4.4 Biological Resources

4.4.1 Setting

Introduction

This section describes the existing environment for wildlife, botanical, and wetland resources for the Proposed Project and alternatives. In addition to the alignments, the setting considers project staging areas, access roads, ancillary facilities and adjacent habitat that could reasonably be affected by project activities. This section identifies potential impacts to sensitive wetland and biological resources and proposes mitigation measures to reduce potential project impacts.

The setting information presented herein was compiled from available scientific literature and database searches, coordination with resource experts, in-house staff expertise, and multi-year field surveys. Sources include the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDB) (CDFG, 2009), the U.S. Fish and Wildlife Service (USFWS) Recovery Plan for Upland Species (Williams et al., 1998), the Proponent's Environmental Assessment (PEA) (Southern California Edison [SCE], 2008) and Stebbins (2008) Biological Resource Study Report that was prepared for the Proposed Project.

Field reconnaissance surveys were conducted for the Proposed Project and alternatives on July 9 and 10, 2008, and November 24 and 25, 2008, by ESA wildlife biologist Joe Henry and on February 11, 2009 and April 6 to 8, 2009, by ESA Certified Wildlife Biologist, Brian Pittman. These surveys were in addition to biological resource surveys performed by SCE and their contractors as identified in Stebbins (2008), which included aerial-reconnaissance surveys by helicopter in May 2006 and February 2007; and ground-based surveys from May 1 to June 10, 2005, April 20 to June 6, 2006, March 26 to 28, 2007, November 15 to 16, 2007, February 3 to 8, 2008, February 20 to 27, 2008, and from March 3 to 9, 2008.

Regional

The study area for the Proposed Project and alternatives is generally located in northwestern Tulare County and regionally within the central San Joaquin Valley and foothills of the Sierra Nevada Mountains. The study area is within the California Floristic Province, Great Valley Region and is within the San Joaquin Valley Subregion[1], which includes portions of the San Joaquin Valley floor in Tulare County that extend to the Sierra foothills (Hickman, 1993). Soils vary greatly in the study area, but the general soil classification includes relatively flat, moderately well-drained to well-drained, moderately deep loamy soils (U.S. Department of Agriculture, 2008). The elevation of the Proposed Project and alternatives varies from about 350 feet to more than 1,800 feet above mean sea level. Annual rainfall averages about 10.7 inches per year in the lower elevation portions

[1] Geographic subdivisions are used to describe and predict features of the natural landscape. The system of geographic units is four-tiered: provinces, regions, subregions, and districts. The State of California is covered by three floristic provinces: California Floristic Province, Great Basin, and Desert. The California Floristic Province is the largest, includes most of the State and small portions of Oregon, Nevada and Baja California, Mexico and is made up of six regions.

of the study area and increases to about 14.5 inches per year at higher elevations (e.g., near Lemon Cove) (DWR, 2009).

Natural Communities and Wildlife Habitat

The vegetation classification system used in this document is based, in part, on the classification systems of Holland (1986) and Mayer and Laudenslayer (1988). The first has been the standard classification system used for describing California's vegetation for a number of years. The second system uses broader groupings known as Wildlife Habitat Relationships types, which are useful when evaluating plant and animal resources simultaneously.

The study area supports a mix of habitats common to the San Joaquin Valley and foothills of the Sierra Nevada range of Tulare County. In general, the valley floor portions of the study area are dominated by agricultural lands with limited areas that support annual grasslands and vernal pool habitat. Foothill portions of the study area that are too steep for agricultural production are dominated by annual grasslands and oak woodlands, and to a smaller extent, riparian woodlands. A description of each of these communities and habitat types as they occur in the study area is presented below, and is displayed as Figure 4.4-1.

Agriculture/Disturbed

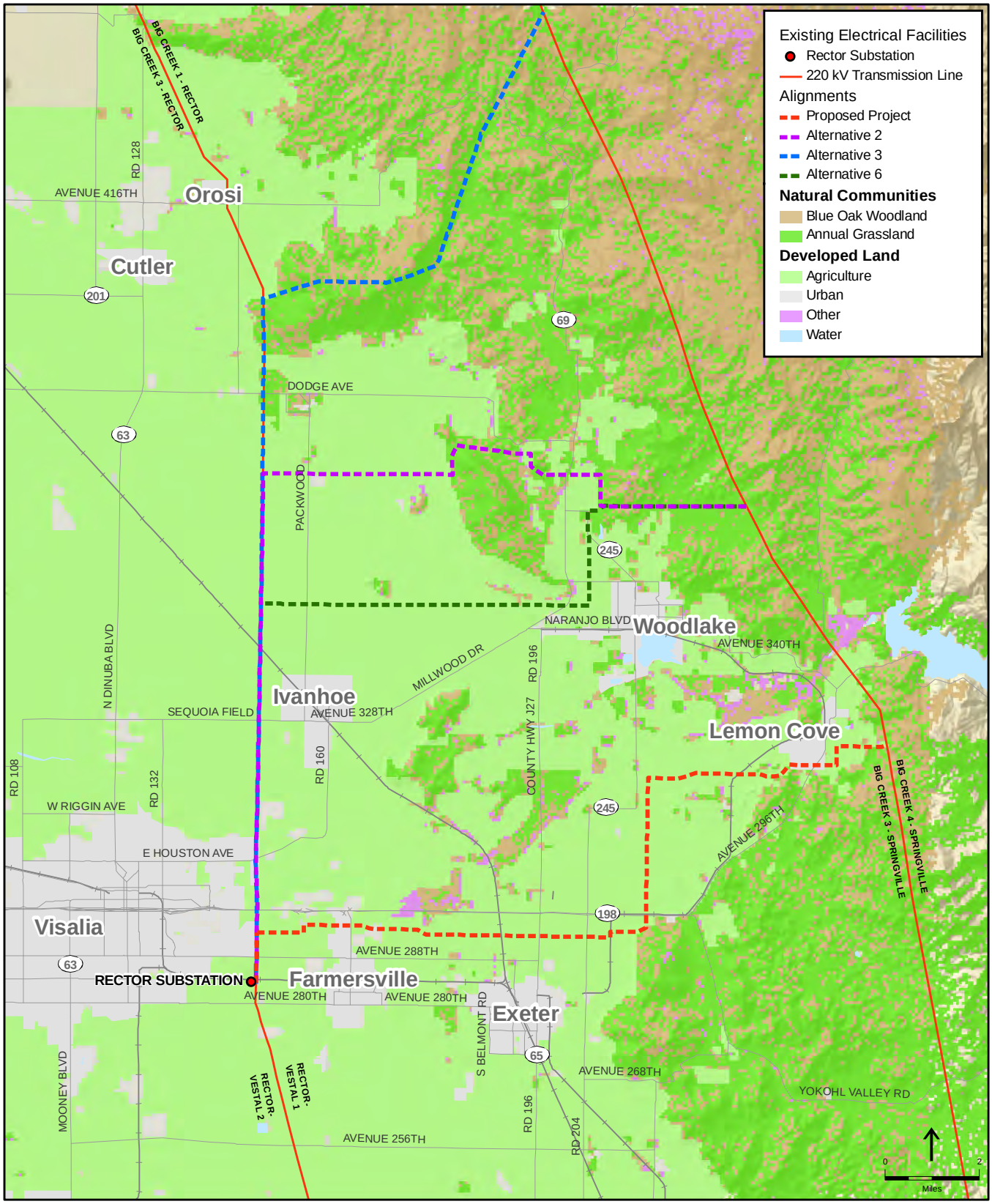
Agricultural lands, including orchards, vineyards, croplands and irrigated pasturelands comprise most of the available vegetation and wildlife habitat on the San Joaquin Valley floor in the study area. Management activities in these areas generally preclude the presence of natural vegetation and special status plant and wildlife species, though a few rare species like the San Joaquin kit fox (*Vulpes macrotis mutica*) and burrowing owl (*Athene cunicularia*) use agricultural lands if native habitat elements and food sources occur nearby.

Citrus and olives are the most widely planted agricultural crops in the study area, but other tree crops include walnuts and stone fruit (e.g., peaches, plums and others), among others. Irrigated pasturelands grazed for livestock also occur in the study area and are dominated by introduced invasive grasses and herbs including Dallisgrass (*Paspalum dilatatum*), perennial ryegrass (*Lolium perenne*), clover (*Trifolium* sp.) and filaree (*Erodium* sp.).

Agricultural lands are the dominant habitat type in the Proposed Project study area. Between the City of Visalia and Badger Hill, orchards and cropland dominate the alignment with less than five percent of the proposed right-of-way (ROW) being developed. Facility upgrades at the Springville, Vestal, Big Creek 3 and Rector Substation sites would consist of electrical system and safety upgrades within developed areas that do not support natural vegetation or wildlife values.

Alternatives 2 and 6 principally traverse orchards and croplands that provide minimal plant and wildlife habitat. Habitat distribution is shown in Figure 4.4-1.

Alternative 3 is dominated by agricultural lands from the Rector Substation to mile 14.6. Between mile 14.6 and the Big Creek-Springville line, the line is dominated by grazed annual grasslands (pasturelands) and blue oak woodlands, which are described below.



SOURCE: ESRI, 2008; SCE, 2008; Thomas Bros. Maps, 2008; CDF, 2002

San Joaquin Cross Valley Loop Transmission Project. 207584.01

Figure 4.4-1

Distribution of Habitats within the Study Area

Native vegetation elements are limited within cultivated and disturbed areas, though ruderal (disturbed) non-native grassland habitat elements sometimes persist on the fringes of these managed areas. Wildlife use varies depending on the type and intensity of farming activities, intensity of disturbance, and availability of nearby native habitat, with bird species that are adapted to human environments or prey on crops often present in the greatest numbers. Typical birds of these areas include European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), and house sparrow (*Passer domesticus*). Croplands are important foraging habitat for numerous raptors including red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), and white-tailed kite (*Elanus leucurus*). In the study area, agricultural areas also provide important movement corridors for common and rare wildlife species such as coyote (*Canis latrans*), and less commonly the San Joaquin kit fox and burrowing owl, which are grasslands species that also use adjacent agricultural lands.

Annual Grassland

Annual grasslands in the study area include non-irrigated grazing lands and grasslands, as well as fallow agricultural lands. Grassland areas are generally limited to the easternmost portions of the Proposed Project and alternative alignments; however, grasslands also persist on the valley floor in small undeveloped parcels (e.g., the Stone Corral Ecological Reserve [Alternative 3] and areas near the Kaweah Oaks Preserve [Proposed Project]), between and within agricultural lands and in fallow fields.

Annual grasslands habitat makes up just a small part (less than five percent) of the Proposed Project alignment, occurring principally in the eastern portion of the alignment near the Big Creek-Springville lines. This habitat comprises about 10 percent of available habitat under Alternative 2 and Alternative 3, and about five percent or less for Alternative 6 (Figure 4.4-1). At relatively higher elevations in the eastern portion of Alternative 3, annual grassland mixes with and is eventually replaced in part by blue oak woodland.

Long-term cattle grazing has greatly influenced the dominant grasses and forb species that occur in the study area, which today tends toward non-native Mediterranean species with relatively few natives. Common dominant grasses in the study area include slender wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum jubatum*), and Italian ryegrass (*Lolium multiflorum*). Areas that have not been intensively grazed by cattle, particularly toward the foothills, additionally support numerous showy-flowered, native annual herbs and forbs, especially during years of favorable rainfall. Such plants include purple brodiaea (*Dichelostemma pulchella*), blow-wives (*Achyrachaena mollis*), bicolor lupine (*Lupinus bicolor*), popcorn flower (*Plagiobothrys nothofulvus*), lotus (*Lotus micranthus*), and blue-eyed gilia (*Gilia tricolor*) (Stebbins, 2008).

Wildlife species that are common to grasslands in the study area are those that are principally associated with the undeveloped Sierra foothills. Common amphibians and reptiles in the study area include western toad (*Bufo boreas*), pacific chorus frog (*Pseudacris regilla*), southern alligator lizard (*Elgaria multicarinata*), western fence lizard (*Sceloporus occidentalis*) and Gilbert's skink (*Plestiodon gilberti*), Pacific gopher snake (*Pituophis catenifer catenifer*), Valley garter snake (*Thamnophis sirtalis fitchi*) and western rattlesnake (*Crotalus oreganus*). Where grasslands co-

occur with vernal pool habitat these areas may additionally support western spadefoot (*Spea hammondii*), which occurs in the eastern portion of Alternative 2 and 6 (B. Pittman, 2009), and California tiger salamander (*Ambystoma californiense*), which is present in grasslands in and near the Stone Corral Ecological Reserve (CDFG, 2009). Birds that breed, forage or otherwise reside in Sierra foothill grasslands include white-tailed kite (*Circus cyaneus*), red-tailed hawk, Brewer's blackbird (*Euphagus cyanocephalus*), western scrub jay (*Aphelocoma californica*), California quail (*Callipepla californica*), western meadowlark (*Sturnella neglecta*), and mourning dove (*Zenaida macroura*), among many others. The burrowing owl is an uncommon resident of grasslands in the study area. Common mammal species in local annual grasslands include California ground squirrel (*Spermophilus beecheyi*), black-tailed jackrabbit (*Lepus californicus*), Audubon's cottontail (*Spermophilus audubonii*) and black-tailed deer (*Odocoileus hemionus*).

Blue Oak Woodland

Blue oak woodland is a highly variable community dominated by blue oak (*Quercus douglasii*), but commonly includes other oak species such as interior live oak (*Q. wislizeni*) as well as foothill pine (*Pinus sabiniana*) and California buckeye (*Aesculus californica*). Within the regional area, stands vary from relatively open savanna with a grassy understory at lower elevations to fairly dense woodlands with a shrub dominated understory at higher elevations.

Blue oak woodland covers less than one percent of the Proposed Project alignment, occurring in small, scattered patches in the east portion of the alignment (Figure 4.4-1). Blue oak woodlands comprise a small portion (less than one percent) of Alternative 2 and 6. This habitat type is most pronounced in Alternative 3, which consists of about 10 to 20 percent of blue oak habitat, predominantly in the northeastern portion of the alignment east of the Big Creek-Rector lines.

Woodland and forest habitat provide food, cover, and nesting sites for many wildlife species. Bird species typically found in oak woodlands include acorn woodpecker (*Melanerpes formicivorus*), bushtit (*Psaltriparus minumus*), oak titmouse (*Baeolophus inornatus*), and hermit thrush (*Catharus guttatus*). Cavity nesting birds and many raptor species rely on oaks and woodland habitat for nesting sites.

Sensitive Plant Communities

Valley Oak Woodland

A remnant stand of valley oak woodland habitat persists in and near the Proposed Project alignment as a remnant of a much larger valley oak community that historically extended to the Kaweah Oaks Preserve. This area is generally located north of the Proposed Project and Highway 198 in the central portion of the alignment (Figure 4.4-1). Woodland and forest habitat provide food, cover, and nesting sites for many wildlife species.

Common wildlife species associated with this remnant oak woodland habitat include gopher snake, western fence lizard, American crow, American kestrel (*Falco sparverius*), American robin (*Turdus migratorius*), house finch (*Carpodacus mexicanus*), great-horned owl (*Bubo virginianus*), mourning dove, western scrub jay, and red-tailed hawk (Stebbins, 2008).

Valley Mixed Riparian Woodland

Valley mixed riparian woodlands occurs at a few locations in the study area along streams and drainages with permanent or intermittent water flows. In the Proposed Project alignment such habitat occurs in association with Deep Creek, Outside Creek and Yokohl Creek. Under Alternatives 2, 3, and 6, riparian woodlands occur at the St. Johns River, Kaweah River, multiple locations in Cottonwood Creek and a few maintained canals. This habitat type is also present in Rattlesnake Creek associated with Alternative 3.

Dominant canopy trees in these riparian woodlands include arroyo willow (*Salix lasiolepis*), California sycamore (*Plantanus racemosa*), Gooding's willow (*S. goodingii*), button-willow (*Cephalanthus occidentalis*) and Oregon ash (*Fraxinus latifolia*). Understory species include rush (*Juncus balticus*), seep monkey-flower (*Mimulus guttatus*), spikerush (*Heleocharis acicularis*), himalayan blackberry (*Rubus armeniacus*), blue elderberry (*Sambucus mexicanus*), wild grape (*Vitis californica*), and stinging nettle (*Urtica dioica holosericea*) (Stebbins, 2008).

Riparian woodlands are extremely productive and important wildlife areas. These areas provide abundant food, cover and breeding sites for native wildlife and often serve as important wildlife nursery sites and movement corridors. Because they are often undeveloped, riparian corridors provide regional connectivity between otherwise disconnected natural habitat and such woodlands generally support a diverse assemblage of plant and wildlife species. Characteristic bird species in this habitat include great blue heron (*Ardea herodias*), great egret (*Ardea alba*), red-winged blackbird (*Agelaius phoeniceus*), California quail, mourning dove, Nuttall's woodpecker (*Picoides nuttallii)*, black phoebe (*Sayornis nigricans*), western wood-pewee (*Contopus sordidulus*), California towhee (*Pipilo crissalis*), northern harrier, red-tailed hawk (*Buteo jamaicensis*), western scrub jay (*Aphelocoma californica*), violet-green swallow (*Tachycineta bicolor*), and many other resident and migratory species.

Vernal Pools and Swales

Tulare County contains a significant distribution of vernal pools which are a sensitive natural community capable of supporting endemic special-status species. Vernal pool habitat is not present in the Proposed Project area, and has limited distribution, generally north of Colvin Mountain, and near Cottonwood Creek and the Town of Elderwood, under Alternative 2 and 6.

Under Alternative 3, more than three acres of vernal pool and swale habitat occur where the Big Creek-Rector lines traverse the Stone Corral Ecological Reserve. Due to its high sensitivity and the presence of numerous threatened and endangered species, this low-lying area was acquired by CDFG for conservation and supports federally designated critical habitat for several plant and wildlife species.

Vernal pools in the study area are dominated by annual forbs and grasses intermixed in some cases with perennial forbs. These pools species tolerate, or depend on, seasonal flooding or soil saturation during the growing season. As described by Stebbins (2008), vernal pools in the study area support spiny-sepaled button celery (*Eryngium spinosepalumi*), which is a sensitive plant species, loosestrife (*Lythrum hyssopifolia*), goldfields (*Lasthenia fremontii*), woolly heads

(*Psilocarphus tenellus*), Hoover's spurge (*Chamaesyce hooveri*), which is a federal listed threatened species, popcorn flower (*Plagiobothrys stipitatus*), seep grass (*Crypsis schoenoides*), foxtail (*Alopecurus howellii*), spikerush (*Heleocharis acicularis*), quillwort (*Isoetes* sp.) and many other native annuals. Special status plant and wildlife species associated with this habitat type are discussed below.

