

# Biological Resources Assessment for a 5.48-acre Project Site (APN 017-251-071) in Shandon, San Luis Obispo County

Prepared for:

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January 2019  
(February 2019 Revision)

“This Biological Resources Assessment was prepared according to the County’s Guidelines. The statements furnished in this report and associated maps are true and correct to the best of my knowledge and belief and the lead biologist certifies that he was present throughout the site visit associated with the report.”

A handwritten signature in black ink, appearing to read 'Sam Stewart', with a long horizontal line extending to the right.

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Sam C. Stewart IV

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February 20, 2019

Date

## EXECUTIVE SUMMARY

This Biological Resources Assessment report was prepared at the request of Agzone Services, LLC for the proposed development of cannabis growing operations at 2500 Shandon Highway, in unincorporated San Luis Obispo County, California. The proposed Project includes outdoor cultivation and a nursery located entirely within pasture, agricultural fields and anthropogenic areas of the above-listed property.

Pax Environmental, Inc. completed a records search and performed a field survey of the proposed Project site on December 12, 2018. The survey included a general botanical and wildlife inventory, identification of vegetation communities, and a habitat assessment focused on the potential for special-status species and sensitive natural communities to occur on the Project site.

The Project will result in the disturbance of approximately 238,708 square feet of annual grassland that is currently utilized as cattle pasture and rangeland. No sensitive vegetation communities or jurisdictional resources were identified during the survey. One special-status species, loggerhead shrike (*Lanius ludovicianus*), was observed during the survey. Suitable habitat for a total of 6 special-status botanical species and 7 special-status wildlife species, as well as migratory nesting birds, was identified within the Project site.

The Project has been designed to avoid impacts to sensitive biological resources. However, there is potential for direct and indirect impacts to occur due to the potential for special status plant and wildlife species in the Project area. Mitigation measures have been recommended which are expected to reduce potential impacts to a less than significant level.

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## 1.0 INTRODUCTION

### 1.1 Project Location

This letter report presents the findings of a December 12, 2018 reconnaissance level biological survey conducted on a parcel in Shandon, unincorporated San Luis Obispo County, California. The Project site consists of approximately 5.48 acres within assessor's parcel number 017-251-071 at 2500 Shandon Highway in Shandon (Figure 1). The Project site is depicted on the Shedd Canyon USGS 7.5-minute topographic quadrangle map within Section 31 of Township 26 South and Range 15 East. The survey was conducted to provide baseline documentation of existing conditions and an assessment of the potential impacts to common and special status biological resources occurring or potentially occurring on the Project site. The proposed Project consists of cannabis row-crop agricultural operations.

### 1.2 Methods

Prior to performing the field survey, PAX Environmental performed a records search for special status plant and wildlife species potentially occurring in the Project region. Sources utilized during the records search included the California Natural Diversity Database (CNDDB) (CDFW 2018), the Calflora Observation Hotline (Calflora 2018), and the Jepson Flora Project website (eFlora, 2018). The CNDDB records search was performed on the USGS 7.5-minute quadrangle encompassing the Project site and the surrounding eight quadrangles in the four cardinal directions and four equal divisions. The quadrangles included in the records search for the Project site include Shedd Canyon, Shandon, Cholame, Camatta Canyon, Camatta Ranch, Wilson Corner, Santa Margarita, Creston, and Estrella.

A reconnaissance-level survey was performed on December 14, 2018 by PAX Senior Biologist Sam Stewart. The survey consisted of meandering transects across the site and a visual search for plants and wildlife, or their evidence of presence (scat, tracks, burrows, nests, etc.), with 100% visual coverage of the Project site and a 200-foot buffer area. In addition, all habitats observed on the Project site were mapped on an aerial that was later digitized using ArcGIS. The survey was augmented by photographic data collection using a GPS-enabled digital camera. Survey times and conditions are presented below in Table 1.

Timing of the survey did not coincide with the flowering period for a majority of locally occurring native plant species. Identifiable species were noted and recorded upon detection while specimens of polytypic species were collected for subsequent dry lab identification. Following the survey, a determination of the likelihood of occurrence was made for special-status species that were not detected based on species or habitat elements observed during the survey as well as putative flowering phenology (e.g., habitat type, elevation, slope, soil, etc.).

**TABLE 1**  
**SURVEY CONDITIONS**

Date	Start/End Time	Temperature (°Fahrenheit)	Cloud Cover (%)	Wind Speed (miles/hour)	Surveyor
12/12/2018	10:20-11:45	53	10	1-6	S. Stewart

## 2.0 EXISTING CONDITIONS

The Shandon site is located at 2500 Shandon Highway and consists of approximately 5.48 acres of untilled pasture in Shandon, unincorporated San Luis Obispo County. Topography on the Project site is relatively flat, gently sloping downhill from southwest to northeast, with elevations ranging from 1,168 to 1,182 feet above mean sea level (msl). Soils on the Project site consist of Rincon clay loam (55.1%), Arbuckle San Ysidro Complex (25.1%), and San Ysidro sandy loam (19.8%) (USDA 2018). Rincon clay loam is clayey alluvium derived from sedimentary rock. The typical profile is clay loam to a depth of 18 inches with a clay layer between 18 and 52 inches. Arbuckle San Ysidro Complex is alluvium derived from mixed rock sources. The typical profile is fine sandy loam to a depth of 29 inches with sandy clay loam or sandy to very gravelly clay loam beneath. San Ysidro sandy loam is alluvium derived from mixed rock, resulting in a sandy loam or sandy clay loam that drains well and can sometimes be slightly saline. All three soils are well-drained, not typically associated with hydric conditions, and typically occur on gentle slopes of 2 to 9%.

The Project site has a history of agricultural use dating back to at least 1994, as determined from aerial imagery, and currently supports low density cattle and sheep grazing. Surrounding land uses include grazed rangeland to the south, vineyards to the north and east, and a rural residence to the west.

## 3.0 RESULTS

### 3.1 Plants

The Shandon site consists of pasture for cattle and sheep and on-site habitat is dominated by herbaceous species associated with annual grassland including non-native grasses and ruderal species. Non-native plants observed during the survey include sweet vernal grass (*Anthoxanthum odoratum*), slender wild oat (*Avena barbata*), common wild oat (*Avena fatua*), foxtail brome (*Bromus madritensis*), nettle-leaved goosefoot (*Chenopodium murale*), skeleton weed (*Chondrilla juncea*), red-stemmed filaree (*Erodium cicutarium* ssp. *cicutarium*), mustard (*Hirschfeldia incana*), dwarf mallow (*Malva neglecta*), cheeseweed (*Malva parviflora*), old han schismus (*Schismus barbatus*), and London rocket (*Sisymbrium irio*). Native plants observed during the survey include turkey mullein (*Croton setiger*), Jimsonweed (*Datura wrightii*), Canada horseweed (*Erigeron canadensis*), thyme-leaved spurge (*Euphorbia serpyllifolia*), and Coulter's horseweed (*Laennecia coulteri*).

### 3.2 Wildlife

Wildlife species observed during the survey included those common to pasturelands and grassland habitat. One bird that is a CDFW Species of Special Concern, loggerhead shrike (*Lanius ludovicianus*), was detected during the survey. Common bird species observed during the survey include turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), common raven (*Corvus corax*), Say's phoebe (*Sayornis saya*), American pipit (*Anthus rubescens*), yellow-rumped warbler (*Setophaga coronata*), European starling (*Sturnus vulgaris*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), white-crowned sparrow (*Zonotrichia leucophrys*), lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), and Brewer's blackbird (*Euphagus cyanocephalus*). Mammals or evidence of their presence detected within the project footprint include domestic cow (*Bos taurus*). Species detected in the study area beyond the project footprint include southern pocket gopher (*Thomomys bottae*), San Joaquin pocket mouse (*Perognathus inornatus*), and/or little pocket mouse (*Perognathus*

*longimembris*), as evidenced by mounds and small diameter (<3") mammal burrows identified in the vineyard and berms along the south side of the existing dirt access road.

### 3.3 Special Status Resources

The following discussion addresses special status biological resources having the potential to occur on the Project site. These resources include plant and wildlife species and habitats that have been afforded special status and/or recognition by the U.S. Fish and Wildlife Service (USFWS), CDFW, and California Native Plant Society (CNPS). In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss.

Special-status plant species include those that are listed as threatened or endangered by the California or federal Endangered Species Acts, as well as those that are assigned a California Rare Plant Rank (CRPR) by the CNPS. CRPR listing statuses are based on the degree of rarity (Lists 1A through 4) and threat level (0.1, 0.2, and 0.3) as follows (CNPS 2018):

#### *Rarity Ranks:*

- List 1A: presumed extirpated in California, and rare or extinct elsewhere
- List 1B: rare, threatened, or endangered in California and elsewhere
- List 2A: presumed extirpated in California, but more common elsewhere
- List 2B: rare, threatened, or endangered in California, but more common elsewhere
- List 3: review list of plants about which more information is needed
- List 4: watch list of plants with limited distribution

#### *Threat Ranks:*

- 0.1: seriously threatened in California (> 80% threatened / high degree and immediacy of threat)
- 0.2: moderately threatened in California (20-80% threatened / moderate degree and immediacy of threat)
- 0.3: not very threatened in California (< 20% threatened / low degree and immediacy or no current threats known)

Natural Communities are evaluated using NatureServe's Heritage Methodology, the same system used to assign global and state rarity ranks for plant and animal species in the CNDDDB. They are assigned an overall rarity score for a single rank of 1 through 5. Evaluation is done at both the Global (full natural range within and outside of California) and State (within California) levels resulting in a single G (global) and S (state) rank ranging from 1 (very rare and threatened) to 5 (demonstrably secure). Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities to be addressed in the environmental review processes of CEQA and its equivalents.

Wetlands are protected under Section 404 of the Clean Water Act (CWA) and are under the jurisdiction of the United States Army Corps of Engineers (USACE). According to the USACE, areas considered to be a "wetland" (and subject to the regulatory jurisdiction of the USACE) must exhibit hydrology, hydric soils, and hydrophilic vegetation that meet federal criteria, as indicated in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008).

In addition, if drainages meet the criteria established by Section 1600 of the California Fish and Game Code, the CDFW may require a Streambed Alteration Agreement prior to any modification of the bed, bank, or channel of streambeds. The CDFW jurisdiction generally includes the streambed and the canopy of associated riparian vegetation.

