Biological Resources Assessment for a 3-acre Cannabis Cultivation Facility in Santa Margarita (APN 037-391-030), San Luis Obispo County, California

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"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."

Sam C. Stewart IV

December 27, 2019
Date

EXECUTIVE SUMMARY

This Biological Resources Assessment report was prepared at the request of Jonathan Hernandez for the proposed development of cannabis growing operations at 248 Carrisa Highway (Assessor's Parcel Number 037-391-030), Santa Margarita, San Luis Obispo County, California (Project). The proposed Project includes outdoor cultivation areas, as well as support facilities within 5.4 acres on the above-listed property.

Pax Environmental, Inc. completed a records search and performed field surveys of the proposed Project site on October 22, 2018, May 17 and June 19, 2019. Surveys included a general botanical and wildlife inventory, identification of vegetation communities, focused survey for special status plants, and an assessment of the potential for special-status wildlife species and natural communities to occur on the Project site.

No sensitive vegetation communities or wildlife were identified during the survey. Records searches identified a total of 43 special-status botanical species and 23 special-status wildlife species that occur in the Project region. Of those identified, 2 special status plant species and 11 special status wildlife species, as well as migratory nesting birds, were identified as potentially occurring on 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 wildlife species in the Project area. Mitigation measures have been recommended that 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 October 22, May 17 and June 19, 2019 biological field surveys of a portion of assessor's parcel number (APN 037-391-030) at 248 Carrisa Highway, Santa Margarita, San Luis Obispo County, California. The Project consists of a proposed 3-acre cannabis cultivation facility, support infrastructure, and access road for a total of 5.4 acres within the 130-acre assessor's parcel number (APN) 072-221-011 (Figure 1). The Project site is depicted on the Camatta Ranch USGS 7.5-minute topographic quadrangle map within Section 28 of Township 28 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 in a 33-acre Project study area.

1.2 Project Description

The proposed Project consists of cannabis cultivation operations and supporting infrastructure. The cultivation area consists of two one-acre plots with in-ground cannabis row crops and a 5,800 square foot (ft^2) nursery. The cultivation area and nursery will be surrounded by a 6-foot-high chain link fence along the perimeter. Fencing will include PVC privacy slats and a 20-foot-wide, locked, electric entrance gate at the northcentral portion of the perimeter fence. Access will be provided via a 16-foot-wide, gravel base access road extending from south to north toward the proposed entrance gate and will include a 20-foot-wide apron at the Carrisa Highway entrance (Figure 2).

Support infrastructure includes a 1,600 ft^2 office trailer between the proposed cultivation area and access road (including security station, restrooms, and septic system), three 5,000-gallon water tanks, irrigation system, and parking. Two of the 5,000-gallon water tanks are proposed within the fenced cultivation area and one is proposed adjacent to the proposed office. Water tanks will be fed by an existing well adjacent to the existing 2,400 ft^2 barn in the northcentral portion of the Project footprint. Water will be distributed to the cultivation areas via a 1.5-inch water line. The existing barn will be converted to use as a drying, trimming, storage and loading facility. Parking will be provided on the existing 14,000 ft^2 graded pad for the barn.

1.3 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 2019), the Calflora Observation Hotline (Calflora 2019), and the Jepson Flora Project website (eFlora, 2019). The CNDDB records search was performed on the USGS 7.5-minute quadrangle encompassing the Project site and the surrounding eight quadrangles in the eight cardinal directions. The quadrangles searched include Camatta Ranch, Camatta Canyon, Holland Canyon, La Panza Ranch, La Panza, Pozo Summit, Santa Margarita Lake, Wilson Corner, and Shedd Canyon.

A reconnaissance-level survey was performed by Pax Senior Biologist Sam Stewart on October 22, 2018. A focused plant survey was performed by Pax Senior Botanist Brian Mayerle on May 17, 2019. A follow-up reconnaissance-level survey and focused plant survey was performed on June 19, 2019 by Mr. Stewart and Pax Botanist Scott Tomkinson. The study area consisted of the Project disturbance area and a 200-foot (ft) buffer for a total study area of 33 acres. A visual search for plants and wildlife, or their evidence of presence (scat, tracks, burrows, nests, etc.) was performed with 100% visual coverage of the Project disturbance area. All vegetation alliances, as described in the California Manual of Vegetation (Sawyer Keeler Wolf 2009), and/or wildlife habitats, as described in the Guide to California Wildlife Habitats (Holland 1986), were mapped in the study area and digitized on an aerial using ArcGIS. In addition, the site was examined for wetland boundaries, including presence or absence of bed and bank, cracked surface soils, and wetland indicator plants. The survey was augmented by photographic data collection using a GPS-enabled digital camera. Survey times and conditions are presented below in Table 2.

Timing of the survey coincided with the flowering period for the majority of locally occurring native plant species. Identifiable species were noted and recorded upon detection while voucher photographs of polytypic species were collected for subsequent 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.).

The Project area was surveyed on foot to document all plant species occurring in the Project footprint during survey visits. Survey timing was based on known blooming periods for the target species as described in the literature. Above average rainfall totals and weather conditions for the 2018/2019 rainy season were considered ideal for plant fecundity and prolonged flowering duration. The site was fully accessible, and several transects were walked throughout the project area to ensure that any special status species would be found if present. Mr. Tomkinson recorded all dominant plant species encountered during the field survey (Appendix A, Table 1). Scientific nomenclature follows the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (eFlora 2019).

TABLE 1
SURVEY CONDITIONS

Date	Start/End Time	Temperature (°Fahrenheit)	Cloud Cover (%)	Conditions	Wind Speed (miles/hour)	Surveyors
October 22, 2019	12:20-19:10	65-80	20	Clear, warm, calm	0-4	S. Stewart
May 15, 2019	13:15-18:30	61-70	80	Cloudy, mild, breezy	6-10	B. Mayerle
June 19, 2019	12:05-17:20	65-75	Clear	Clear, warm, calm	Calm	S. Stewart S. Tomkinson

2.0 EXISTING CONDITIONS

The Project site consists of approximately 5.4 acres within the approximately 130-acre APN 037-391-030 at 248 Carrisa Highway, Santa Margarita, San Luis Obispo County. The site is mostly vacant with one 2,400 ft^2 metal barn on 14,000 ft^2 graded pad in the north-western portion and a man-made water basin to the south of the central Project site. There is a graded access road

traversing the Project site from east to west and north to south and evidence of recent tilling in the central and eastern portions of the Project site. Topography is irregular and there are ridges to the north and south that slope gently downhill to the existing east-west trending dirt access road along the northern edge of the Project site. The site plateaus near the center, sloping downhill to the east and west. Approximately 1.2 acres of the proposed Project consists of the existing access road that extends approximately 0.35-mile north from Carrisa Highway to the entrance gate. Project site elevations range from 1,605 to 1,718 feet above mean sea level (msl).

Soils on the Project site are diverse and consist mostly of Oceano loamy sand (37%), deep, excessively drained soils that formed in material weathered from sandy eolian deposits and typically occur on rolling dune-like topography with slopes up to 50%. Arnold loamy sand (33%) is present in the northwestern corner of the Project site and consists of deep, somewhat excessively drained soils that formed in material weathered from soft sandstone. This soil type is found on hills and uplands with slopes ranging from 9 to 75 percent. Gaviota-San Andreas association soils (18%) are present in the southern extent of the access road and consist of sandy loam weathered from sandstone. This soil type is found in mountainous area with slopes of 30 to 75%. Arnold-San Andreas complex soils (10%) are present in the central portion of the access road and are like Arnold soils but composed of slightly coarser material. (USDA 2019) (Figure 3).

The Project site has a history of equipment storage and private recreational use preceding 1994 as well as disking as recently as 2017. Surrounding land uses include undeveloped natural areas in all directions, unpaved dirt access roads, and rural residential approximately 0.25-mile northeast and 0.5-mile east.

3.0 RESULTS

3.1 Plants

Vegetation in the study area is representative of repeated disturbance and was dominated by annual brome grassland. Habitat acreages and distribution in the study area are presented in Table 3 and Figure 4, respectively.

TABLE 3
NATURAL COMMUNITIES AND HABITATS IN THE STUDY AREA

	Acreage	% of Study Area
Annual Grassland	17.3	50.9
Chamise Chaparral	7.8	22.9
Buckwheat – Deerweed Scrub	4.3	12.7
Disturbed/Barren	3.4	10
Mixed Oak Forest	1.1	3.2
Man-made Basin	0.1	0.3
Total	34	100

Annual Grassland

Annual grassland in the study area consists of the *Avena spp. – Bromus spp.* Wild Oats and Annual Brome Grasslands Semi-Natural Alliance (42.027.00) (Sawyer et al. 2009). It was the most prevalent habitat (17.3 acres), representing 50.9% of the study area and 69% of the Project footprint. The variety of plants observed in this alliance during the survey was dominated by slim oat (*Avena barbata*) and foxtail brome (*Bromus madritensis ssp.rubens*) with other bromes, black mustard (*Brassica nigra*), and red-stemmed filaree (*Erodium cicutarium*) also occurring in high

densities. Non-native grasses and ruderal species were dominant throughout with native species present at much lower densities.

Non-native plants observed during the survey include ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordaceous*), yellow star thistle (*Centaurea solstitialis*), red stemmed filaree (*Erodium cicutarium*), rattail grass (*Festuca myuros*), foxtail barley (*Hordeum murinum*), prickly lettuce (*Lactuca serriola*), narrowleaf cottonrose (*Logfia* gallica), bur clover (*Medicago polymorpha*), and purple vetch (*Vicia benghalensis*). Individual ornamental tree species were also observed in the grassland surrounding the barn's graded pad, including ornamental larch (*Larix sp.*), olive (*Olea europea*), and Chinese elm (*Ulmus parviflora*).

Native plants observed during the survey include remnant species from native grassland habitat that occurred on the site. Species observed during the survey include blow wives (*Achyrachaena mollis*), Chilean trefoil (*Acmispon wrangelianus*), fiddleneck (*Amsinckia menziesii*), owl's clover (*Castilleja exserta*), turkey-mullein (*Croton setiger*), common cryptantha (*Cryptantha intermedia*), western tansy mustard (*Descurainia pinnata*), thread stemmed fleabane (*Erigeron foliosus var.* foliosus), seaside heliotrope (*Heliotropium curassavicum*), sticky lessingia (*Lessingia pectinate var. tenuipes*), California cottonrose (*Logfia filaginoides*), bicolor lupine (*Lupinus bicolor*), and wire lettuce (*Stephanomeria exigua*). Individual native trees were also found scattered throughout annual grasslands, including California juniper (*Juniperus californica*), bull pine *Pinus sabiniana*), Coast live oak (*Quercus agrifolia*), and blue oak (*Quercus douglasii*).

Chamise Chaparral

Chamise chaparral in the study area consists of the *Adenostoma fasciculatum* Alliance (37.101.16) (Sawyer et al. 2009). It was the second most prevalent habitat (7.8 acres), representing 22.9% of the study area but is not present in the Project footprint. It is a dense tangle of woody shrubs dominated by chamise, an evergreen shrub that forms a continuous to broken canopy with other chaparral species occurring at less than 50% density. Emergent trees are also present at low cover. In the study area, this alliance occurs primarily along the ridgelines and slopes.

