting or removal of any tree.

No other local ordinances, policies, habitat conservation plans (HCP), or natural community conservation plans (NCCP) are in effect for this project. While a draft HCP had been underway in this region for some time, this effort is no longer moving forward. However, San Benito County adopted Ordinance 541 in 1988 to set and collect fees for financing the HCP and for San Joaquin kit fox protection measures. These fees are to be paid by the applicant as a condition of the issuance of a building permit. Monies paid through this ordinance do not provide take authorization under the federal or state Endangered Species Acts.

3.3 IMPACTS AND MITIGATIONS SPECIFIC TO THE PROJECT SITE

The proposed project consists of the construction of a well and installation of a six-inch diameter, 3,460-linear-foot transmission pipeline for conveyance of pumped groundwater from the well site to the existing system of the Stonegate subdivision. An electrical line has also been

proposed as a possible project element and would extend approximately 680 ft. southwest past the well to an existing electrical pole.

For the purposes of this analysis, it is assumed that any future proposal by the applicant will be consistent with the general locations of the site as currently represented in the plans provided by Schaaf & Wheeler (2009). Any appreciable difference in either scope or general location of the proposed project would require an additional impact assessment to ensure that unanticipated impacts to biotic resources are not likely to occur.

3.3.1 Loss of Habitat for Special Status Plants

Potential Impacts. Ten special status vascular plant species are known to occur in the general project vicinity (Table 1). Site development would have no effect on regional populations of these species since the site provides no habitat for special status plants. Therefore, state and federal laws protecting special status plants would not be relevant to development of the site.

Mitigation. Mitigation measures are not warranted.

3.3.2 Loss of Habitat for Special Status Animals

Potential Impacts. Twenty special status animal species occur, or once occurred, regionally (Table 1). With the exception of the white-tailed kite, northern harrier, burrowing owl, western red bat, and western mastiff bat, all of these species would be absent from or unlikely to occur on the site due to unsuitable habitat conditions. Proposed construction and trenching activities would have no effect on these species because there is little or no likelihood that they would be present at the time of construction.

The well site, possible electrical line, and a short segment of the alignment between the well site and Bolado Road fall within critical habitat designated by the USFWS for the California red-legged frog. The remainder of the project site appears to border the designated critical habitat area. At the time this report was prepared, no federal nexus was known to be in effect for this project. Additionally, the site does not support the primary constituent elements (i.e, aquatic

breeding and non-breeding habitat and upland habitat) needed to sustain the species' life cycle; the fallow field could be considered dispersal habitat for California red-legged frogs, but it would be characterized as low quality because it is adjacent to movement barriers (e.g., roads and development). Therefore, issues related to critical habitat for California red-legged frogs are not applicable for this project.

The remaining special status animal species listed above may occur more frequently in the fallow field but would not be expected to occur in the horse pasture or on the paved roads. These species either occur on the site incidental to home range and migratory movements, thus using the site infrequently, or may forage on the site year-round or during migration. Project buildout would have a minimal effect on the breeding success of these species and would not result in the loss of foraging, nesting, and/or roosting habitat that is abundantly available, and of higher quality, regionally. While special status animal species may move through or occasionally forage in the fallow field, less than 500 sq. ft. of habitat will be permanently impacted. The remaining disturbance to this habitat will be temporary in nature, and disturbed vegetation is expected to rapidly recruit to cover areas left barren as a result of trenching activities. Therefore, the loss of habitat for these species would be considered less than significant.

Mitigation. Mitigation measures are not warranted.

3.3.3 Disturbance to Migratory Bird Nests

Potential Impacts. Although no stick nests were observed on or adjacent to the site, the valley oaks occurring in the fallow field and trees along Bolado Road and Quien Sabe Road provide suitable nesting habitat for migratory birds, including tree-nesting raptors. Additionally, the fallow field provides suitable, albeit sparse, nesting habitat for burrowing owls. If a migratory bird or raptor, regardless of its federal or state status, were to nest on or near the site prior to or during proposed ground disturbance activities, such activities could result in the abandonment of active nests or direct mortality to these birds. Ground disturbance activities that adversely affect the nesting success of special-status or non-special-status migratory birds, including tree- and

ground-nesting raptors, or result in mortality of individual birds constitute a violation of state and federal laws (Section 3.2.3) and would be considered a significant impact under CEQA.