Table 3, Special Status Plant Species, and Table 4, Special Status Wildlife Species, provide a summary of special status plant and wildlife species known to occur in the Project region including information on the status, potential for occurrence, and definitions for the various status designations. Figure 5 presents the locations of special status resources in proximity to the Project site, as determined by records searches. Sources used to determine the special status of biological resources are as follows:

- Plants – Electronic Inventory of Rare and Endangered Vascular Plants of California. (California Native Plant Society [CNPS] [2018]). California Natural Diversity Database (CNDDB) List of Special Plants (CDFW 2018).
- Wildlife - CNDDB List of Special Animals (CDFW 2018)
- Habitats – CNDDB List of Sensitive Natural Communities (CDFW 2018)



**TABLE 2  
SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION**

Species	Status <sup>1</sup>			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale <sup>2</sup>
	USFWS	CDFW	CNPS			
<i>Arctostaphylos pilosula</i> Santa Margarita manzanita	-	-	1B.2	Dec-May	Shale, decomposed granite or sandstone in chaparral, and cismontane woodland or forest between 195 and 4,000 ft elevation.	Not expected (1, 2)
<i>Aristocapsa insignis</i> Indian Valley spineflower	-	-	1B.2	May-Sep	Sandy soils in cismontane woodland between 590 and 4,000	Not expected (1)
<i>Astragalus didymocarpus</i> var. <i>milesianus</i> Miles' milk-vetch	-	-	1B.2	Mar-Jul	Clay soils in coastal scrub between 164 and 1,265 ft elevation	Low (7)
<i>Calochortus simulans</i> La Panza mariposa lily	-	-	1B.3	Apr-Jun	Decomposed granite and serpentine soils between 490 and 3,805 ft elevation	Not expected (2)
<i>Calycadenia villosa</i> Dwarf calycadenia	-	-	1B.1	May-Oct	Open, dry meadows, seeps, hillsides, and gravelly washes in chaparral, cismontane woodland, or valley and foothill grassland between 1,970 to 2,065 ft elevation	Not expected (3)
<i>Camissoniopsis hardhamiae</i> Hardham's evening-primrose	-	-	1B.2	Mar-May	Sandy, decomposed carbonate soils in chaparral and cismontane woodland between 195 and 3,300 ft elevation	Not expected (1, 2)
<i>Castilleja densiflora</i> var. <i>obispoensis</i> San Luis Obispo owl's-clover	-	-	1B.2	Mar-May	Grasslands, meadows, and seeps between 30 and 1,590 ft elevation	Low (7)
<i>Caulanthus californicus</i> California jewelflower	FE	SE	1B.1	Feb-May	Sandy soils in chenopod scrub, valley/foothill grassland, and pinyon/juniper woodland between 690 to 2,855 ft elevation	Not expected (4)
<i>Caulanthus lemmonii</i> Lemmon's jewelflower	-	-	1B.2	Mar-May	Pinyon and juniper woodland and valley/foothill grasslands between 1,085 and 3,020 ft elevation	Low (7)
<i>Chlorogalum pomeridianum</i> var. <i>minus</i> dwarf soaproot	-	-	1B.2	May-Aug	Chaparral on serpentine soils between 390 and 4,000 ft elevation	Not expected (1, 2)
<i>Chlorogalum purpureum</i> var. <i>reductum</i> Camatta Canyon amole	FT	R	1B.2	May-Aug	Chaparral and cismontane woodland on clay or serpentine soils between 1,885 and 2,000 ft elevation	Not expected (1, 2, 3)



**TABLE 2**  
**SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION**

Species	Status <sup>1</sup>			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale <sup>2</sup>
	USFWS	CDFW	CNPS			
<i>Chorizanthe breweri</i> Brewer's spineflower	-	-	1B.3	Apr-Aug	Chaparral, woodland, coastal scrub, and coniferous forest in rocky or gravelly soils between 150 and 2,510 ft elevation	Not expected (1, 2)
<i>Chorizanthe rectispina</i> Straight-awned spineflower	-	-	1B.3	Apr-Jul	Granite in chaparral, cismontane woodland, and coastal scrub between 150 and 3,415 ft elevation	Not expected (1, 2)
<i>Eremalche parryi</i> ssp. <i>kernensis</i> Kern mallow	FE	-	1B.1	Mar-May	Sandy to clay soils in chenopod scrub, valley/foothill grassland, and pinyon/juniper woodland between 310 and 3,545 ft elevation	Low (7)
<i>Eriastrum luteum</i> Yellow-flowered eriastrum	-	-	1B.2	May-Jun	Bare, sandy, decomposed granite slopes in chaparral, broadleaved upland forest and cismontane woodland between 790 and 1,770 ft elevation	Not expected (1, 2)
<i>Eryngium spinosepalum</i> Spiny-sepaed button-celery	-	-	1B.2	Apr-May	Clay soils of granitic origin within vernal pools and valley/foothill grassland between 50 and 4,165 ft elevation	Not expected (2)
<i>Eschscholzia rhombipetala</i> Diamond-petaled California poppy	-	-	1B.1	Mar-Apr	Alkaline clay slopes and flats among valley/foothill grassland between 100 and 1,065 ft elevation	Low (7)
<i>Horkelia cuneata</i> var. <i>sericea</i> Kellogg's horkelia	-	-	1B.1	Apr-Sept	Sandy or gravelly soils in old dunes, closed-cone forest, coastal scrub and chaparral between 15 and 1,410 ft elevation	Not expected (1)
<i>Juncus luciensis</i> Santa Lucia dwarf rush	-	-	1B.2	Apr-Jul	Vernal pools, ephemeral drainages, wet meadows and streamsides among lower montane coniferous forest, chaparral, and Great Basin scrub between 915 and 6,675 ft elevation	Not expected (1, 2, 5)
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	-	-	1B.2	Feb-Jun	Alkaline soils in playas, sinks and grasslands among coastal salt marshes,	Not expected (1, 2)

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**SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION**

Species	Status <sup>1</sup>			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale <sup>2</sup>
	USFWS	CDFW	CNPS			
					playas and vernal pools between sea level and 4,510 ft elevation	
<i>Layia heterotricha</i> Pale-yellow layia	-	-	1B.1	Mar-Jul	Open areas with alkaline or clay soils among cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley/foothill grassland between 295 to 5,905 ft elevation	Not expected (2)
<i>Layia munzii</i> Munz's tidy-tips	-	-	1B.2	Mar-Apr	White-gray, alkaline, clay soils in chenopod scrub and valley/foothill grassland between 150 and 2,510 ft elevation	Not expected (2)
<i>Lepidium jaredii</i> ssp. <i>jaredii</i> Jared's pepper-grass	-	-	1B.2	Mar-May	Alkali flats and sinks with sandy soils among valley and foothill grassland between 1,105 and 3,300 ft elevation	Not expected (2, 3)
<i>Madia radiata</i> Showy golden madia	-	-	1B.1	Mar-May	Adobe clay in valley/foothill grassland and cismontane woodland between 245 and 4,000 ft elevation	Not expected (2)
<i>Malacothamnus gracilis</i> Slender bush-mallow	-	-	1B.1	May-Oct	Dry, rocky slopes among chaparral between 490 and 1,100 ft elevation	Not expected (1, 2, 7)
<i>Navarretia fossalis</i> Spreading navarretia	-	ST	1B.1	Mar-Jul	Hardpan or claypan in vernal pools, chenopod scrub, marshes, swamps and playas between 50 and 2,790 ft elevation	Not expected (1, 2, 5)
<i>Navarretia nigelliformis</i> ssp. <i>radians</i> Shining navarretia	-	-	1B.2	Mar-Jul	Cismontane woodland, valley/foothill grassland, and vernal pools between 525 and 1,770 ft elevation	Low (7)
<i>Plagiobothrys uncinatus</i> Hooked popcorn flower	-	-	1B.2	Apr-May	Sandstone outcrops and canyon sides in chaparral, cismontane woodland, and valley/foothill grassland between 690 and 2,805 ft elevation	Not expected (1, 2)
<i>Senecio aphanactis</i> Chaparral ragwort	-	-	2B.2	Jan-Apr	Drying alkaline flats in chaparral, cismontane woodland, and coastal scrub between 65 and 2,805 ft elevation	Not expected (1, 2)

**TABLE 2**  
**SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION**

Species	Status <sup>1</sup>			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale <sup>2</sup>
	USFWS	CDFW	CNPS			
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i> Parish's checkerbloom	-	R	1B.2	May-Jun	Rocky, serpentine soils in closed-cone forest and chaparral between 1,965 and 2,625 ft elevation	Not expected (1, 2, 3)
<b>1: STATUS DEFINITIONS</b>						
<p><b>USFWS</b></p> <p>FE: Species designated as endangered under the federal Endangered Species Act. Endangered = "any species in danger of extinction throughout all or a significant portion of its range."</p> <p>FPE: Proposed for federal listing as Endangered.</p> <p>C: Candidate for federal listing as Threatened or Endangered.</p> <p><b>CDFW</b></p> <p>SE: Endangered = "a species is endangered when its prospects of survival and reproduction are in immediate jeopardy from one or more causes" and is officially listed as such under the California Endangered Species Act (CESA).</p> <p>SR: State-listed as Rare = "taxa that are biologically rare, very restricted in distribution, or declining throughout their range but not currently threatened with extirpation" (Special Vascular Plants, Bryophytes, and Lichens List)</p> <p><b>CNPS</b></p> <p>1A Plants Presumed Extinct in California</p> <p>2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere</p> <p><b>2: LIKELIHOOD FOR OCCURRENCE</b></p> <p>Not expected: Not expected to occur</p> <p>Low: Low potential to occur</p> <p>Moderate: Moderate potential to occur</p> <p>High: High potential to occur</p> <p>Present: Known to occur</p> <p>- if likelihood is not provided, it was not represented in that site's 9-quad search</p>						
<p>FT: Species designated as threatened under the Federal Endangered Species Act = "species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."</p> <p>FPT: Proposed for federal listing as Threatened.</p> <p>ST: Threatened = "a species that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this Act" (CESA).</p> <p>1B Plants Rare, Threatened, or Endangered in California and Elsewhere</p> <p><b>RATIONALE</b></p> <p>1: Lack of suitable habitat</p> <p>2: Lack of suitable substrate</p> <p>3: Beyond known elevation range</p> <p>4: Beyond known geographic range</p> <p>5: Required soil moisture regime not present</p> <p>6: Observable perennial species not observed during survey</p> <p>7: Marginally suitable habitat present</p> <p>8: Suitable habitat present but no known records within one mile</p> <p>9: Suitable habitat present with known records within one mile</p> <p>10: Observed during survey</p>						

**TABLE 3**  
**SPECIAL STATUS WILDLIFE SPECIES OCCURRING IN THE PROJECT REGION**

Species	Status <sup>1</sup>		Habitat Description	Likelihood for Occurrence/Rationale <sup>2</sup>
	USFWS	CDFW		
Invertebrates				
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT	-	Sandstone depression pools and grassed swale, earth slump, or basalt-flow depression pools	Not expected (1)
Amphibians				
<i>Ambystoma californiense</i> California tiger salamander	FT	ST	Underground refuge, especially ground squirrel burrows, in proximity to vernal pools or other seasonal water sources for breeding	Not expected (1)
<i>Rana boylei</i> foothill yellow-legged frog	-	ST/SSC	Partly shaded, shallow streams and riffles with a rocky substrate	Not expected (1)
<i>Rana draytonii</i> California red-legged frog	FT	SSC	Lowlands and foothills in or near deep permanent water sources with dense, shrubby or emergent riparian vegetation	Not expected (1)
<i>Spea hammondi</i> Western spadefoot toad	-	SSC	Grasslands and woodlands with vernal pools	Low (5)
Reptiles				
<i>Anniella pulchra</i> northern California legless lizard	-	SSC	Moist sandy or loose loamy soils under sparse vegetation	Moderate (5, 7)
<i>Arizona elegans occidentalis</i> California glossy snake	-	SSC	Scrub or grassland with loose or sandy soils	Low (5)
<i>Emys marmorata</i> western pond turtle	-	SSC	Ponds, marshes, rivers, streams, and irrigation ditches with basking sites and suitable upland habitat for egg-laying	Not expected (1)
<i>Gambelia sila</i> Blunt-nosed leopard lizard	FE	SE	Sparsely vegetated alkali and desert scrub habitats in areas of low topographic relief	Not expected