Jurisdictional Waters of the U.S., Including Wetlands

Wetlands are ecologically productive habitats that support a rich variety of both plant and animal life. They are recognized as important natural systems because of their value to fish and wildlife, and their functions as storage areas for flood flows, groundwater recharge, nutrient recycling and water quality improvement. Wetlands are defined as areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted to saturated soils.

A formal wetland delineation has not been prepared for the Proposed Project or alternatives; however, a preliminary wetland assessment, which was performed during reconnaissance surveys provides an estimate of the number and type of wetland features that could be traversed or impacted by the Proposed Project and alternatives.

For the portions of the Proposed Project and alternatives that support orchards and croplands, historic and current land uses including ground leveling and farming activities have made wetland habitats generally uncommon. Within these areas, wetlands habitats are largely limited to managed irrigation canals.

Several drainages originate in the Sierra Nevada Mountains and traverse the study area. One of the major drainages in the study area, the Kaweah River, has numerous tributaries that would be crossed by the Proposed Project and alternatives. Among these tributaries are Cameron Creek, Deep Creek, Long Canal, Mill Creek, Packwood Creek and the St. Johns River, which would all be crossed by the Proposed Project and alternatives. These natural and modified waterways have the ability to support significant areas of wetlands and riparian habitat. Seasonal wetland and vernal pool habitats are also present under Alternative 3 (Stone Corral Ecological Reserve) and in portions of Alternative 2 and 6.

Special-Status Species

Several species that occur in the study vicinity are accorded "special-status" because of their recognized rarity or vulnerability to various causes of habitat loss or population decline. Some of these receive specific protection defined in federal or State endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as "special-status species" in this EIR, following a convention that has developed in practice but has no official sanction. The various categories encompassed by the term, and the legal status of each, are discussed in the *Regulatory Context* below.

Special-status plant and wildlife species that are known to or have potential to occur in the study area are discussed below. Figure 4.4-2 and Figure 4.4-3 display known occurrences of special-status plant and wildlife species in the study area, respectively.

A list of special-status species reported or expected to occur within the study area as well as information pertaining to natural communities of special concern was compiled on the basis of data in the PEA (SCE, 2008), Stebbins's (2008) biological study, the CNDDB (CDFG, 2009), California Native Plant Society (CNPS) online database, and other available scientific databases. The list is intended to be comprehensive and the "Potential for Occurrence" designations apply to species and habitats in the study area that would not necessarily be impacted by the Proposed Project or alternatives. Further information was gathered during site visits to determine the potential presence of conditions that could support any of the special-status species and/or natural communities of special concern identified in Table 4.4-1.

Based upon this information, special-status species and/or sensitive natural communities that have at least a moderate to high potential for occurrence within the study area and could be exposed to project-related impacts (i.e., species or habitat that is either known to occur in the study area or with a high potential to occur) are described below.

Special-Status Wildlife

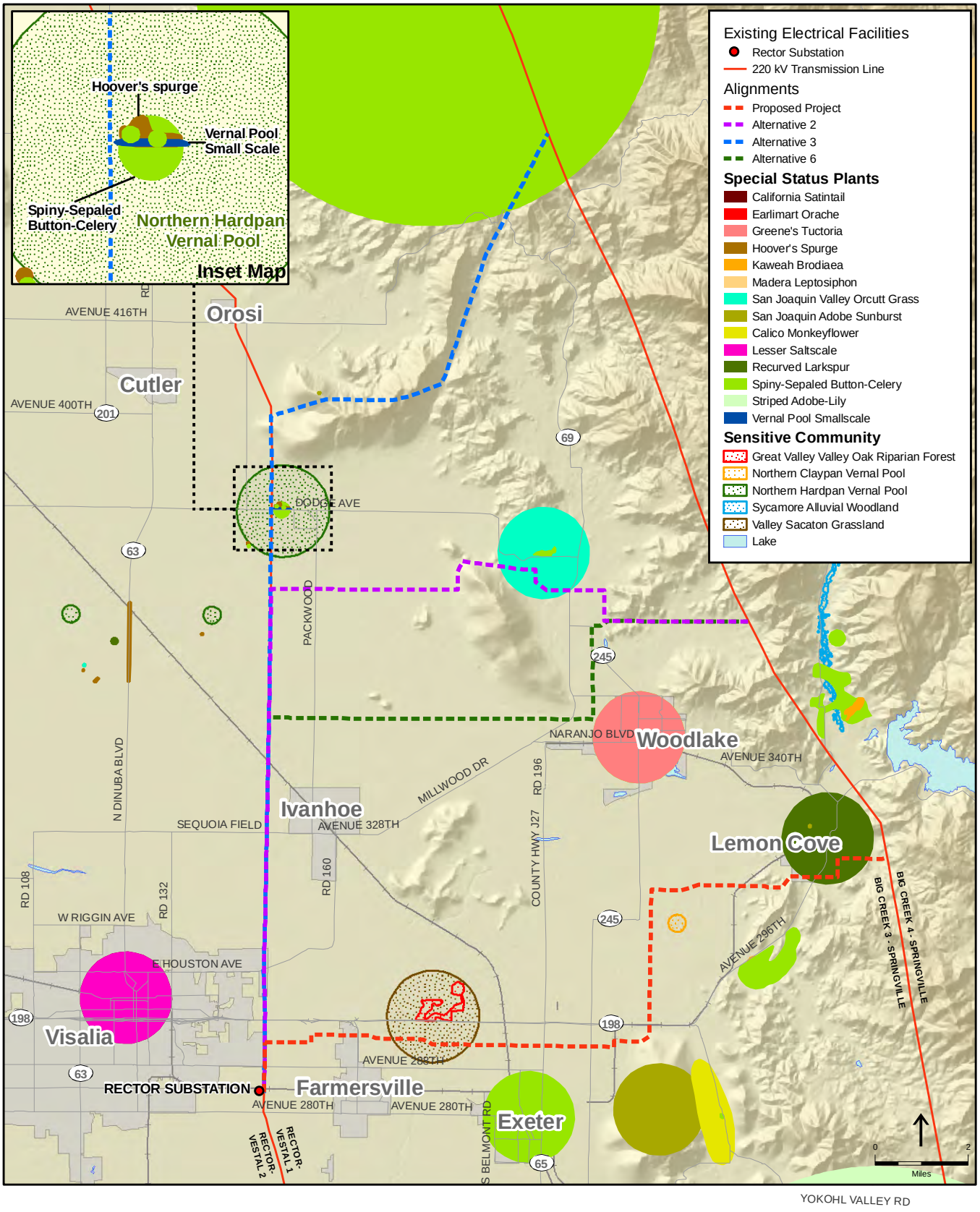
Listed Invertebrates

Vernal Pool Fairy Shrimp. The vernal pool fairy shrimp (*Branchinecta lynchi*) is a federally threatened species. The species is associated through much of its range with seasonal pools and puddles (vernal pools) that occur in grasslands habitat. The vernal pool fairy shrimp is being threatened throughout its range by factors such as agriculture and development. Critical habitat[2] for this species is present in a portion of the Stone Corral Ecological Reserve which Alternative 3 would traverse for approximately one mile (Figure 4.4-4). A few scattered pools occur in annual grassland habitat in the eastern portion of Alternatives 2 and 6, within areas identified as critical habitat for San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), which is discussed below. This species is presumed present in all seasonal wetland and vernal pool habitats in or near the Proposed Project and alternative alignments.

Valley Elderberry Longhorn Beetle. The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is a federally threatened species. The valley elderberry longhorn beetle is specifically found within California's Central Valley in association with Mexican and blue elderberry shrubs. The species can be identified by the characteristic larval emergence holes it leaves in the stems of occupied plants.

About 12 blue elderberry shrubs occur as a component of riparian habitat at three drainages that would be spanned by the Proposed Project: Deep Creek, Outside Creek and Yokohl Creek, though elderberry shrubs may occur elsewhere within the project area. Five or more large

[2] A discussion of critical habitat follows the special status species descriptions.



SOURCE: ESRI, 2008; SCE, 2008; Thomas Bros. Maps, 2008; CNDDB, 2008

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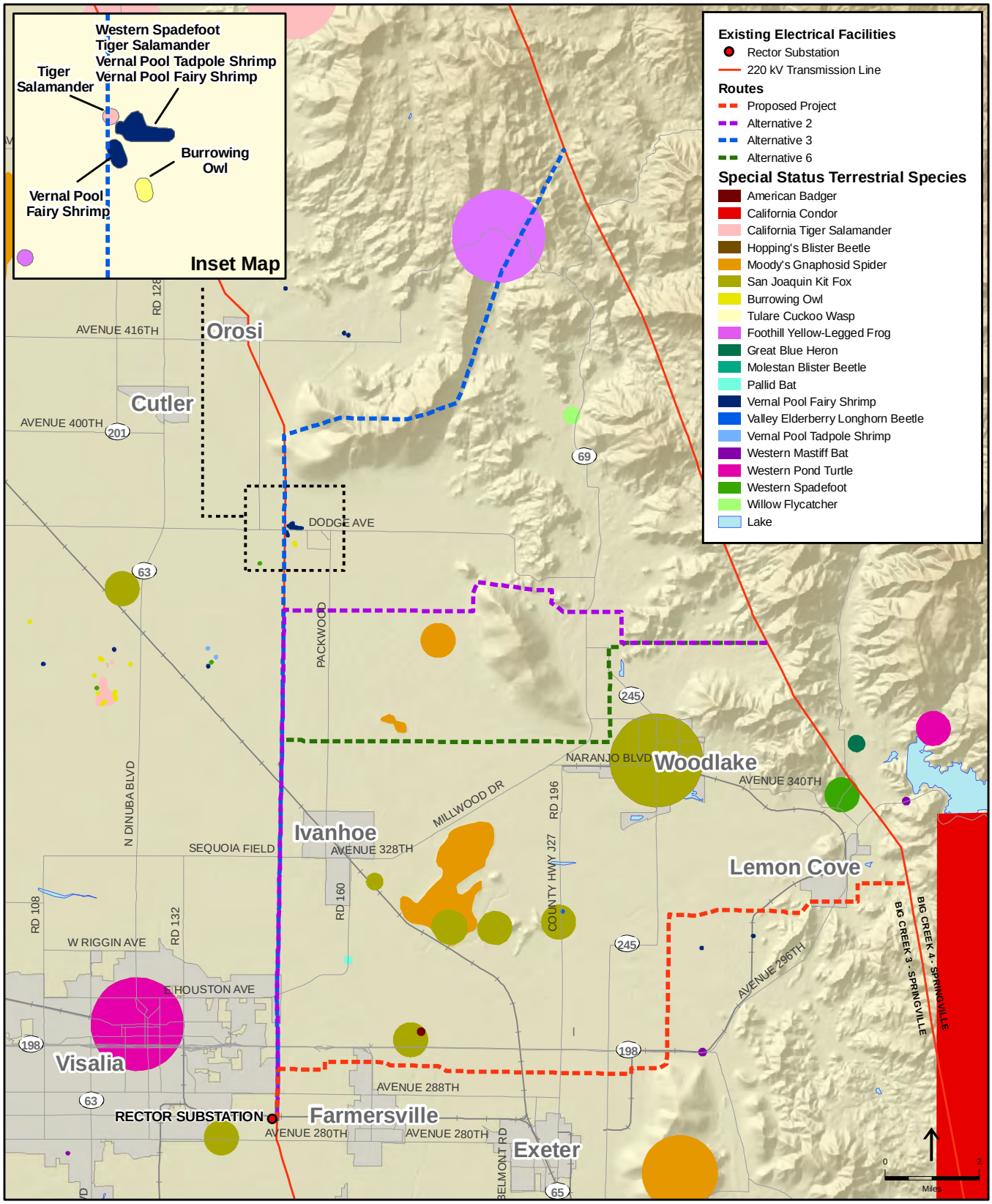
Figure 4.4-2

Special Status Plant Species and Sensitive Communities within the Study Area



SOURCE: ESRI, 2008; SCE, 2008; Thomas Bros. Maps, 2008; CNDDB, 2008

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Figure 4.4-3
Special Status Terrestrial Species within the Study Area

TABLE 4.4-1
SPECIAL-STATUS SPECIES REPORTED IN OR CONSIDERED FOR THE PROPOSED PROJECT AND ALTERNATIVES

Common Name *Scientific Name*	Listing Status: Fed/State/ CNPS	General Habitat	Occurrence Reported in Area/ Potential for Occurrence			
			Proposed Project	Alternative 2	Alternative 3	Alternative 6
Invertebrates						
FEDERAL OR STATE THREATENED AND ENDANGERED SPECIES						
Branchinecta lynchi Vernal pool fairy shrimp	FT/--/--	Vernal pools or other areas capable of ponding water seasonally	Low	Mod.	Present	Mod.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT/--/--	Riparian habitat, stream banks and other areas that support its host plant, elderberry shrubs	Present	Present	Present	Present
Lepidurus packardi Vernal pool tadpole shrimp	FE/--/--	Vernal pools or other areas capable of ponding water seasonally	Low	Mod.	Present	Mod.
Amphibians						
FEDERAL OR STATE THREATENED AND ENDANGERED SPECIES						
Ambystoma californiense California tiger salamander	FT/SC/--	Wintering sites occur in grasslands occupied by burrowing mammals; breed in ponds and vernal pools	Low	Mod.	Present	Mod.
SPECIES OF SPECIAL CONCERN						
Rana boylii Foothill yellow-legged frog	--/CSC/--	Shaded, shallow streams with rocky or cobbly substrate	Absent	Absent	Low	Absent
Spea hammondi Western spadefoot	--/CSC/--	Requires seasonal ponds and pools for breeding	Low	Present	Present	Present
Reptiles						
SPECIES OF SPECIAL CONCERN						
Actinemys marmorata Western pond turtle	--/CSC/--	Lakes, ponds, reservoirs, and slow-moving streams and rivers, primarily in foothills and lowlands	Low	Low	Low	Low
Birds						
FEDERAL OR STATE THREATENED AND ENDANGERED SPECIES						
Buteo swainsoni Swainson's hawk	--/ST/--	Nests in large trees, often near water, open grasslands, or agricultural lands	Mod.	Mod.	Mod.	Mod.
Empidonax traillii Willow flycatcher	--/SE/--	Deciduous thickets, especially willows, often near water	Low	Low	Low	Low
Gymnogyps californianus California condor	FE/ST/CFP	Steep, rocky scrub, oak and pine woodlands and savannahs, often nesting near cliffs or large trees	Low	Low	Low	Low

TABLE 4.4-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED IN OR CONSIDERED FOR THE PROPOSED PROJECT AND ALTERNATIVES

Common Name *Scientific Name*	Listing Status: Fed/State/ CNPS	General Habitat	Occurrence Reported in Area/ Potential for Occurrence			
			Proposed Project	Alternative 2	Alternative 3	Alternative 6
Birds (cont.)						
		SPECIES OF SPECIAL CONCERN				
Ardea herodias Great blue heron	--/CSC/--	Near water sources, often nesting in colonies in tall trees	Low	Low	Low	Low
Aquila chrysaetos Golden eagle	BEPA/--/--	Nests in canyons and large trees in open habitats	High	High	High	High
Athene cunicularia Burrowing owl	--/CSC/--	Nests and forages in low-growing grasslands with burrowing mammals	Mod.	Mod.	Present	Mod.
Mammals						
		FEDERAL OR STATE THREATENED AND ENDANGERED SPECIES				
Vulpes macrotis mutica San Joaquin kit fox	FE/ST/--	Annual grasslands or grassy open areas with shrubs, loose-textured soils for burrows and prey base	High	High	High	High
		SPECIES OF SPECIAL CONCERN				
Antrozous pallidus Pallid bat	--/CSC/--	Roosts in buildings, caves, or cracks in rocks	Low	Low	Low	Low
Eumops perotis californicus Greater western mastiff bat	--/CSC/--	Breeds in rugged, rocky canyons and forages in a variety of habitats	Low	Mod.	Mod.	Mod.
Taxidea taxus American badger	--/CSC/--	Dry, open grasslands	Mod.	Mod.	Mod.	Mod.
Plants						
		FEDERAL OR STATE THREATENED AND ENDANGERED SPECIES				
Brodiaea insignis Kaweah brodiaea	--/SE/1B	Foothill woodland openings	Low	Mod.	Mod.	Mod.
Chamaesyce hooveri Hoover's spurge	FT/--/1B	Found in vernal pools on volcanic mudflow or clay substrate.	Low	Mod.	Present	Mod.
Fritillaria striata Striped adobe-lily	--/ST/IB	Areas with adobe clay soils	Low	Low	Low	Low
Orcuttia inaequalis San Joaquin Valley Orcutt grass	FT/SE/1B	Endemic to vernal pools of the San Joaquin Valley.	Low	High	High	High
Pseudobahia peirsonii San Joaquin adobe sunburst	FT/SE/1B	Annual herb found in cismontane woodland and in valley and foothill grassland on adobe clay substrate.	Low	Mod.	Mod.	Low
Tuctoria greenei Greene's tuctoria	FE/SR/1B	Vernal pools	Low	Low	Mod.	Low