Mitigation. The following measures should be implemented to avoid any impacts to active migratory bird or raptor (e.g., hawks, falcons, owls, etc.) nests:

Tree-nesting raptors. At the time this report was prepared, no trees were proposed for removal. Should trees need to be removed, however, their removal should occur during the non-breeding season (September 1 through January 31). If it is not possible to avoid tree removal or other disturbances during the breeding season (February 1 through August 31), a qualified biologist should conduct a pre-disturbance survey for tree-nesting raptors and other migratory birds in all trees within the operation footprint and within 250 feet of the footprint no more than 30 days of the onset of ground disturbance, if such disturbance will occur during the breeding season. If nesting migratory birds are detected on the site during the survey, a suitable activity-free buffer should be established around all active nests. The precise dimension of the buffer (up to 250 ft.) would be determined at that time and may vary depending on location and species. Buffers should remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents. Pre-disturbance surveys during the non-breeding season are not necessary for migratory birds, as they are expected to abandon their roosts during quarry activities. Implementation of the above measures would mitigate impacts to migratory birds, including tree-nesting raptors, to a less-than-significant level.

Burrowing owls. A qualified biologist should conduct pre-construction surveys for burrowing owls on the project area and, if possible, within 250 ft. of the project area within 30 days of the onset of ground disturbance. These surveys should be conducted in a manner consistent with accepted burrowing owl survey protocols. If pre-construction surveys determine that burrowing owls occupy the project area during the non-breeding season (September 1 through January 31), then a passive relocation effort (i.e., blocking burrows with one-way doors and leaving them in place for a minimum of three days) may be necessary to ensure that the owl is not harmed or injured during construction. Once it has been determined that owls have vacated the project

area, the burrows can be collapsed, and ground disturbance can proceed. If burrowing owls are detected on the project area or immediately adjacent lands (i.e., within 250 feet of the project area boundary) during the breeding season (February 1 through August 31), a construction-free buffer of up to 250 feet should be established around any active owl nests. The buffer areas should be enclosed with temporary fencing, and construction equipment and workers should not enter the enclosed setback areas. Buffers should remain in place for the duration of the breeding season. After the breeding season, passive relocation of any remaining owls may take place as described above.

Implementation of the above measures would mitigate impacts to migratory birds, including tree- and ground-nesting raptors, to a less-than-significant level.

3.3.4 Impacts to San Joaquin Kit Foxes

Potential Impacts. No burrows possessing the dimensions suitable for the San Joaquin kit fox were observed on the site during the August 2009 field survey, although protocol-level surveys including 100% visual coverage of the site were not conducted for this species.

As discussed in Section 3.3.2, project development would result in a less-than-significant loss of habitat for the San Joaquin kit fox. However, it is possible, though highly unlikely, that an individual kit fox could move onto the site incidentally prior to construction. Construction-related activities may result in harm or injury to individual kit foxes, should they occur on the site. This would be considered a significant adverse impact.

Mitigation. While unlikely, the possibility of the San Joaquin kit fox's occurrence on the project site warrants prudent protection measures, should any individuals wander onto the site at the time of site development and associated construction activities. As such, the project proponent should implement the protection measures outlined in the "U.S. Fish and Wildlife Service standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance," provided in Appendix C and summarized below. While these

recommendations were developed by the USFWS Sacramento office, they would be applicable to this project site as well.

- Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. The primary objective is to identify kit fox habitat features (e.g., potential dens and refugia) on the project site and evaluate their use by kit foxes. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS shall be contacted immediately to determine the best course of action. If no kit fox activity is detected, a written report shall be submitted to the USFWS within five days after completion of the surveys.
- Permanent and temporary construction activities and other types of project-related activities should be carried out in a manner that minimizes disturbance to kit foxes, should their presence be detected on the site during pre-construction surveys. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.
- The Ventura field office of the USFWS and the Fresno field office of the CDFG will be notified in writing within three working days in case of the accidental death or injury to a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Implementation of these measures would minimize the risk that construction activities during site development would result in mortality to individual kit foxes.

3.3.5 Disturbance to Trees

Potential Impacts. One large (approximately 50 inches in diameter) and several smaller valley oaks are present along the pipeline alignment near Bolado Road. The proposed alignment would be situated within the dripline of the large valley oak and may be located within the dripline of at least one of the smaller valley oaks. Trenching activities could compromise the root system and health of these trees, which would be considered a significant adverse impact.

At the time this report was prepared, no trees were proposed for removal.

Mitigation. The proposed pipeline should be realigned so that trenching activities will occur outside of the dripline of any onsite trees. The setback distance from the trees should be determined in consultation with a certified arborist. If avoidance is not possible (i.e., an easement cannot be obtained for realigning the pipeline to occur outside of the tree dripline), then the project applicant and trenching operator should work in consultation with a certified arborist to determine the optimal drilling location in order to minimize direct and indirect impacts to the root system of onsite trees.