Given the dense overstory of this association, it is less susceptible to invasion and is dominated by native herbs and shrubs, including chaparral clarkia (*Clarkia affinis*), interior goldenbush (*Ericameria linearifolia*), common hareleaf (*Lagophylla ramosissima*), southern honeysuckle (*Lonicera subspicata*), California man-root (*Marah fabacean*), slender cottonweed (*Micropus californicus*), coffee fern (*Pellaea andromedifolia*), gold back fern (*Pentagramma triangularis*), branching phacelia (*Phacelia ramosissima*), California plantain (*Plantago erecta*), California everlasting (*Pseudognaphalium californicum*), hollyleaf redberry (*Rhamnus ilicifolia*), blue elderberry (*Sambucus nigra ssp. caerulea*), purple needle grass (*Stipa pulchra*), and Fremont's death camas (*Toxicoscordion fremontii*). Scattered trees observed in this alliance include California juniper, bull pine, and inland scrub oak (*Quercus berberidifolia*).

Buckwheat Deerweed Scrub

Buckwheat deerweed scrub in the study area consists of the *Eriogonum fasciculatum – Lotus scoparius* Alliance (32.040.19) (Sawyer et al. 2009). It is the third most common habitat in the study area (4.3 acres), representing 12.7% of the study area but is present not in the Project footprint. It is a relatively low-growing scrub occurring on slopes in the study area and is dominated by California buckwheat (*Eriogonum fasciculatum*) and deerweed (*Acmispon glaber [previously Lotus scoparius]*). Portions of this alliance have experienced repeated disturbance, particularly in

disced areas adjacent to the proposed Project site. Disturbed buckwheat deerweed scrub is relatively sparse with higher concentrations of introduced species typical of the annual grassland habitat described above.

Undisturbed buckwheat deerweed scrub in the study area is dominated by native herbs and shrubs, including narrow leaf milkweed (*Asclepias fascicularis*), red spot clarkia (*Clarkia speciosa ssp. speciosa*), elegant clarkia (*Clarkia unguiculata*), sand pygmy weed (*Crassula connata*), field sun cup (*Camissonia campestris ssp. campestris*), blue dicks (*Dichelostemma capitatum*), many flowered eriastrum (*Eriasatrum pluriflorum*), Bailey's buckwheat (*Eriogonum elegans*), California poppy (*Eschscholzia californica*), climbing bedstraw (*Galium porrigens*), slender flowered gilia (*Gilia tenuiflora ssp. tenuiflora*), narrow scaled goldenbush (*Hazardia stenolepis*), coastal tidytips (*Layia platyglossa*), chick lupine (*Lupinus microcarpus var. microcarpus*), cudweed (*Pseudognaphalium beneolens*), vinegarweed (*Trichostema lanceolatum*), and Johnny jump up (*Viola pedunculata*). Scattered trees observed in this alliance within the study area include California juniper, blue oak, and bull pine.

Disturbed/Barren

Disturbed/barren areas is an unclassified habitat type that composes approximately 3.4 acres (10%) of the study area and 31% of the Project footprint. This habitat type includes the access road and other high use areas in the study area consisting of unpaved barren ground with less than 2% total herbaceous cover. This area is barren due to repeated disturbance associated with road and off-road traffic and repeated human use. Plant species observed in barren areas include mostly introduced ruderal, weedy species or native weeds that can tolerate repeated disturbance. Non-native species observed include hairy rupturewort (*Herniaria hirsuta*), perennial pepperweed (*Lepidium latifolium*), cheeseweed (*Malva parviflora*), knotweed (*Polygonum aviculare ssp. depressum*), Russian thistle (*Salsola tragus*), milk thistle (*Silybum marianum*), and Indian hedge mustard (*Sisymbrium orientale*). Native species observed include desert dandelion (*Malacothrix glabrata*) and white plum wirelettuce (*Stephanomeria exigua ssp. coronaria*).

Mixed Oak Forest

Mixed oak forest in the study area consists of the *Quercus (agrifolia, douglasii, garryana, kelloggii, lobate, wislizenii*) Alliance (71.100.00) (Sawyer et al. 2009). The alliance includes a small area in the study area (1.1 acres) to the south of Carrisa Highway representing 3.2% of the study area. It includes oak stands where three or more oaks are codominant in the upper canopy, including coast live oak (*Q. agrifolia*), blue oak (*Q. douglasii*), and/or interior live oak (*Q. wislizeni*). Other trees present include bull pine (*Pinus sabiniana*) and inland scrub oak. The shrub and herbaceous layers are sparse to common and most frequently grassy.

Man-Made Basin

Man-made basin is an unclassified habitat type composing approximately 0.1-acre (0.3%) of the study area and consists of an earthen basin to the south of the Project footprint that is fed by well water. This area is devoid of vegetation and no water was present during any of the surveys.

3.2 Wildlife

Wildlife species observed during the survey included those common to grasslands, scrub and chaparral habitats. No fish or amphibian species were detected due to lack of natural surface

water in the vicinity. Reptile species observed during the survey include Coast Range fence lizard (*Sceloporus occidentalis bocourtii*) and western side-blotched lizard (*Uta stansburiana elegans*).

Bird species observed during the survey include turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), great horned owl (*Bubo virginianus*), Anna's hummingbird (*Anna calypte*), acorn woodpecker (*Melanerpes formacivorus*), Nuttall's woodpecker (*Picoides nuttallii*), northern flicker (*Colaptes auratus*), Say's phoebe (*Sayornis saya*), western scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), western meadowlark (*Sturnella neglecta*), mountain chickadee (*Poecile gambeli*), bushtit (*Psaltriparus minimus*), Bewick's wren (*Thyromanes bewickii*), wrentit (*Chamaea fasciata*), western bluebird (*Sialia mexicana*), northern mockingbird (*Mimius polyglottos*), European starling (*Sturnus vulgaris*), spotted towhee (*Pipilo maculatus*), California towhee (*Pipilo crissalis*), lark sparrow (*Chondestes grammacus*), white-crowned sparrow (*Zonotrichia leucophrys*), dark-eyed junco (*Junco hyemalis*) and Brewer's blackbird (*Euphagus cyanocephalus*). Non-native birds observed during the survey include European starling (*Sturnus vulgaris*).

Mammals or evidence of their presence detected during the survey include southern pocket gopher (*Thomomys bottae*), pocket mouse (*Chaetodipus* and/or *Perognathus sp.*), kangaroo rat (*Dipodomys sp*), California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), San Joaquin kit fox (*Vulpia macrotis mutica*), mule deer (*Odocoileus hemionus*), and American black bear (*Ursus americanus*).

3.3 Special Status Resources

The following discussion addresses special status biological resources having the potential to occur in the Project study area. 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 considered by the analysis include those potentially occurring within the direct impact footprint that are listed as Threatened and/or Endangered by the California or federal Endangered Species Act(s), as well as those assigned a California Rare Plant Rank (CRPR) by the CNPS that clearly meet the definition of Rare or Endangered under Guideline §15380 of the California Environmental Quality Act (CEQA). 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 2019):

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)

Special status wildlife species considered by the analysis include those listed by the state and/or federal Endangered Species Acts as Threatened and/or Endangered, Candidate(s) for listing as Threatened and/or Endangered, and/or listed by the CDFW as Fully Protected (FP), Species of Special Concern (SSC), and/or CDFW Watchlist (WL).

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 CNDDB. 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. 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 in the project site, 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] [2019]). California Natural Diversity Database (CNDDB) List of Special Plants (CDFW 2019).

- Wildlife - CNDDB List of Special Animals (CDFW 2019)

- Habitats – CNDDB List of Sensitive Natural Communities (CDFW 2019)

3.4 Special Status Plants

The CNDDB and CNPS on-line inventory listed 50 plants as occurring in the Project region, 43 of which are considered special status and subject to CEQA impact analysis (CNPS List 1 and 2 species and/or List 3 and 4 species with a threat rank of 0.1 or 0.2). One CNPS List 4.3 species, Elegant buckwheat (*Eriogonum elegans*), was observed in the southeastern corner of the study area and Project footprint during the focused botanical survey performed in the Spring and Summer of 2019. Fewer than a dozen individuals of this species were observed. It is endemic to California and limited to observations in seven counties, with multiple observations in five counties, including Santa Barbara, Ventura, San Benito, Monterey and San Luis Obispo. There are 31 known populations in San Luis Obispo County totaling between 700 and 1,400 individual plants. According to CNPS, this species is not very threatened in California (less than 20% threatened / low degree and immediacy or no current threats known). In addition, twenty four senesced mariposa lilies (*Calochortus sp.*) were observed in the southeastern portion of the study area to the south of the Project footprint. The lilies could not be identified to species given the flowers had shed their petals. No other special status plants were observed during the survey by an experienced botanist in an above-average rainfall year.

Based on the field survey and the known habitat requirements of the special status species identified in Table 3, one CNPS List 1B.3 species, La Panza mariposa lily (*Calochortus simulans*), and one CNPS List 1B.2 species, Palmer's mariposa lily (*Calochortus palmeri var. palmeri*), have potential to occur on the Project site given the observation of mariposa lilies that could not be identified to species adjacent to the southeastern corner of the Project site. There are records of La Panza mariposa lily in the southeastern corner of the property beyond the study area. Given that these species are more suited to moist or serpentine substrates, they are considered to have a low to moderate potential to occur on the Project site.

3.5 Special Status Wildlife

The CNDDB on-line inventory listed 23 special status wildlife species in the region. No special status wildlife species were observed on the Project site or throughout the study area during the surveys. Twelve species were determined to have a low to high potential to occur on the Project site.

Invertebrates

The study area was determined to have a moderate potential for occurrence of Crotch's bumble bee (*Bombus crotchii*), a candidate for listing as Endangered under the California Endangered Species Act (CESA). This species is known to inhabit rodent burrows and other refugia in scrub and grassland habitats. Food plants include milkweed (*Asclepias spp.*), pincushion (*Chaenactis spp.*), lupine (*Lupinus spp.*), medick (*Medicago spp.*), phacelia (*Phacelia spp.*), and salvia (*Salvia spp.*) (Williams et al. 2014). Kangaroo rat or California ground squirrel burrows, as well as food sources, including species of milkweed, lupine, medick, and phacelia, were observed in the study area during surveys. The disking of onsite soils has reduced the suitability of habitat on the Project site, resulting in a moderate potential for occurrence.

Amphibians

The study area was determined to have a low potential for California tiger salamander (*Ambystoma californiense*), a federally and state listed Threatened species. It is known to inhabit underground refugia, especially ground squirrel burrows, in grasslands and woodlands in

proximity to vernal pools or other seasonal water sources for breeding. There are no known seasonal wetlands in proximity to the Project site; however, there are permanent ponds within 0.5-mile to the west. CDFW California Wildlife Habitat Relationships (CWHR) Predicted Habitat Suitability modeling ranks the study area as low habitat suitability based on the mean expert opinion suitability value for each habitat type for breeding, foraging, and cover. The disking of onsite soils has further reduced the suitability of habitat on the Project site, resulting in a low potential for occurrence.

Reptiles

The study area was determined to have a moderate potential for northern California legless lizard (*Anniella pulchra*) and a high potential for California glossy snake (*Arizona elegans occidentalis*), both California Species of Special Concern (SSC). Northern legless lizard is known to inhabit moist, sandy or loose loamy soils under sparse vegetation (CNDDB 2019). California glossy snake is known to inhabit scrub or grassland with loose or sandy soils (CNDDB 2019).

The closest CNDDB record for northern legless lizard is approximately 2.9 miles southwest. This species typically soils beneath the leaf litter (duff) of trees or shrubs (Stebbins 2003). Onsite soils are dominated by sand or sandy loam. In the study area, this species is expected particularly in the duff of deciduous trees like coast live oak, blue oak, and/or scrub oak. There are no trees within the Project site, but portions are close to the duff of the trees, resulting in a moderate potential for occurrence.