**TABLE 3**  
**SPECIAL STATUS WILDLIFE SPECIES OCCURRING IN THE PROJECT REGION**

Species	Status <sup>1</sup>		Habitat Description	Likelihood for Occurrence/Rationale <sup>2</sup>
	USFWS	CDFW		
				(1, 4)
<i>Masticophis flagellum ruddocki</i> San Joaquin coachwhip	-	SSC	Valley grassland and saltbush scrub in the San Joaquin Valley	Low (5)
<i>Phrynosoma blainvillei</i> coast horned lizard	-	SSC	Sandy substrate with scattered low bushes and abundant native ants and other insects	Low (5)
<b>Birds</b>				
<i>Agelaius tricolor</i> Tri-colored blackbird	-	SE/SSC	Open water with cattails or other protected nesting substrate within a few kilometers of foraging habitat	Nesting: Not expected (1) Foraging: Moderate (5)
<i>Ammodramus savannarum</i> Grasshopper sparrow	-	SSC	Dense grasslands with scattered shrubs on rolling hills	Nesting: Not expected (1) Foraging: Low (5)
<i>Athene cunicularia</i> burrowing owl	-	SSC	Open, dry annual or perennial grasslands and scrublands with low-growing vegetation	Nesting: Low (6) Foraging: Moderate (6)
<i>Buteo regalis</i> Ferruginous hawk	-	WL	Open grasslands, juniper-sagebrush flats, riparian areas, savannahs, agricultural or ranch lands with groves or lines of trees	Nesting: Not expected (9) Foraging: Moderate (6)
<i>Buteo swainsonii</i> Swainson's hawk	-	ST	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	Nesting: Not expected (1) Foraging: Moderate (6)

**TABLE 3  
SPECIAL STATUS WILDLIFE SPECIES OCCURRING IN THE PROJECT REGION**

Species	Status <sup>1</sup>		Habitat Description	Likelihood for Occurrence/Rationale <sup>2</sup>
	USFWS	CDFW		
<i>Charadrius montanus</i> mountain plover	-	SSC	Open areas and bare ground on flat grasslands, plowed fields, and newly sprouting grain fields	Nesting: Not expected (9) Foraging: Moderate (6)
<i>Coturnicops noveboracensis</i> Yellow rail	-	SSC	Freshwater marshlands	Nesting: Not expected (1) Foraging: Not expected (1)
<i>Elanus leucurus</i> white-tailed kite	-	FP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland	Nesting: Not expected (1) Foraging: Moderate (6)
<i>Falco mexicanus</i> Prairie falcon	-	FP	Dry open terrain and cliffs for nesting	Nesting: Not expected (1) Foraging: High (7)
<i>Lanius ludovicianus</i> loggerhead shrike	-	SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, scrub & washes	<b>Present; (8)</b>
<i>Riparia riparia</i> Bank swallow	-	ST	Vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, and lakes	Nesting: Not expected (1) Foraging: Low (5)
<b>Mammals</b>				
<i>Ammospermophilus nelsoni</i> Nelson's antelope squirrel	-	ST	Burrows in sparsely vegetated loamy soils with scattered shrubs, forbs and grasses in broken terrain with gullies and washes between 200- and 1,300-feet elevation	Not expected (1, 4)

**TABLE 3**  
**SPECIAL STATUS WILDLIFE SPECIES OCCURRING IN THE PROJECT REGION**

Species	Status <sup>1</sup>		Habitat Description	Likelihood for Occurrence/Rationale <sup>2</sup>
	USFWS	CDFW		
<i>Antrozus pallidus</i> Pallid bat	-	SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting	Not expected (1)
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-	SSC	Throughout California in a wide variety of habitats. Most common in mesic sites	Not expected (1)
<i>Dipodomys ingens</i> Giant kangaroo rat	FE	SE	Flat terrain with sandy loam soils for burrowing in annual grasslands and alkali scrub	Not expected (1, 4)
<i>Onychomys torridus tularensis</i> Tulare grasshopper mouse	-	SSC	Hot, arid valleys and scrub deserts in the southern San Joaquin Valley	Not expected (1)
<i>Taxidea taxa</i> American badger	-	SSC	Drier open stages of most shrub, forest, and herbaceous habitats, with friable soils	Low (5)
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE	ST	Friable soils among annual grasslands or grassy open stages with scattered shrubby vegetation.	Low (5)



**TABLE 3**  
**SPECIAL STATUS WILDLIFE SPECIES OCCURRING IN THE PROJECT REGION**

Species	Status <sup>1</sup>		Habitat Description	Likelihood for Occurrence/Rationale <sup>2</sup>
	USFWS	CDFW		
<b>Status Definitions<sup>1</sup></b>				
<b>USFWS</b>			<b>CDFW</b>	
FE: Species designated as Endangered under the Federal Endangered Species Act. Endangered = "any species in danger of extinction throughout all or a significant portion of its range."			ST: Threatened = "a species that, although not presently Threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this Act (California Endangered Species Act)."	
FT: Species designated as Threatened under the Federal Endangered Species Act. Threatened = "species likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range."			SE: Endangered = "a species is endangered when its prospects of survival and reproduction are in immediate jeopardy from one or more causes."	
FPE: Proposed for federal listing as Endangered.			SR: Rare = "not presently Threatened with extinction, but in such small numbers throughout its range that it may become Endangered if its present environment worsens."	
FPT: Proposed for federal listing as Threatened.			FP: Fully Protected species are protected by special legislation and cannot be taken at any time.	
BCC: Bird of Conservation Concern			SSC: Species of Special Concern.	
			WL: Watch List	
<b>2: <u>LIKELIHOOD FOR OCCURRENCE</u></b>				
Not expected: Not expected to occur			1: Lack of suitable habitat	
Low: Low potential to occur			2: Lack of suitable substrate	
Moderate: Moderate potential to occur			3: Beyond known elevation range	
High: High potential to occur			4: Beyond known geographic range	
Present: Known to occur			5: Marginally suitable habitat present	
			6: Suitable habitat present but no known records within one mile (or appropriate distance based on typically-sized territory for the species)	
			7: Suitable habitat present with known records within one mile (or appropriate distance based on typically-sized territory for the species)	
			8: Observed during survey	
			9: Overwintering migrant	

### 3.4 Special Status Plants

No special status plants were observed during the field survey. However, the timing of the survey was not conducive to the detection of annual species that bloom in spring and/or summer. The CNDDDB and CNPS on-line inventory listed 31 special status plants occurring in the Project site region. Based on the field assessment and the known habitat requirements of the special status species identified by the records search, 6 species were determined to have a low potential for occurrence on the Project site.

Based on the presence of marginally suitable habitat, the Project site was determined to have a low potential for occurrence of Kern mallow (*Eremalche parryi* ssp. *kernensis*), a CNPS List 1B.1 species that is federally-listed as Endangered. In addition, two CNPS List 1.B.1 species have a low potential to occur; including dwarf calycadenia (*Calycadenia villosa*) and diamond-petaled California poppy (*Eschscholzia rhombipetala*); and three CNPS List 1B.2 species have a low potential to occur; including Mile's milk-vetch, San Luis Obispo owl's-clover (*Castilleja densiflora* var. *obispoensis*), and shining navarretia (*Navarretia nigelliformis* ssp. *radicans*).

### 3.5 Special Status Wildlife

One species of special concern, loggerhead shrike (*Lanius ludovicianus*), was observed on the Project site during the survey. The CNDDDB on-line inventory listed 29 special status wildlife species in the Project region. Of those listed, 5 species were determined to have a low to moderate potential to occur on the Project site.

Based on the presence of potentially suitable habitat, the Project site was determined to have a low potential for occurrence of the following Species of Special Concern: California glossy snake (*Arizona elegans occidentalis*), coast horned lizard (*Phrynosoma blainvillei*), burrowing owl (*Athene cunicularia*), and American badger (*Taxidea taxa*); and a moderate potential for occurrence of northern California legless lizard (*Anniella pulchra*) given the presence of suitable soils and known records in close proximity to the Project site.

One federally-listed Endangered and state-listed Threatened species, San Joaquin kit fox (*Vulpes macrotis mutica*), has been recorded at thirteen sites within a 10-mile radius of the project site (CNDDDB 2018). This species typically occurs in grasslands and open scrub in areas of low precipitation (generally less than ten inches per year) and requires friable, sandy soils to excavate burrows (Zeiner et al. 1991). It is also known to expand the burrows of other mammals such as California ground squirrel (*Otospermophilus beecheyi*) and American badger in soils with clay content (Orloff et al. 1986).

Of the thirteen San Joaquin kit fox records within a 10-mile radius, five consist of sightings or specimen collections of adult foxes prior to 1975, 3 consist of sightings between 1990 and 2012 (including a 2012 observation of an adult fox immediately to the west of Shandon Highway opposite the Project site), three consist of scat detections during a 2014 study, and two consist of natal dens detected 6.5 miles northwest in 1990 and 10 miles southeast in 2013. Assuming the identification of the adult kit fox observation to the west of the Project site is accurate and given a home range of one to two square miles for the species (Morrell 1972), it is likely that there is an occupied den within a two-mile radius of the Project site.

As described in Section 2, soils on the Project site are dominated by Rincon clay loam, a clayey alluvium with a homogenous clay layer between 18 and 52 inches. The presence of this clay soil horizon at the depth through which kit fox typically excavate horizontal tunnels and dens

effectively precludes the species from utilizing the majority of the Project site for denning habitat. Furthermore, vegetation on the Project site had recently been grazed allowing complete visual coverage of the substrate during the survey (Figure 7, Site Photographs), and no mammal burrows were detected within the project impact area during the survey. Therefore, this species was not expected to occupy the Project site as of the field survey.

The annual grassland habitat within the study area offers marginally suitable foraging habitat for San Joaquin kit fox. Cattle grazing has eliminated shrubs and increased compaction of substrate that is marginally suitable to unsuitable for burrowing due to soil type, reducing the availability and persistence of underground cover for its prey base (e.g., kangaroo rats and California ground squirrels). Furthermore, the presence of intensive viticulture to the north and east reduces the likelihood that kit foxes will move across the Project site to access occupiable habitat. Therefore, this species is considered to have a low potential to forage on the project site.