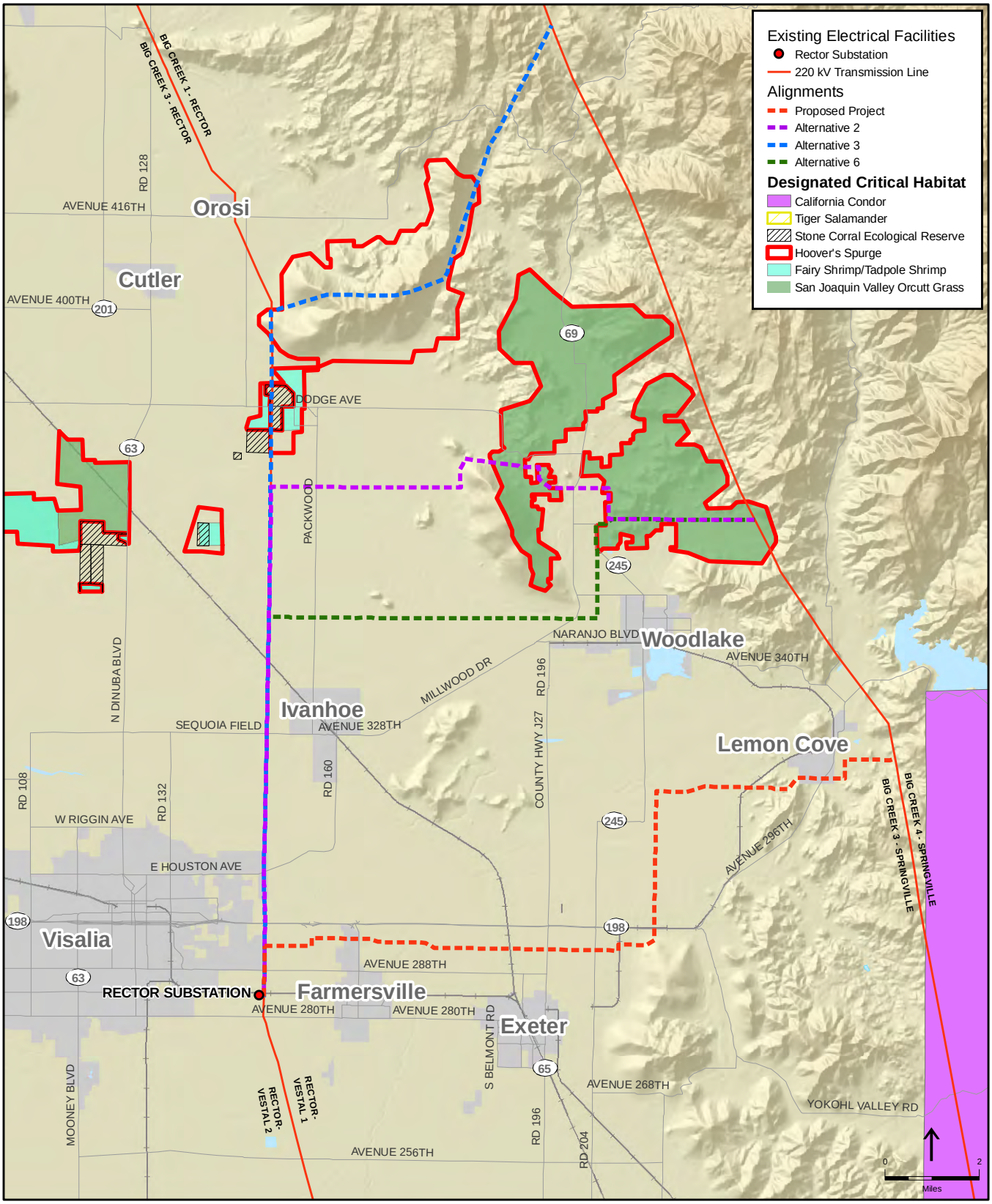
TABLE 4.4-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED IN OR CONSIDERED FOR THE PROPOSED PROJECT AND ALTERNATIVES

Common Name *Scientific Name*	Listing Status: Fed/State/ CNPS	General Habitat	Occurrence Reported in Area/ Potential for Occurrence			
			Proposed Project	Alternative 2	Alternative 3	Alternative 6
Plants (cont.)						
		SPECIES OF SPECIAL CONCERN				
Atriplex erecticaulis Earlimart orache	--/--/1B	Valley and foothill grassland	Low	Low	Low	Low
Atriplex minuscula Lesser saltscale	--/--/1B	Annual herb occurring in chenopod scrub, playas, and in valley and foothill grassland with sandy, alkaline substrate.	Low	Low	Low	Low
Atriplex persistens Vernal pool smallscale	--/--/1B	Found in alkaline vernal pools.	Low	Low	Low	Low
Delphinium recurvatum Recurved larkspur	--/--/1B	Perennial herb occurring in chenopod scrub, cismontane woodland, and in alkaline substrate in valley and foothill grassland.	Low	Low	Low	Mod.
Eryngium spinosepalum Spiny-sepaled button celery	--/--/1B	Vernal pools	Low	Present	Present	Present
Imperata brevifolia California satintail	--/--/2	Chaparral and scrub	Low	Low	Low	Low
Mimulus pictus Calico monkeyflower	--/--/1B	Native bunchgrass grasslands	Low	Low	Low	Low

STATUS CODES:

Federal (U.S. Fish and Wildlife Service):
BEPA = Bald and Golden Eagle Protection Act
FE = Listed as Endangered by the Federal Government
FT = Listed as Threatened by the Federal Government
State (California Department of Fish and Game):
SE = Listed as Endangered by the State of California
ST = Listed as Threatened by the State of California
SR = Listed as Rare by the State of California (plants only)
SC = Candidate for listing as threatened or endangered by the State of California
CSC = California species of special concern
CFP = California fully protected species
California Native Plant Society (CNPS):
List 1A = Plants believed extinct
List 1B = Plants rare, threatened, or endangered in California and elsewhere
List 2 = Plants rare, threatened, or endangered in California but more common elsewhere

SOURCES: CNPS, 2009; CDFG, 2009



SOURCE: ESRI, 2008; SCE, 2008; Thomas Bros. Maps, 2008; USFWS, 1993, 2005, 2006,2008; CDFG, 2008

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Figure 4.4-4

Designated Critical Habitat

elderberry shrubs are present under Alternative 2, 3 and 6 at the St. Johns River, immediately below and within the base of an existing tower. Under Alternative 2, approximately six additional elderberry shrubs would be spanned by the project. Valley elderberry longhorn beetle are presumed present at each of these locations.

Vernal Pool Tadpole Shrimp. The vernal pool tadpole shrimp (*Lepidurus packardi*) is a federally endangered species. This species is endemic to California's Central Valley and is associated with a variety of natural and artificial pool habitats ranging in size from small tire ruts to large seasonal pools. Seasonal wetlands that support vernal pool tadpole shrimp occur in areas supporting grasslands and other areas with slow draining soils. The species is associated through much of its range with vernal pools and is known to burrow into the muddy bottoms of these wetlands. Due to this association, the vernal pool tadpole shrimp is being threatened throughout its range by factors such as agriculture and development. Critical habitat and the species are present within the Stone Corral Ecological Reserve which Alternative 3 would traverse for approximately one mile (Figure 4.4-4).

In the absence of detailed branchiopod surveys, this species is presumed present in all vernal pool habitats in or near the Proposed Project and alternative alignments, and is considered to have a moderate potential to occur in association with small pools in the eastern portion of Alternative 2 and 6.

Listed Amphibians

California Tiger Salamander. The California tiger salamander (*Ambystoma californiense*) is a federally threatened species and a candidate for threatened or endangered status under the California Endangered Species Act. The California tiger salamander requires seasonal water sources in order to breed, and can be found within annual grassland and woodland habitats. Outside the breeding season, adults inhabit underground refuges, often small mammal burrows. Individuals are known to routinely travel up to half a mile or farther from breeding sites

There are no reported California tiger salamander occurrences or potential habitat in the Proposed Project area. Potential breeding sites are available within the study areas for Alternative 6 in a seasonal pool located immediately east of Colvin Mountain and also in the easternmost half mile of the Alternative 2 and 6alignments. These potential breeding sites would be spanned by powerlines; however, if present, salamanders would likely be encountered in upland habitat. A breeding population is present in the Stone Corral Ecological Reserve, which would be traversed by Alternative 3.

Non-listed Amphibians

Foothill Yellow-Legged Frog. The foothill yellow-legged frog (*Rana boylii*) is a CDFG species of special concern. The species requires shaded, shallow streams with rocky or cobbly substrate. The only recorded occurrence of the species is near the Alternative 3 ROW in association with Moore Creek, roughly one and a half miles west of the Big Creek-Springville lines (CDFG, 2009). As the foothill yellow-legged frog is a strictly aquatic species, its distribution would be

limited to within rocky mountain creeks and riparian corridors. No other occurrences are known or reported in the study area and this species is not expected on the Proposed Project or alternative alignments.

Western Spadefoot. The western spadefoot (*Spea hammondii*) is a CDFG species of special concern that occurs in valley grassland and foothill habitats that are common throughout California's Central valley. The species requires vernal pool habitats for successful breeding and is therefore susceptible to land uses such as agriculture and development.

Habitat for this species does not occur within the Proposed Project area. Western spadefoot tadpoles were observed in April 2008 in a single ephemeral pool in the eastern grassland portion of Alternative 2 and 6 (B. Pittman, 2009). Potential breeding sites are available within the Alternative 6 alignment, in a large seasonal pool located immediately east of Colvin Mountain, and also generally in the easternmost half mile of the Alternative 2 and 6 alignments. These potential breeding sites would be spanned by powerlines.

This species is presumed present in grasslands and seasonal wetland habitat in the ROW for Alternative 3, in and near the Stone Corral Ecological Reserve.

Listed Birds

Swainson's Hawk. The Swainson's hawk (*Buteo swainsoni*) is a State-listed threatened species. Swainson's hawks often nest peripherally to riparian corridors as well as utilizing lone trees or groves of trees within agricultural fields. Suitable foraging areas include native grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row croplands. The species forages and nests in the regional vicinity of the Proposed Project and alternatives, but nesting has not been identified in the study area (within five miles) (Woodbridge, 1998; CDFG, 2009). Valley oak habitat east of Farmersville in the Proposed Project area is suitable for Swainson's hawk nesting, though there are no locally reported nesting occurrences.

Non-listed Birds

Golden Eagle. The golden eagle (*Aquila chrysaetos*) receives federal protection under the Bald Eagle Protection Act. The species inhabits rolling foothills and mountainous areas within California and nest in canyons with cliff walls or in large trees in open areas. A relatively wide ranging species, the golden eagle is known to forage within grassland and foothill habitats of California's Central Valley and can therefore be expected to occur within the study area. Golden eagle nesting habitat occurs in association with blue oak woodland habitat in the foothill portion of the Proposed Project and alternatives while being most pronounced under Alternative 3, where blue oak woodlands comprises about 20 percent of available habitat. Potential nesting sites are available under Alternatives 2 and 6, where woodlands occur near the ROW (see Figure 4.4-1).

Burrowing Owl. Burrowing owls (*Athene cunicularia*) are relatively small, semicolonial owls that are residents of open dry grasslands and barren areas. They breed and roost in burrows excavated by ground squirrels and other small mammals. Where the number and availability of natural burrows is limited, owls may occupy human-made burrows such as drainage culverts,

cavities under piles of rubble, discarded pipe, and other tunnel-like structures (Zeiner et al., 1990a). Burrowing owls hunt from perches and are opportunistic feeders, consuming arthropods, small mammals (e.g., meadow voles), birds, amphibians, and reptiles. Burrowing owls occur within the Stone Corral Ecological Reserve which would be traversed by Alternative 3 and have a moderate potential to occur within non-cultivated grassland portions of the Proposed Project and alternatives.

Listed Mammals

San Joaquin Kit Fox. The San Joaquin kit fox (*Vulpes macrotis mutica*) is a federally threatened and State-endangered species that is a permanent resident of arid grasslands or open scrubland in the San Joaquin Valley, where friable soils are present. Dens are required year-round for reproduction, shelter, temperature regulation, and protection from predators. They require open grassland and savannah habitats for foraging and dispersal. Historically their habitat included native alkali marsh and saltbush scrub of the valley floor, but the availability of such habitats has diminished markedly due to agricultural conversion. Grasslands with friable soils are considered the principal habitat for denning, foraging, and dispersal, while open oak woodlands provide lower quality foraging and dispersal habitat. Kit foxes will use habitats that have been extensively modified by humans, including grasslands and scrublands with active oil fields, wind turbines, and agricultural matrices.

San Joaquin kit fox have been recently identified about one mile north of the Proposed Project and in agricultural lands near Alternatives 2, 3 and 6 (CDFG, 2009) (Figure 4.4-3). Kit foxes are known to move frequently, relying on agricultural lands and croplands as well as annual grasslands. Based on the known distribution of this species and available habitat, there is a moderate potential that kit foxes may occur at one time or another within agricultural or grassland portions of the Proposed Project and alternative alignments.

Non-Listed Mammals

Western Mastiff-bat. The western mastiff-bat (*Eumops perotis californicus*) prefers open, semiarid to arid habitats with low elevation and rugged, rocky areas that have suitable crevices for roosting. They roost in buildings and trees, provided they have adequate drops to allow them to take flight (Zeiner et al., 1990b).

Western mastiff-bats are uncommon, widespread residents of the San Joaquin and Salinas Valleys and coastal lowlands south of San Francisco Bay (Zeiner et al., 1990b). A female western mastiff-bat was collected by the California Department of Health Services in 1990 in the general vicinity of Woodlake (Figure 4.4-3) (CDFG, 2009). Open grassland, canyons, and woodland communities in the eastern portion of the Proposed Project and alternative alignments provide potential roosting areas for greater western mastiff-bats. Habitat is considered limited in agricultural portions of the Proposed Project and alternative alignments.

American Badger. In California, the American badger (*Taxidea taxus*) occupies a diversity of habitats; grasslands, savannas, and mountain meadows near timberline are preferred, though they

occur in deserts as well. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground. Badgers range throughout the State except for the humid coastal forests of northwestern California in Del Norte County and the northwestern portion of Humboldt County (Williams, 1986). This species is expected to occur in low densities in grassland and oak woodland/savannah habitats throughout the study area. American badgers are known from the vicinity of the Kaweah Oaks Preserve, north of Highway 198 (CDFG, 2009).

Special-Status Plants

Listed Plants

Kaweah Brodiaea. Kaweah brodiaea (*Brodiaea insignis*) is a State-listed endangered species endemic to the Sierra Nevada foothills where it grows along the Tule and Kaweah Rivers in Tulare County. There is one known population in the study area, downstream from Lake Kaweah, about one mile east of the Big Creek-Springville transmission lines (Figure 4.4-2). This population is more than two miles from any facilities associated with the Proposed Project and alternatives (CDFG, 2009).

Hoover's Spurge. Hoover's spurge (*Chamaesyce hooveri*) is a federally threatened species. This low-growing annual herb of the Euphorbiaceae family flowers from July to September. The species requires vernal pools as habitat and is thus being threatened throughout its range by factors such as agriculture and development. Hoover's spurge is present in portions of the Stone Corral Ecological Reserve, which would be traversed by Alternative 3. Alternative 2 would traverse approximately four miles of critical habitat for this species, and Alternative 6 would traverse approximately three miles of critical habitat, which are discussed below (Figure 4.4-4).

Striped Adobe-lily. The striped adobe-lily (*Fritillaria striata*), is a State-listed endangered species that is endemic to the Sierra Nevada foothills in Kern and Tulare counties. This species grows in annual grasslands with adobe clay soils. There is a known population located in a mountainous area approximately two miles south of the Proposed Project. There are no known populations located in proximity to the alternatives.

San Joaquin Valley Orcutt Grass. San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*) is a federally threatened, State-endangered and a CNPS List 1B species. It is an annual grass of the Poaceae family that flowers from April to September. The species requires vernal pools as habitat and is thus being threatened throughout its range by factors such as agriculture and development. San Joaquin Valley Orcutt grass occurs within the ROW for Alternative 3 at the Stone Corral Ecological Reserve (Figure 4.4-2). Alternative 2 would traverse approximately four miles of critical habitat for this species, and Alternative 6 would traverse approximately three miles of critical habitat (Figure 4.4-4).

San Joaquin Adobe Sunburst. The San Joaquin adobe sunburst (*Pseudobahia peirsonii*) is a federal threatened and State-endangered species. It is a slender, woolly annual in the sunflower family (Asteraceae) that grows in grasslands with heavy adobe clay soils, often in association with non-native annual plants such as wild oats (*Avena* spp.), soft chess and red brome (*Bromus*

hordeaceus and *B. rubens*), and redstem filaree (*Erodium cicutarium*). This species was historically distributed from Kern County to Tulare and Fresno counties, though today is limited to few locations. One population is known about 2.5 miles east from the City of Exeter, about two miles south of the Proposed Project ROW. Given that this species occurs in the regional project vicinity, there is a moderate potential that it could occur in the alignment for the Proposed Project or one of the alternatives.

Greene's Tuctoria. Greene's tuctoria (*Tuctoria greenei*) is a federal listed species. It is an annual member of the grass family (Poa). After its initial discovery in Butte County in 1890, Greene's tuctoria was not reported again for over 40 years. However, during extensive surveys in the late 1930s, Hoover found the species at 12 sites in Fresno, Madera, Merced, San Joaquin, Stanislaus, Tehama, and Tulare Counties (USFWS, 2005). This species presently persists at about 41 sites in the above counties (CDFG, 2009). Greene's tuctoria has been found in three types of vernal pools: Northern Basalt Flow, Northern Claypan, and Northern Hardpan with a range of size and depth characteristics (USFWS, 2005). Appropriate vernal pool habitat is not present in the Proposed Project area, but may be present in vernal pools that occur in portions of Alternatives 2, 3, and 6.

Non-listed Plants

Recurved Larkspur. Recurved larkspur (*Delphinium recurvatum*) is a CNPS List 1B species. This perennial herb of the Ranunculaceae family flowers from March to June. The species occurs in scrub, woodland, or grassland habitat. The nearest occurrence of recurved larkspur is about one mile north of the Proposed Project and five miles south of Alternatives 2 and 6 (see Figure 4.4-2). No other occurrences are reported in the study area.

Spiny-sepaled Button-celery. Spiny-sepaled button-celery (*Eryngium spinosepalum*) is a CNPS List 1B species. This perennial herb of the Apiaceae family flowers from April to May. The species requires vernal pools or grassland as habitat. This species is present at the Stone Corral Ecological Reserve which would be traversed by Alternative 3, and is also present near Colvin Mountain associated with Alternative 2 (see Figure 4.4-2). This species is also reported from the easternmost three miles of the Alternative 3 ROW.

Natural Communities of Special Concern

Northern Hardpan Vernal Pool

Northern Hardpan Vernal Pool is a shallow, aquatic community dominated by annual herbs and grasses that are typical of vernal pool habitat. Germination and growth begin with winter rains, often continuing when inundated. Common species of the community are whitehead navarretia (*Navarretia luecocephala*), annual hairgrass (*Deschampsia danthonoides*) and dwarf wooly-heads (*Psilocarphus brevissimus*), among others. This community is present at the Stone Corral Ecological Reserve which would be traversed by Alternative 3 (CDFG, 2009), and occurs, to a limited extent, in association with seasonal wetlands and vernal pools that occur in eastern portions of Alternative 2 and 6.

Valley Sacaton Grassland

Valley Sacaton Grassland occurs in areas with seasonally high water tables or areas overflowed during winter flooding. The habitat is tussock-forming grassland dominated by alkali Sacaton grass (*Sporobolus airoides*). This vegetation community occurs north of Highway 198, about one-half mile north of the Proposed Project. The portion of the Proposed Project that is nearest to this habitat, located about three miles east of the Big Creek–Rector transmission lines, is cultivated as croplands and walnut orchards (see Figure 4.4-2). This habitat type does not occur in any of the alternative alignments.