The closest CNDDB record for California glossy snake is 1.9 miles southeast. This species occupies mammal burrows or excavates a burrow in friable sandy substrate of grassland and scrub habitats (Stebbins 2003). In the study area, this species is expected to occur in the mammal burrows and annual grasslands within the Project site, resulting in a high potential for occurrence.

Birds

The study area was determined to have a low potential for Swainson's hawk (*Buteo swainsonii*), a state listed Threatened species, and a moderate potential for burrowing owl (*Athene cunicularia*), an SSC. Swainson's hawk nests in trees in open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats (CNDDB 2019, Bechard 2010). Burrowing owl typically occupies ground squirrel burrows, expands existing mammal burrows, or occupies piles of branches or other refuse.

The closest CNDDB record for Swainson's hawk is approximately 22 miles northeast. This species typically occupies flats and agricultural fields in desert areas. Given the marginal suitability of the habitat in the study area and the distance to known records, this species has a low potential for occurrence.

The closest CNDDB record for burrowing owl is approximately 13 miles northeast. This species can be detected by the presence of whitewash, feathers or bone scatters (CBOC 1997). Despite the distance to known records and the lack of detected sign, the presence of suitable topography, soils and potentially occupiable mammal burrows result in a moderate potential for occurrence.

Mammals

The study area was determined to have a moderate potential for the giant kangaroo rat (*Dipodomys ingens*) (GKR), a federally and state listed Endangered species; San Joaquin kit fox

(*Vulpes macrotis mutica*) (SJKF), a federally listed Endangered and state listed Threatened species; and western red bat (*Lasiurus blossevillii*), an SSC. Additionally, the study area was determined to have a high potential for American badger (*Taxidea taxa*), an SSC.

The study area is on the western edge of the range for GKR and the closest record is approximately 9 miles to the northeast. This species occurs in relatively flat grasslands and alkali scrub with sandy loam soils (Zeiner et al. 1990). Kangaroo rat burrows were observed on the project site during surveys. However, these could be associated with the more common San Joaquin Valley kangaroo rat (*Dipodomys nitratoides*). Given the distance to known records and Project location on the western edge of the range, this species is considered to have a moderate potential for occurrence.

The closest CNDDB record for SJKF is less than 0.6-mile to the east. This species occurs in relatively flat to gently rolling grasslands and open scrub with friable soils where it will excavate burrows or expand California ground squirrel burrows (Zeiner et al. 1990). No burrows for this species were identified in the study area. However, given the proximity to known records and observation of scat in the study area, this species is considered to have a moderate potential for occurrence.

The closest CNDDB record for western red bat is approximately 12 miles to the south. This species roosts in trees from two to forty feet above the ground and forages in forest openings or along forest or woodland edges (Zeiner et al. 1990). This species is considered to have a moderate potential for occurrence.

The closest CNDDB record for American badger is within the study area to the south of the Project site. This species excavated burrows in friable soils of scrub, forests, and herbaceous habitats. No suitable burrows for this species were observed in the study area. However, given the proximity to known records, this species is considered to have a high potential for occurrence.

TABLE 3
SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale[2]
	USFWS	CDFW	CNPS			
Agrostis hooveri Hoover's bent grass	-	-	1B.2	Apr-Jul	Sandy sites in chaparral, cismontane woodland, closed-cone coniferous forest, and grasslands between 195 and 2,510 ft elevation	Not expected (6)
Amsinckia douglasiana Douglas fiddleneck	-	-	4.2	Mar-May	Monterey shale and well-drained soils in chaparral and valley/foothill grassland between 0 and 6,400 ft elevation	Not expected (6)
Antirrhinum ovatum Oval-leaved snapdragon	-	-	4.2	May-Nov	Clay or gypsum soils within chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland between 655 and 3,280 ft elevation	Not expected (2,6)
Arctostaphylos pilosula 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 (6)
Aristocapsa insignis Indian Valley spineflower	-	-	1B.2	May-Sep	Sandy soils in cismontane woodland between 590 and 4,000	Not expected (6)
Atriplex coronata var. *coronata* crownscale	-	-	4.2	Mar-Oct	Chenopod scrub, grassland and vernal pools between between 5 and 1,935 ft elevation	Not expected (6)
Calochortus simulans La Panza mariposa lily	-	-	1B.3	Apr-Jun	Decomposed granite and serpentine soils between 490 and 3,805 ft elevation	**Moderate (7)**
Calochortus palmeri var. palmeri Palmer's mariposa lily	-	-	1B.2	Apr-Jul	Vernally moist places in yellow-pine forest and chaparral between 635 and 8,300 ft elevation	**Low (5)**
Calycadenia villosa 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 (3,6)
Camissoniopsis hardhamiae 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 (6)
Carex obispoensis San Luis Obispo sedge	-	-	1B.2	Apr-Jun	In seeps of closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub,	Not expected (1,6)

TABLE 3
SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale[2]
	USFWS	CDFW	CNPS			
					valley and foothill grassland between 15 and 2,775 ft elevation	
Caulanthus californicus 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 (6)
Caulanthus lemmonii Lemmon's jewelflower	-	-	1B.2	Mar-May	Pinyon/ juniper woodland and grasslands between 1,085 and 3,020 ft elevation	Not expected (6)
Chlorogalum pomeridianum var. *minus* dwarf soaproot	-	-	1B.2	May-Aug	Chaparral on serpentine soils between 390 and 4,000 ft elevation	Not expected (2,6)
Chlorogalum purpureum var. *reductum* 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 (2,3,6)
Chorizanthe breweri 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 (6)
Chorizanthe palmeri Palmer's spineflower	-	-	4.2	Apr-Aug	Rocky serpentine soils in chaparral, cismontane woodland and grassland between 180 and 3,100 ft elevation	Not expected (2,6)
Chorizanthe rectispina Straight-awned spineflower	-	-	1B.3	Apr-Jul	Granite in chaparral, cismontane woodland, and coastal scrub between 150 and 3,415 ft elevation	Not expected (2,6)
Cirsium occidentale var. lucianum Cuesta Ridge thistle	-	-	1B.2	Apr-Jun	Openings on serpentinite, often on steep rock slopes and along roadsides between 1,590 and 2,510 ft elevation	Not expected (2,6)
Deinandra paniculata paniculate tarplant	-	-	4.2	Mar-Dec	Vernally wet areas in coastal scrub and valley and foothill grasslands between 80 and 3,085 ft elevation	Not expected (5,6)
Delphinium parryi ssp. *eastwoodiae* Eastwood's larkspur	-	-	1B.2	Apr-May	Chaparral and grassland on serpentine soils between 195 and 2,100 ft elevation	Not expected (2,6)
Delphinium umbraculorum Umbrella larkspur	-	-	1B.3	Apr-Jun	Mesic sites among chaparral and cismontane woodland between 705 and 6,810 ft elevation	Not expected (5,6)

TABLE 3
SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale[2]
	USFWS	CDFW	CNPS			
Dudleya abramsii ssp. murina mouse-gray dudleya	-	-	1B.3	May-Jun	Mesic sites among chaparral and cismontane woodland between 80 and 1,755 ft elevation	Not expected (5,6)
Eremalche parryi ssp *kernensis* 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	Not expected (6)
Eriastrum luteum 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 (2,6)
Eryngium spinosepalum Spiny-sepaled 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 (2,6)
Eschscholzia rhombipetala Diamond-petaled California poppy	-	-	1B.1	Mar-Apr	Alkaline clay slopes and flats among valley/foothill grassland between 100 and 1,065 ft elevation	Not expected (2,6)
Fritillaria agrestis stinkbells	-	-	4.2	Mar-Jun	Cismontane woodland, chaparral, grasslands, pinyon and juniper woodland between 30 and 5,105 ft elevation	Not expected (6)
Fritillaria ojaiensis Ojai fritillary	-	-	1B.2	Feb-May	Rocky sites in broadleaved upland forest, chaparral, lower montane coniferous forest and cismontane woodland between 310 and 3,740 ft elevation	Not expected (6)
Horkelia yadonii Santa Lucia horkelia	-	-	4.2	Apr-Jul	Meadows and seeps with granitic, sandy soils in broadleaved upland forest, chaparral, cismontane woodland, riparian woodland between 950 and 2,855 ft elevation	Not expected (2,5,6)
Juncus luciensis Santa Lucia dwarf rush	-	-	1B.2	Apr-Jul	Vernal pools, ephemeral drainages, wet meadows and streamsides among lower montane coniferous forest, chaparral and	Not expected (2,5,6)

TABLE 3
SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale[2]
	USFWS	CDFW	CNPS			
					Great Basin scrub between 680 and 6,680 ft elevation	
Layia heterotricha 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 (2,6)
Lupinus ludovicianus San Luis Obispo County lupine	-	-	1B.2	Apr-Jul	Open, sandy areas in chaparral and cismontane woodland between 275 and 1,725 ft elevation	Not expected (6)
Madia radiata 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 (2,6)
Malacothamnus gracilis Slender bush-mallow	-	-	1B.1	May-Oct	Dry, rocky slopes among chaparral between 490 and 1,100 ft elevation	Not expected (6)
Monardella palmeri Palmer's monardella	-	-	1B.2	Jun-Aug	Serpentine soils in cismontane woodland and chaparral between 295 and 3,100 ft elevation	Not expected (2,6)
Navarretia fossalis 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 (2,6)
Navarretia nigelliformis ssp. *radians* Shining navarretia	-	-	1B.2	Mar-Jul	Cismontane woodland, valley/foothill grassland, and vernal pools between 525 and 1,770 ft elevation	Not expected (6)
Plagiobothrys uncinatus 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 (6)
Senecio aphanactis 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 (2,6)

TABLE 3
SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale[2]
	USFWS	CDFW	CNPS			
Sidalcea hickmanii ssp. *parishii* 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 (2,6)
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	-	-	1B.2	Mar-Oct	Serpentine outcrops in chaparral, valley and foothill grassland and cismontane woodlands on ridges and slopes between 295 and 3,415 ft elevation	Not expected (2,6)
Stylocline masonii Mason's bedstraw	-	-	1B.1	Mar-May	Sandy washes in chenopod scrub, pinyon and juniper woodland between 325 and 3,940ft elevation	Not expected (6)

TABLE 3
SPECIAL STATUS PLANT SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]			Bloom Period	Habitat Description	Likelihood for Occurrence/ Rationale[2]
	USFWS	CDFW	CNPS			

1: STATUS DEFINITIONS

USFWS

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."

FPE: Proposed for federal listing as Endangered.

C: Candidate for federal listing as Threatened or Endangered.

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."

FPT: Proposed for federal listing as Threatened.

CDFW

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).

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.

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).