#### **4.0 IMPACT ASSESSMENT AND MITIGATION**

The proposed project has the potential to directly and/or indirectly impact special-status plant and wildlife species, and migratory nesting birds. Short-term direct impacts to habitat could cause injury or death to wildlife because of construction-related disturbances, such as vegetation removal, grading, or soil compaction. Short-term indirect impacts could result from construction noise, harassment, dust emissions, or other disruption during construction activities. Potential long-term direct and indirect impacts to wildlife may occur as a result of ongoing project operations. The total area of disturbance is approximately 5.48 acres of cattle rangeland consisting entirely of annual grassland. This habitat type is very common in the region and is dominated by introduced, weedy species, the loss of which would not substantially reduce the extent, diversity, or quality of native or other important vegetation.

##### **4.1 Special Status Plants**

The Project site has been subject to repeated disturbance over many years because of active agricultural operations and grazing. As such, conditions are considered marginally suitable for the special status plants in question and they are considered to have a low potential for occurrence. It is therefore unlikely that the proposed Project would have a significant effect on special status plants. However, the Project site has the potential for state- and federally-listed Threatened and Endangered species and a focused botanical survey is recommended to document presence or absence during the appropriate blooming period for Kern mallow, dwarf calycadenia, California jewelflower, diamond-petaled California poppy, Miles' milk-vetch, San Luis Obispo owl's-clover, shining navarretia, recurved larkspur, and San Joaquin woollythreads. Implementation of Mitigation Measure BIO-1 below would be expected to reduce potential impacts to a level considered less than significant.

Annual grassland on the project site primarily consists of non-native species. Spreading the seed of invasive species from the project site and into new areas may result in impacts to special-status plant populations and sensitive habitats within the region. Implementation of Mitigation Measure BIO-2 below would be expected to reduce potential impacts to a level considered less than significant.

##### **4.2 Special Status Wildlife**

Conditions are considered marginally suitable for several Species of Special Concern, including coast horned lizard, California glossy snake, San Joaquin coachwhip, and American badger.

These species are considered to have a low potential, meaning the likelihood of occurrence is lower than the likelihood of absence. Therefore, any potential occurrence would be very low density and the overall impact to the species would be considered minimal. Mitigation Measures BIO-3, BIO-4, and BIO-5 below would be expected to further reduce potential impacts to Species of Special Concern to a level considered less than significant.

The Project site is considered suitable for California legless lizard and it has a moderate potential for occurrence based on the presence of suitable substrate and proximity to known records. Given the limited size of the Project site and limited extent of occupiable habitat for the species (primarily along the road berm), the likelihood of impact is considered low. Implementation of Mitigation Measure BIO-5 would further reduce potential impacts to California legless lizard to a level considered less than significant.

The Project site has a low potential for burrowing owl and a high potential for nesting birds. Potential direct or indirect impacts to active nests resulting in nest failure or take would conflict with the Migratory Bird Treaty Act (16 U.S.C. §§ 703–712). Implementation of Mitigation Measures BIO-6 and BIO-7 would avoid or reduce potential impacts to special status birds and all nesting birds to a level considered less than significant.

The Project site is considered marginally suitable foraging habitat for San Joaquin kit fox and it is considered to have a low potential for occurrence based on proximity to known records. The duration of project-related ground disturbance, including earth-moving, is expected to be three days. Long-term operations are expected to result in an average of four daily vehicle round-trips to and from the Project site between May and October. Direct impacts to San Joaquin kit fox may occur as a result of construction-related activities, including vehicle strikes, and indirect impacts may occur during long-term project activities, including increased light-pollution. The potential for these impacts are considered minimal based on the estimates described above. Implementation of Mitigation Measures BIO-4, BIO-8, and BIO-9 would avoid or reduce potential impacts to the species to a level considered less than significant.

San Joaquin kit fox are not expected to permanently reside on site due to unsuitable soil conditions and long-term cattle grazing and they are also unlikely to hunt on the project site due to limited prey base. Furthermore, the project site is surrounded to the north and east by intensive viticulture and does not facilitate movement between distinct suitable habitat areas. Due to the project's location within the 4:1 County designated mitigation area, implementation of mitigation measures pursuant to the County Guide to SJKF Mitigation Procedures under the California Environmental Quality Act (CEQA) will be required. Construction and implementation of the proposed project would result in approximately 5.48 acres (238,710 sf) of disturbance within annual grassland habitat (i.e., cattle rangelands). For projects less than 40 acres in size, completion of a SJKF habitat evaluation form may optionally be completed to receive approval for a lower mitigation ratio than what is mapped for the project site, based on site-specific conditions. Mitigation must be fulfilled by contribution to the preservation of habitat through a conservation easement agreement, compensation to a predetermined mitigation bank, or payment of an in-lieu fee to the San Francisco office of The Nature Conservancy.

#### **4.3 Sensitive Natural Communities**

The CNDDDB records search identified Valley Sink Scrub (G4, S3.2), Northern Interior Cypress Forest (G2, S2.2), and Northern Claypan Vernal Pool (G1, S1.1) as special status natural communities occurring in the Project region. The Project site consists of pasture with annual grassland habitat. None of the above-mentioned sensitive natural communities and no potentially

jurisdictional areas were identified during the survey or review of historic aerials dating back to 1994. No impacts to sensitive natural communities are anticipated.

#### **4.4 Wildlife Movement**

Maintaining connectivity between areas of suitable habitat is critical for dispersal, migration, foraging, and genetic health of plant and wildlife species. A functional network of connected habitats is essential to the continued existence of California's diverse species and natural communities in the face of both human land use and climate change. Terrestrial species must navigate a habitat landscape that meets their needs for breeding, feeding and shelter. In addition, aquatic connectivity is critical for anadromous fish like salmon that encounter many potential barriers as they return upstream to their places of origin. Projects that introduce substantial barriers to movement of resident or migratory fish or wildlife species or hinder the normal activities of wildlife require mitigation to offset project effects.

The project site is surrounded by human land uses in three of the four cardinal directions, including active viticulture operations to the north and east, and a rural residence to the west. The site is a pocket of disturbed, yet undeveloped land bordered by expansive open space areas of undeveloped rangelands to the south, and the north, east, and west beyond the respective land uses adjacent to the project site. Therefore, the project would not be expected to affect or impinge local or regional wildlife movement or migration patterns. Also, Mitigation Measures BIO-8 and BIO-9 already require design features that would avoid impacts to wildlife movement on the project site and nocturnal use of areas adjacent to the project site (e.g., project fences include an approximate 4-inch passage gap at ground level and security lighting includes a directional/shielded design feature to prevent lighting spillover into adjacent grasslands).

### **5.0 RECOMMENDATIONS**

The following avoidance, minimization, and mitigation measures are recommended to reduce the anticipated impacts to the maximum extent feasible.

- BIO-1 Special Status Plant Species Avoidance and Minimization Measures.** Prior to initial ground disturbance and staging activities in areas of suitable habitat for special status plants, focused surveys shall be completed by a qualified biologist. The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the blooming period of the target species. Surveys shall be conducted in accordance with the most current protocols established by the CDFW, USFWS, and consistent with the County's policies. All special status plant species identified on-site shall be mapped onto a site-specific aerial photograph and topographic map. Survey results shall be submitted to the County Department of Planning and Building prior to initiation of construction. If special-status plant species, specifically Kern mallow, dwarf calycadenia, California jewelflower, diamond-petaled California poppy, Miles' milk-vetch, San Luis Obispo owl's-clover, shining navarretia, recurved larkspur, and San Joaquin woollythreads, are identified within the proposed development footprint, impacts to these species will be minimized to the extent feasible to avoid impacting 90% of the plants observed. If special-status plant species are identified on the Project site and direct impacts to special status plants cannot be avoided, a salvage and relocation plan will be prepared to compensate for significant impacts on special status plant species and identify suitable locations, methods, and success criteria for special status plant mitigation through direct seeding and restoration of suitable unoccupied habitat. The plan shall, at a minimum, require replacement through

collection of seed and topsoil from impact sites, a monitoring and management component that outlines weed management and monitoring techniques, and success criteria that require successful establishment of the target species over the acreage and numbers of impacted plants within five years. If onsite salvage and restoration is not feasible, the plan will identify areas that contain verified extant populations of the special status plant species, of similar size and quality, and equal or greater density to the population(s) that would be impacted by the Project proposed for preservation as compensatory mitigation for special status plant impacts. Offsite habitat occupied by the affected species shall be preserved and managed in perpetuity at a minimum 1:1 mitigation ratio (at least one plant preserved for each plant affected, and at least one occupied acre preserved for each occupied acre affected. The restoration plan will be prepared and submitted to the County Department of Planning and Building for approval prior to initial site disturbance.

**BIO-2 Noxious Weed Species.** To prevent the potential spread of invasive botanical species identified within the project site, all vehicles and equipment used at the site shall be cleaned of all dirt, mud, and plant debris prior to exiting the site (e.g., driven over rumble strips). This will prevent tracking of potential seed stock off the property.

**BIO-3 Worker Environmental Awareness Program (WEAP).** Prior to initiation of construction activities (including staging and mobilization), all personnel associated with Project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the Project area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction of the Project. All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them. The form shall be submitted to the County Department of Planning and Building to document compliance prior to initiation of construction.

**BIO-4 Preconstruction Survey for American Badger and San Joaquin Kit Fox.** A qualified biologist shall complete a preconstruction survey for these species no less than 14 days and no more than 30 days prior to the start of initial project activities to ensure these special-status wildlife species are not present within proposed work areas. If dens are discovered, they shall be inspected to determine if they are currently occupied. If the qualified biologist determines that potential San Joaquin kit fox dens may be present, an exclusion buffer shall be established in accordance with the distances recommended in the USFWS' 2011 recommendations. The USFWS shall be contacted for further guidance regarding any natal San Joaquin kit fox dens encountered. If active badger dens are found, a minimum of a 50-foot, no-activity buffer shall be implemented in the den vicinity. If avoidance is not possible during construction or continued operation, the County and CDFW shall be contacted for further guidance.

**BIO-5 Special Status Herpetofauna Avoidance and Minimization.** Within 30 days prior to initiation of ground disturbance, a focused survey for special status herpetofauna, including northern California legless lizard, coast horned lizard, California glossy



snake, and San Joaquin coachwhip, shall be performed by a qualified biologist. Sandy soils within the impact footprint will be surveyed for California legless lizard by a qualified biologist utilizing a raking survey methodology. A survey report summarizing results of the survey shall be submitted to the County Department of Planning and Building within one week of completing the survey. A qualified biologist shall monitor initial vegetation clearing and ground disturbance to salvage and relocate individuals. Any sightings of California Species of Special Concern shall be documented and reported to County and CDFW staff and the CNDDDB. Mortality shall be documented and reported to County and CDFW staff, and specimens donated to the appropriate collection manager of the San Luis Obispo County Museum of Natural History or other appropriate scientific institution. A monitoring report summarizing results of the monitoring shall be submitted to the County Department of Planning and Building within one week of completing monitoring work for these species.