Regulatory Context

Many biological resources in California are protected and/or regulated by a variety of laws and policies administered by federal, State, and/or local agencies. The following is an overview of the key agencies, regulations, and policies relevant to the Proposed Project and alternatives.

Federal

U.S. Fish and Wildlife Service

The USFWS administers the Federal Endangered Species Act (FESA) (16 U.S. Code [USC] 153 et seq.), the Migratory Bird Treaty Act (MBTA) (16 USC 703–711), and the Bald Eagle Protection Act (16 USC 668).

Federal Endangered Species Act. Under the FESA, the Secretary of the Interior and the Secretary of Commerce have joint authority to list a species as threatened or endangered (16 USC § 1533(c)). Two federal agencies oversee the FESA: the USFWS has jurisdiction over plants, wildlife, and resident fish, while the National Marine Fisheries Service (NMFS) has jurisdiction over anadromous fish and marine fish and mammals. Section 7 of the FESA mandates that federal agencies consult with the USFWS and NMFS to ensure that federal agency actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species. The FESA prohibits the "take"[3] of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery.

Section 10 requires the issuance of an "incidental take" permit before any public or private action may be taken that could take an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan (HCP) that would offset the take of individuals that may occur, incidental to implementation of the project, by providing for the protection of the affected species.

There are no active or approved HCPs in the Proposed Project area or near any of the project alternatives. The Kaweah Delta Water Conservation District (District) is in the initial organization and planning stages of proposing several conservation plans in northwestern Tulare County. The Proposed Project would traverse one or more areas that the District is reviewing as a

[3] Take is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct.

potential restoration sites. Because there are no adopted HCPs near the Proposed Project or project alternatives they are not considered further in this EIR.

Pursuant to the requirements of the FESA, a federal agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the project area and whether the proposed action will have a potentially significant impact on such species. In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC § 1536(3), (4)). Therefore, project-related impacts to these species or their habitats would be considered significant in this EIR.

Critical Habitat. The USFWS designates critical habitat for listed species under FESA. Critical habitat designations are specific areas within the geographic region that are occupied by a listed species that are determined to be critical to its survival and recovery in accordance with FESA. Federal entities issuing permits or acting as a lead agency must show that their actions do not negatively affect the critical habitat to the extent that it impedes the recovery of the species. Portions of Alternative 2 and 6 would traverse designated critical habitat for San Joaquin Valley Orcutt Grass and Hoover's spurge and Alternative 3 would traverse critical habitat for vernal pool fairy shrimp, vernal pool tadpole shrimp and Hoover's spurge (Figure 4.4-4). Within designated critical habitat, the USFWS protects areas that provide the primary constituent elements (PCEs) for the survival and conservation of the subject listed species. PCEs are the physical and biological functions considered essential to species conservation that require special management considerations or protection.

PCEs for vernal pool fairy shrimp and vernal pool tadpole shrimp are those habitat components that are essential for the primary biological needs of foraging, sheltering, reproduction, and dispersal (USFWS, 2006). PCEs for these shrimp and San Joaquin Valley Orcutt grass and Hoover's spurge generally coincide with the presence of topographic features characterized by mounds and swales that provide pond continuously or intermittently, depressional features including isolated vernal pools underlying restrictive soil layers that continuously hold water for a minimum of 23 days in all but the driest years. Vernal pool fairy shrimp and vernal pool tadpole shrimp additionally require sources of food and structure that provide shelter in the pools (USFWS, 2006).

Protection of Nesting Birds - Migratory Bird Treaty Act. The MBTA (16 United States Code § 703 Supp. I, 1989) generally prohibits the killing, possessing, or trading of migratory birds, bird parts, eggs, and nests, except as provided by the statute.

Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act, enforced by the USFWS, makes it illegal to import, export, take (which includes molest or disturb), sell, purchase, or barter any bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*) or parts thereof.

U.S. Army Corps of Engineers

Clean Water Act, Section 404. The U.S. Army Corps of Engineers (USACE) administers Section 404 of the Clean Water Act (CWA). Section 404 regulates activities in wetlands and "other waters of the United States." Wetlands are a subset of "waters of the United States" that are defined in the Code of Federal Regulations (CFR) (33 CFR 328.3[a]; 40 CFR 230.3[s]) as:

1. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide.

2. All interstate waters including interstate wetlands. (Wetlands are defined by the federal government [33 CFR 328.3(b), 1991] as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances support, a prevalence of vegetation typically adapted for life in saturated soil conditions.)

3. 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. This includes any waters with the following current or potential uses:

    - That are or could be used by interstate or foreign travelers for recreational or other purposes,
    - From which fish or shellfish are or could be taken and sold in interstate or foreign commerce, or
    - That are used or could be used for industrial purposes by industries in interstate commerce.

4. All impoundments of waters otherwise defined as waters of the United States under the definition.

5. Tributaries of waters identified in paragraphs (1) through (4).

6. Territorial seas.

7. Wetlands next to waters identified in paragraphs (1) through (6).

8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding the Clean Water Act jurisdiction remains with the U. S. Environmental Protection Agency (328.3[a][8] added 58 CFR 45035, August 25, 1993).

State

California Department of Fish and Game

The CDFG administers a number of laws and programs designed to protect fish and wildlife resources under the Fish and Game Code (FGC), such as the California Endangered Species Act (FGC Section 2050, et seq.), Fully Protected Species (FGC Section 3511), Native Plant

Protection Act (FGC Sections 1900 to 1913) and Lake or Streambed Alteration Agreement Program (FGC Sections 1600 to 1616).

California Endangered Species Act. In 1984, the State of California implemented the California Endangered Species Act (CESA) which prohibits the take of State-listed endangered and threatened species; although, habitat destruction is not included in the State's definition of take. Section 2090 requires State agencies to comply with endangered species protection and recovery and to promote conservation of these species. The CDFG administers the act and authorizes take through California Fish and Game Code Section 2081 agreements (except for designated "fully protected species," see below). Unlike its federal counterpart, CESA protections apply to candidate species that have been petitioned for listing.

Regarding listed rare and endangered plant species, CESA defers to the California Native Plant Protection Act (see below).

Fish and Game Code Section 3503. California Fish and Game Code Section 3503.5 provides that it is unlawful to take, possess, or destroy any birds in the orders 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 activities that result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment and/or reproductive failure are considered a "take" by CDFG. Any loss of eggs, nests, or young or any activities resulting in nest abandonment would constitute a significant project impact.

Native Plant Protection Act. California Fish and Game Code Section 1900–1913, also known as the Native Plant Protection Act, is intended to preserve, protect, and enhance endangered or rare native plants in California. The act directs CDFG to establish criteria for determining what native plants are rare or endangered. Under Section 1901, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more cause. A species is rare when, although not threatened with immediate extinction, it is in such small numbers throughout its range that it may become endangered. The act also directs the California Fish and Game Commission to adopt regulations governing the taking, possessing, propagation, or sale of any endangered or rare native plant.

Vascular plants that are identified as rare by the CNPS, but which may have no designated status or protection under federal or State endangered species legislation, are defined as follows:

- **List 1A:** Plants Presumed Extinct.
- **List 1B:** Plants Rare, Threatened, or Endangered in California and elsewhere.
- **List 2:** Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
- **List 3:** Plants about Which More Information is Needed – A Review List.
- **List 4:** Plants of Limited Distribution – A Watch List.

In general, plants appearing on CNPS List 1A, 1B, or 2 are considered to meet the criteria of CEQA Guidelines Section 15380 and effects to these species are considered "significant" in this EIR. Additionally, plants listed on CNPS List 1A, 1B or 2 meet the definition of Section 1901, Chapter 10 (Native Plant Protection Act) and Sections 2062 and 2067 (California Endangered Species Act) of the California Fish and Game Code.

Lake or Streambed Alteration Program. The CDFG regulates activities that would interfere with the natural flow of, or substantially alter, the channel, bed, or bank of a lake, river, or stream. Section 1602 of the California Fish and Game Code requires notification of the CDFG for lake or stream alteration activities. If, after notification is complete, the CDFG determines that the activity may substantially adversely affect an existing fish and wildlife resource, the CDFG has authority to issue a Streambed Alteration Agreement under Section 1603 of the California Fish and Game Code. Requirements to protect the integrity of biological resources and water quality are often conditions of Streambed Alteration Agreements. These may include avoidance or minimization of heavy equipment use within stream zones, limitations on work periods to avoid impacts to wildlife and fisheries resources, and measures to restore degraded sites or compensate for permanent habitat losses.

Species of Special Concern. CDFG maintains lists for candidate-endangered species and candidate-threatened species. California candidate species are afforded the same level of protection as listed species. California also designates species of special concern, which are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species or fully protected species, but may be added to official lists in the future. CDFG intends the species of special concern list to be a management tool for consideration in future land use decisions.

State Water Resources Control Board

Porter Cologne Water Quality Act. The State Water Resources Control Board (SWRCB), through its nine Regional Water Quality Control Boards (RWQCB), regulates waters of the State through the California Clean Water Act (i.e., Porter-Cologne Act). If the Corps determines wetlands or other waters to be isolated waters and not subject to regulation under the federal CWA, the RWQCB may choose to exert jurisdiction over these waters under the Porter-Cologne Act as waters of the State.

CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria. These criteria have been modeled after the definition of FESA and the section of Fish and Game Code discussing rare or endangered plants or animals. This section was included in the CEQA Guidelines primarily for situations in which a public agency is reviewing a project that may have a significant effect on a candidate species that has not yet been listed by

CDFG or USFWS. CEQA provides the ability to protect species from potential project impacts until the respective agencies have the opportunity to designate the species protection.

CEQA also specifies the protection of other locally or regionally significant resources, including natural communities or habitats. Although natural communities do not presently have legal protection, CEQA requires an assessment of such communities and potential project impacts. Natural communities that are identified as sensitive in the CNDDB are considered by CDFG to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents such as general and area plans often identify natural communities.

Local

Tulare County General Plan (Proposed Project and Alternatives 2, 3, and 6)

The following policies from the Tulare County General Plan Environmental Resources Management Element would be applicable to the Proposed Project and alternatives:

Fish and Wildlife

Policy 6.D.1: Tulare County shall, as part of the Environmental Resources Management Element (ERME), request of the State Department of Fish and Game, and enter into, a planning agreement to develop jointly a study which will identify in Tulare County the following:

a. Significant habitat to be preserved in a natural state for the survival of rare and endangered species

b. Fish and game habitat desirable for meeting the quantity of demand for fishing and hunting by residents of, and from without the county

c. Wildlife habitat needed for meeting the quantity of demand for recreational, educational and scientific observation, scenic enjoyment and appreciation of open space

Policy 6.D.2: With the results of, these studies, the county should give the highest of priorities to designating land uses to assure protection of rare and endangered species. It should provide for other wildlife uses as much as possible which will also serve to meet open space needs.

Policy 6.D.3: Adopt a policy of conservation of unique and endangered species through habitat protection. Such necessary areas of habitat should be protected through open space zoning, which would envision only compatible uses.

Policy 6.D.4: Development practices that upset natural habitat in watersheds should be controlled to minimize erosion and maximize beneficial vegetation growth.

Policy 6.D.6: Agricultural and ranching interests should be encouraged to maintain or develop areas of natural habitat where terrain or soil is not conducive to maximum agricultural production anyway.

Policy 6.D.7: Support of the wild rivers program and in particular attempt, by every available means, to retain the Kern River above the mouth of South Creek, and the South Fork of the Kern River, above the mouth of Bartolas Creek, in a natural state.

Policy 6.D.8: Support should be expressed and actively offered to the establishment of a portion of Golden Trout Creek as a natural area for the observation of the native golden trout in its natural setting.

Policy 6.D.9: Areas containing mineral springs and seeps, where such seeps and springs appear to be vital to the continuation of wildlife in the area, should be covered with protective zoning which will prevent the destruction of these important natural resources.

Policy 6.D.10: Expedite the continuance and enlargement of wetland preserves that will provide waterfowl habitat necessary to maintenance of the flyway route through the valley. Such wetlands will also function as important habitat sources for many other small animal species, and should be identified also through flood control, water quality enhancement and air pollution control programs.

Vegetation

Policy 6.L.2: Identify areas particularly susceptible to wildfire and allow man-made uses only where it can be demonstrated that they do not appreciably increase fire hazard.

Policy 6.L.3: Identify areas of unique value in their natural state, for purposes of educational, scientific, and aesthetic uses and plan and program for their preservation.

Policy 6.L.5: Identify important wildlife habitat areas and provide for compatible uses within those areas.

(Tulare County General Plan, 2001).

City of Visalia

General Plan (Proposed Project and Alternative 2, 3, and 6). The following objectives from the City of Visalia General Plan Land Use Element would be applicable to the Proposed Project and alternatives:

Objective 2.1.A: Preserve and enhance natural and rural features such as waterways, Valley Oaks, and agriculture as significant assets and community resources."

In regards to this objective, the City of Visalia General Plan Land Use Element calls for the preservation of selected waterways identified as valuable resources, the enhancement of views and public access to waterways and other significant features, expansion of the Conservation, Open Space, Recreation and Parks Element to the entire urban area proposed by the Land Use Element update, the protection of significant stands of Valley Oak woodland from further development, the enhancement of the scenic quality of the east end of Highway 198, the encouraging of use of native trees in landscaping, and the utilization of natural and man-made features as community buffer zones (City of Visalia, 1996).

Municipal Code, Chapter 12.20 Street Trees and Parkway Landscaping (Proposed Project and Alternatives 2, 3 and 6). The following sections of the City of Visalia Municipal Code would be applicable to the Proposed Project and alternatives:

12.20.010 - Purpose. The purpose of this chapter is to promote and regulate the planting, long term care, maintenance, and protection of street trees within the city. (Ord. 2004-21 (part), 2004)

12.20.030 - Street tree guidelines. The director is authorized to develop and administer guidelines for the care, preservation, pruning, planting, replanting, removal or disposition of street trees. The guidelines shall include an authorized species list, spacing guidelines for each authorized species, specifications for street tree planting, and specifications for nursery stock quality of street trees. The guidelines shall be periodically reviewed as updated as needed. (Ord. 2004-21 (part), 2004)

12.20.040 - Protection and maintenance of street trees. No street tree shall be altered, pruned, or removed except in accordance with the provisions of this chapter and the authorized street tree guidelines. No person shall cause any substance or material to be on or near a street tree which shall restrict its natural growth or shall cause it damage. (Ord. 2004-21 (part), 2004)

12.20.050 - Topping. Except as necessary to insure public safety or as authorized by the director, no person shall top any street tree or other tree located on public property. Trees severely damaged by storms or other causes, or trees under utility wires or other obstructions where other pruning practices are impractical may be exempted from this section at the discretion of the director. (Ord. 2004-21 (part), 2004)

12.20.060 - Protection during construction. Street trees shall be protected to the extent possible from damage during construction, sidewalk repair, repair of utility structures and facilities above and below ground, and other similar activities by the person conducting the construction or activity. The zone of protection shall include the ground beneath the crown dripline of the tree. Protection measures shall be included in building permit applications when building permits are required for construction. (Ord. 2004-21 (part), 2004)

12.20.090 - Trimming specifications. All street trees shall be pruned in accordance with American National Standards Institute (ANSI) A300 standards, as amended from time to time. A copy of the standards shall be maintained by the director and made available for review upon request. (Ord. 2004-21 (part), 2004)

12.20.110 - Quality of street trees. New plantings of street trees shall be in accordance with the street tree guidelines for nursery stock quality. (Ord. 2004-21 (part), 2004)

12.20.120 - Replacement of street trees. Street trees removed by the director or by natural causes shall be replaced on a one-for-one basis. The location and species of any replacement tree shall be determined by the director. (Ord. 2004-21 (part), 2004)

12.20.170 - Street trees under utility lines. Street trees planted under utility lines shall be of an approved species specified in the street tree guidelines. (Ord. 2004-21 (part), 2004)

12.20.210 - Utility company's right to perform maintenance. Tree limbs growing near overhead lines and utility facilities may be pruned to clear such facilities by the affected

utility company in compliance with applicable franchise agreements with the city. (Ord. 2004-21 (part), 2004)

12.20.230 - Street tree removal permits. The director shall establish a permit system to be used to authorize street tree removal. The director shall use his or her discretion with respect to tree removal permits as governed by this chapter and by the street tree guidelines. No person will be authorized to remove trees covered by this chapter without first having received a permit to do such work. Permits shall not be valid for a period longer than thirty (30) days from issuance date. Exceptions, in the discretion of the director, shall be those permits issued to public utilities serving the area, which permits may be valid for a period of one year. (Ord. 2004-21 (part), 2004)

City of Farmersville (Proposed Project)

The City of Farmersville General Plan generally indicates that new development should, "Minimize the impact of new development on biotic resources in the planning area" (City of Farmersville, 2002).

4.4.2 Significance Criteria

Based on Section 15065 and Appendix G of the CEQA Guidelines, the project would result in a significant impact on the environment if it would:

a) 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 CDFG or USFWS (including List 1A, 1B, and 2 plant species of the CNPS Inventory);

b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS;

c) 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;

d) 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;

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, other approved local, regional, or state habitat conservation plan.

CEQA Section 15380 provides that a plant or animal species may be treated as "Rare or Endangered" even if not on one of the official lists if, for example, it is likely to become endangered in the foreseeable future. As species of plants and animals become restricted in range

and limited in population numbers, species may become listed or candidates for listing as Endangered or Threatened and become recognized under CEQA as a significant resource. Examples of such species are vernal pool fairy shrimp and burrowing owl; the former is listed by the federal government and the latter is considered a California species of special concern.

In conducting the following impact analysis, three principal components of the CEQA Guidelines outlined above were considered:

- Magnitude of the impact (e.g., substantial/not substantial);
- Uniqueness of the affected resource (i.e., rarity of the resource); and
- Susceptibility of the affected resource to perturbation (i.e., sensitivity of the resource).

The evaluation of the significance of the following impacts considered the interrelationship of these three components. For example, a relatively small magnitude impact to a State or federally listed species would be considered significant because the species is very rare and is believed to be very susceptible to disturbance. Conversely, a plant community such as California annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be required to result in a significant impact.

4.4.3 Applicant Proposed Measures

SCE proposes the following applicant proposed measure (APM) to minimize impacts on biological resources from the Proposed Project. The impact analysis in this EIR assumes that this APM would be implemented to reduce biological impacts as discussed below.

> **APM-BIO-01:** Elderberry Avoidance. The elderberry avoidance guidelines of the USFWS (1999b) would be followed. At a minimum, all ground-disturbing activities should be avoided within 15 feet of any mature elderberries with basal stem diameters of 1 inch or greater. If elderberry plants with stems having a diameter of 1 inch or greater cannot be avoided, the USFWS would be consulted to develop mitigation measures appropriate to the type of impact.