CNPS

1A Plants Presumed Extinct in California

1B Plants Rare, Threatened, or Endangered in California & elsewhere

2A Plants presumed extirpated in California, but more common elsewhere

2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere

3 Review list of plants about which more information is needed

4 Watch list of plants with limited distribution

2: LIKELIHOOD FOR OCCURRENCE

Not expected:	Not expected to occur in Project footprint
Low:	Low potential to occur in Project footprint
Moderate:	Moderate potential to occur in Project footprint
High:	High potential to occur in Project footprint
Present:	Observed within Project footprint

RATIONALE

1: Lack of suitable habitat
2: Lack of suitable substrate
3: Beyond known elevation range
4: Beyond known geographic range
5: Required soil moisture regime not present
6: Not observed during survey
7: Marginally suitable habitat present
8: Suitable habitat present but no known records within one mile
9: Suitable habitat present with known records within one mile
10: Observed during survey

TABLE 4
SPECIAL STATUS WILDLIFE SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]		Habitat Description	Likelihood for Occurrence/Rationale[2]
	USFWS	CDFW		
Invertebrates				
Bombus crotchii Crotch's bumble bee	-	SE	Burrows in grassland or scrub with, or in proximity to, nectar sources (perennially flowering plants) in coastal California east to the Sierra-Cascade Crest and south into Mexico	**Moderate (6)**
Amphibians				
Ambystoma californiense California tiger salamander	FT	ST	Underground refuge, especially ground squirrel burrows, in proximity to vernal pools or other seasonal water sources for breeding	**Low (5,6)**
Rana draytonii 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)
Spea hammondii western spadefoot toad	-	SSC	Grasslands and woodlands with vernal pools	Not expected (1)
Reptiles				
Anniella pulchra northern California legless lizard	-	SSC	Moist sandy or loose loamy soils under sparse vegetation	**Low (6)**
Arizona elegans occidentalis California glossy snake	-	SSC	Scrub or grassland with loose or sandy soils	**High (7)**
Emys marmorata western pond turtle	-	SSC	Ponds, marshes, rivers, streams, and irrigation ditches with basking sites and suitable upland habitat for egg-laying	Not expected (1)
Gambelia sila Blunt-nosed leopard lizard	FE	SE	Sparsely vegetated alkali and desert scrub habitats in areas of low topographic relief	Not expected (4)

TABLE 4
SPECIAL STATUS WILDLIFE SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]		Habitat Description	Likelihood for Occurrence/Rationale[2]
	USFWS	CDFW		
Birds				
Agelaius tricolor Tri-colored blackbird	-	ST/SSC	Open water with cattails or other protected nesting substrate within two miles of foraging habitat	Nesting: Not expected (1) Foraging: Moderate (6)
Athene cunicularia burrowing owl	-	SSC	Open, dry annual or perennial grasslands and scrublands with low-growing vegetation	Nesting: **Moderate (6)** Foraging: Moderate (6)
Buteo swainsonii Swainson's hawk	-	ST	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	Nesting: **Low (5,6)** Foraging: Moderate (6)
Falco mexicanus Prairie falcon	-	WL	Dry open terrain and cliffs for nesting	Nesting: Not expected (1) Foraging: Moderate (6)
Gymnogyps californianus California condor	FE	SE/FP	Nests in clefts of rocky walls in deep canyons and forages over savannah, grasslands, & foothills	Nesting: Not expected (1) Foraging: Moderate (7)
Mammals				
Antrozus pallidus Pallid bat	-	SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting	Not expected (1)
Corynorhinus townsendii Townsend's big-eared bat	-	SSC	Throughout California in a wide variety of habitats. Most common in mesic sites	Not expected (1)
Dipodmys ingens Giant kangaroo rat	FE	SE	Flat terrain with sandy loam soils for burrowing in annual grasslands and alkali scrub	**Moderate (6)**
Erethizon dorsatum North American porcupine	-	-	Coniferous forest and mixed woodland in the Sierra Nevada, Cascade, and Coast Ranges.	Not expected (1)
Lasiurus blossevillii western red bat	-	-	Roosts in trees 2-40 feet above the ground and forages along habitat edges of trees	**Moderate (6)**

TABLE 4
SPECIAL STATUS WILDLIFE SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]		Habitat Description	Likelihood for Occurrence/Rationale[2]
	USFWS	CDFW		
Myotis yumanensis Yuma myotis	-	-	Hot, arid valleys and scrub deserts in the southern San Joaquin Valley	Not expected (1)
Onychomys torridus tularensis Tulare grasshopper mouse	-	SSC	Hot, arid valleys and scrub deserts in the southern San Joaquin Valley	Not expected (1)
Perognathus inornatus San Joaquin pocket mouse	-	-	Open scrublands, grasslands, and oak savanna with friable, fine sandy soils	**High (7)**
Taxidea taxa American badger	-	SSC	Drier open stages of most shrub, forest, and herbaceous habitats, with friable soils	**Moderate (7)**
Vulpes macrotis mutica San Joaquin kit fox	FE	ST	Friable soils among annual grasslands or grassy open stages with scattered shrubby vegetation.	**Moderate (7)**

TABLE 4
SPECIAL STATUS WILDLIFE SPECIES OCCURRING IN THE PROJECT REGION

Species	Status[1]		Habitat Description	Likelihood for Occurrence/Rationale[2]
	USFWS	CDFW		

Status Definitions[1]

USFWS

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."
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."
FPE: Proposed for federal listing as Endangered.
FPT: Proposed for federal listing as Threatened.
BCC: Bird of Conservation Concern

CDFW

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)."
SE: Endangered = "a species is Endangered when its prospects of survival and reproduction are in immediate jeopardy from one or more causes."
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."
FP: Fully Protected species are protected by special legislation and cannot be taken at any time.
SSC: Species of Special Concern.
WL: Watch List

[2]: LIKELIHOOD TO OCCUR IN THE PROJECT DISTURBANCE AREA

Not expected: Not expected to occur
Low: Low potential to occur
Moderate: Moderate potential to occur
High: High potential to occur
Present: Known to occur

[3]: Species not expected in the Project disturbance area but may occur in the study area

[2]: RATIONALE

1: Lack of suitable habitat
2: Lack of suitable substrate
3: Beyond known elevation range
4: Beyond known geographic range
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: Species or evidence of presence observed during survey
9: Overwintering migrant

3.6 Sensitive Natural Communities

The CNDDB records search did not identify any special status natural communities as occurring in the Project region. Vegetation on the Project site consists of the wild oats and annual brome grasslands semi-natural alliance (42.027.00), chamise chaparral alliance (37.101.16), buckwheat deerweed scrub alliance (32.040.19), and mixed oak alliance (71.100.00). None of the above-mentioned natural communities are considered special status and a review of aerials dating back to 1962 suggests there has been no substantial modification of onsite habitat.

No surface water was observed in the study area during the survey and no depressions that could become inundated during rain events were identified. There was no evidence of standing water from 2019 rain events and no wetland indicator plant species were identified. No lacustrine, palustrine, or alluvial features were identified during the survey or review of aerials dating back to 1962.

4.0 IMPACT ASSESSMENT AND MITIGATION

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study Checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the Project 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 CDFW or USFWS;
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (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 Study Areas;
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
f. Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan.

Biological resource impact evaluation must consider both the resource itself and how that resource fits into a regional or local context. Impacts that diminish or eliminate a regionally important biological resource, or conflict with local, state, or federal resource conservation plans designed to protect said resources are considered substantial. Whereas, impacts to resources considered locally important may not be significant according to CEQA if there is not a regional effect.

4.1 Plants

The Project site is composed of annual grasslands and disturbed areas that have been subject to disking in the past and have subsequently been invaded by non-native, weedy species occurring at much higher densities than natives. These conditions are considered unsuitable for most of the special status plants known to occur in the Project region. Habitat impacts are presented in Table 5 below.

TABLE 5
VEGETATION IMPACTS

Habitat Type	Acreage
Annual Grasslands	3.73
Disturbed/	1.67
Total	5.4

A focused botanical survey performed in the Spring and Summer of 2019 documented approximately 12 individuals of Elegant buckwheat, a CNPS List 4.3 species. This species is not considered special status and very few individuals would be potentially affected by Project implementation. Impacts to this species would be considered less than significant.

Two CNPS list 1B species, La Panza mariposa lily and Plummer's mariposa lily, have potential to occur on the Project site. Impacts to CNPS List 1B species would be considered significant. Implementation of Mitigation Measures BIO-1 and BIO-2 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 indirect impacts to special-status plant populations and sensitive habitats within the region. Implementation of Mitigation Measure BIO-3 below would be expected to reduce potential impacts to a level considered less than significant.

4.2 Wildlife

The total area of direct disturbance is approximately 3.73 acres of annual brome grasslands, a semi-natural vegetation, and 1.67 acres of disturbed or barren areas. These habitat types are repeatedly disturbed and dominated by weedy species, represent little value to native wildlife, and are not expected to support substantial populations of common or special status wildlife. Short-term direct impacts to habitat could cause injury or death to wildlife because of construction-related disturbances, such as vegetation removal, grading, and construction. However, the loss of these habitats would not be expected to substantially reduce the extent, diversity, or quality of native or other important vegetation for wildlife or result in substantial loss of native wildlife.

Invertebrates

Based on the presence of marginally suitable habitat, the Project site was determined to have a moderate potential for occurrence of Crotch's bumble bee, a federally and state listed Threatened species. Given the limited size of the Project site and limited extent of occupiable habitat for this species, the likelihood of impact is considered low. In addition, operation of a cannabis cultivation facility will introduce associated pesticide use that could affect offsite populations of Crotch's bumble bee. Implementation of Mitigation Measures BIO-2, BIO-4 and BIO-5 would avoid or reduce potential direct and indirect impacts to this species to a level considered less than significant.

Amphibians

Based on the presence of marginally suitable habitat, the Project site was determined to have a low potential for occurrence of California tiger salamander, a federally and state listed Threatened species. Given the limited size of the Project site and limited extent of occupiable habitat for this species, the likelihood of impact is considered low. Implementation of Mitigation Measure BIO-2 and BIO-6 would avoid or reduce potential direct impacts to this species to a level considered less than significant.

Reptiles

Based on the presence of marginally suitable habitat, the Project site was determined to have potential for occurrence of reptile Species of Special Concern, including a low potential for

northern California legless lizard and high potential for California glossy snake. Given the limited size of the Project site and limited extent of occupiable habitat for these species, the likelihood of impact is considered low. Implementation of Mitigation Measures BIO-2 and BIO-7 would avoid or reduce potential direct impacts to these species to a level considered less than significant.

Birds

The Project has the potential for direct and/or indirect impacts to active nests during construction, including direct impacts to ground-nesting bird species of special concern, such as burrowing owl, indirect impacts to nesting Threatened birds, including Swainson's hawk, and indirect impacts to common raptors and/or other passerines nesting in the study area and/or adjacent areas. Nest failure or take resulting from Project activities would conflict with the Migratory Bird Treaty Act (16 U.S.C. §§ 703–712) and California Fish and Game Code (FGC Division 4, Part 2, §§ 3503 and 3513). Implementation of Mitigation Measures BIO-2, BIO-9 and BIO-10 would avoid or reduce potential impacts to special status birds and all nesting birds to a level considered less than significant.

Mammals

Rodent burrows were identified in the study area that may be occupied by the state and federally listed Endangered GKR. Direct impacts GKR may occur as a result of construction-related activities, including take resulting from burial of burrows in the Project disturbance area that may be occupied prior to initiation of Project activities, and potential Project-associated vehicle strikes. Indirect impacts may occur to GKR potentially occupying the study area beyond the Project disturbance area during long-term Project activities, including increased light-pollution and restriction of movement across the Project site. Implementation of Mitigation Measures 3, 11 and 13 would avoid or reduce potential direct and/or indirect impacts to GKR to a level considered less than significant.

No burrows considered suitable for use by the federally listed Endangered and state listed Threatened SJKF were documented during the survey. Direct impacts to SJKF may occur as a result of construction-related activities, including take resulting from burial of kit fox dens in the Project disturbance area that may be excavated and occupied prior to initiation of Project activities, and potential Project-associated vehicle strikes. Indirect impacts may occur to kit foxes potentially occupying the study area beyond the Project disturbance area during long-term Project activities, including increased light-pollution and restriction of movement across the Project site.