**BIO-6 Preconstruction Surveys for Nesting Raptors and Birds.** The applicant shall ensure the following actions are undertaken to avoid and minimize potential impacts to nesting birds: To the extent feasible, removal of vegetation within suitable nesting bird habitats will be scheduled to avoid the nesting season and occur between September and January. For activities that cannot avoid the nesting season (February 15 to August 31), not more than 30 days prior to initiation of construction activities (e.g. mobilization and staging), a qualified biologist shall conduct preconstruction surveys for nesting raptors and other native nesting birds. The survey for the presence of nesting raptors shall cover all areas within the disturbance footprint plus a 500-foot buffer where access can be secured. Survey reports shall be submitted to the County Department of Planning and Building at least one week prior to initiating construction, and within one week of completing surveys for ongoing activities. If active nests (nests with eggs or chicks) are located, the qualified biologist shall establish an appropriate avoidance buffer ranging from 50 to 300 feet based on the species biology and the current and anticipated disturbance levels occurring in vicinity of the nest, and 500 feet for nests of fully protected species (such as white-tailed kite) and raptors. All buffers shall be marked using high-visibility flagging, fencing, and/or signage. No construction activities shall be allowed within the buffers until the young have fledged from the nest or the nest fails, unless approved by the qualified biologist. The qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer. Encroachment into the buffer shall be conducted at the discretion of the qualified biologist. Monitoring reports summarizing nest avoidance measures, including buffers, fledge dates, and documentation of the avoidance of fully protected species, if applicable, shall be submitted to the County Department of Planning and Building on a monthly basis while nest buffers are in place or while activities are occurring within the specified buffer of an inactive nest of a fully protected species.

**BIO-7 Burrowing Owl Avoidance and Minimization.** No more than 30 days before the start of initial ground disturbing activities, a qualified biologist(s) shall conduct focused, pre-construction, take-avoidance surveys for burrowing owls within all areas proposed for ground disturbance that contain suitable owl habitat (CDFW 2012). Preconstruction surveys shall be consistent with CDFW recommended methods described in the Staff Report on Burrowing Owl Mitigation (CDFW 2012), conducted on foot such that 100% of the survey area is visible, and shall cover the entire impact footprint plus a 500-foot buffer. All observations of burrowing owl and sign of



burrowing owl (including suitable burrows, pellets, whitewash) shall be mapped on a site-specific aerial image. A report of survey findings shall be submitted to the County Department of Planning and Building prior to initiation of construction activities. If no suitable burrows are found, a final take avoidance survey shall be completed within 48 hours prior to initiation of ground disturbing activities. If suitable burrows for burrowing owls are found during preconstruction surveys on the Project site; burrowing owl occupancy shall be determined through up to three additional focused surveys on potential burrows during the morning and/or evening survey windows as defined in the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If the burrows are determined to be unoccupied, they shall be hand excavated by a qualified biologist. If the presence of burrowing owls is confirmed, the following avoidance measures shall be implemented.

1. Occupied burrows shall not be disturbed during the nesting season (typically February through August) unless a qualified biologist verifies, through non-invasive methods, that the burrow is either not being used for breeding. Owls present after February 1 shall be assumed to be nesting unless evidence indicates otherwise. Nest-protection buffers described below shall remain in effect until August 31 or until the nest has failed or all juvenile owls are foraging independently as determined by a qualified biologist.

2. Site-specific, no-disturbance buffer zones shall be established and maintained between Project activities and occupied burrows, using the distances recommended in the CDFW guidelines (CDFW 2012). Buffer distances may be modified by a qualified biologist in consultation with CDFW. The buffer zones shall be clearly delineated by highly visible orange construction fencing, which shall be maintained in good condition through Project completion or until construction activities are no longer occurring near the burrow.

3. During the nonbreeding season (generally September 1– January 31), a qualified biologist may passively relocate burrowing owls found within construction areas. Prior to passively relocating burrowing owls, a Burrowing Owl Exclusion Plan shall be prepared by a qualified biologist in accordance with Appendix E of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). The Burrowing Owl Exclusion Plan shall be submitted for review and approval to the CDFW and County Department of Planning and Building prior to implementation. The biologist shall accomplish such relocations using one-way burrow doors installed and left in place for at least two nights; owls exiting their burrows will not be able to re-enter. Then, immediately before the start of construction activities, the biologists shall remove all doors and excavate the burrows to ensure that no animals are present the burrow. The excavated burrows shall then be backfilled. To prevent evicted owls from occupying other burrows in the impact area, the biologist shall, before eviction occurs, (1) install one-way doors and backfill all potentially suitable burrows within the impact area, and (2) install one-way doors in all suitable burrows located within approximately 50 feet of the active burrow, then remove them once the displaced owls have settled elsewhere. When temporary or permanent burrow-exclusion methods are implemented, the following steps shall be taken: a) Prior to excavation, a qualified biologist shall verify that evicted owls have access to multiple, unoccupied, alternative burrows, located nearby (within 250 feet) and outside of the projected disturbance zone. If no suitable alternative natural burrows are available for the owls, then, for each owl that is evicted, at least two artificial burrows shall be installed in suitable

nearby habitat areas. Installation of any required artificial burrows preferably shall occur at least two to three weeks before the relevant evictions occur, to give the owls time to become familiar with the new burrow locations before being evicted. The artificial burrow design and installation shall be as described in the Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans per Appendix E of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). b) Passive relocation of burrowing owls shall be limited in areas adjacent to Project activities that have a sustained or low-level disturbance regime; this approach shall allow burrowing owls that are tolerant of Project activities to occupy quality, suitable nesting and refuge burrows. The use of passive relocation techniques in a given area shall be determined by a qualified biologist who may consult with CDFW and shall depend on existing and future conditions (e.g., time of year, vegetation/topographic screening, and disturbance regimes).

**BIO-8 County Standard Mitigation of Impacts to SJKF Habitat.** In accordance with the County Guide to SJKF Mitigation Procedures under CEQA, the applicant shall adopt the Standard Kit Fox CEQA Mitigation Measures and shall include these measures on development plans. The following summarizes those that are applicable to this Project:

The applicant shall mitigate for the loss of SJKF habitat either by:

1. establishing a conservation easement on-site or off-site in a suitable San Luis Obispo County location and provide a non-wasting endowment for management and monitoring of the property in perpetuity;
2. depositing funds into an approved in-lieu fee program; or
3. purchasing credits in an approved conservation bank in San Luis Obispo County.

The following measures shall also apply on project sites.

- A maximum 25 mph speed limit shall be required at the Project site during construction activities.
- All construction activities shall cease at dusk and not start before dawn.
- A qualified biologist shall be on-site immediately prior to initiation of Project activities to inspect for any large burrows (e.g., known and potential dens) and to ensure no wildlife are injured during Project activities. If dens are encountered, they should be avoided as discussed below.
- Exclusion zone boundaries shall be established around all known and potential SJKF dens.
- All excavations deeper than two feet shall be completely covered at the end of each working day.
- All pipes, culverts, or similar structures shall be inspected for SJKF and other wildlife before burying, capping, or moving.
- All exposed openings of pipes, culverts, or similar structures shall be capped or temporarily sealed prior to the end of each working day.
- All food-related trash shall be removed from the site at the end of each work day.
- Project-related equipment shall be prohibited outside of designated work areas and access routes.
- No firearms shall be allowed in the Project area.
- Disturbance to burrows shall be avoided to the greatest extent feasible.
- The use of pesticides or herbicides shall be in compliance with all local, state, and federal regulations so as to avoid primary or secondary poisoning of

endangered species utilizing adjacent habitats and the depletion of prey upon which SJKF depend.

- Permanent fences shall allow for SJKF passage through or underneath (i.e., an approximate 4-inch passage gap shall remain at ground level).

**BIO-9 Mitigation Measure 3: Lighting.** Any temporary construction lighting or permanent lighting introduced for the Project shall avoid night time illumination of potentially suitable habitat features for special-status species (i.e., off-site adjacent grasslands). Temporary construction lighting will be kept to the minimum amount necessary and shall be directed toward active work areas and away from open spaces and/or drainages. To minimize the effects of future exterior lighting on special-status wildlife species, all outdoor lighting fixtures shall be positioned and/or shielded to avoid direct lighting of off-site natural habitat areas.

## **6.0 LITERATURE CITED**

### World Imagery

Sources: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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**Table 4.** List of non-native plant species observed on the Project site on December 12, 2018.

<u>Scientific Name</u>	<u>Common Name</u>	<u>FAMILY</u>
<i>Anthoxanthum odoratum</i>	sweet vernal grass	POACEAE
<i>Avena barbata</i>	slender wild oats	POACEAE
<i>Avena fatua</i>	common wild oats	POACEAE
<i>Bromus madritensis madritensis</i>	foxtail chess	POACEAE
<i>Chondrilla juncea</i>	skeleton weed	ASTERACEAE
<i>Erodium cicutarium</i> ssp. <i>cutarium</i>	red-stemmed filaree	GERANIACEAE
<i>Hirschfeldia incana</i>	short-pod mustard	BRASSICACEAE
<i>Malva neglecta</i>	dwarf mallow	BRASSICACEAE
<i>Malva parviflora</i>	cheeseweed	GERANIACEAE
<i>Schismus barbatus</i>	old han schismus	POACEAE
<i>Sisymbrium irio</i>	London rocket	BRASSICACEAE
<i>Vicia sativa</i> ssp. <i>sativa</i>	common vetch	FABACEAE