4.4.4 Impacts and Mitigation Measures

Approach to Analysis

This section identifies potential impacts to the biological resources within vicinity of the Proposed Project while Section 4.4.5, below, identifies potential impacts within the vicinity of the alternatives. For both sections, the impact analysis focuses on foreseeable changes to the baseline conditions in the context of the significance criteria presented above and retained below for ease of reference. This analysis includes an evaluation of the potential direct and indirect effects of the Proposed Project and alternatives. Definitions and examples of these effects within the context of biological resources are provided below.

- **Direct Effects.** Direct or primary effects are those effects that are caused by the project and occur at the same time and place (CEQA Guideline §15358). Examples of these types of effects to biological resources include incidental take during construction, elimination of

suitable habitat due to project construction, and degradation of habitats due to construction related activities.

- **Indirect Effects.** Indirect or secondary effects are those effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable (CEQA Guideline §15358). Examples of these types of effects to biological resources include the discharge of sediment or chemicals that adversely affect water quality downstream of the project site, an increase in human activity during project operations, and potential growth-inducement effects.

- **Cumulative Impacts.** Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts (CEQA Guideline §15355). These include the effects of future projects that are reasonably certain to occur within the area of the Proposed Project, and which may cumulatively increase the magnitude of effects described previously. Examples of these types of effects to biological resources include the effects of a cumulative loss of habitat for a special status species due to other planned projects in the area.

The Proposed Project and alternatives have the potential to have direct and indirect effect on terrestrial biological resources in the region. These potential effects include construction-related disturbance to wetlands, loss of natural habitats, and impacts to special status plant and wildlife species and their habitat. Mitigation measures were developed to reduce the level of significance of potential impacts. Mitigation measures focused first on minimization and avoidance of biological resources where possible. Where impacts could not be avoided, compensation for potential impacts was proposed.

The proposed modifications at the Springville, Vestal, and Big Creek 3 Substations consist solely of electrical system and safety upgrades, and the associated construction, operation and maintenance activities would have no impact with respect to biological resources. Similarly, the same type of electrical system and safety upgrade activities proposed for the Rector Substation would not have any potential biological impacts.

a) 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 CDFG or USFWS (including List 1A, 1B, and 2 plant species of the CNPS Inventory).

Construction

Impact 4.4-1: Construction activities could result in adverse impacts to the following special-status plant species: Kaweah brodiaea, Hoover's spurge, striped adobe lily, San Joaquin Valley Orcutt grass, San Joaquin adobe sunburst, Greene's tuctoria, recurved larkspur and spiny-sepaled button celery. ***Less than significant with mitigation*** **(Class II)**

There is a low likelihood that construction of the Proposed Project could directly or indirectly impact special status plants. Protocol-level botanical surveys have been performed for the Proposed Project, with the exception of the eastern 800 foot reach where the landowner has denied site access for surveys. Based on survey findings, special status plants do not occur on

examined portions of the Proposed Project alignment. The unsurveyed portion of the alignment includes a former orchard and areas that are currently grazed. This area does not provide vernal pool habitat and no special status plant populations are known from the local vicinity of this area. Nonetheless, because presence/absence surveys have not been performed in this area, if special status plants are present they could be impacted by the Proposed Project.

Construction-related activities such as site preparation, vegetation removal, installation of poles/towers and the use of construction related equipment could cause temporary and permanent direct impacts by loss of special-status plants or their habitat, root or seed damage or indirectly through changes in soil profile. Indirect impacts are not anticipated because the creation of access roads would be limited under the Proposed Project. With implementation of Mitigation Measures 4.4-1a through 4.4-1c, the Proposed Project would result in less than significant impacts to special-status plants.

Mitigation Measure 4.4-1a: Rare plant surveys. SCE and/or its contractors shall conduct preconstruction surveys following CDFG and USFWS special-status plant survey guidelines to determine if populations are present in unsurveyed areas. Surveys shall document the location, extent, and size of special-status plant populations, if present, and shall be used to inform the planned avoidance of rare plant populations whenever possible.

To the extent feasible, the final project design shall minimize impacts on known special-status plant populations that are identified in the project area (e.g., by routing access roads away from plant populations). SCE and/or its contractors shall establish an appropriate exclusion zone (e.g., greater than 50 feet) to minimize the potential for direct and indirect impacts such as fugitive dust and accidental intrusion into sensitive areas (see Mitigation Measure 4.3-1b for dust control measures). The exclusion zone shall be staked and flagged in the field by a qualified botanist prior to construction.

Mitigation Measure 4.4-1b: Agency consultation, impact avoidance, minimization and compensation. If special status plants are identified and avoidance is not feasible, SCE shall compensate for the loss of special-status plants through the following steps:

- If special-status plant survey findings (Mitigation Measure 4.4-1a) indicate that the project would directly or indirectly impact a listed plant species, SCE shall consult with the USFWS and CDFG to determine if formal consultation is required under the State or federal Endangered Species Acts.
- Impacts to identified special status plant populations shall be minimized by avoiding impacts whenever possible, minimizing impacts, and compensating for project impacts that cannot be avoided.
- If impacts to special status plants cannot be avoided, a qualified ecologist shall prepare a restoration and mitigation plan according to CDFG guidelines and in coordination with CDFG and USFWS to mitigate for project effects. At a minimum, the plan shall include collection of reproductive structures from affected plants, a full description of microhabitat conditions necessary for each affected species, seed germination requirements, restoration techniques for temporarily disturbed occurrences, assessments of potential transplant and enhancement sites, success and performance criteria, and monitoring programs, as well as measures to ensure long-

term sustainability. The mitigation plan shall apply to portions of the project that support special status plants and also to any required mitigation lands.

- If threatened or endangered plant species are affected, land that supports known populations of affected special-status plants shall be identified, enhanced, and protected within the project area or acquired within Tulare County at a ratio of 1.1:1 and protected in perpetuity under conservation easement.

Indirect and direct impacts could occur as a result of non-native weeds or invasive plants becoming established within areas disturbed by project activities and/or transported into the project area on vehicles and construction equipment, respectively. The following measure shall be implemented to minimize the spread of noxious weeds.

> **Mitigation Measure 4.4-1c: Noxious Weed and Invasive Plant Control Plan.** SCE shall develop and implement a Noxious Weed and Invasive Plant Control Plan consistent with standard Best Management Practices (see for example: Department of Transportation, State of California (2003); Storm Water Quality Handbooks; and Project Planning and Design Guide Construction Site Best Management Practices Manual). The plan shall be reviewed and approved by Tulare County and the CPUC and shall, at a minimum, address any required cleaning of construction vehicles to minimize spread of noxious weeds and invasive plants.

Significance after Mitigation: Less than Significant.

Impact 4.4-2: Construction activities could result in impacts on valley elderberry longhorn beetle and its habitat. *Less than significant with mitigation* (Class II)

Because agriculture is the dominant land use in much of the project area, the distribution of valley elderberry longhorn beetle habitat is limited. Elderberry shrubs were identified at three drainages that would be spanned by the Proposed Project: Deep Creek, Outside Creek and Yokohl Creek, though elderberry shrubs may occur elsewhere along the alignment.

As proposed, no elderberry shrubs were identified that would be directly impacted by the Proposed Project, though the close proximity of construction activities require that protective measures be implemented to minimize the potential for direct impacts and disturbance to elderberry shrubs. SCE has proposed avoidance through the implementation of APM-BIO-01 and consultation with USFWS to develop additional mitigation measures if avoidance is not feasible. In addition, a comprehensive elderberry shrub survey is needed to provide early identification of conflicts and avoid timing delays that may arise with USFWS consultation. With the implementation of Mitigation Measure 4.4-2a and 4.4-2b, based on the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS, 1999b), impacts to valley elderberry longhorn beetle would be less than significant.

> **Mitigation Measure 4.4-2a:** SCE and/or its contractors shall perform a focused elderberry shrub survey to identify elderberry shrub distribution in the project area and document project impacts to valley elderberry longhorn beetle. Surveys shall document the location,

extent, and size of elderberry shrubs. If elderberry shrubs are identified in the project area and would be impacted by proposed activities, SCE shall consult with the USFWS as identified in Measure APM-BIO-01 (SCE, 2008), and implement Measure 4.4-2b.

Mitigation Measure 4.4-2b: If detailed surveys indicate that the project would directly or indirectly impact occupied valley elderberry longhorn beetle habitat, SCE shall consult with the USFWS to determine if formal consultation is required under the Endangered Species Act. SCE and/or its contractors shall avoid and minimize impacts to valley elderberry longhorn beetle and its habitat wherever possible. Where impacts cannot be avoided, SCE shall provide compensation for project impacts based on USFWS guidelines (1999 or more current) for avoiding, minimizing, and mitigating project impacts on valley elderberry longhorn beetle. If avoidance is not feasible, USFWS general compensation guidelines call for replacement of elderberry plants in designated mitigation areas at a ratio from 2:1 to 5:1 for each stem greater than one inch in diameter. Note that replacement ratios are by stem and not by elderberry shrub. Replacement stock shall be obtained from local sources. Plants are generally replaced at a 2:1 ratio for stems greater than one inch in diameter at ground level with no adult emergence holes, 3:1 for stems where emergence holes are evident in less than 50 percent of the shrubs, and 5:1 for stems greater than one inch in diameter where emergence holes are present in greater than 50 percent of elderberry shrubs.

SCE shall provide for replacement of elderberry shrubs by developing a restoration and mitigation plan as described in Measure 4.4-1b, to include success and performance criteria, monitoring programs, and measures to ensure long-term sustainability.

Significance after Mitigation: Less than Significant.

Impact 4.4-3: Construction activities would result in direct and/or indirect impacts on existing populations of, and habitat for, Swainson's hawk and golden eagle. ***Less than significant with mitigation*** **(Class II)**

Construction and operation activities associated with the Proposed Project, such as grading and preparation of temporary work areas, pull and tension sites, and access roads; operation of heavy equipment; installation and removal of poles/towers; and conductor installation, could result in direct or indirect impacts on existing populations of, and habitat for, Swainson's hawk and golden eagle. Though such nesting has not been documented in the project area, nesting could potentially occur within or adjacent to any portion of the Proposed Project. The follow measures shall be implemented to reduce potential impacts to a less-than-significant level.

Mitigation Measure 4.4-3a: SCE and/or its contractors shall implement the following measures:

- Whenever feasible, construction near recently active nest sites shall start outside the active nesting season. The nesting period for golden eagle is generally between March 1 and August 15.

- If construction activities begin during the nesting period, a qualified biologist shall perform a preconstruction survey 14 to 30 days before the start of each new construction phase to search for golden eagle and Swainson's hawk nest sites within one-half mile of proposed activities. If active nests are not identified, no further action is required and construction may proceed. If active nests are identified, the avoidance guidelines identified below shall be implemented.

- For golden eagle, construction contractors shall observe CDFG avoidance guidelines, which stipulate a minimum 500-foot buffer zone around active golden eagle nests. Buffer zones shall remain until young have fledged. For activities conducted with agency approval within this buffer zone, a qualified biologist shall monitor construction activities and the eagle nest(s) to monitor eagle reactions to activities. If activities are deemed to have a negative effect on nesting eagles, the biologist shall immediately inform the construction manager that work should be halted, and CDFG will be consulted. The resource agencies do not issue take authorization for this species.

- If construction begins during the Swainson's hawk nesting period, a qualified biologist shall conduct preconstruction surveys at least 14 days prior to construction following CDFG guidance in areas that potentially provide nesting opportunities to verify species presence or absence. If the survey indicates presence of nesting Swainson's hawks within a half-mile radius, the results shall be coordinated with CDFG to develop and implement suitable avoidance measures that include construction buffers (e.g., 500 feet) and nest monitoring during construction.

- Consistent with the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California* (CDFG, 1994), mitigation shall include the following approach:

    - No intensive new disturbances or other project-related activities that could cause nest abandonment or forced fledging shall be initiated within a quarter mile (buffer zone) of an active nest between March 15 and September 15.

    - Nest trees shall not be removed unless no feasible avoidance exists. If a nest tree must be removed, SCE shall obtain a management authorization (including conditions to offset the loss of the nest tree) from CDFG. The tree removal period specified in the management authorization is generally between October 1 and February 1.

    - Monitoring of the nest by a qualified biologist may be required if the project-related activity has potential to adversely impact the nest.

- CDFG often allows construction activities that are initiated outside the nesting season to continue without stopping even if raptors such as golden eagles choose to nest within 500 feet of work activities. Thus, work may continue without delay if surveys verify the local absence of nesting golden eagles, or if construction begins outside the nesting period (August 16 through February 28).

Following construction, SCE and/or its contractors shall survey for and monitor golden eagle nesting sites in the area to ensure that maintenance activities do not disrupt nest sites. Surveys will be performed at the beginning of the nesting season and continue though the

nesting season. Consistent with present policy, disruptive maintenance activities will be suspended within 500 feet of active eagle nests until the young eagles have fledged.

Mitigation Measure 4.4-3b: SCE shall acquire and/or restore foraging habitat for Swainson's hawk in accordance with CDFG guidelines, set forth in *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California* (CDFG, 1994), as follows:

- Compensate for permanent foraging habitat losses (e.g., agricultural lands and annual grasslands) within one mile of active Swainson's hawk nests (acreage to be determined during preconstruction surveys) at a 1:1 replacement ratio).

Significance after Mitigation: Less than Significant.

Impact 4.4-4: Construction activities may impact protected nesting migratory birds. *Less than significant with mitigation* (Class II)

Construction activities associated with the Proposed Project, such as grading, preparation of temporary work areas, pull and tension sites, and access roads; operation of heavy equipment; installation and removal of poles/towers; and conductor installation, could disturb nesting birds and cause nest site abandonment and/or reproductive failure through an increase in noise, human presence and/or removal of habitat. SCE and/or its contractors shall implement the following measure to reduce potential impacts to nesting migratory birds a less than significant level.

Mitigation Measure 4.4-4: SCE and/or its contractors shall implement the following measures to avoid impacts on nesting raptors and other protected birds for activities that are scheduled during the breeding season (February 1 through August 31):

- No more than two weeks before construction within each new construction area, a qualified wildlife biologist shall conduct preconstruction surveys of all potential nesting habitat within 500 feet of construction sites where access is available.

- If active nests are not identified, no further action is necessary. If active nests are identified during preconstruction surveys, a no-disturbance buffer shall be created around active raptor nests and nests of other special-status birds during the breeding season, or until it is determined that all young have fledged. Typical buffers are 500 feet for raptors and 250 feet for other nesting birds (e.g., waterfowl, and passerine birds). The size of these buffer zones and types of construction activities that are allowed in these areas could be further modified during construction in coordination with CDFG and shall be based on existing noise and disturbance levels in the project area.

Significance after Mitigation: Less than Significant.

Impact 4.4-5: Construction activities could result in direct and indirect impacts on burrowing owl. *Less than significant with mitigation* (Class II)

Portions of the Proposed Project are located within areas known to support burrowing owl, though owls have not been identified in or near the Proposed Project. If present locally, construction associated with the project could result in direct mortality of burrowing owls and temporary habitat loss. SCE shall implement the following measure in grasslands and other areas that may potentially support burrowing owl nesting to reduce potential impacts to a less than significant level.

Mitigation Measure 4.4-5: SCE and/or its contractors shall conduct preconstruction surveys and implement measures to avoid impacts to burrowing owls.

- A qualified biologist shall conduct preconstruction surveys for burrowing owls 14 to 30 days prior to the start of each new construction phase, using the most current CDFG protocol. Surveys shall cover grassland areas within a 500-foot buffer from all project construction sites within suitable grasslands habitat, checking for adult and juvenile burrowing owls and owl nests. If owls are detected during surveys, occupied burrows shall not be disturbed.

- Construction exclusion areas (e.g., orange exclusion fence or signage) shall be established around the occupied burrows, where no disturbance shall be allowed. During the nonbreeding season (September 1 through January 31), the exclusion zone shall extend 160 feet around occupied burrows. During the breeding season (February 1 through August 31), exclusion areas shall extend 250 feet around occupied burrows.

- If the above requirements cannot be met, passive relocation of onsite owls may be implemented as an alternative, but only during the nonbreeding season and only with prior CDFG approval. Passive relocation shall be accomplished by installing one-way doors on the entrances of burrows located within 160 feet of the project area. The one-way doors shall be left in place for 48 hours to ensure the owls have left the burrow. The burrows shall then be excavated with a qualified biologist present. Construction shall not proceed until the project area is deemed free of owls.

Significance after Mitigation: Less than Significant.

Impact 4.4-6: Construction activities could result in direct and indirect impacts on San Joaquin kit fox and its habitat. *Less than significant with mitigation* (Class II)

Grassland and agricultural portions of the Proposed Project are generally known to support San Joaquin kit fox (CDFG, 2009). Construction activities could result in direct and indirect impacts to this species including potential harassment or mortality from use of heavy equipment. SCE and/or its contractors shall implement Mitigation Measure 4.4-6 in natural and agricultural areas, and other areas that may potentially support kit fox. Implementation of Mitigation Measure 4.4-6, derived from the *USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox* (USFWS, 1999a), would reduce direct and/or indirect impacts on San Joaquin kit foxes to a less-than-significant level.

Mitigation Measure 4.4-6: SCE and/or its contractors shall implement the following San Joaquin kit fox protection measures for construction areas located in grasslands and agricultural lands that provide potential habitat for San Joaquin kit fox.

- Preconstruction surveys shall be conducted within 200 feet of work areas to identify potential San Joaquin kit fox dens or other refugia in and surrounding work areas. A qualified biologist shall conduct the survey 14 to 30 days before construction begins. All potential dens shall be monitored for evidence of kit fox use by placing an inert tracking medium at den entrances and monitoring for at least three consecutive nights. If no activity is detected at these sites, they may be closed following guidance established in the 1999 *USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox.*

- If kit fox occupancy is determined at a given site, closure activities shall immediately be halted and the USFWS contacted. Depending on the den type, reasonable and prudent measures to avoid effects to kit fox could include seasonal limitations on project construction at the site (i.e., restricting the construction period to avoid spring-summer pupping season), and/or establishing a construction exclusion zone around the identified site, or resurveying the den a week later to determine species presence or absence.

- To minimize the possibility of inadvertent kit fox mortality, project-related vehicles shall observe a maximum 20 miles per hour speed limit on private roads in kit fox habitat. Nighttime vehicle traffic shall be kept to a minimum on nonmaintained roads. Off-road traffic outside the designated project area shall be prohibited in areas of kit fox habitat.