Due to the Project's location within the 2:1 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 disturbance to approximately 3.73 acres of annual grassland seminatural habitat 1.67 acres of barren areas. 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. However, the site would not qualify for a reduction due to the suitability of habitat for the species on the Project site and the presence of recent records in proximity. 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. Implementation of Mitigation Measures BIO-2, BIO-8, BIO-12, and BIO-13 would avoid or reduce potential impacts to the species to a level considered less than significant.

4.3 Natural Communities

The CNDDB records search did not identify any special status natural communities occurring in the Project region. The Project site consists of annual grassland habitat, a semi-natural community that is dominated by non-native, weedy species, and disturbed/barren areas. No sensitive natural communities, wetlands, or other drainage features were identified during the survey or review of historic aerials dating back to 1962. Impacts to approximately 5.4 acres of annual grassland and disturbed/barren areas would be considered less than significant.

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. Projects that introduce substantial barriers to movement of resident or migratory wildlife species or hinder the normal activities of wildlife require mitigation to offset Project effects.

The study area is surrounded by undeveloped areas with natural habitats. Project implementation would directly impact a small area and operations would not be expected to substantially inhibit wildlife movement through the area. The Project does not introduce significant features that would be expected to affect wildlife movement through surrounding natural habitats and impacts to wildlife movement are considered less than significant.

Project fencing may partially restrict the use of the Project site by wildlife. However, the loss of 3.73 acres of annual grasslands as wildlife habitat would be considered less than significant and the implementation of design features required by Mitigation Measures BIO-12 and BIO-13 would further avoid or reduce potential direct and/or indirect impacts to SJKF and other wildlife movement across the site to a level considered less than significant.

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, an early spring focused survey shall be completed by a qualified biologist. The survey shall be floristic in nature and shall be seasonally timed to coincide with the blooming period of the target species (April-May). The survey 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 La Panza mariposa lily (*Calochortus simulans*) and Palmer's mariposa lily (*Calochortus palmeri var. palmeri*), 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 **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-3 **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 entering or exiting the site (e.g., driven over rumble strips) to prevent tracking of potential seed stock to or from the property. Rumble strips will also be regularly cleaned and maintained to prevent the accumulation of non-native seed stock.

BIO-4 **Crotch's Bumblebee Survey and Minimization Measures.** Within 30 days prior to initiation of ground disturbance between March and September, the Project footprint will be surveyed for Crotch's bumble bee using a photograph survey methodology. The site will be slowly walked by two biologists equipped with >8-megapixel point and shoot or DSLR cameras using transects to obtain 100% coverage of the project site. All insects observed during the survey will be photographed with attention to family Apidae (bees). All bees observed will be photographed to the greatest extent feasible without handling. Photographs should clearly show the entire top side of the abdomen, the side of the thorax/abdomen and the face/head. Several photos should be taken of

each specimen to obtain an identification. If a bee is observed entering a burrow or other cavity, a GPS point should be recorded and attention should be focused on the cavity to determine if multiple individuals may be entering/exiting, indicating the potential presence of a colony. Biologists will submit photos to Bumble Bee Watch (www.bumblebeewatch.org), BeeSpotter (https://beespotter.org), or a similar website that employs bumble bee experts to verify the identifications. Qualified scientific experts may also be used to verify photographic records. CDFW will be notified as soon as possible if a *B. crotchii* observation is verified. If a *B. crotchii* colony is detected on the Project site, the colony will be mapped and avoided. No vegetation or soil disturbance will be permitted within a 50-foot radius of the colony. If avoidance is infeasible, CDFW will be consulted regarding potential conservation measures.

BIO-5 **Pesticide Management Plan.** To maintain healthy populations of natural pest enemies and pollinators, an integrated pest management plan will be developed consistent with the following guidelines:

- Before applying any pesticide, read and follow all the product label directions.
- Target the application to the specific area where the pest is a problem to reduce the harm to natural enemies and pollinators.
- Choose selective and nonpersistent pesticides that are pollinator-friendly
- Identify the pest, and use the resources on the University of California Statewide Integrated Pest Management website (www.ipm.ucanr.edu) to determine which pesticides will specifically control that pest.
- Avoid broad-spectrum, persistent insecticides, including carbamates, organophosphates, and pyrethroids that kill many different invertebrates and leave residues that kill pollinators, parasites, and predators that migrate in after the application.
- Avoid neonicotinoids and other systemic insecticides that translocate (move) within plants and can poison bees and natural enemies that feed on nectar, pollen, and liquids that plants ooze (guttation).
- Avoid spraying tank mixes, such as insecticides combined with fungicides.
- Be aware that broad-spectrum (nonselective) herbicides and herbicides applied for broadleaf weeds, reduce the abundance of floral plants that attract and feed pollinators and natural enemies.

In the event Crotch's bumblebee is detected on the Project site, the above Pesticide Management Plan will be submitted to CDFW for review and approval.

BIO-6 **California Tiger Salamander Avoidance and Impact Minimization.** Within 30 days prior to Project disturbance, biologists will perform pre-construction clearance surveys in Project direct impact areas with small mammal burrows that are suitable for CTS, including California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*) and/or kangaroo rat (*Dipodomys spp.*). Each suitable burrow that is found will be flagged with a pin flag and/or GPS'ed to facilitate return to and excavation of the burrow. Excavation of suitable small mammal burrows will be conducted between April 1 and September 30 (during the CTS non-breeding season). At the discretion of the biologist, excavations may be allowed to proceed later into the year, but only if no substantial rain has fallen (rain event resulting in at least 1 inch of rainfall). If possible, each burrow excavation will be conducted by slowly removing the burrow (including any side tunnels) using a fiber-optic inspection camera, hand tools (e.g., shovel, digging bar, garden trowel, masonry trowel, etc.). Cloth, cylinder, capped pipe, or similar material that would protect the integrity of the burrow will be pushed into the burrow approximately 12 to 16 inches to plug the burrow and prevent

injury to animals attempting to exit the burrow during excavation (i.e., to prevent injury or mortality).

The excavation sequence will then continue as follows:

- A pipe and fiber-optic inspection camera monitored by a biologist will be inserted 12-16 inches into the burrow;
- 10-14 linear inches of burrow will be removed at a time by a 2nd biologist or under the supervision of the 1st biologist;
- The burrow will be checked for evidence of CTS or other animals; and
- The pipe and fiber-optic inspection camera will be reinserted 12-16 inches further into the burrow.

This process will be repeated until the burrow and any side burrows have been completely excavated. All burrows (including side burrows) will be excavated to their endpoints and the excavation will then be backfilled, brought back to grade, and compacted using the same equipment that was used for excavation.

If a burrow is found to be occupied by CTS, the individual(s) present will be captured and relocated to constructed burrows in suitable habitat within the property boundary to the west of the Project site (closer to the only known water sources within 2 miles). CTS handling will comply with the following:

- Biologists will use bare hands (only) during capture and handling.
- The Project Biologist will not use soaps, oils, creams, lotions, repellents, or solvents of any sort on their hands within two hours before and during periods when they are capturing and relocating CTS.
- Individuals will not be handled by the tail, head, or limbs.
- The location of capture will be geo-referenced with a GPS unit and the latitude and longitude coordinates will be recorded on a standardized field data sheet.
- The bearing between the capture location and nearest known CTS breeding pond will be determined and recorded on the standardized field data sheet.
- Containers used for holding or transporting individuals (generally 2-gallon buckets with lids) will not contain any standing water.
- Individuals will not be placed in positions/containers where they may physically contact other individuals.
- Captured individuals will be kept moist and cool in a bucket containing a damp sponge that is shaded from direct sun exposure.
- Captured individuals will be relocated to a suitable constructed burrow outside the work area on the same bearing with the nearest known CTS breeding pond.
- Multiple captured individuals will not be released to the same repository.
- Upon release of an individual it will be monitored by the Project Biologist until it is determined that it is in no imminent danger.

All observations of state and/or federally-listed species within the work area will be recorded on California Natural Diversity Data Base (CNDDB) field data sheets and sent to the CDFW within 14 calendar days of the occurrence. Any harm, injury, or mortality (i.e., “take”) of these species will be reported via phone and email to the USFWS and CDFW within 24 hours of the incident. The monitoring biologist will submit a pre-construction compliance report to the USFWS and CDFW documenting the excavation and backfill of all suitable burrows for CTS as well as relocation of individuals within 30 calendar days of completion of pre-construction CTS clearance activities. The report shall detail (i) dates that pre-construction clearance activities occurred; (ii) pertinent information regarding the success of the Project in

implementing the plan's avoidance and minimization measures; (iii) an explanation of failure to successfully implement such measures (if any); (iv) occurrences of incidental take of listed species (if any); and (vi) other pertinent information.

BIO-7 **Special Status Reptiles Avoidance and Minimization.** Within 30 days prior to initiation of ground disturbance, sandy soils within the impact footprint will be surveyed for legless lizard by a qualified biologist utilizing a raking survey methodology and burrows will be excavated and surveyed for California glossy snake. Any individuals found shall be relocated to appropriate habitat at least 50 feet outside the development footprint. 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 in areas of suitable habitat to salvage and relocate individuals. 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 this species.

BIO-8 **Preconstruction Survey for American Badger and San Joaquin Kit Fox.** A County-approved qualified biologist shall complete a preconstruction survey for American badger and San Joaquin kit fox 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 occupied 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-9 **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 complete 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-10 **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-11 **Conduct focused pre-construction giant kangaroo rat burrow/precinct surveys and implement compensation and avoidance measures.** No more than 30 days prior to commencement of ground disturbing activities the Applicant shall retain a County-approved, qualified biologist to conduct pre-construction surveys for giant kangaroo rat. If active giant kangaroo rat burrows/precincts are present, the applicant shall consult with CDFW and USFWS to develop compensation, avoidance and relocation plans. The applicant will compensate for permanent impacts to giant kangaroo rats and their habitat with the creation of permanent conservation easement(s), purchase of credits from an approved mitigation bank, or transfer land in fee to a CDFW approved conservation holder with a deed restriction or other appropriate agreement for the management of the land. The Applicant shall compensate for impacts to suitable giant kangaroo rat habitat at a 3:1 ratio for acreage permanently altered by construction. In addition, the Applicant shall compensate for functional degradation of suitable giant kangaroo rat habitat at a 2:1 ratio. The mitigation areas must include occupied habitat that is of equal or greater habitat quality and support an equal or greater population of giant kangaroo rat after any restoration compared to the impacted habitat. This mitigation may occur on lands used simultaneously as mitigation for impacts to other species.

Active burrows/precincts shall be mapped, and ground-disturbing activities shall not occur within 50 feet of each. The setback shall be marked in the field to be easily visible by all construction personnel. A Final Giant Kangaroo Rat Relocation Plan will be developed in coordination with wildlife agencies (USFWS and CDFW). At least 30

days before the start of construction, a relocation plan shall be submitted to the County for approval. The plan shall include but not be limited to the following: the methods for capturing animals; the procedures for evaluating health of the animals; the location and methods for storing live animals; the methods for soft release (i.e., fencing); radio tagging; monitoring for survivorship; and remedial actions for injured or lost animals. The relocation plan would generally include these components; however, the details of the final plan will be subject to the approval and conditions set forth by CDFW and USFWS. Methods to prevent entry to the burrow (e.g., one-way doors) by giant kangaroo rat and other small mammal species shall be implemented prior to construction. If construction-related impacts would result in the crushing or destruction of a burrow then the burrow shall be excavated (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more than 4 inches at a time or as described in the CDFW and USFWS-approved relocation plan). If giant kangaroo rat burrows/precincts must be trapped from January through June (recognized breeding/mating season), the relocation plan will include a protocol to be followed if a lactating female giant kangaroo rat or young are encountered. The Applicant shall document all giant kangaroo rat burrows/precincts abandoned or destroyed and provide a written report to the County of San Luis Obispo.