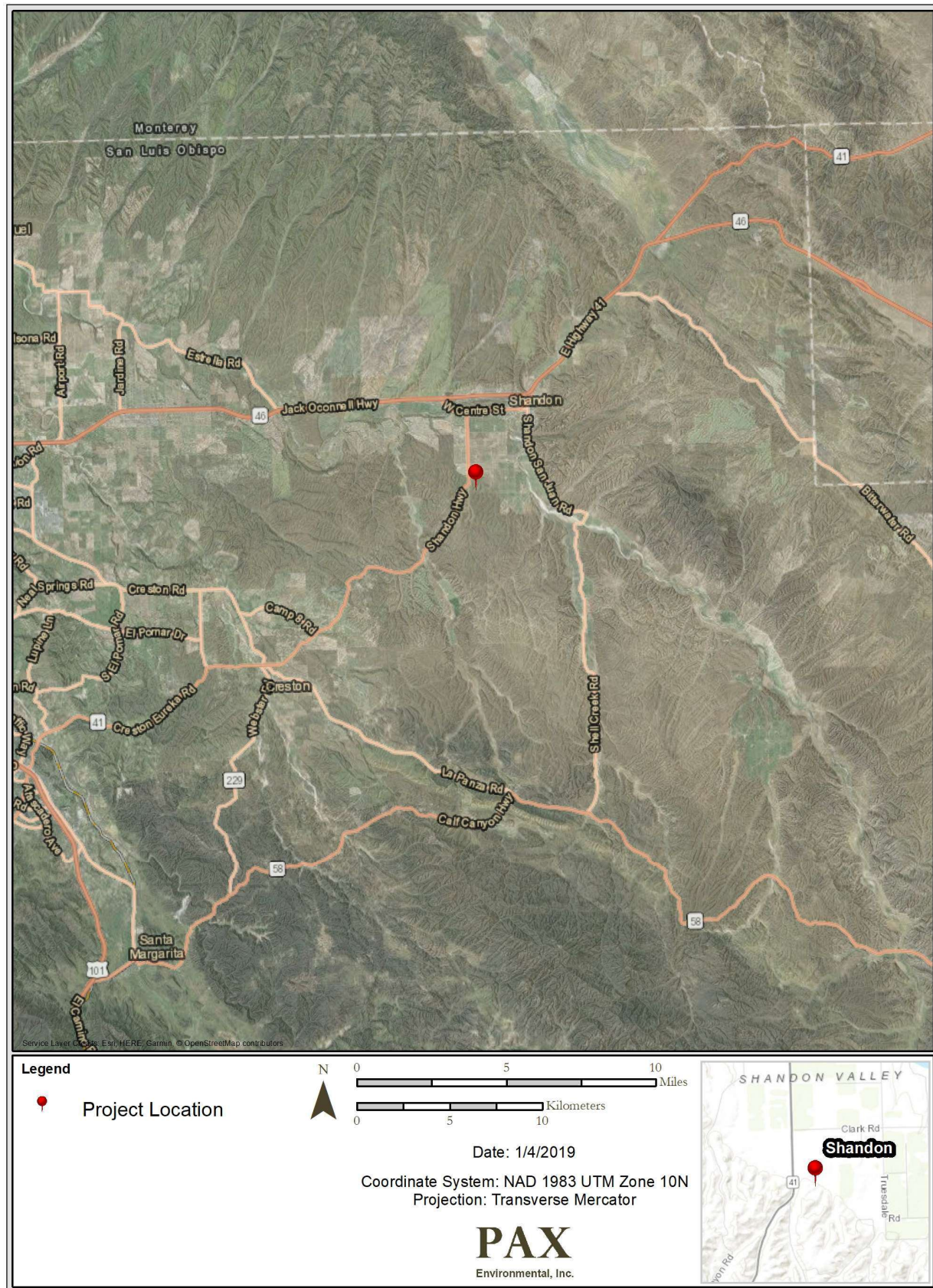
**Table 5.** List of native plant species observed on the Project site on December 12, 2018.

<u>Scientific Name</u>	<u>Common Name</u>	<u>FAMILY</u>
<i>Croton setiger</i>	turkey mullein	EUPHORBIACEAE
<i>Datura wrightii</i>	Jimsonweed	SOLANALES
<i>Erigeron canidensis</i>	Canada horseweed	ASTERACEAE
<i>Euphorbia serpyllifolia</i>	thyme-leaved spurge	EUPHORBIACEAE
<i>Laennecia coulteri</i>	Coulter's horseweed	ASTERACEAE

**Table 6.** List of wildlife species observed on the Project site on December 12, 2018.

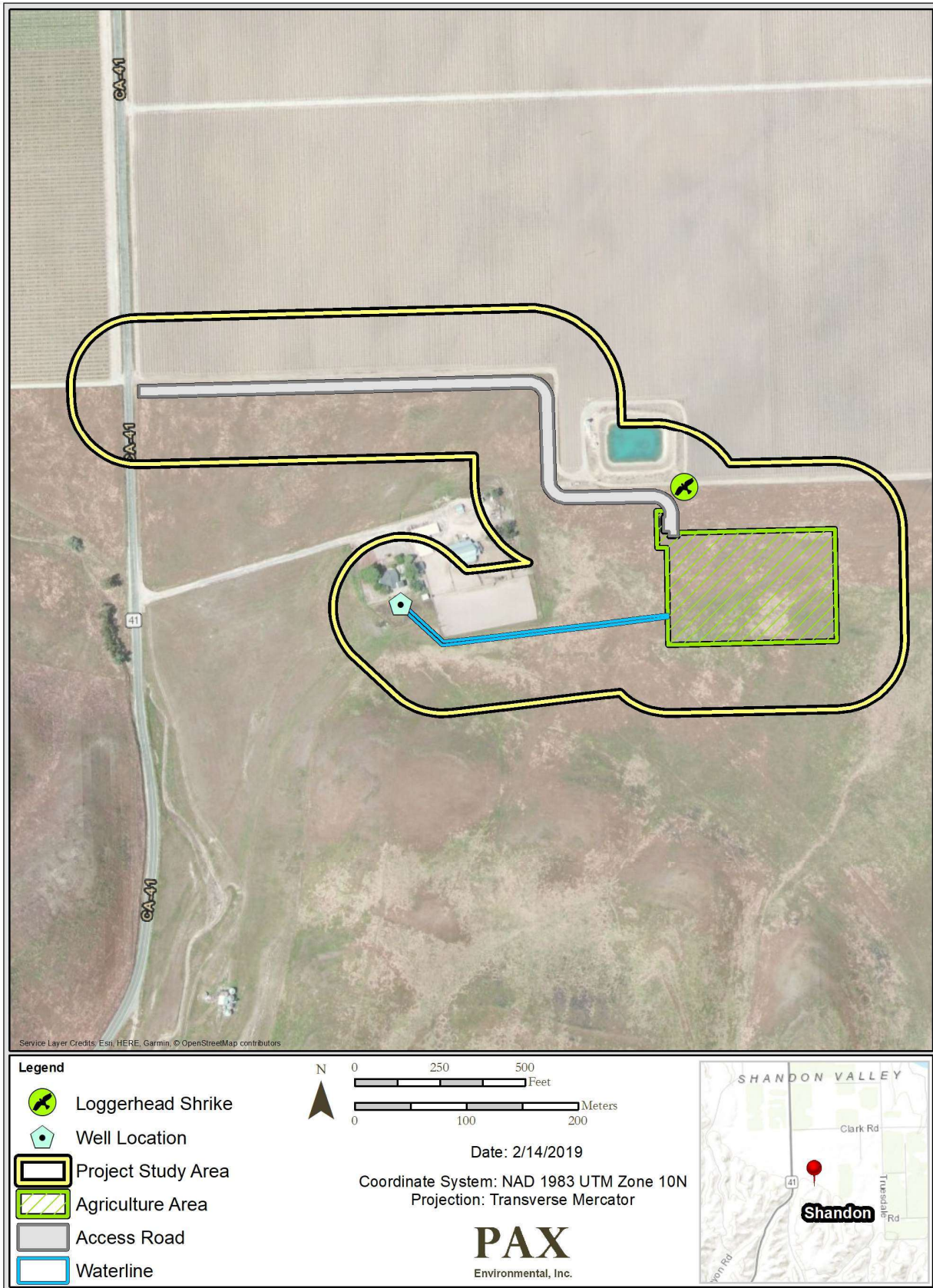
Common Name <sup>a</sup>	Scientific Name	Status	Notes
<b>BIRDS</b>			
turkey vulture	<i>Cathartes aura</i>	MBTA	Flying overhead
red-tailed hawk	<i>Buteo jamaicensis</i>	MBTA	Flying overhead
Common raven	<i>Corvus corax</i>	MBTA	-
Say's phoebe	<i>Sayornis saya</i>	MBTA	-
American pipit	<i>Anthus rubescens</i>	MBTA	-
yellow-rumped warbler	<i>Setophaga coronate</i>	MBTA	-
European starling	<i>Sturnus vulgaris</i>	Non-native	-
house finch	<i>Haemorhous mexicanus</i>	MBTA	-
loggerhead shrike	<i>Lanius ludovicianus</i>	MBTA/SSC	-
lesser goldfinch	<i>Spinus psaltria</i>	MBTA	-
white-crowned sparrow	<i>Zonotrichia leucophrys</i>	MBTA	-
lark sparrow	<i>Chondestes grammacus</i>	MBTA	-
western meadowlark	<i>Sturnella neglecta</i>	MBTA	-
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	MBTA	-
<b>MAMMALS</b>			
southern pocket gopher	<i>Thomomys bottae</i>	-	burrows/mounds observed in study area beyond project limits
pocket mouse	<i>Perognathus</i> sp.	-	
domestic cow	<i>Bos taurus</i>	Non-native	-