- To prevent accidental entrapment of kit fox or other animals during construction, all excavated holes or trenches greater than two feet deep shall be covered at the end of each work day by suitable materials, or escape routes constructed of earthen materials or wooden planks shall be provided. Before filling, such holes shall be thoroughly inspected for trapped animals.

- All food-related trash items (such as wrappers, cans, bottles, and food scraps) shall be disposed of in closed containers and removed daily from the project area.

- To prevent harassment and mortality of kit foxes or destruction of their dens, no pets shall be allowed in the project area.

Significance after Mitigation: Less than Significant.

Operations

Impact 4.4-7: Operation of new transmission lines could impact raptors as a result of electrocution or collision. ***Less than significant with mitigation*** **(Class II)**

Poles and powerlines pose a danger to raptors as a result of electrocution and collision hazards, and are a recognized source of raptor mortality. Powerline electrocution is the result of two interacting factors: raptor behavior and pole design. Raptors are opportunistically attracted to

powerlines because they provide perch sites for hunting, resting, feeding, for territorial defense, or as nesting structures. Many standard designs of electrical industry hardware place conductors and groundwires close enough together that raptors can touch them simultaneously with their wings or other body parts, causing electrocution. Raptors and other birds may also collide with powerlines, which can be difficult for birds to detect for various reasons such as during night flight or during inclement weather conditions.

The type and magnitude of such impacts, and strategies to avoid conflicts between birds and new transmission lines have been well described by the Edison Electric Institute's Avian Power Line Interaction Committee (APLIC). The APLIC (2006) characterizes potential impacts as follows:

> "Birds are generally electrocuted by transmission lines by due to environmental factors such as topography, vegetation, available prey and other, behavioral or biological factors influence avian use of power poles and inadequate separation between energized conductors or energized conductors and grounded hardware can provide two points of contact.
>
> Raptors and other large birds are opportunistic and may use power poles for a number of purposes, such as nest sites, high points from which to defend territories, and perches from which to hunt. Some structures are preferred by birds because they provide considerable elevation above the surrounding terrain, thereby offering a wide field of view. Electrocution can occur when a bird completes an electric circuit by simultaneously touching two energized parts or an energized part and a grounded part of electrical equipment. Most electrocutions occur on medium-voltage distribution lines (4-34.5 kV), in which the spacing between conductors may be small enough to be bridged by birds. Poles with energized hardware, such as transformers, can be especially hazardous, even to small birds, as they contain numerous, closely-spaced energized parts.
>
> "Avian-safe" structures are those that provide adequate clearances to accommodate a large bird between energized and/or grounded parts. Consequently, 60 inches of horizontal separation, which can accommodate the wrist-to-wrist distance of an eagle (which is approximately 54 inches), is used as the standard for raptor protection Likewise, vertical separation of at least 48 inches can accommodate the height of an eagle from its feet to the top of its head (which is approximately 31 inches). Because dry feathers act as insulation, contact must be made between fleshy parts, such as the wrists, feet, or other skin, for electrocution to occur. In spite of the best efforts to minimize avian electrocutions, some degree of mortality may always occur due to influences that cannot be controlled, e.g. weather."

Implementation of the Mitigation Measure 4.4-7 would reduce impacts to a less-than-significant level.

> **Mitigation Measure 4.4-7:** SCE shall follow Avian Power Line Interaction Committee guidelines for avian protection on powerlines. SCE shall use current guidelines to reduce bird mortality from interactions with powerlines. The Avian Power Line Interaction Committee (APLIC, 2006) and USFWS recommend the following:
>
> - Provide 60-inch minimum horizontal separation between energized conductors or energized conductors and grounded hardware;

- Insulate hardware or conductors against simultaneous contact if adequate spacing is not possible;
- Use pole designs that minimize impacts to birds, and;
- Shield wires to minimize the effects from bird collisions.

Significance after Mitigation: Less than Significant.

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b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS.

Construction

Impact 4.4-8: Construction activities would impact riparian habitat, including native oak trees. ***Less than significant with mitigation*** **(Class II)**

The Proposed Project would span several natural and artificial waterways that support extensive riparian habitat, including Cameron Creek, Deep Creek, Outside Creek and Yokohl Creek, among others. These waterways would be spanned by the Proposed Project (e.g., from Structure #26 to #27) with no anticipated habitat impacts; however, the Proposed Project may require the removal or trimming of some vegetation to meet required wire clearances. The location and extent of such activities, if applicable, are not defined. Although the majority of the vegetation that would require removal is non-native, some native riparian habitat may be affected from implementation of the Proposed Project. Implementation of Mitigation Measure 4.4-8 would reduce impacts to a less-than-significant level.

> **Mitigation Measure 4.4-8:** SCE shall, through project design, avoid riparian vegetation (especially native oak trees) where feasible. Should the removal of mature native oak trees be deemed unavoidable, SCE shall compensate riparian habitat impacts through habitat restoration on a 3:1 mitigation ratio based on affected acreage and a 9:1 mitigation ratio based on impacted native oak trees.

Significance after Mitigation: Less than Significant.

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c) 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.

Construction

Impact 4.4-9: Construction activities could impact jurisdictional waters of the United States and waters of the State, including drainages and seasonal wetlands. ***Less than significant with mitigation*** **(Class II)**

Potential impacts to wetlands and other jurisdictional waters of the U.S. and waters of the State were estimated based on a field review of accessible sites and aerial photos where site access was not available. Based on the preliminary assessment, the Proposed Project is not expected to directly or indirectly impact vernal pools, drainages or seasonal wetlands that occur in the project area. As proposed, such features would be avoided with a suitable upland construction buffer (e.g., at least 50 feet); therefore, no direct impacts were identified to jurisdictional features. Drainages that would be spanned by the Proposed Project include Cameron Creek, Tulare Irrigation District Canal, Deep Creek, Consolidated People's Ditch, Outside Creek, Pennebaker Ditch, Rice Ditch, Catron Ditch, Lemon Grove Ditch, Friant Kern Canal, Foothill Ditch and Yokohl Creek.

A wetland delineation would be required to verify that jurisdictional wetlands would not be impacted by the Proposed Project once this EIR is certified. Implementation of Mitigation Measure 4.4-9a and 4.4-9b would reduce impacts to jurisdictional wetlands to a less than significant level.

> **Mitigation Measure 4.4-9a:** SCE and/or its contractors shall perform a wetland delineation and shall incorporate the results into the final design of transmission lines and access roads to ensure a minimum 50 foot construction buffer. The project shall be modified to minimize disturbance of any wetland, whenever feasible. In the event of any project changes that involve ground disturbance outside of the boundary of the existing wetland delineation, a new wetland delineation shall be performed.
>
> **Mitigation Measure 4.4-9b:** Where jurisdictional wetlands and other waters cannot be avoided, to offset temporary and permanent impacts that occur as a result of the project, restoration and compensatory mitigation shall be provided through the following mechanisms:
>
> - Purchase or dedication of land to provide wetland preservation, restoration or creation. If restoration is available and feasible, then a mitigation replacement ratio of at least 2:1 shall be used. If a wetland needs to be created, at least a 3:1 ratio shall be implemented to offset losses. Where practical and feasible, onsite mitigation shall be implemented.
>
> - A wetland mitigation and monitoring plan shall be developed by a qualified biologist or wetland scientist in coordination with CDFG, USFWS, USACE, and/or RWQCB that details mitigation and monitoring obligations for temporary and permanent impacts to wetlands and other waters as a result of construction activities. The plan shall quantify the total acreage lost, describe mitigation ratios

for lost habitat, annual success criteria, mitigation sites, monitoring and reporting requirements, and site specific plans to compensate for wetland losses resulting from the project.

The mitigation and monitoring plan shall be submitted to the appropriate regulatory agencies for approval. The plan and documentation of such agency approval shall be submitted to the CPUC prior to construction.

Significance after Mitigation: Less than Significant.

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d) Interference 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.

Construction, Operations and Maintenance

During its operational phase, the proposed would not interfere with the movement of any migratory fish or wildlife species, obstruct established wildlife movement corridors, or impede the use of native wildlife nursery sites. The presence of new transmission lines brings the potential to increase electrocution and collision hazards to resident and migratory birds.

Impacts to resident and migratory birds from interactions with power lines, principally by electrocution, are considered less than significant because the project design incorporates the necessary clearance between energized portions and grounding structure to be considered safe for avian species that occur in the area (see Mitigation Measure 4.4-7). Ground facilities, including power poles/towers, access roads and substation upgrades would not create a barrier to wildlife movement or interfere with established wildlife corridors or nursery sites. Similarly, such impacts are not expected during project construction or maintenance activities. Therefore, no impacts to wildlife movement or on wildlife nursery sites are expected as a result of the Proposed Project (No Impact).

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e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The Conservation Element of the Tulare County General Plan includes general objectives relating to biological resources. These objectives include the designation of land uses to assure protection of rare and endangered species and habitat protection (Tulare County, 2001). The Proposed Project largely avoids areas with sensitive biological resources and habitats (e.g., riparian corridors and the Kaweah Oaks Preserve), and is thus consistent with the County General Plan (No Impact).

The City of Farmersville General Plan calls to: “Minimize the impact of new development on biotic resources in the planning area” (Farmersville General Plan, 2002). In minimizing and

mitigating project impacts to biological resources, the portion of the Proposed Project in the City of Farmersville would be consistent with these general objectives (No Impact).

Impact 4.4-10: Construction activities could impact valley oaks or protected landmark trees in the City of Visalia. ***Less than significant with mitigation*** **(Class II)**

Project impacts to valley oaks and landmark trees in the City of Visalia have not been fully identified for the Proposed Project; however, through project design, SCE has made an effort to minimize encroachment into areas with substantial stands of trees, including valley oaks. The implementation of Mitigation Measure 4.4-10 would further ensure that SCE and/or its contractors consider and avoid impacts to sensitive trees in the City of Visalia, consistent with City of Visalia tree protection requirements.

> **Mitigation Measure 4.4-10:** Within the City of Visalia, existing trees in the project area shall be protected during construction by following Best Management Practices to minimize damage to such trees. These would include, but are not limited to, the following measures that shall be implemented by SCE:
>
> - Inventory valley oaks and landmark trees to determine their distribution within the project alignment;
> - Establish tree protection zones that include most or all of the root zone and are also designed to protect the canopy of each tree to be retained on a site;
> - Install tree protection fencing as needed to buffer and protect valley oaks or landmark trees from construction activities;
> - Perform tree pruning and/or surgery as needed to enhance the health and structure of trees, and;
> - Replace lost valley oaks or landmark trees at a 5:1 ratio within the City of Visalia, or fund the replacement of such trees by the City;
> - Mitigate for soil compaction and tree injuries, including dust control.

Significance after Mitigation: Less than Significant.

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f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan.

There are no adopted HCPs, NCCPs or other approved local, regional, or State habitat conservation plans in the vicinity of the Proposed Project; therefore, no impact would occur from implementation of the Proposed Project (No Impact).

4.4.5 Cumulative Impacts

The geographical context includes urban, agricultural and open space land uses in northwestern Tulare County that support common and sensitive biological resources.

Construction of the Proposed Project could result in both temporary impacts on special-status species (i.e., Kaweah brodiaea, Hoover's spurge, striped adobe lily, San Joaquin Valley Orcutt grass, San Joaquin adobe sunburst, Greene's tuctoria, recurved larkspur, spiny-sepaled button celery, valley elderberry longhorn beetle, burrowing owl, San Joaquin kit fox, Swainson's hawk and golden eagle) and their habitat. It is anticipated that ongoing and future development projects as described in Section 3.6, *Cumulative Projects*, would contribute to the incremental loss of undeveloped natural lands that provide habitat for these special-status species. Past, present and reasonably foreseeable projects are also required to comply with federal and State regulations protecting special-status species through implementation of mitigation measures during construction. Activities associated with the construction of the Proposed Project would cause relatively minor loss of undeveloped grassland habitat in the area, principally for the footprint of individual transmission towers/poles where they occur in non-agricultural lands, and for access roads where needed, that would traverse native habitat. Therefore, implementation of Mitigation Measures 4.4-1a – 1c, 4.4-2a and 2b, 4.4-3a and b, 4.4-5 and 4.4-6, which requires SCE to conduct surveys and to avoid, minimize and mitigate for potential impacts to special-status species and their habitat, would reduce the cumulative contribution of the Proposed Project to less than significant (Class II).

Construction of the Proposed Project could also impact riparian habitat, including native oak trees as well as jurisdictional waters of the United States and waters of the State, including drainages and seasonal wetlands. It is anticipated that ongoing and future development projects as described in Section 3.6, *Cumulative Projects*, would contribute to impacts to such features. As with special-status species, past, present and reasonably foreseeable projects are required to comply with federal and State regulations protecting riparian habitat and jurisdictional waters. It is anticipated that impacts to riparian habitat and jurisdictional waters would be avoided by the Proposed Project. However, a jurisdictional determination has not been made for features within the project area therefore there is the potential for impact. The potential project impacts in combination with other projects could contribute to a cumulatively significant impact on riparian habitat, including native oak trees as well as jurisdictional waters of the United States and waters of the State, including drainages and seasonal wetlands. Implementation of Mitigation Measures 4.4-9a and b would require SCE to perform a wetland delineation and have it verified by the USACE if there is a potential to impact jurisdictional features. Additionally, they would be required to avoid, minimize or mitigate potential impacts. For riparian habitat, implementation of Mitigation Measure 4.4-8 requires SCE to avoid, minimize or mitigate potential impacts. As noted above, it is anticipated that impacts from construction of the Proposed Project to riparian habitat and jurisdictional waters would be avoided or minimal; therefore, in combination with other projects as described in Section 3.6, *Cumulative Projects*, the Proposed Project would not contribute to a cumulatively significant impact on riparian habitat, including native oak trees as well as jurisdictional waters of the United States and waters of the State, including drainages and seasonal wetland (Class II).

The portion of the project area that is within the City of Visalia contains valley oak and/or protected landmark trees. There is the potential for ongoing and future development projects in the City to impact valley oak and/or protected landmark trees. These projects are generally residential subdivisions that may require vegetation removal and/or grading. Permits to remove valley oak and/or protected landmark trees in order to construct such subdivisions would be required from the City. The potential construction impacts of the Proposed Project, in combination with other projects in the City, could contribute to a cumulatively significant impact on valley oak and/or protected landmark trees. Implementation of Mitigation Measures 4.4-10, which requires Best Management Practices to minimize damage to such trees including, but not limited to, replacement at a 5:1 ratio, would reduce the cumulative contribution of the Proposed Project to valley oak and/or protected landmark trees to less than significant (Class II).

The project area consists of urban, agricultural and open space that provide habitat for nesting migratory birds and raptors. There is the potential for ongoing and future development projects, mainly residential subdivisions and road widening, to impact nesting birds during construction. Moreover, residential developments would be supported by power infrastructure consisting of distribution voltage (i.e., less than 50 kV); however, distribution lines for new residential developments are generally required to be installed underground (SCE, 1998); therefore, there would be no additional potential for electrocution or collision of raptors from power infrastructure associated with the residential development projects. The potential construction impacts, in combination with other projects, could contribute to a cumulatively significant impact on nesting birds; however, there is no potential cumulative operational impact related to electrocution or collision of raptors with power infrastructure. Implementation of Mitigation Measure 4.4-4 would require SCE to conduct preconstruction surveys and avoid active nests with a suitable buffer. Therefore, with the implementation of this measure, the Proposed Project would not have a cumulatively considerable contribution to impacts on nesting birds (Class II).

4.4.6 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore, no impacts would occur to biological resources (No Impact).

Alternative 2

Compared to the Proposed Project, Alternative 2 would have relatively greater impacts on terrestrial and biological resources both directly and through habitat modification. Portions of the Alternative 2 ROW would impact several federal and State listed species that would not be impacted by the Proposed Project. The alignment additionally traverses about five miles of

designated critical habitat for Hoover's spurge and San Joaquin Orcutt grass, which support western spadefoot and are presumed to support vernal pool fairy shrimp, vernal pool tadpole shrimp, and California tiger salamander (breeding and upland habitat).

Special Status Plants and Wildlife

The Alternative 2 alignment supports populations of special status plant and wildlife species that are common to the Proposed Project, and several species that are unique to this alternative. Construction-related project impacts to these species would be considered significant prior to mitigation.

Based on preliminary botanical surveys, the only special status plant that occurs near the Alternative 2 alignment is spiny-sepaled button celery (a CNPS List 1B species). This species was identified in multiple locations east of Colvin Mountain in association with vernal pool habitat and in annual grasslands near the Big Creek-Springville lines (B. Pittman, 2009). These vernal pool areas would be spanned by Alternative 2 but individual plants that occur outside of wetlands could be impacted during project construction. The implementation of Mitigation Measure 4.4-1a, which provides for rare plant surveys, and 4.4-1b, which provides agency consultation, and impact avoidance, minimization and compensation, would reduce impacts to special status plants to less than significant (Class II).

Blue elderberry shrubs were identified at three locations along Alternative 2 and are presumed to support valley elderberry longhorn beetle. As identified in the *Setting*, five or more large elderberry shrubs occur within the alignment at the St. Johns River, immediately beneath and within the base of an existing tower to be removed. Construction activities could result in the removal of these five shrubs and the loss of all associated valley elderberry longhorn beetles. Three elderberry shrubs were identified and would be avoided at Cottonwood Creek, and two separate associations of elderberry shrubs were identified and would be avoided on Colvin Mountain. The implementation of Mitigation Measures 4.4-2a and 4.4-2b, which provide for detailed elderberry shrub surveys, agency consultation, and replacement of impacted elderberry shrubs would reduce project impacts to less than significant (Class II).

Similar to the Proposed Project (Impact 4.4-3), Alternative 2 has the potential to impact Swainson's hawk and golden eagle that could potentially nest within or near the Alternative 2 alignment. Though nesting has not been observed in the Alternative 2 ROW, potentially suitable Swainson's hawk nesting sites occur within riparian habitat (e.g., at St. Johns River and Cottonwood Creek) and in agricultural lands near the ROW. For golden eagle, potential nesting sites are present in isolated oak woodlands that occur near the eastern portion of the ROW. Additionally, protected migratory birds are expected to nest throughout the Alternative 2 alignment. Construction and operation activities associated with Alternative 2, such as grading, preparation of temporary work areas, pull and tension sites, access roads, operation of heavy equipment, installation and removal of poles, and conductor installation, could result in direct or indirect impacts on existing populations of, and habitat for, Swainson's hawk, golden eagle or nesting migratory birds. The implementation of Mitigation Measures 4.4-3a and 4.4-3b would reduce potential project impacts to less than significant (Class II).