BIO-12 **County Standard Mitigation of Impacts to San Joaquin Kit Fox Habitat.** In accordance with the County Guide to San Joaquin Kit Fox 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 San Joaquin kit fox 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 site:

- 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 San Joaquin kit fox 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 San Joaquin kit fox 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 workday.

- 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 San Joaquin kit fox depend.

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

BIO-13 **Mitigation Measure 3: Lighting.** Any temporary construction lighting or permanent lighting introduced for the Project shall avoid nighttime 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 or semi-natural habitat areas.

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Table 5. List of non-native plant species observed on the Project site on October 22, 2018, May 17 and June 19, 2019.

Common Name	Scientific Name	Family Name
Slim oat	*Avena barbata*	Poaceae
Black mustard	*Brassica nigra*	Brassicaceae
Ripgut brome	*Bromus diandrus*	Poaceae
Soft chess	*Bromus hordeaceus*	Poaceae
Foxtail brome	*Bromus madritensis ssp. rubens*	Poaceae
Yellow star thistle	*Centaurea solstitialis*	Asteraceae
Red stemmed filaree	*Erodium cicutarium*	Geraniaceae
Rattail grass	*Festuca myuros*	Poaceae
Hairy rupturewort	*Herniaria hirsuta*	Caryophyllaceae
Foxtail barley	*Hordeum murinum*	Poaceae
Prickly lettuce	*Lactuca serriola*	Asteraceae
Larch	*Larix sp.*	Pinaceae
Perennial pepperweed	*Lepidium latifolium*	Brassicaceae
Narrowleaf cottonrose	*Logfia gallica*	Asteraceae
Cheeseweed	*Malva parviflora*	Malvaceae
Bur clover	*Medicago polymorpha*	Fabaceae
Olive	*Olea europea*	Oleaceae
Knotweed	*Polygonum aviculare ssp. depressum*	Polygonaceae
Russian thistle	*Salsola tragus*	Asteraceae
Milk thistle	*Silybum marianum*	Asteraceae
Indian hedge mustard	*Sisymbrium orientale*	Brassicaceae
Purple vetch	*Vicia benghalensis*	Fabaceae

Table 6. List of native plant species observed on the Project site on October 22, 2018, May 17 and June 19, 2019.

Common Name	Scientific Name	Family Name	Notes
Blow wives	*Achyrachaena mollis*	Asteraceae	-
Deerweed	*Acmispon glaber*	Fabaceae	-
Chilean trefoil	*Acmispon wrangelianus*	Fabaceae	-
Chamise	*Adenostoma fasciculatum*	Rosaceae	-
Fiddleneck	*Amsinckia menziesii*	Boraginaceae	-
Narrow leaf milkweed	*Asclepias fascicularis*	Apocynaceae	-
Douglas's milk vetch	*Astragalus douglasii*	Fabaceae	-
Mariposa lily	*Calochortus sp.*	Liliaceae	Unkown; senesced
Field sun cup	*Camissonia campestris ssp. campestris*	Onagraceae	-
Owl's clover	*Castilleja exserta*	Orobanchaceae	-
Yellow star thistle	*Centaurea solstitialis*	Asteraceae	-
Chaparral clarkia	*Clarkia affinis*	Onagraceae	-
Red spot clarkia	*Clarkia speciosa ssp. speciosa*	Onagraceae	-
Elegant clarkia	*Clarkia unguiculata*	Onagraceae	-
Sand pygmy weed	*Crassula connata*	Crassulaceae	-
Turkey-mullein	*Croton setiger*	Euphorbiaceae	-
Common cryptantha	*Cryptantha intermedia*	Boraginaceae	-
Western tansy mustard	*Descurainia pinnata*	Brassicaceae	-
Blue dicks	*Dichelostemma capitatum*	Themidaceae	-
Many flowered eriastrum	*Eriastrum pluriflorum*	Polemonaceae	-
Interior goldenbush	*Ericameria linearifolia*	Asteraceae	-
Thread stemmed fleabane	*Erigeron foliosus var. foliosus*	Asteraceae	-
Bailey's buckweat	*Eriogonum baileyi var. baileyi*	Polygonaceae	-
Elegant buckwheat	*Eriogonum elegans*	Polygonaceae	CNPS List 4.3
California buckwheat	*Eriogonum fasciculatum*	Polygonaceae	-
Red stemmed filaree	*Erodium cicutarium*	Geraniaceae	-
California poppy	*Eschscholzia californica*	Papaveraceae	-
Rattail grass	*Festuca myuros*	Poaceae	-
Climbing bedstraw	*Galium porrigens*	Rubiaceae	-
Slender flowered gilia	*Gilia tenuiflora ssp tenuiflora*	Polemonaceae	-
Narrow scaled goldenbush	*Hazardia stenolepis*	Asteraceae	-
Seaside heliotrope	*Heliotropium curassavicum*	Boraginaceae	-
Hairy rupturewort	*Herniaria hirsuta*	Caryophyllaceae	-
Foxtail barley	*Hordeum murinum*	Poaceae	-
California juniper	*Juniperus californica*	Cupressaceae	-
Prickly lettuce	*Lactuca serriola*	Asteraceae	-
Common hareleaf	*Lagophylla ramosissima*	Asteraceae	-
Coastal tidytips	*Layia platyglossa*	Asteraceae	-
Perennial pepperweed	*Lepidium latifolium*	Brassicaceae	-
Sticky lessingia	*Lessingia pectinata var. tenuipes*	Asteraceae	-
California cottonrose	*Logfia filaginoides*	Asteraceae	-
Narrowleaf cottonrose	*Logfia gallica*	Asteraceae	-
Southern honeysuckle	*Lonicera subspicata*	Caprifoliaceae	-
Bicolor lupine	*Lupinus bicolor*	Fabaceae	-
Chick lupine	*Lupinus microcarpus var. microcarpus*	Fabaceae	-
Cheeseweed	*Malva parviflora*	Malvaceae	-

Desert dandelion	*Malacothrix glabrata*	Asteraceae	-
California man-root	*Marah fabacea*	Cucurbitaceae	-
Bur clover	*Medicago polymorpha*	Fabaceae	-
Slender cottonweed	*Micropus californicus*	Asteraceae	-
Coffee fern	*Pellaea andromedifolia*	Pteridaceae	-
Gold back fern	*Pentagramma trianularis*	Pteridaceae	-
Branching phacelia	*Phacelia ramosissima*	Boraginaceae	-
Bull pine	*Pinus sabiniana*	Pinaceae	-
California plantain	*Plantago erecta*	Plantaginaceae	-
Knotweed	*Polygonum aviculare ssp. depressum*	Polygonaceae	-
Cudweed	*Pseudognaphalium beneolens*	Asteraceae	-
California everlasting	*Pseudognaphalium californicum*	Asteraceae	-
Blue oak	*Quercus douglasii*	Fagaceae	-
scrub oak	*Quercus berberidifolia*	Fagaceae	-
Russian thistle	*Salsola tragus*	Asteraceae	-
Blue elderberry	*Sambucus niga ssp. caerulea*	Adoxaceae	-
Milk thistle	*Silybum marianum*	Asteraceae	-
Indian hedge mustard	*Sisymbrium orientale*	Brassicaceae	-
Wire lettuce	*Stephanomeria exigua*	Asteraceae	-
White plume wirelettuce	*Stephanomeria exigua ssp. coronaria*	Asteraceae	-
Purple needle grass	*Stipa pulchra*	Poaceae	-
Fremont's death camas	*Toxicoscordion fremonii*	Melanthiaceae	-
Vinegarweed	*Trichostema lanceolatum*	Lamiaceae	-
Purple vetch	*Vicia benghalensis*	Fabaceae	-
Johnny jump up	*Viola pedunculata*	Violaceae	-

Table 7. List of wildlife species observed on the Project site on October 22, 2018, May 17 and June 19, 2019.

Common Name	Scientific Name	Status	Notes
Reptiles			
Coast Range fence lizard	Sceloporus occidentalis boourtii	-	-
western side-blotched lizard	Uta stansburiana elegans	-	-
Birds			
turkey vulture	*Cathartes aura*	MBTA	Flying overhead
American kestrel	*Falco sparverius*	MBTA	Flying overhead
red-tailed hawk	*Buteo jamaicensis*	MBTA	Flying overhead
California quail	*Callipepla californica*	MBTA	-
mourning dove	*Zenaida macroura*	MBTA	-
great horned owl	*Bubo virginianus*	MBTA	-
Anna's hummingbird	*Anna calypte*	MBTA	-
acorn woodpecker	*Melanerpes formacivorus*	MBTA	-
Nuttall's woodpecker	*Picoides nuttallii*	MBTA	-
northern flicker	*Colaptes auratus*	MBTA	-
Say's phoebe	*Sayornis saya*	MBTA	-
western scrub-jay	*Aphelocoma californica*	MBTA	-
common raven	*Corvus corax*	MBTA	-
western meadowlark	*Sturnella neglecta*	MBTA	-
mountain chickadee	*Poecile gambeli*	MBTA	-
bushtit	*Psaltriparus minimus*	MBTA	-
Bewick's wren	*Thyromanes bewickii*	MBTA	-
wrentit	*Chamaea fasciata*	MBTA	-
western bluebird	*Sialia mexicana*	MBTA	-
northern mockingbird	*Mimius polyglottos*	MBTA	-
European starling	*Sturnus vulgaris*	*Non-native*	-
spotted towhee	*Pipilo maculatus*	MBTA	-
California towhee	*Pipilo crissalis*	MBTA	
lark sparrow	*Chondestes grammacus*	MBTA	-
white-crowned sparrow	*Zonotrichia leucophrys*	MBTA	-
dark-eyed junco	*Junco hyemalis*	MBTA	-
western meadowlark	*Sturnella neglecta*	MBTA	-
Brewer's blackbird	*Euphagus cyanocephalus*	MBTA	-
Mammals			
southern pocket gopher	*Thomomys bottae*	-	burrows
California ground squirrel	*Otospermophilus beecheyi*	-	burrows
pocket mouse**	*Chaetodipus/Perognathus*	-	burrows
kangaroo rat*	*Dipodomys*	SE/FE?	burrows
coyote	*Canis latrans*	-	scat
San Joaquin kit fox	*Vulpia macrotis mutia*	-	scat
mule deer	*Odocoileus hemionus*	-	scat
American black bear	*Ursus americanus*	-	scat

* Species of burrows observed onsite not determined due to similarity *Dipodoymys nitratoides* and *D. ingens* habits and overlapping ranges.