Impacts to any retained trees during trenching operations would also be reduced to a less-than-significant level by conforming to the following guidelines:

- The project proponent should retain a consulting arborist prior to any ground disturbance activities. The consulting arborist should develop a tree-protection plan outlining specific procedures to ensure that retained trees are protected during trenching operations.
- A certified arborist or a qualified biologist should be onsite to monitor trenching activities.
- Prior to any ground disturbance activities, fencing should be installed around the dripline of all retained trees occurring within the development envelopes, and the fencing should remain in place for the duration of trenching operations. The type of fencing to be utilized would be at the direction of the consulting arborist.
- Should project buildout require any limb or root pruning of any of the trees occurring on the site, a tree pruning/removal permit may be required by the County pursuant to Chapter 19.33 of the county's code of ordinances, and the applicant would be expected to comply with the terms of the permit. Any limb or root pruning to be conducted on retained trees should be approved and supervised by the consulting arborist and should follow best management practices developed by the International Society of Arboriculture.
- Supplemental irrigation to retained trees should be applied as determined by the consulting arborist.
- If any of the retained trees should be damaged during trenching operations, they should be evaluated at the earliest possible time by the consulting arborist so that appropriate measures can be taken.

3.3.6 Disturbance to Waters of the United States or Riparian Habitats

Potential Impacts. No wetlands or other jurisdictional waters occur on the project site. Therefore, state and federal regulations protecting jurisdictional waters are not relevant to project-related activities. For areas where lower order tributaries cross under the road via culverts, the pipeline will be placed beneath the culverts. The project will also have no effect on riparian habitats or other sensitive natural communities, as no such areas occur on the project site.

Mitigation. Mitigation measures are not warranted.

3.3.7 Loss of Habitat for Native Wildlife

Potential Impacts. Construction of the well would result in the permanent loss of less than 500 sq. ft. of existing habitat (i.e., the fallow field). All other disturbances to the fallow field would result from trenching activities and, thus, would be temporary in nature. The site would be expected to return to its prior condition and function following project completion. The remainder of the site consists of a small portion (i.e., less than 120 linear ft.) of a sparsely vegetated horse pasture and approximately 2,800 linear ft. of paved roads, which provide only low-quality habitat for most species. Any impacts to these areas would also be temporary due to trenching. Vegetation that may be impacted in areas left barren as a result of trenching activities would be expected to naturally recruit in a short period of time from surrounding areas. Due to the small amount of low-quality habitat that would be permanently and temporarily impacted by project development, the loss of habitat for native wildlife resulting from the proposed project would constitute a less-than-significant impact.

Mitigation. Mitigation measures are not warranted.

3.3.8 Interference with the Movement of Native Wildlife

Potential Impacts. Although Tres Pinos Creek facilitates the movement of wildlife through the region, the project site itself does not function as a significant wildlife movement corridor. Proposed construction and trenching activities are not expected to have a significant effect on

home range and dispersal movements of native wildlife that may occur in the region. The proposed work may result in a temporary disruption of local wildlife movements and would be expected to do so only during daylight hours. Because the site will have functionally been unchanged once construction is complete, these activities are not expected to result in any permanent or substantial changes in use or movement patterns. Wildlife species presently utilizing this area are expected to continue moving through it after project buildout. Therefore, the proposed project would have a less-than-significant impact on corridor-type movements of native wildlife within the region.

Mitigation. Mitigation measures are not warranted.

3.3.9 Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters

Potential Impacts. Proposed construction activities would result in a small amount of soils left barren in the construction footprint and, therefore, vulnerable to sheet, rill, or gully erosion. Furthermore, runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. These pollutants may eventually be carried to sensitive wetland habitats used by a diversity of native wildlife species.

The applicant is expected to comply with the provisions of a County grading permit, including standard erosion control measures that employ best management practices (BMPs). Projects involving the grading of large tracts of land must also be in compliance with provisions of a General Construction permit (a type of NPDES permit) available from the California Regional Water Quality Control Board. Compliance with the above permit(s) should result in no impact to water quality in seasonal creeks, reservoirs, and downstream waters from the proposed project and should not result in the deposition of pollutants and sediments in sensitive riparian and wetland habitats.

Mitigation. Mitigation measures are not warranted.

3.3.10 Local Ordinances or Habitat Conservation Plans

Potential Impacts. With the exception of San Benito County's ordinance regarding tree pruning and removal (Section 3.3.5), no local ordinances, HCPs, or NCCPs are known to be in effect for this project. While a draft HCP had been underway in this region for some time, this effort is no longer moving forward and, as such, the project will not conflict with an HCP/NCCP. Therefore, the proposed project would not be impacted by any local policies related to biological resources.