As identified for the Proposed Project, the burrowing owl and San Joaquin kit fox have regional distribution throughout the study area. Burrowing owls are expected to occur within open, short grasslands in and near the Alternative 2 alignment. Such habitat is present at Colvin Mountain and in the eastern portion of the alignment; however, this species has not been identified near the Alternative 2 ROW. San Joaquin kit fox are known to occur in the study area and also could be encountered at any location along Alternative 2, including within agricultural lands and annual grassland habitat. Construction associated with Alternative 2 could result in direct mortality of burrowing owls and/or San Joaquin kit fox and temporary habitat loss during construction. The implementation of Mitigation Measures 4.4-5 and 4.4-6 would reduce impacts to less than significant (Class II).

Similar to the Proposed Project, during operations the new transmission line associated with Alternative 2 would have the potential to interact with raptors resulting in bird electrocution or collision. The implementation of Mitigation Measure 4.4-7, which requires compliance with avian protection standards on powerlines, would reduce project impacts to less than significant (Class II).

Impact 4.4-Alt2-1: Construction activities associated with Alternative 2 could result in impacts to vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander and/or western spadefoot. ***Less than significant with mitigation*** **(Class II)**

Portions of Alternative 2 provide suitable habitat for and may support populations of the federally listed vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander and/or western spadefoot. Suitable habitat for these species is present in association with vernal pools and upland habitat that occur on and immediately east of Colvin Mountain, and in a small portion of the annual grassland habitat near the Big Creek-Springville lines. Within this area, two large vernal pools, one about half an acre in size, would be spanned by Alternative 2; one additional vernal pool is located within a proposed pull site area, and one seasonal pool that was observed to support western spadefoot breeding in April 2009 is within the footprint of a proposed tower site. On Colvin Mountain, proposed access roads and towers would be located within 100 feet of a seasonal pond that may support habitat for each of the above-named species. Project activities either within or near these aquatic sites have the potential to directly take individual shrimp, California tiger salamanders or western spadefoot, and activities in surrounding upland areas may directly take the later two species or indirectly impact shrimp species by reducing aquatic habitat quality. The implementation of Mitigation Measure 4.4-Alt2-1 would reduce this potential project impact to a less than significant level.

> **Mitigation Measure 4.4-Alt2-1:** SCE shall assume the presence of vernal pool fairy shrimp, vernal pool tadpole shrimp, western spadefoot and California tiger salamander in all suitable habitat for which SCE chooses not to perform protocol-level surveys. SCE and/or its contractors shall minimize impacts on special status vernal pool wildlife species by avoiding habitat whenever possible, and by avoiding and minimizing direct and indirect impacts on vernal pools. Mitigation Measures 4.4-9a and 4.4-9b shall be applied to meet the specific requirements for the replacement or restoration of impacted seasonal wetland and vernal pool habitat.

Additional measures to minimize and avoid habitat for listed vernal pool wildlife species shall be implemented as required by USFWS and include:

- Avoidance of potential habitat by narrowing work corridors near vernal pools and seasonal wetland habitat to the greatest extent practicable.

- Prior to construction activities, a detailed biological evaluation shall be prepared by SCE that establishes baseline environmental conditions in areas that support vernal pools. Elements to be assessed include, at a minimum, the distribution and size of pools and swales within 100 feet of project activities, and a description of pools that includes maximum water depth, total dissolved solids, pH, and alkalinity. The biological evaluation shall be used as a basis for site restoration and long-term monitoring. An assessment of listed invertebrate and amphibian populations shall also be provided as a component of the baseline evaluation.

- A USFWS-approved construction monitor shall be present during construction within 500 feet of vernal pool habitat. SCE shall develop and implement a mitigation, monitoring, and management plan, with input from regulatory agencies that outlines long-term management strategies and performance standards to be attained to compensate for habitat losses resulting from the project. At a minimum, the plan shall include standards for mitigation site selection and construction specifications for mitigation sites, a description of site conditions including aerial maps, an analysis of local vernal pool habitat, and performance criteria by which site quality can be assessed over time (e.g., size, vegetation species present, date of initial ponding, ponding duration, and wildlife usage). A monitoring program shall be established to track the development of habitat conditions that are conducive to the establishment of vernal pool wildlife species.

- SCE shall mitigate for the loss of branchiopod habitat that will be filled or otherwise directly or indirectly impacted by the project by restoring impacted pools or providing compensatory habitat (e.g., through a USFWS-approved mitigation bank).

- A USFWS-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the vernal pool fairy shrimp, vernal pool tadpole shrimp, western spadefoot, and California tiger salamander and their habitat, the importance of these species and their habitat, the general measures that are being implemented to conserve these species as they relate to the project, and the boundaries within which the project construction shall occur.

- All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 100 feet from any vernal pool or aquatic habitat.

Significance after Mitigation: Less than Significant.

Critical Habitat

Under Alternative 2, the proposed ROW would traverse about five miles of designated critical habitat for Hoover's spurge and San Joaquin Orcutt grass (Figure 4.4-4). Three portions of this area, two about one-half linear miles in length and another about one mile in length, support the

primary constituent elements that are considered essential for the biological needs of Hoover's spurge and San Joaquin Orcutt grass. The eastern area, near the Big Creek-Springville lines, is characterized by isolated vernal pools and a series of interconnected pools. A second area that supports seasonal wetlands and pools occurs east of Road 204 and north of Avenue 364. A third area includes portions of Colvin Mountain and areas further east that support individual vernal pools and roadside swales with vernal pool characteristics.

Neither Hoover's spurge nor San Joaquin Orcutt grass were observed in the Alternative 2 area during winter 2009 or earlier botanical surveys; however, their absence could be due to abnormal precipitation during the 2008-2009 rainfall season. Of the five miles of Alternative 2 that occur within designated critical habitat, the alternative covers about two linear miles within areas that support the primary constituent elements for Hoover's spurge and San Joaquin Orcutt grass. The precise distribution of pools needs to be further examined within the critical habitat unit to determine the extent of direct impacts; however, preliminary indications are that seasonal wetlands can be spanned by lines and that access roads would impact greater than four to five acres of upland habitat that supports the primary constituent elements for Hoover's spurge and San Joaquin Orcutt grass.

This impact would be reduced to a less than significant level through the implementation of Mitigation Measure 4.4-1a, which provides rare plant surveys, agency consultation regarding impacts to listed plants, and Mitigation Measures 4.4-9a and 4.4-9b, which mitigate for project impacts to jurisdictional wetlands. The implementation of these measures would impacts to less than significant (Class II).

Riparian Habitat or Other Sensitive Natural Community

Impact 4.4-Alt2-2: Project construction could disturb riparian habitat in the St. Johns River and potentially impact northern claypan vernal pool habitat at select locations between Colvin Mountain and the Big Creek-Springville lines. ***Less than significant with mitigation*** **(Class II)**

The removal of existing lattice towers in the St. Johns River channel is common to Alternatives 2, 3, and 6 and would temporarily disturb about 0.1 acre of riparian habitat that is growing beneath the existing towers. Vegetation that would be affected by construction activities includes about three large elderberry shrubs and associated riparian understory species. No trees or other woody riparian habitat would be removed. The removal of elderberry shrubs and vegetation replanting would be partly mitigated by implementation of Mitigation Measures 4.4-2a and 4.4-2b, which provides for the salvage and replacement of elderberry shrubs and consultation with the USFWS. In the event that Alternative 2 is selected, additional measures would be required to ensure that the riparian corridor of St. Johns River is restored to pre-project conditions. The implementation of Mitigation Measure 4.4-Alt2-2 would reduce impacts to less than significant.

Numerous vernal pools and seasonal wetlands occur in the portion of the Alternative 2 alignment between Colvin Mountain and the Big Creek-Springville lines. Due to the abnormal rainfall patterns in winter 2009, the distribution of these pools was not immediately obvious during

reconnaissance-level field surveys. In the absence of detailed surveys to inform the design and placement of towers, access roads and staging areas, it is assumed that activities associated with Alternative 2 could impact northern claypan vernal pools that occur in or adjacent to the alignment.

Because the Alternative 2 alignment has not been finalized, once a final alignment has been selected, a wetland delineation will be performed to confirm the extent of potential wetland impacts under Alternative 2, if any. The implementation of Mitigation Measures 4.4-9a and 4.4-9b, which provides for an inventory and avoidance of seasonal wetlands in the alignment, would reduce impacts to less than significant.

> **Mitigation Measure 4.4-Alt2-2:** Riparian habitat shall be restored in areas where it is disturbed, and monitored to ensure the long-term survival of plantings. Where impacts to riparian habitat cannot be avoided, a qualified ecologist shall prepare a restoration and mitigation plan in coordination with CDFG to mitigate for project impacts to riparian habitat. At a minimum, the plan shall include collection of reproductive structures from affected plants, a full description of microhabitat conditions necessary for each affected species, seed germination requirements, restoration techniques for temporarily disturbed occurrences, assessments of potential transplant and enhancement sites, success and performance criteria, and monitoring programs, as well as measures to ensure long-term sustainability. The mitigation plan shall apply to portions of the project alignment that support restored riparian habitat.

Significance after Mitigation: Less than Significant.

Wetlands

Compared with the Proposed Project, Alternative 2 has a greater likelihood of causing direct and indirect impacts to wetlands through direct removal, filling, hydrological interruption, or other means. The alignment spans several drainages that would not be impacted by Proposed Project activities, including the Kaweah River and Cottonwood Creek. The removal of existing lattice towers in the St. Johns River channel would temporarily disturb about 0.1 acres of riparian habitat and barren river channel. The proposed lines would span a one-half acre vernal pool located east of Colvin Mountain, and pull and staging facilities would need to be reconfigured from the proposed configuration to avoid two additional vernal pools and a seasonal drainage.

Alternative 2 could additionally cause the temporary disturbance of freshwater emergent wetlands in the eastern portion of the alignment near the Big Creek-Springville lines, and could affect a limited, though unknown number of drainage features in support of access roads to new towers.

Because the alignment has not been finalized, once a final alignment has been selected, a wetland delineation will be performed to confirm the extent of jurisdictional wetland impacts under Alternative 2. The implementation of Mitigation Measures 4.4-9a and 4.4-9b would reduce impacts to less than significant (Class II).

Wildlife Corridors and Nursery Sites

As identified in the impact discussion for the Proposed Project, bird interactions with power facilities shall be minimized by implementing tower designs that provide the necessary clearance between energized portions and grounding structure to be considered safe for the avian species that occur in the area. Ground facilities, including power poles, access roads and substation upgrades would not create a barrier to wildlife movement or interfere with established wildlife corridors or nursery sites. Therefore, no impacts to wildlife movement or wildlife nursery sites are expected as a result of Alternative 2 (No Impact).

Local Policies and Ordinances

As discussed for the Proposed Project, valley oaks or protected landmark trees could be impacted in the City of Visalia. The implementation of Mitigation Measure 4.4-10 would reduce this impact to less than significant (Class II).

Habitat Conservation Plans

There are no adopted HCPs or NCCPs in the Alternative 2 alignment (No Impact).

Alternative 3

Compared to the Proposed Project, Alternative 3 would have substantially greater impacts to special status plants and wildlife. This is due to activities that would be associated with the construction of approximately 10 miles of new access roads and transmission line in the foothills of the Sierra Nevada Mountains and proposed activities in and near the Stone Corral Ecological Reserve. This alternative also affects critical habitat for several species, which would not be affected under the Proposed Project.

Special Status Plants and Wildlife

The Alternative 3 alignment supports populations of special status plant and wildlife species that are common to the Proposed Project alignment, and several species that are unique to Alternative 3. Construction related project impacts to these species would be considered significant prior to mitigation.

Due to access constraints, botanical surveys were not performed on portions of Stokes Mountain and within the Stone Corral Ecological Reserve; however, ecological conditions and special status plant and wildlife species are well documented from the Reserve. Vernal pool habitat in the Reserve is known to support numerous special status plants including Hoover's spurge and San Joaquin Valley Orcutt grass, which are federally listed species, and spiny-sepaled button celery (a CNPS List 1b species), among others. Significant impacts would be associated with the removal of existing lattice towers, and the construction of new structures and access roads. The Alternative 3 alignment could directly impact about three or more acres of habitat that supports

Hoover's spurge and San Joaquin Valley Orcutt grass within the project footprint. The implementation of Mitigation Measure 4.4-1a through 4.4-1c would reduce this impact to less than significant (Class II).

Blue elderberry shrubs occur in several locations in the Alternative 3 alignment and are presumed to support valley elderberry longhorn beetle. As described for Alternative 2, five or more large elderberry shrubs occur within the alignment at the St. Johns River, immediately below and within the base of an existing tower and would presumably be removed or otherwise impacted by activities associated with Alternative 3. Numerous elderberry shrubs were identified in rural areas east of Stokes Mountain that could additionally be impacted by Alternative 3 activities. The implementation of Mitigation Measure 4.4-2a and 4.4-2b would reduce potential impacts to valley elderberry longhorn beetle to less than significant (Class II).

Similar to the Proposed Project, Alternative 3 has the potential to impact Swainson's hawk and golden eagle that could nest near the alignment. Though nesting by these species has not been observed in the Alternative 3 ROW, potentially suitable Swainson's hawk nesting sites occur within riparian habitat (e.g., at St. Johns River, the Kaweah River and Cottonwood Creek) and other locations near the ROW. For golden eagle, nesting sites are available in isolated oak woodlands that occur near the eastern portion of the ROW. Additionally, protected migratory birds are expected to nest throughout the Alternative 3 alignment. Construction activities associated with Alternative 3, such as grading and preparation of temporary work areas, pull and tension sites, and access roads, operation of heavy equipment, installation and removal of poles, and conductor installation, could result in direct or indirect impacts on existing populations of, and habitat for, Swainson's hawk, golden eagle or nesting migratory birds. The implementation of Mitigation Measures 4.4-3a and 4.4-3b would reduce impacts to less than significant (Class II).

The burrowing owl and San Joaquin kit fox have regional distribution throughout the study area. Burrowing owls are expected to occur within open, short grasslands in and near the Alternative 3 alignment. Such habitat is present in the Stone Corral Ecological Reserve (where burrowing owls are present) and portions of the ROW located further north. San Joaquin kit fox are known to occur in the study area and have also been reported at the Reserve. This species may be encountered within agricultural lands and annual grassland habitat on the alignment. Construction associated with Alternative 3 could result in direct mortality of burrowing owls and/or San Joaquin kit fox and temporary habitat loss during construction. The implementation of Mitigation Measures 4.4-5 and 4.4-6 would reduce impacts to burrowing owl and San Joaquin kit fox to less than significant (Class II).

During operations, the Alternative 3 transmission line would have the potential to interact with raptors resulting in bird electrocution or collision. The implementation of Mitigation Measure 4.4-7 would reduce project impacts to less than significant (Class II).

Impact 4.4-Alt3-1: Construction activities associated with the Alternative 3 could result in impacts to vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander and/or western spadefoot. ***Less than significant with mitigation*** **(Class II)**

Portions of Alternative 3 provide suitable habitat for and may support populations of the federally listed vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander and/or western spadefoot. Suitable habitat for these species is present in the vicinity of the Stone Corral Ecological Reserve. Proposed activities would directly impact about 3.0 or more acres of aquatic habitat that supports these species within the project footprint and considerably more upland habitat that supports California tiger salamander and western spadefoot. Mitigation Measures 4.4-9a and 4.4-9b shall be applied to meet the specific requirements for the replacement or restoration of impacted seasonal wetland and vernal pool habitat. Mitigation Measure 4.4-Alt3-1 would further reduce this potential project impact to a less than significant level.

> **Mitigation Measure 4.4-Alt3-1:** SCE shall assume the presence of vernal pool fairy shrimp, vernal pool tadpole shrimp, western spadefoot and California tiger salamander in all suitable habitat for which SCE chooses not to perform protocol-level surveys. SCE and/or its contractors shall minimize impacts on special status vernal pool wildlife species by avoiding habitat whenever possible, and by avoiding and minimizing direct and indirect impacts on vernal pools. Mitigation Measures 4.4-9a and 4.4-9b shall be applied to meet the specific requirements for the replacement or restoration of impacted seasonal wetland and vernal pool habitat.
>
> Additional measures to minimize and avoid habitat for listed vernal pool wildlife species shall be implemented as required by USFWS and include:
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> - Avoidance of potential habitat by narrowing work corridors near vernal pools and seasonal wetland habitat to the greatest extent practicable.
>
> - Prior to construction activities, a detailed biological evaluation shall be prepared by SCE that establishes baseline environmental conditions in areas that support vernal pools. Elements to be assessed include, at a minimum, the distribution and size of pools and swales within 100 feet of project activities, and a description of pools that includes maximum water depth, total dissolved solids, pH, and alkalinity. The biological evaluation shall be used as a basis for site restoration and long-term monitoring. An assessment of listed invertebrate and amphibian populations shall also be provided as a component of the baseline evaluation.
>
> - A USFWS-approved construction monitor shall be present during construction within 500 feet of vernal pool habitat. SCE shall develop and implement a mitigation, monitoring, and management plan, with input from regulatory agencies that outlines long-term management strategies and performance standards to be attained to compensate for habitat losses resulting from the project. At a minimum, the plan shall include standards for mitigation site selection and construction specifications for mitigation sites, a description of site conditions including aerial maps, an analysis of local vernal pool habitat, and performance criteria by which site quality can be assessed over time (e.g., size, vegetation species present, date of initial ponding, ponding duration, and wildlife usage). A monitoring program shall be established to track the development of habitat conditions that are conducive to the establishment of vernal pool wildlife species.

- SCE shall mitigate for the loss of branchiopod habitat that will be filled or otherwise directly or indirectly impacted by the project by restoring impacted pools or providing compensatory habitat (e.g., through a USFWS-approved mitigation bank).

- A USFWS-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the vernal pool fairy shrimp, vernal pool tadpole shrimp, western spadefoot, and California tiger salamander and their habitat, the importance of these species and their habitat, the general measures that are being implemented to conserve these species as they relate to the project, and the boundaries within which the project construction shall occur.

- All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 100 feet from any vernal pool or aquatic habitat.

Significance after Mitigation: Less than Significant.