Figure 1. Project regional location map

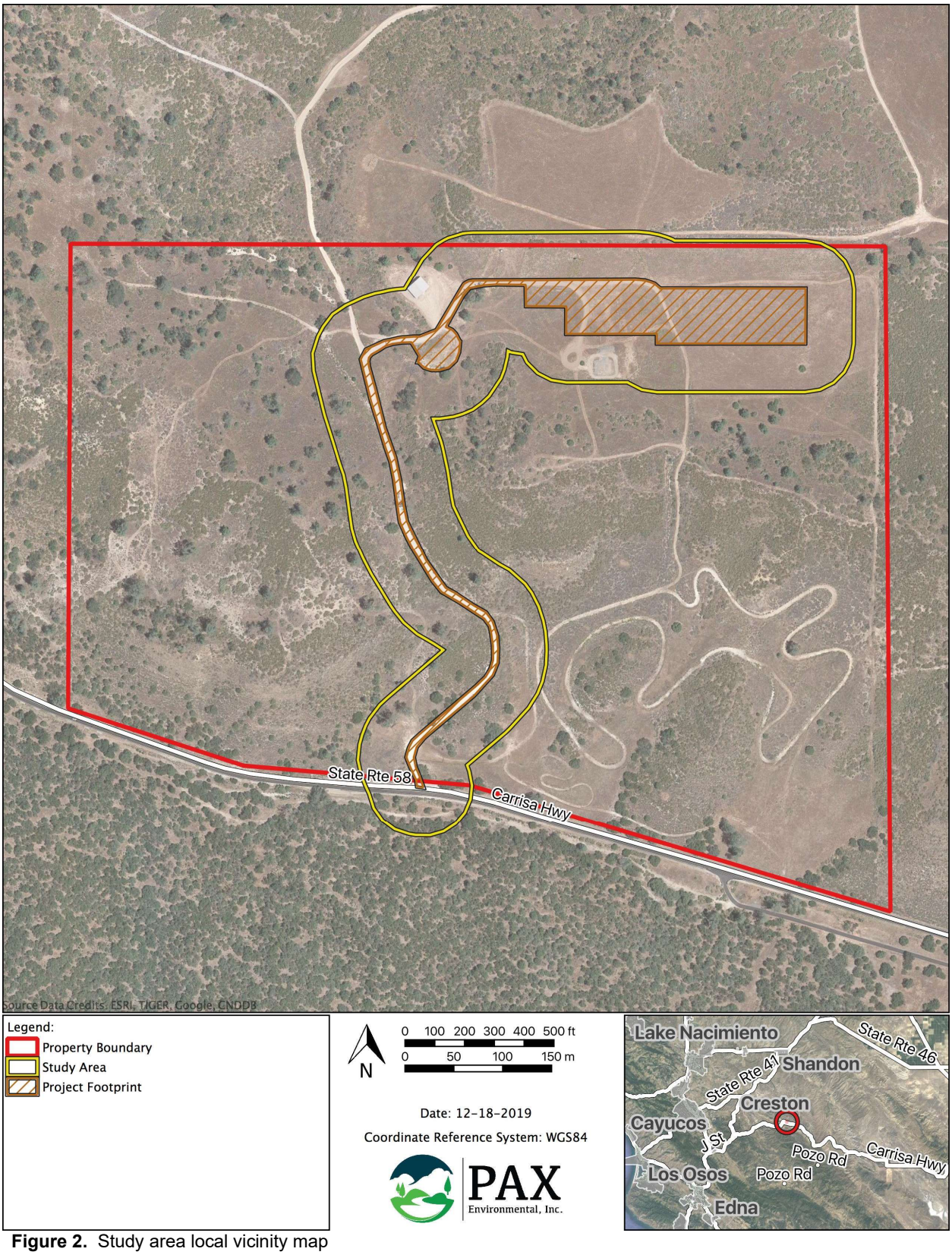

Figure 2. Study area local vicinity map

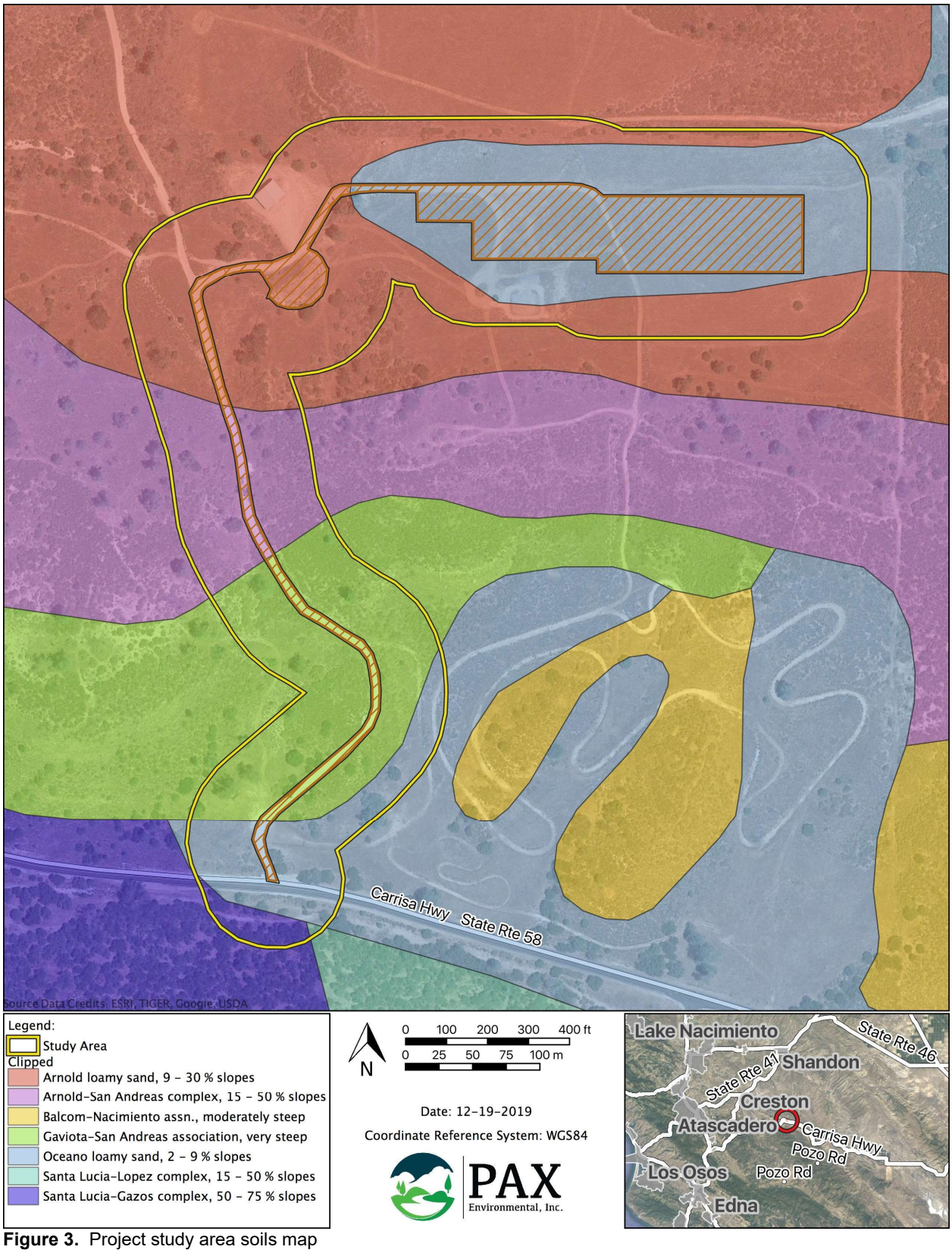

Figure 3. Project study area soils map

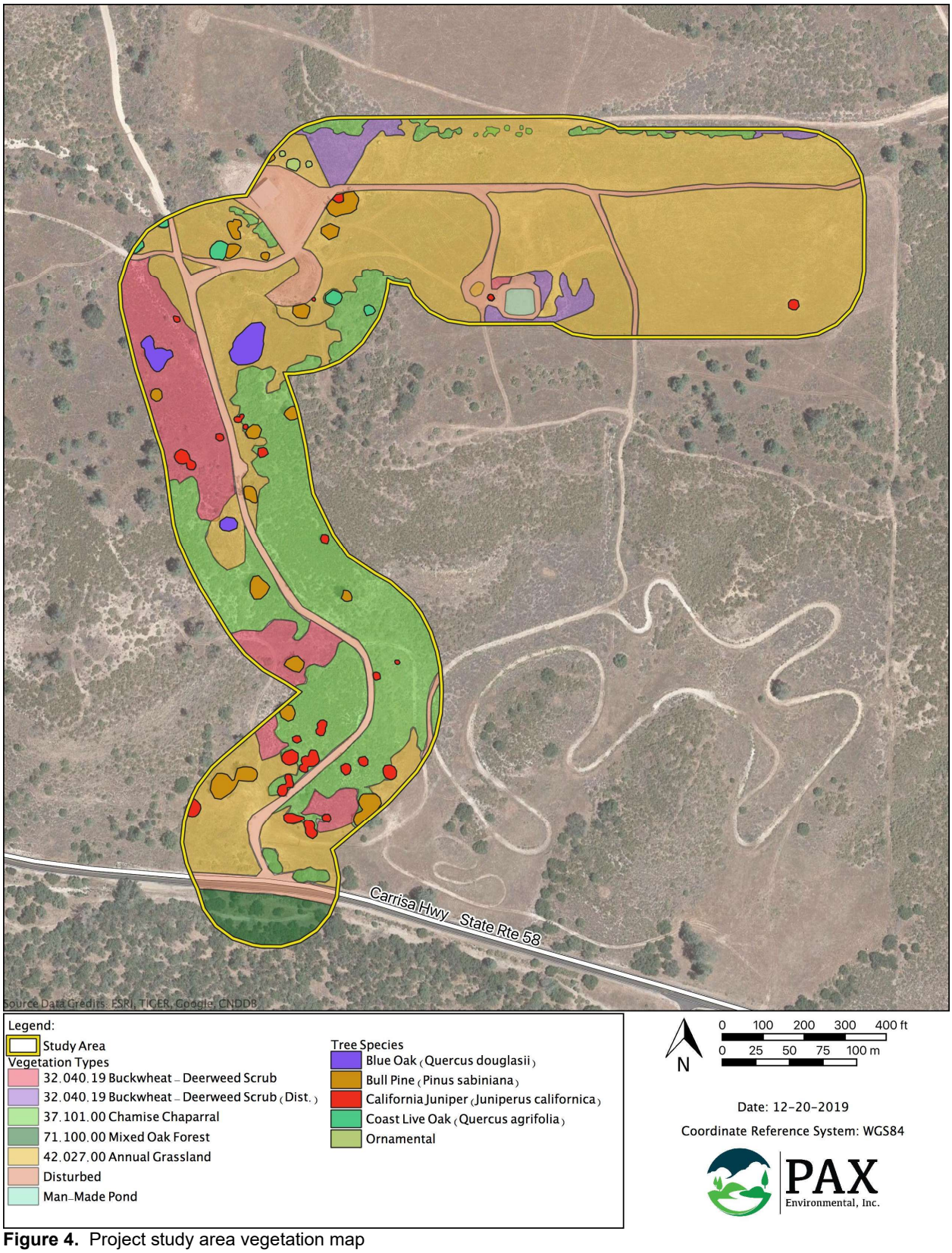

Figure 4. Project study area vegetation map

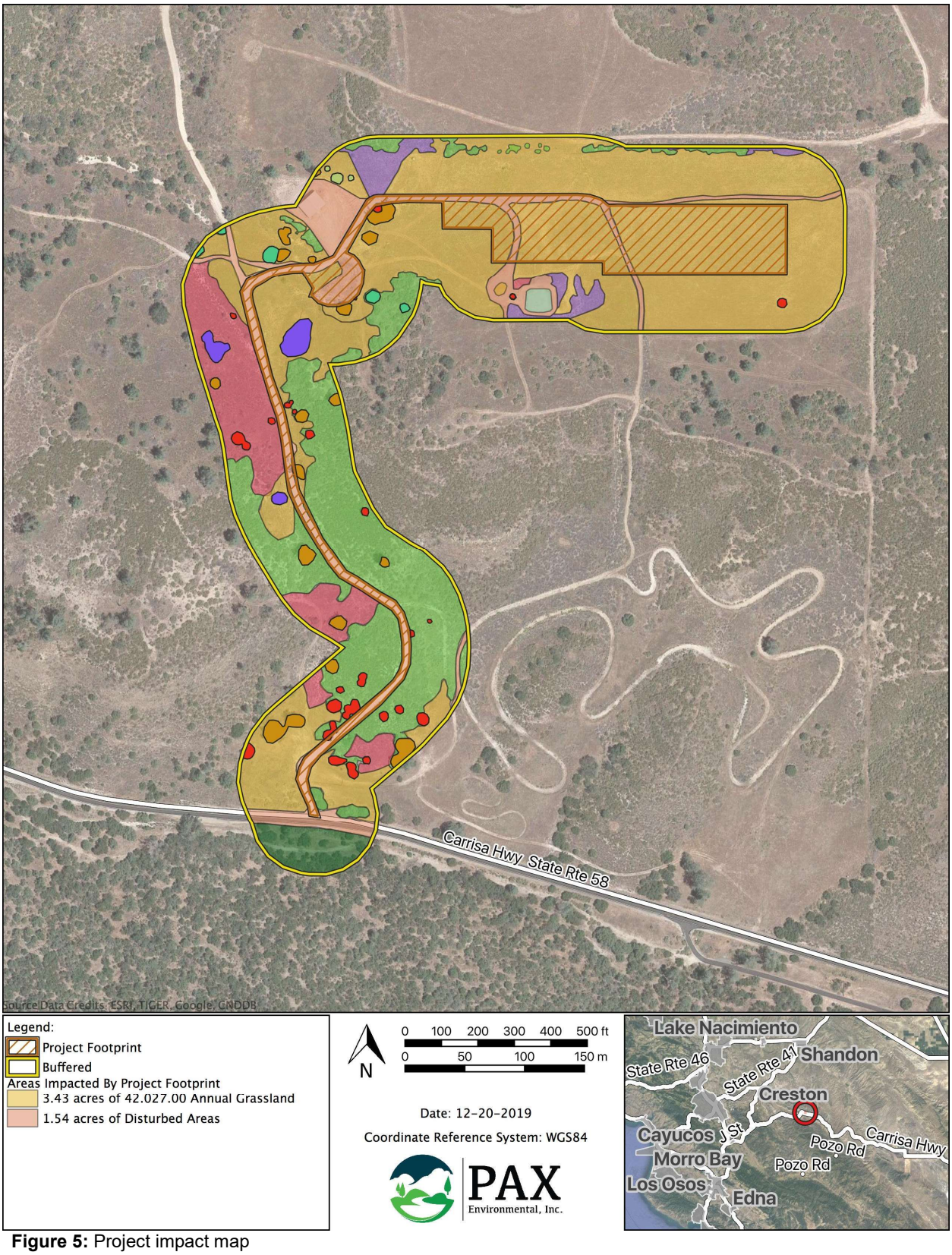

Figure 5: Project impact map

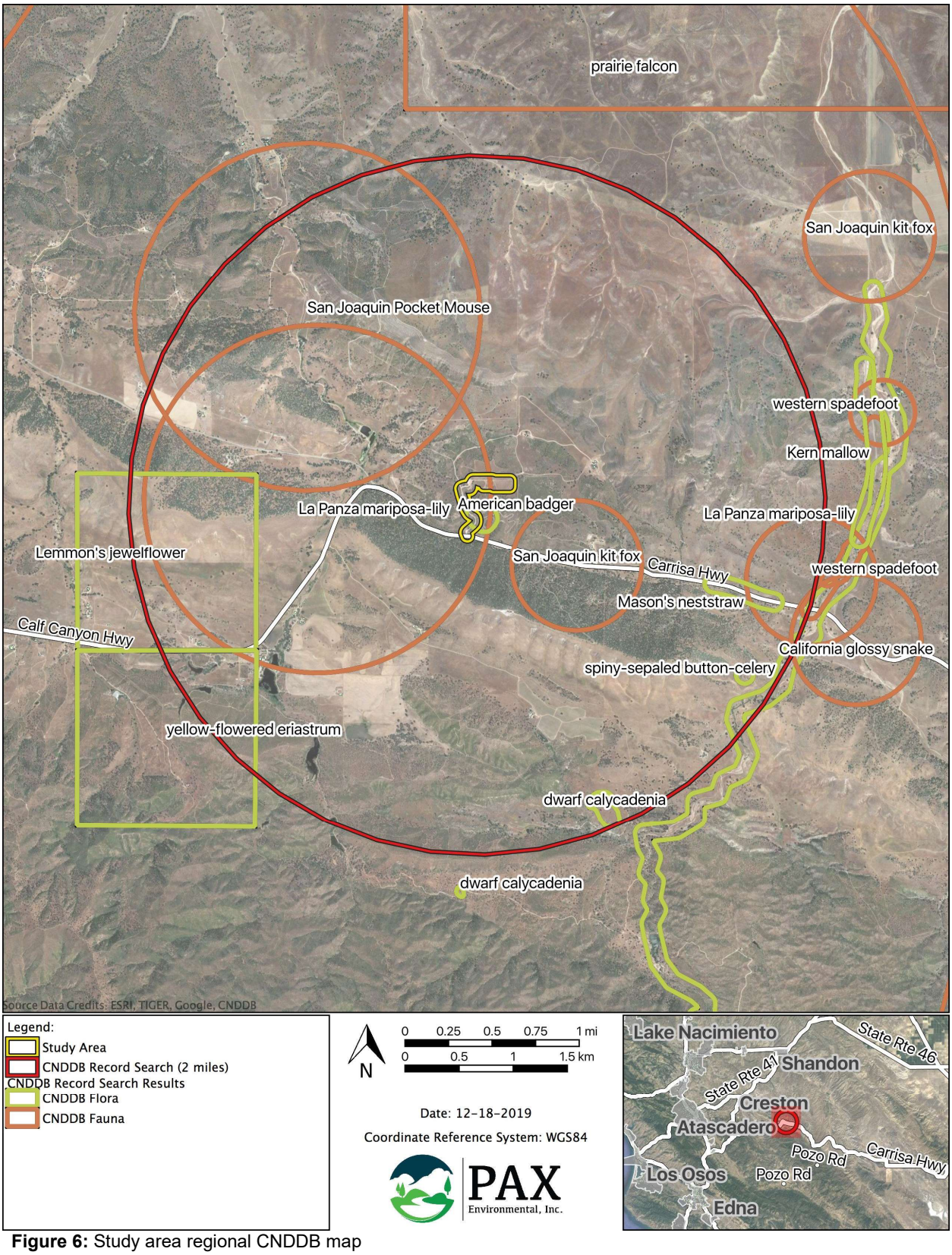

Figure 6: Study area regional CNDDB map

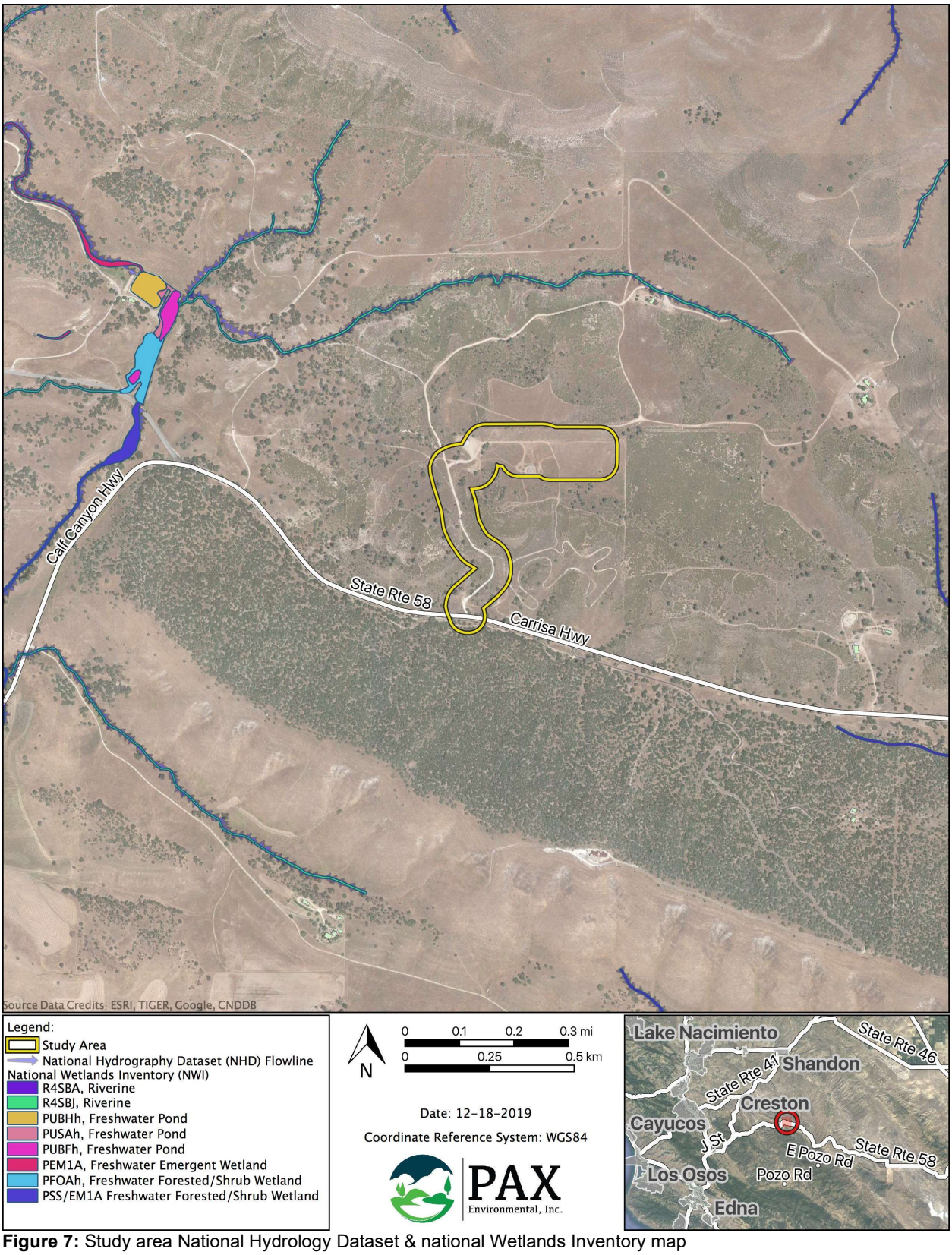

Figure 7: Study area National Hydrology Dataset & national Wetlands Inventory map

Figure 7 - Site photographs

Photo 1: Project site facing east from the existing barn along the access road (October 22, 2018).

Photo 2: Project site photographed from ridgeline to south facing north (October 22, 2018).

Photo 3: Project site photographed from ridgeline to south facing north (June 19, 2019).

Photo 4: Senesced calochortus lily (June 19, 2019).

Photo 5: Elegant buckwheat (June 19, 2019).

Photo 6: Onsite burrows (June 19, 2019).