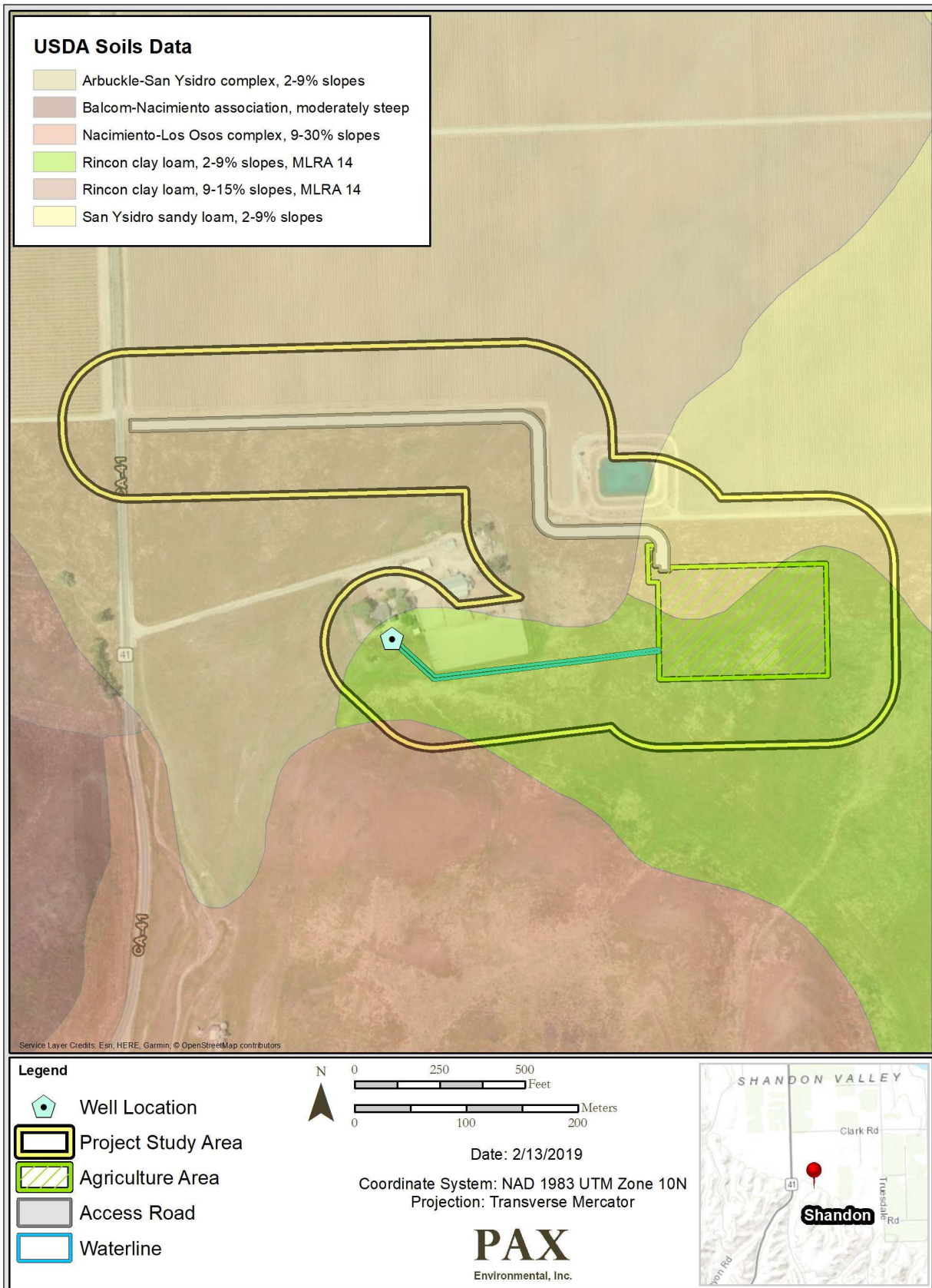


**Figure 1. Project Vicinity Map**



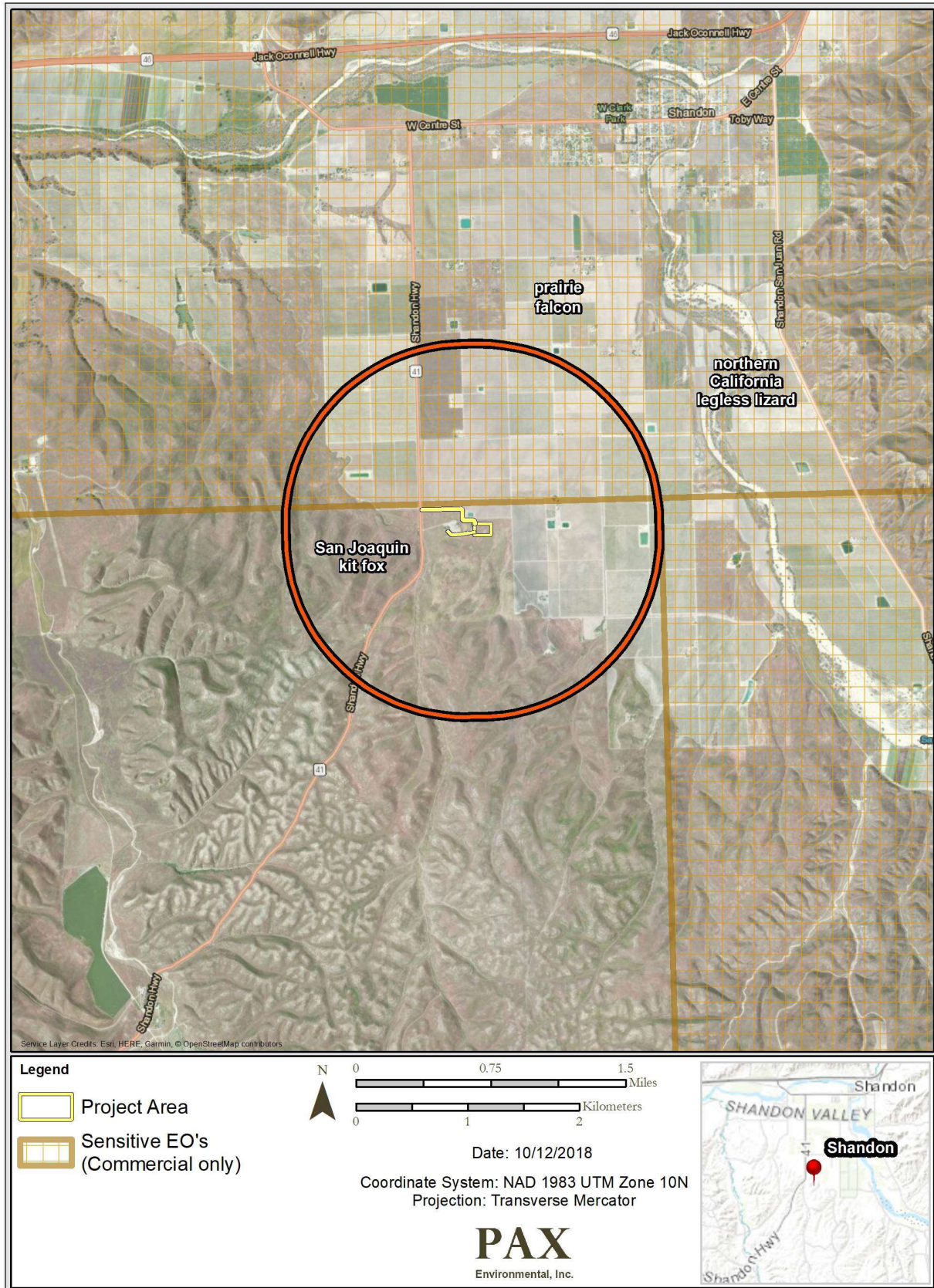


**Figure 2. Shandon Project Site**



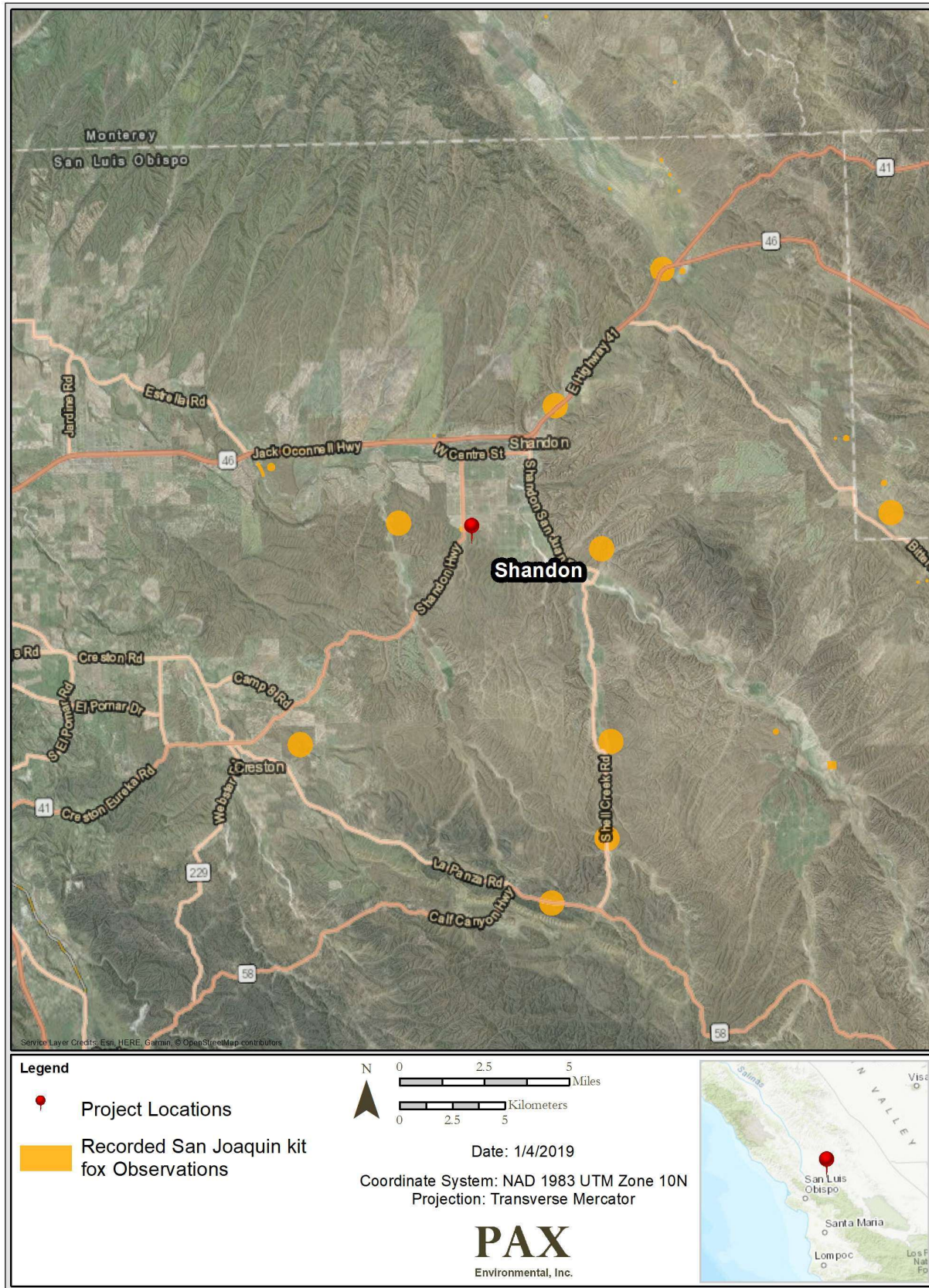
**Figure 3. USDA Soils Map**





**Figure 4. Shandon Project Site CNDDDB Records**





**Figure 5. San Joaquin Kit Fox Observations Map**



**Figure 6. Site Photographs**



**Photo 1:** Shandon project site photographed from access road to north facing south.



**Photo 2:** Loggerhead shrike observed on Shandon Project site.



**Photo 3:** Burrows observed in berm along access road on Shandon project site.

## **Appendix A**

### **San Joaquin Kit Fox Habitat Evaluation Form**



# San Joaquin Kit Fox Habitat Evaluation Form

## Cover Sheet

**Project Name** Shandon Cannabis Farm

**Date** 12/15/2018

**Project Location\*** 2.5 miles southwest of Shandon, CA

\*Include project vicinity map and project boundary on copy of U.S.G.S. 7.5 minute map (size may be reduced)

**U.S.G.S. Quad Map Name**

Shedd Canyon Quadrangle

**Lat/Long or UTM coordinates (if available)**

35.622707 -120.393309

**Project Description:**

**Project Size** 5.48 Acres **Amount of Kit Fox Habitat Affected** 5.48 Acres

**Quantity of WHR Habitat Types Impacted** (i.e. - 2 acres annual grassland, 3 acres blue oak woodland)

WHR type Annual Grassland Acres 5.48

WHR type \_\_\_\_\_ Acres \_\_\_\_\_

WHR type \_\_\_\_\_ Acres \_\_\_\_\_

WHR type \_\_\_\_\_ Acres \_\_\_\_\_

**Comments:** Cattle pasture/rangeland with annual grasslands surrounded by vineyards to the north/east, contiguous pasture/rangelands with annual grasslands to the south/southwest, and a rural residence/ranch to the west

Form Completed By: Sam C. Stewart IV

## San Joaquin Kit Fox Habitat Evaluation form

**Is the project area within 10 miles of a recorded San Joaquin kit fox observation or within contiguous suitable habitat as defined in question 2 (A-E)**