Mitigation. Mitigation measures are not warranted.

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APPENDIX A: VASCULAR PLANTS OF THE STUDY AREA

The plants species listed below were observed on the Stonegate well and pipeline site during the field survey conducted by Live Oak Associates on August 27, 2009. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
 FACW - Facultative Wetland
 FAC - Facultative
 FACU - Facultative Upland
 UPL - Upland
 +/- - Higher/lower end of category
 NI - No investigation

ANACARDIACEAE – Sumac Family		
<i>Schinus molle*</i>	Peruvian pepper tree	UPL
APIACEAE – Carrot Family		
<i>Foeniculum vulgare*</i>	Sweet fennel	FACU
ASCLEPIADACEAE – Milkweed Family		
<i>Asclepias fascicularis</i>	Narrowleaf milkweed	FAC
ASTERACEAE - Sunflower Family		
<i>Baccharis pilularis</i>	Coyote brush	UPL
<i>Gnaphalium luteo-album*</i>	Everlasting cudweed	UPL
<i>Heterotheca grandiflora</i>	Telegraph weed	UPL
<i>Lactuca serriola*</i>	Prickly lettuce	FAC
<i>Senecio vulgaris*</i>	Common groundsel	NI*
<i>Silybum marianum*</i>	Milk thistle	UPL
BRASSICACEAE – Mustard Family		
<i>Hirschfeldia incana*</i>	Summer mustard	UPL
CHENOPODIACEAE – Goosefoot Family		
<i>Chenopodium</i> sp.	Chenopod	n/a
CONVOLVULACEAE – Morning-Glory Family		
<i>Convolvulus arvensis*</i>	Field bindweed	UPL
EUPHORBIACEAE – Spurge Family		
<i>Eremocarpus setigerus</i>	Turkey mullein	UPL
FAGACEAE – Oak Family		
<i>Quercus lobata</i>	Valley oak	FAC*
LAMIACEAE – Mint Family		
<i>Mentha pulegium*</i>	Pennyroyal	OBL
MALVACEAE – Mallow Family		
<i>Malva neglecta*</i>	Dwarf mallow	UPL
ONAGRACEAE – Evening Primrose Family		
<i>Epilobium brachycarpum</i>	Panicled willowherb	UPL
PAPAVERACEAE – Poppy Family		
<i>Eschscholzia californica</i>	California poppy	UPL
PLANTAGINACEAE – Plantain Family		

<i>Plantago lanceolata</i> *	English plantain	FAC-
POACEAE - Grass Family		
<i>Avena barbata</i> *	Slender wild oats	UPL
<i>Avena fatua</i> *	Wild oat	UPL
<i>Bromus diandrus</i> *	Ripgut brome	UPL
<i>Hordeum murinum</i> *	Foxtail barley	NI
POLYGONACEAE – Buckwheat Family		
<i>Polygonum arenastrum</i> *	Common knotweed	UPL

*Introduced, non-native species

**APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY
OCCUR ON THE STUDY AREA**

The species listed below are those that may reasonably be expected to routinely use the habitats of the Stonegate well and pipeline site. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed on or adjacent to the site on August 27, 2009, have been noted with an asterisk.

CLASS AMPHIBIA (Amphibians)

ORDER ANURA (Frogs and Toads)

FAMILY: BUFONIDAE (True Toads)

Western toad *Bufo boreas*

FAMILY: HYLIDAE (Treefrogs and Relatives)

Pacific treefrog *Pseudacris regilla*

CLASS REPTILIA (Reptiles)

ORDER SQUAMATA (Lizards and Snakes)

SUBORDER SAURIA (Lizards)

FAMILY: PHRYNOSOMATIDAE

Western fence lizard *Sceloporus occidentalis*

FAMILY: ANGUIDAE (Alligator Lizards and Relatives)

Southern alligator lizard *Elgaria multicarinatus*

SUBORDER: SERPENTES (Snakes)

FAMILY: COLUBRIDAE (Colubrids)

Gopher snake *Pituophis melanoleucus*

Common kingsnake *Lampropeltis getulus*

CLASS AVES (Birds)

ORDER CICONIIFORMES (Herons, Storks, Ibises and Relatives)

FAMILY: CATHARTIDAE (New World Vultures)

*Turkey vulture *Cathartes aura*

ORDER FALCONIFORMES (Vultures, Hawks and Falcons)

FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures and Harriers)