Critical Habitat

Under Alternative 3, the proposed ROW would traverse about 8.2 miles of designated critical habitat for Hoover's spurge and San Joaquin Orcutt grass, 1.5 miles of which is within Stone Corral Ecological Reserve. The largest block of critical habitat for Hoover's spurge and San Joaquin Orcutt grass that is traversed by this alignment is near Stokes Mountain. In this area the alignment traverses about 6.7 miles of critical habitat for Hoover's spurge (see Figure 4.4-4); however, Alternative 3 facilities would generally be located on a hillside slope that does not support vernal pools or primary constituent elements for this species. Adjacent to and within the Reserve, the alignment would be within 100 feet of critical habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp for a linear distance of about one mile. Both Hoover's spurge and San Joaquin Orcutt grass occur in the portion of the Stone Corral Ecological Reserve that is traversed by the alignment. Hoover's spurge was not identified during botanical surveys in critical habitat for this species located on and near Stokes Mountain.

Construction of the Alternative 3 alignment in and near the Stone Corral Ecological Reserve could have a substantial permanent impact on vernal pool habitat and hydrology. Even if efforts were made to minimize ground disturbance within the Reserve, it is likely that greater than three acres of high quality aquatic habitat could be permanently impacted by new access roads and a similar or greater amount of upland annual grassland habitat would be lost to provide access roads.

Due to the large magnitude of this project impact and high sensitivity of the Reserve, this impact would remain significant unmitigable following the implementation of Mitigation Measures 4.4-1a though 4.4-1c (special status plants) and 4.4-9 (wetlands) (Class I).

Riparian Habitat or Other Sensitive Natural Community

Impact 4.4-Alt3-2: Construction activities would disturb riparian habitat in the St. Johns River. *Less than Significant with Mitigation* (Class II)

The removal of existing lattice towers in the St. Johns River channel would temporarily disturb about 0.1 acre of riparian habitat that is growing beneath the existing towers. Vegetation that would be affected by Alternative 3 activities includes about three large elderberry shrubs and associated riparian understory species. No trees or other woody riparian habitat would be removed. The removal of elderberry shrubs and vegetation replanting would be partly mitigated by implementation of Mitigation Measures 4.4-2a and 4.4-2b, which provides for the salvage and replacement of elderberry shrubs and consultation with the USFWS. In the event that Alternative 3 is selected, additional measures would be required to ensure that the riparian corridor of St. Johns River is restored to pre-project conditions. The implementation of Mitigation Measure 4.4-Alt3-3 would reduce impacts to less than significant.

> **Mitigation Measure 4.4-Alt3-2:** Riparian habitat shall be restored in areas where it is disturbed, and monitored to ensure the long-term survival of plantings. Where impacts to riparian habitat cannot be avoided, a qualified ecologist shall prepare a restoration and mitigation plan in coordination with CDFG to mitigate for project impacts to riparian habitat. At a minimum, the plan shall include collection of reproductive structures from affected plants, a full description of microhabitat conditions necessary for each affected species, seed germination requirements, restoration techniques for temporarily disturbed occurrences, assessments of potential transplant and enhancement sites, success and performance criteria, and monitoring programs, as well as measures to ensure long-term sustainability. The mitigation plan shall apply to portions of the project alignment that support restored riparian habitat.

Significance after Mitigation: Less than significant

Impact 4.4-Alt3-3: Construction activities would potentially impact vernal pool habitat within the Stone Corral Ecological Reserve. *Significant Unmitigable* (Class I)

Unique to Alternative 3, the proposed ROW would traverse a portion of the Stone Corral Ecological Reserve that supports more than three acres of vernal pool habitat where the existing Big Creek-Rector lines traverse the Reserve. The removal of existing facilities, installation of new lines, and the creation of access roads, as presently proposed, would foreseeably impact more than three acres of northern claypan vernal pool habitat that is within designated critical habitat and is known to support listed plant and wildlife species (see the Alternative 3 discussion of critical habitat, above). Aside from direct impacts, project activities would have indirect impacts on adjacent vernal pools in the reserve and associated special status plant and wildlife species. The creation of permanent access roads in the reserve could permanently alter local hydrology in adjacent pools with compounding indirect project effects on wetlands and water flow in surrounding portions of the Reserve.

Because the Alternative 3 alignment has not been finalized, once a final alignment has been selected, a wetland delineation will be performed to verify the location of jurisdictional wetlands. Preliminary estimates demonstrate that the Alternative 3 alignment has at least three acres of wetlands within the project footprint and that a large potion of vernal pool impacts would be permanent. As seen with the Alternative 3 wetland analysis, impacts to the northern claypan vernal pool sensitive natural community would be significant and unmitigable, should the alignment traverse the Stone Corral Ecological Reserve. The implementation of Mitigation Measures 4.4-9a and 4.4-9b would incrementally reduce Alternative 3 effects; however, impacts would remain significant unmitigable following mitigation based on the extreme sensitivity of the Stone Corral Ecological Reserve to disturbance.

Mitigation Measure 4.4-Alt3-3a: Implement Proposed Project Mitigation Measure 4.4-9a.

Mitigation Measure 4.4-Alt3-3b: Implement Proposed Project Mitigation Measure 4.4-9b.

Significance after Mitigation: Significant unmitigable.

Wetlands

Alternative 3 would impact greater than three acres of vernal pool habitat with potential indirect impacts on an unknown area of wetland habitat in the Reserve. Permanent direct impacts on vernal pools and indirect impacts on adjacent pools are anticipated from the creation of permanent access roads, which could alter local hydrology and compound indirect project effects on surrounding portions of the reserve.

Alternative 3 could additionally cause the temporary disturbance of freshwater emergent wetlands in the eastern portion of the alignment near the Big Creek-Springville lines, and possibly permanent disturbance to a limited number of features in support of access roads to new towers. It is estimated that access roads would be constructed over no fewer than five ephemeral drainages, with resultant impacts to jurisdictional wetlands. Due to the magnitude and location of the impact, impacts to jurisdictional wetlands and other waters would be significant unmitigable following mitigation. The portion of the Reserve that is traversed by the project is highly sensitive and the creation of year-round access roads in this area would need to fill a substantial area of wetlands. Poles that are presently in these areas do not have year-round access roads. It is anticipated that this alternative would require an Individual permit from the USACE based on the magnitude of wetland impacts that would be incurred at the Reserve. Following the implementation of Mitigation Measures 4.4-9a and 4.4-9b, impacts would remain significant unmitigable (Class I).

Wildlife Corridors and Nursery Sites

As identified in the impact discussion for the Proposed Project, bird interactions with power facilities shall be minimized by implementing tower designs that provide the necessary clearance

between energized portions and grounding structure to be considered safe for the avian species that occur in the area. Ground facilities, including power poles, access roads and substation upgrades would not create a barrier to wildlife movement or interfere with established wildlife corridors or nursery sites. Therefore, no impacts to wildlife movement or wildlife nursery sites are expected as a result of Alternative 3 (No Impact).

Local Policies and Ordinances

As discussed for the Proposed Project, valley oaks or protected landmark trees could be impacted in the City of Visalia. The implementation of Mitigation Measure 4.4-10 would reduce this impact to less than significant (Class II).

Habitat Conservation Plans

There are no adopted HCPs, NCCPs or adopted conservation plans in the Alternative 3 alignment (No Impact).

Alternative 6

Compared to the Proposed Project, Alternative 6 would have relatively greater impacts to special status plants and wildlife. The Alternative 6 alignment supports populations of special status plant and wildlife species that are common to the Proposed Project alignment, and several species that are unique to Alternative 6. Construction related project impacts to these species would be considered significant prior to mitigation.

Special Status Plants and Wildlife

Preliminary botanical surveys have covered the entire alignment and the only special status plant described from the alignment is spiny-sepaled button celery (a CNPS List 1B species). This species was identified in association with vernal pool habitat that occurs west of the Big Creek-Springville lines, and in annual grasslands located near the Big Creek-Springville lines. The vernal pool areas would be spanned by the project but individual plants that occur outside of wetlands could be impacted during project construction. The implementation of Mitigation Measure 4.4-1a, which provides for rare plant surveys, and 4.4-1b, would reduce impacts to special status plants to less than significant (Class II).

Blue elderberry shrubs were identified at one location in the Alternative 6 alignment, and are presumed to support valley elderberry longhorn beetle. As described for Alternative 2, five or more large elderberry shrubs at the St. Johns River could be impacted by Alternative 6 activities. The implementation of Mitigation Measure 4.4-2a and 4.4-2b would reduce potential impacts to valley elderberry longhorn beetle to less than significant (Class II).

As described for the Proposed Project (Impact 4.4-3), Alternative 6 has the potential to impact Swainson’s hawk and golden eagle that may nest in or near the alignment. Though nesting by

these species has not been observed in the Alternative 6 ROW, potential Swainson's hawk nesting sites occur within riparian habitat (e.g., at the St. Johns River) and agricultural areas in the project area, and potential golden eagle nesting areas occur in isolated oak woodlands near the eastern portion of the ROW. Additionally, protected migratory birds are expected to nest throughout the Alternative 6 alignment. Construction and operation activities associated with Alternative 6, such as grading and preparation of temporary work areas, pull and tension sites, access roads, operation of heavy equipment, installation and removal of poles, and conductor installation, could result in direct or indirect impacts on existing populations of, and habitat for, Swainson's hawk, golden eagle or nesting migratory birds. The implementation of Mitigation Measures 4.4-3a and 4.4-3b would reduce impacts to less than significant (Class II).

As identified for the Proposed Project, the western burrowing owl and San Joaquin kit fox are regionally distributed throughout the study area. Burrowing owls are expected to occur within relative open, short grasslands in and near the Alternative 6 alignment. Such habitat occurs in the eastern portion of the alignment; however, this species has not been identified near the Alternative 6 ROW. San Joaquin kit fox are known to occur in the study area and also could be encountered at any location on the Alternative 6 alignment, including within agricultural lands and annual grassland habitat. Construction associated with Alternative 6 could result in direct mortality of burrowing owls and/or San Joaquin kit fox and temporary habitat loss during construction. The implementation of Mitigation Measures 4.4-5 and 4.4-6 would reduce impacts to burrowing owl and San Joaquin kit fox to less than significant (Class II).

As described for the Proposed Project (Impact 4.4-7), during operations the Alternative 6 transmission line has the potential to interact with raptors resulting in bird electrocution or collision. The implementation of Mitigation Measure 4.4-7 would reduce project impacts to less than significant (Class II).

Impact 4.4-Alt6-1: Construction activities associated with the Alternative 6 could result in impacts to vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander and/or western spadefoot. *Less than significant with mitigation* (Class II)

Portions of the Alternative 6 alignment provide suitable habitat for and may support unknown populations of the federally listed vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander and/or western spadefoot. Suitable habitat for these species is present in association with vernal pools and upland habitat that occur in a small portion of the annual grassland habitat near the Big Creek-Springville lines. Within this area, one seasonal pool was observed to support western spadefoot breeding in April 2009 and is within the footprint of a proposed tower site and additional pools occur in the local project vicinity. Project activities that occur in or near these aquatic sites have the potential to directly take individual shrimp, California tiger salamanders or western spadefoot, and activities in surrounding upland areas may directly take the later two species or indirectly impact the shrimp species by reducing aquatic habitat quality. Mitigation Measures 4.4-9a and 4.4-9b shall be applied to meet the specific requirements for the replacement or restoration of impacted seasonal wetland and vernal pool habitat. The

implementation of Mitigation Measure 4.4-Alt6-1 would further reduce this potential project impact to a less-than-significant level.

Mitigation Measure 4.4-Alt6-1: SCE shall assume the presence of vernal pool fairy shrimp, vernal pool tadpole shrimp, western spadefoot and California tiger salamander in all suitable habitat for which SCE chooses not to perform protocol-level surveys. SCE and/or its contractors shall minimize impacts on special status vernal pool wildlife species by avoiding habitat whenever possible, and by avoiding and minimizing direct and indirect impacts on vernal pools. Mitigation Measures 4.4-9a and 4.4-9b shall be applied to meet the specific requirements for the replacement or restoration of impacted seasonal wetland and vernal pool habitat.

Additional measures to minimize and avoid habitat for listed vernal pool wildlife species shall be implemented as required by USFWS and include:

- Avoidance of potential habitat by narrowing work corridors near vernal pools and seasonal wetland habitat to the greatest extent practicable.

- Prior to construction activities, a detailed biological evaluation shall be prepared by SCE that establishes baseline environmental conditions in areas that support vernal pools. Elements to be assessed include, at a minimum, the distribution and size of pools and swales within 100 feet of project activities, and a description of pools that includes maximum water depth, total dissolved solids, pH, and alkalinity. The biological evaluation shall be used as a basis for site restoration and long-term monitoring. An assessment of listed invertebrate and amphibian populations shall also be provided as a component of the baseline evaluation.

- A USFWS-approved construction monitor shall be present during construction within 500 feet of vernal pool habitat. SCE shall develop and implement a mitigation, monitoring, and management plan, with input from regulatory agencies that outlines long-term management strategies and performance standards to be attained to compensate for habitat losses resulting from the project. At a minimum, the plan shall include standards for mitigation site selection and construction specifications for mitigation sites, a description of site conditions including aerial maps, an analysis of local vernal pool habitat, and performance criteria by which site quality can be assessed over time (e.g., size, vegetation species present, date of initial ponding, ponding duration, and wildlife usage). A monitoring program shall be established to track the development of habitat conditions that are conducive to the establishment of vernal pool wildlife species.

- SCE shall mitigate for the loss of branchiopod habitat that will be filled or otherwise directly or indirectly impacted by the project by restoring impacted pools or providing compensatory habitat (e.g., through a USFWS-approved mitigation bank).

- A USFWS-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the vernal pool fairy shrimp, vernal pool tadpole shrimp, western spadefoot, and California tiger salamander and their habitat, the importance of these species and their habitat, the general measures that are being implemented to conserve these species as they relate to the project, and the boundaries within which the project construction shall occur.

- All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 100 feet from any vernal pool or aquatic habitat.

Significance after Mitigation: Less than Significant.

Critical Habitat

Under Alternative 6, the proposed ROW would traverse about three miles of designated critical habitat for Hoover's spurge and San Joaquin Orcutt grass (Figure 4.4-4). A relatively small portion of this area, perhaps less than half a linear mile, supports the primary constituent elements that are considered essential for the biological needs of Hoover's spurge and San Joaquin Orcutt grass. This area is characterized by isolated vernal pools and a series of interconnected pools. Neither Hoover's spurge nor San Joaquin Orcutt grass were observed in the area during winter 2009 botanical surveys; however, this could be due to abnormal precipitation during the 2008-2009 rainfall season. Within the portion of designated critical habitat that supports the primary constituent elements for Hoover's spurge and San Joaquin Orcutt grass, Alternative 6 would installation of roughly three towers and two access roads. The precise distribution of pools needs to be further examined within the critical habitat unit to determine the extent of direct impacts; however, preliminary indications are that seasonal wetlands could be avoided by Alternative 6 activities and that access roads would impact about half an acre of upland habitat within designated critical habitat that supports the primary constituent elements for Hoover's spurge and San Joaquin Orcutt grass.

This impact would be reduced to a less-than-significant level through the implementation of Mitigation Measure 4.4-1a, which provides rare plant surveys, agency consultation regarding impacts to listed plants, and Mitigation Measures 4.4-9a and 4.4-9b, which mitigate for project impacts to jurisdictional wetlands. The implementation of these measures would reduce impacts to less than significant (Class II).

Riparian Habitat or other Sensitive Natural Community

Impact 4.4-Alt6-2: Project construction would disturb riparian habitat in the St. Johns River and potentially impact northern claypan vernal pool habitat at select locations between Colvin Mountain and the Big Creek-Springville lines. ***Less than significant with mitigation*** **(Class II)**

The removal of existing lattice towers in the St. Johns River channel would temporarily disturb about 0.1 acre of riparian habitat that is growing beneath the existing towers. The implementation of Mitigation Measures 4.4-2a, 4.4-2b and 4.4-Alt6-2 would reduce impacts to less than significant.

Several vernal pools and seasonal wetlands occur in the portion of the Alternative 6 alignment near the Big Creek-Springville lines. Due to the abnormal rainfall patterns in winter 2009, the distribution of these pools was not immediately obvious during reconnaissance-level field

surveys. In the absence of detailed surveys to inform the design and placement of towers, access roads and staging areas, project activities could impact northern claypan vernal pools that occur in or adjacent to the alignment. The implementation of Mitigation Measures 4.4-9a and 4.4-9b would reduce impacts to less than significant.

> **Mitigation Measure 4.4-Alt6-2:** Riparian habitat shall be restored in areas where it is disturbed, and monitored to ensure the long-term survival of plantings. Where impacts to riparian habitat cannot be avoided, a qualified ecologist shall prepare a restoration and mitigation plan in coordination with CDFG to mitigate for project impacts to riparian habitat. At a minimum, the plan shall include collection of reproductive structures from affected plants, a full description of microhabitat conditions necessary for each affected species, seed germination requirements, restoration techniques for temporarily disturbed occurrences, assessments of potential transplant and enhancement sites, success and performance criteria, and monitoring programs, as well as measures to ensure long-term sustainability. The mitigation plan shall apply to portions of the project alignment that support restored riparian habitat.

Significance after Mitigation: Less than Significant.

Wetlands

Compared with the Proposed Project, Alternative 6 has a greater likelihood of causing direct and indirect impacts to jurisdictional wetlands through direct removal, filling, hydrological interruption, or other means. The alignment spans but would not impact the Kaweah River. The removal of existing lattice towers in the St. Johns River channel would temporarily disturb about 0.1 acres of riparian habitat and the barren river channel. The proposed Alternative 6 alignment is directed south of Colvin Mountain, and avoids Cottonwood Creek and other seasonal wetlands.

Alternative 6, like Alternative 2, could cause the temporary disturbance of freshwater emergent wetlands in the eastern portion of the alignment near the Big Creek-Springville lines, and possibly permanent disturbance to a limited number of features in support of access roads to new towers. The implementation of Mitigation Measures 4.4-9a and 4.4-9b would reduce impacts to less than significant (Class II).

Wildlife Corridors and Nursery Sites

As identified in the impact discussion for the Proposed Project, bird interactions with power facilities shall be minimized by implementing tower designs that provide the necessary clearance between energized portions and grounding structure to be considered safe for the avian species found in the area. Ground facilities, including power poles, access roads and substation upgrades would not create a barrier to wildlife movement or interfere with established wildlife corridors or nursery sites. Therefore, no impacts to wildlife movement or wildlife nursery sites are expected as a result of Alternative 6 (No Impact).

Local Policies and Ordinances

As discussed for the Proposed Project, valley oaks or protected landmark trees could be impacted in the City of Visalia. The implementation of Mitigation Measure 4.4-10 would reduce this impact to less than significant (Class II).

Habitat Conservation Plans

There are no adopted HCPs, NCCPs or adopted conservation plans in the Alternative 6 alignment (No Impact).

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