☒ **Yes - Continue with evaluation form**

☐ **No - Evaluation form/surveys are not necessary**

1. Importance of the project area relative to Recovery Plan for Upland Species of the San Joaquin Valley, California (Williams et al., 1998)
  - a. Project would block or degrade an existing corridor linking core populations or isolate a subpopulation (20)
  - b. Project is within core population (15)
  - c. Project area is identified within satellite populations (12)
  - d. Project area is within a corridor linking satellite populations (10)
  - e. Project area is not within any of the previously described areas but is within known kit fox range (5)**
2. Habitat characteristics of project area.
  - a. Annual grassland or saltbush scrub present >50% of site (15)**
  - b. Grassland or saltbush scrub present but comprises <50% of project area (10)
  - c. Oak savannah present on >50% of site (8)
  - d. Fallow ag fields or grain/alfalfa crops (7)
  - e. Orchards/vineyards (5)
  - f. Intensively maintained row crops or suitable vegetation absent (0)
3. Isolation of project area.
  - a. Project area surrounded by contiguous kit fox habitat as described in Question 2a-e (15)
  - b. Project area adjacent to at least 40 acres of contiguous habitat or part of an existing corridor (10)**
  - c. Project area adjacent to <40 acres of habitat but linked by existing corridor (i.e., river, canal, aqueduct) (7)

- d. Project area surrounded by ag but less than 200 yards from habitat (5)
  - e. Project area completely isolated by row crops or development and is greater than 200 yards from potential habitat (0)
- 4. Potential for increased mortality as a result of project implementation. Mortality may come from direct (e.g., - construction related) or indirect (e.g., - vehicle strikes due to increases in post development traffic) sources.
  - a. Increased mortality likely (10)
  - b. Unknown mortality effects (5)**
  - c. No long-term effect on mortality (0)
- 5. Amount of potential kit fox habitat affected.
  - a. >320 acres (10)
  - b. 160 - 319 acres (7)
  - c. 80 - 159 acres (5)
  - d. 40 - 79 acres (3)
  - e. < 40 acres (1)**
- 6. Results of project implementation.
  - a. Project site will be permanently converted and will no longer support foxes (10)**
  - b. Project area will be temporarily impacted but will require periodic disturbance for ongoing maintenance (7)
  - c. Project area will be temporarily impacted and no maintenance necessary (5)
  - d. Project will result in changes to agricultural crops (2)
  - e. No habitat impacts (0)
- 7. Project Shape
  - a. Large Block (10)
  - b. Linear with > 40 foot right-of-way (5)**
  - c. Linear with < 40 foot right-of-way (3)
- 8. Have San Joaquin kit foxes been observed within 3 miles of the project area within the last 10 years?
  - a. **Yes (10)** No (0)

## Scoring

1. Recovery importance	<u>5</u>
2. Habitat condition	<u>15</u>
3. Isolation	<u>5</u>
4. Mortality	<u>0</u>
5. Quantity of habitat impacted	<u>1</u>
6. Project results	<u>2</u>
7. Project shape	<u>3</u>
8. Recent observations	<u>10</u>

TOTAL	<u>61</u>
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*Revised 03/02-lpd*

## **Appendix B**

### **Declaration of Biologist Qualifications**

## General Biological Report

PROJECT NAME/NUMBER: 5.48-acre Project Site (APN 017-251-071) in Shandon

NAME OF BIOLOGIST: Sam Stewart FIRM: Pax Environmental

I am the primary field biologist for the above referenced project. I have the following minimum qualifications to comply with the County of San Luis Obispo's biological reporting requirements for this type of biological report (General):

- I have a bachelor's degree in Social Ecology from University of California Irvine, 1998
- I have previously conducted independent field work and reporting, and demonstrated the following:
  - ✓ Knowledge and experience in identification of habitats and vegetation associations found in San Luis Obispo County;
  - ✓ General knowledge of local plant and wildlife species;
  - ✓ General knowledge of sensitive habitats and plant and wildlife species;
  - ✓ Ability and experience in identifying potential impacts to plants, animals, and habitats;
  - ✓ Ability and experience in recommending mitigation measures to minimize impacts to plants, animals, and habitats;
  - ✓ Experience in monitoring for compliance with biological mitigation measures; and
  - ✓ Ability and experience in writing complete, well-written technical reports as per the County Guidelines for Preparation of Technical Reports.

**Check one:**



Attached is a representative copy (electronic) of a recent report I authored.



I previously submitted a representative copy of a report I authored.

**With my signature I confirm that I meet all of the above qualifications and that I was a primary author of this report and provided field oversight and/or conducted a substantial portion of the field survey work.**



February 15, 2019

\_\_\_\_\_  
Signature of Biologist

\_\_\_\_\_  
Date

## Sam C. Stewart IV

### Senior Biologist/Ecologist



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#### Academic Background

Bachelors, Social Ecology, University of California, Irvine, 1998

#### Professional Experience

Sam Stewart is a Senior Biologist with 20 years of field experience in biological services. His experience includes biological constraints and technical impact analyses; focused surveys for special status plant and wildlife species; fish and aquatic macroinvertebrate sampling; complex analysis of food web relationships; aquatic toxicology; design and establishment of compensatory mitigation sites; wildlife relocation and long-term monitoring; long-term population studies; and invasive species control programs. He has extensive focused survey experience with fish and herpetofauna, including Threatened and Endangered species such as Santa Ana sucker, unarmored three-spine stickleback, arroyo toad, California red-legged frog, mountain yellow-legged frog, blunt-nosed leopard lizard, desert tortoise, and Coachella Valley fringe-toed lizard. Mr. Stewart has performed long-term population monitoring for Santa Ana sucker, arroyo toad, and red-legged frog, utilizing multi-metric bioassessment methodologies to track habitat changes and population health trends. He has also performed focused surveys and long-term monitoring of burrowing owl and desert kit fox utilizing motion-activated and endoscopic cameras to determine den occupancy and reproductive status. Mr. Stewart is a CDFW-trained practitioner of the Surface Water Ambient Monitoring Program (SWAMP) and can conduct rapid bioassessment of streams and wetlands per State Water Resources Control Board (SWRCB) standard operating procedures. He has conducted investigations in varied geographic areas including; deserts and watersheds of Los Angeles, Orange, San Diego, San Bernardino, Riverside, Imperial, Ventura, Santa Barbara, San Luis Obispo, Monterey, Kern, Fresno, and Tuolumne Counties in California as well as the deserts of Arizona. A brief list of key projects is presented below. A more detailed list is available upon request.

- **Biological Studies, Monterey Bay Regional Water Project (2015 to present).** Mr. Stewart performed field surveys, authored the vegetation community assessment, and performed peer-review of technical documents for the Castroville-Salinas and Santa Cruz County distribution segment of the Monterey Bay Regional Water Project, a desalinization plant and water distribution network extending through the cities of Salinas, Castroville, and Moss Landing.
- **On-call Services, Department of Water and Power (2016 to 2018).** Mr. Stewart assisted the Department of Water and Power with CEQA and CDFW Section 1600 compliance, and Biological Assessments/Biological Evaluation (BA/BE) for projects in the Angeles National Forest (ANF), including floristic surveys, tree inventories, nesting bird surveys, and protocol-level surveys for special status wildlife.
- **CEQA Compliance Surveys and Monitoring, Sustainable Power Group (2016 to 2018).** Mr. Stewart assisted SPower with environmental compliance on multiple project sites in the Antelope and San Joaquin valleys, performing focused surveys and monitoring for burrowing owl, San Joaquin antelope squirrel, and kit fox. Mr. Stewart also performed translocation of legless lizard, and long-term monitoring of occupied burrowing owl and kit fox burrows.
- **Focused Surveys and Monitoring, Tehachapi Renewable Transmission Project (TRTP) Southern California Edison (2010-2016).** Mr. Stewart served as the Lead Biologist for fish,

amphibian and reptile focused surveys on Segments 5, 6, 7, 8, and 11, and served as Lead Biological Monitor for construction on Segment 6 of Southern California Edison's (SCE) Tehachapi Renewable Transmission Project (TRTP) extending approximately 175 miles of native habitats and developed/disturbed areas from the Tehachapi Mountains in Kern County to the City of Ontario in San Bernardino County.

- **On-call Biological Services, Los Angeles County Department of Public Works (2001-2016).** Mr. Stewart was a Senior Biologist for on-call services with the LACDPW Flood Maintenance and Water Resources Divisions for 15 years. He conducted focused surveys for special status fish, amphibian and reptile species in reservoirs, storm water basins, and natural and/or modified creeks throughout Los Angeles County. Mr. Stewart prepared many technical analyses, including biological constraints, biological technical reports, population monitoring studies, and CEQA document sections. In addition, Mr. Stewart investigated episodic fish die-off in LACDPW facilities in the Los Angeles and San Gabriel rivers watersheds, collecting specimens and water samples for laboratory toxicological testing and completing causative analysis based on detected constituent concentrations and acute toxicity levels established by the Environmental Protection Agency (EPA).
- **On-call Biological Services, Caltrans Districts 7, 8, and 12 (2005-2010).** Mr. Stewart assisted Caltrans with environmental compliance on multiple project sites throughout coastal and desert areas in Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. He performed general biological surveys and protocol level surveys for special status plants and wildlife, including arroyo toad, California red-legged frog, desert tortoise, and burrowing owl. He was principal author of Natural Environment Studies (NES) for multiple interchange projects and served as the Lead Biologist for the Ortega Highway Safety Improvements project in the Cleveland National Forest, involving long-term population monitoring of the endangered arroyo toad in San Juan Creek. Mr. Stewart coordinated with Caltrans, the U.S. Forest Service (USFS), the USFWS, the County of Orange, and the Construction Contractor to ensure that monitors were present during construction activities and mitigation measures were enforced, including maintenance of exclusionary fencing. As part of the mitigation program required by the USFWS Biological Opinion, Mr. Stewart conducted annual focused surveys and a long-term population study of the arroyo toad. He also instituted an invasive aquatic species control program to remove American bullfrog, red-swamp crayfish, and African clawed frog. Given the success of the program, the USFWS requested continued funding as mitigation for other Caltrans 2010 emergency projects on SR-74.
- **Sections 404 and 1600 Compliance, Level III Communications, (1998-2000).** Mr. Stewart performed wetlands delineations and prepared permit applications for impacts to wetland resources in Burlington Northern Santa Fe (BNSF) railroad right-of-way throughout San Luis Obispo and Santa Barbara counties for a portion of a 2,000-mile long fiber optic cable installation in California.

### **Certifications**

- California Department of Fish and Wildlife Scientific Collecting Permit (**No. SC-4421**) for Special Concern Species, arroyo toad, and red-legged frog.
- U.S. Fish and Wildlife Service-approved Biologist qualified to handle arroyo toad and California red-legged frog (**Biological Opinions 1-6-05-F-1688.6 and FWS-10B0117-10F0215, respectively**)
- Surface Water Ambient Monitoring Program (SWAMP) Practitioner – California Department of Fish and Wildlife, (Trained in 2013 and 2015)