Red-shouldered hawk *Buteo lineatus*

Golden eagle *Aquila chrysaetos*

Rough-legged hawk *Buteo lagopus*

Ferruginous hawk *Buteo regalis*

*Red-tailed hawk *Buteo jamaicensis*

White-tailed kite *Elanus leucurus*

Sharp-shinned hawk *Accipiter striatus*

Northern harrier *Circus cyaneus*

FAMILY: FALCONIDAE (Caracaras and Falcons)

Prairie falcon *Falco mexicanus*

Merlin *Falco columbarius*

FAMILY: FALCONIDAE (Caracaras and Falcons)

*American kestrel	<i>Falco sparverius</i>
ORDER GALLIFORMES (Magapodes, Curassows, Pheasants and Relatives)	
FAMILY: ODONTOPHORIDAE (New World Quail)	
California quail	<i>Callipepla californica</i>
ORDER COLUMBIFORMES (Pigeons and Doves)	
FAMILY: COLUMBIDAE (Pigeons and Doves)	
Rock dove	<i>Columba livia</i>
Band-tailed pigeon	<i>Columba fasciata</i>
Mourning dove	<i>Zenaida macroura</i>
ORDER STRIGIFORMES (Owls)	
FAMILY: STRIGIDAE (Typical Owls)	
Western screech owl	<i>Otus kennicottii</i>
Great horned owl	<i>Bubo virginianus</i>
ORDER APODIFORMES (Swifts and Hummingbirds)	
FAMILY: TROCHILIDAE (Hummingbirds)	
Anna's hummingbird	<i>Calypte anna</i>
Allen's hummingbird	<i>Selasphorus sasin</i>
ORDER PICIFORMES (Woodpeckers and Relatives)	
FAMILY: PICIDAE (Woodpeckers and Wrynecks)	
Downy woodpecker	<i>Picoides pubescens</i>
ORDER PASSERIFORMES (Perching Birds)	
FAMILY: TYRANNIDAE (Tyrant Flycatchers)	
Say's phoebe	<i>Sayornis saya</i>
Black phoebe	<i>Sayornis nigricans</i>
FAMILY: CORVIDAE (Jays, Magpies and Crows)	
*Western scrub-jay	<i>Aphelocoma californica</i>
American crow	<i>Corvus brachyrhynchos</i>
Common raven	<i>Corvus corax</i>
FAMILY: TROGLODYTIDAE (Wrens)	
House wren	<i>Troglodytes aedon</i>
FAMILY: TURDIDAE (Thrushes)	
American robin	<i>Turdus migratorius</i>
FAMILY: MIMIDAE (Mockingbirds and Thrashers)	
*Northern mockingbird	<i>Mimus polyglottos</i>
FAMILY: STURNIDAE (Starlings and Allies)	
European starling	<i>Sturnus vulgaris</i>
FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)	
Brown-headed cowbird	<i>Molothrus ater</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Western meadowlark	<i>Sturnella neglecta</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
FAMILY: FRINGILLIDAE (Finches)	
Purple finch	<i>Carpodacus purpureus</i>
House finch	<i>Carpodacus mexicanus</i>
American goldfinch	<i>Carduelis tristis</i>
Lesser goldfinch	<i>Carduelis psaltria</i>

FAMILY: PASSERIDAE (Old World Sparrows)

House sparrow

Passer domesticus

CLASS MAMMALIA (Mammals)

ORDER DIDELPHIMORPHIA (Marsupials)

FAMILY: DIDELPHIDAE (Opossums)

Virginia opossum

Didelphis virginiana

ORDER RODENTIA (Rodents)

FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)

California ground squirrel

Spermophilus beecheyi

FAMILY: GEOMYIDAE (Pocket Gophers)

Botta's pocket gopher

Thomomys bottae

FAMILY: MURIDAE (Mice, Rats and Voles)

Norway rat

Rattus norvegicus

House mouse

Mus musculus

ORDER CARNIVORA (Carnivores)

FAMILY: CANIDAE (Foxes, Wolves and Relatives)

Domestic dog

Canis familiaris

Coyote

Canis latrans

Red Fox

Vulpes vulpes

Gray Fox

Urocyon cinereoargenteus

FAMILY: PROCYONIDAE (Raccoons and Relatives)

Raccoon

Procyon lotor

FAMILY: MUSTELIDAE (Weasels and Relatives)

Western Spotted Skunk

Spilogale gracilis

Striped Skunk

Mephitis mephitis

FAMILY: FELIDAE (Cats)

Feral cat

Felis catus

**APPENDIX C: 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

Contact information updated by LOA, April 2008

**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 Ventura 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 Ventura 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:

2493 Portola Road, Suite B
Ventura, CA 93003
(805) 644-1766

"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 Popping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/popping 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 popping 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.