Biological Report

for

South Chandler Ranch

City of Paso Robles
San Luis Obispo County

Prepared for

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February 2018

982.02

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Cover Page: South Chandler Ranch. May 3, 2017.

Synopsis

- This biological report examines a 117.3-acre Study Area located in the City of Paso Robles, San Luis Obispo County, California.
- The proposed project is a residential development. Site plans were still in development at the time this report was prepared.
- Habitat types identified and mapped in the Study Area consist of California annual grassland, anthropogenic, ruderal, and wetland.
- Botanical surveys conducted in spring 2017 identified 84 species, subspecies, and varieties of vascular plants in the Study Area. Appropriate habitat and soil conditions are suitable for three special status plant species. No special status plant species were detected in the Study Area during appropriately timed botanical surveys.
- Wildlife species that could be present in the Study Area include three species of amphibians, seven reptiles, 36 birds, and 20 mammals. Appropriate habitat is present in the Study Area for eight special status animals. No special status animals were detected in the Study Area in 2017.

1.0 Introduction

This report provides information regarding biological resources associated with the 117.3-acre South Chandler Ranch (Study Area) in the City of Paso Robles in San Luis Obispo County, California (Figure 1). Results are reported for botanical and wildlife surveys of the Study Area conducted in spring 2017. A habitat inventory and results of database and literature searches of special status species reports within a nine 7.5-minute quadrangle search area of the Study Area are also included. Special status species that could occur in the Study Area or be affected by the proposed project are discussed, and lists of plant and animal species that were identified or are expected in the Study Area are provided.

This Biological Report provides information regarding biological resources in the Study Area, and assesses impacts to biological resources that could occur from the proposed project. An evaluation of the effect of the proposed project on biological resources is included, and mitigation measures are provided.

1.1 Project Location and Description

The Study Area is located in the City of Paso Robles, San Luis Obispo County, California, east of the intersection of Sherwood Road and Fontana Road (Figure 2). Fontana Road borders the Study Area to the west, Linne Road borders the Study Area to the south, agricultural land borders the Study Area to the east, and undeveloped Chandler Ranch property lies to the north. The Study Area is located within the Templeton United States Geological Survey (USGS) 7.5-minute quadrangle, and is composed of 62 parcels which are provided in Appendix A. Approximate coordinates for the center of the Study Area are 35.615471°N and 120.644812°W (WGS 84). Elevation varies from 815 feet above mean sea level (amsl) to 929 feet amsl.

The proposed project (Project) is a residential development. Final site plans were not available at the time this report was prepared.

1.3 Responsible Parties

TABLE 1. RESPONSIBLE PARTIES.

Applicant	Biological Consultant
Ayres Group 355 Bristol Street, Suite A, Costa Mesa, CA 93626-7923	**Althouse and Meade, Inc.** 1602 Spring Street Paso Robles, CA 93446 (805) 237-9626
Planner/Engineer	**Lead Agency**
North Coast Engineering 725 Creston Road, Suite B Paso Robles, CA 93446 (805) 239-3127	**City of El Paso de Robles** Planning Division 1000 Spring Street Paso Robles, CA 93446 (805) 237-3970

2.0 Methods

The Study Area was surveyed for biological resources on April 28, 2017 and May 3, 2017. Surveys were conducted by Principal Biologist Jason Dart and Botanists Kristen Andersen and Shannon Henke. Surveys were conducted on foot in order to compile species lists, search for special status plants and animals, map habitats, and to photograph the Study Area. The entire Study Area was surveyed.

Each habitat type occurring in the Study Area was inspected, described, and catalogued (Section 3.0). All plant and animal species observed in the Study Area were identified and recorded (Section 4.0). Reconnaissance transects were meandering with an emphasis on locating habitat appropriate for special status plants. Transects were utilized to map boundaries of different vegetation types, describe general conditions and dominant species, compile species lists, and evaluate potential habitat for special status species. Identification of botanical resources included field observations and laboratory analysis of collected material (Table 6). Botanical surveys were conducted on May 3, 2017 according to agency guidelines (USFWS 2000, CDFG [CDFW] 2009, and CNPS 2001). Botanical surveys were appropriately timed to identify all special status plant species known from the region (refer to Section 4.1, and Table 4) that have potential to occur in the Study Area. Botanical nomenclature used in this document follows the Jepson Manual, Second Edition (Baldwin et al. 2012). We also provide Jepson Manual First Edition names in brackets where nomenclature has recently changed.

Wildlife documentation included observations of animal presence and wildlife sign such as nests, tracks, and scat. Observations of wildlife were recorded during field surveys in all areas of the Study Area (Table 7). Birds were identified by sight, using 10-power binoculars, or by vocalizations. Reptiles and amphibians were identified by sight, often using binoculars; traps were not used. Mammals recorded in the Study Area were identified by sight and tracks. Small

mammal trapping studies were beyond the scope of this report, although several species are likely to occur.

Mapping efforts utilized hand notation on recent land survey and aerial photos. Maps were created using aerial photo interpretation, field notation, and GPS data imported to ArcGIS 10, a Geographic Information System (GIS) software program. Data were overlaid on a 2016 National Agriculture Imagery Program (NAIP) aerial of San Luis Obispo County (USDA 2016). Biological resource constraints were mapped in the field on site. Hand notation on field maps was incorporated into point and polygon layers and overlaid on high resolution aerial photographs.

We conducted a search of the California Natural Diversity Database (CNDDB February 15, 2018 data) and the California Native Plant Society (CNPS) On-line Inventory of Rare and Endangered Plants of California for special status species known to occur in eight USGS 7.5-minute quadrangles surrounding the Study Area: Adelaida, Atascadero,, Creston, Estrella, Paso Robles, Santa Margarita, Templeton, and York Mountain. The Morro Bay North quadrangle was omitted from the CNDDB and CNPS search results because the quad is separated from the site by the coastal mountains and contains results for coastal species which would not be present in the Study Area.

Special status species lists produced by database and literature searches were cross-referenced with the described habitat types in the Study Area to identify all potential special status species that could occur on or near the Study Area. Each special status species that could occur on or near the Study Area is individually discussed (refer to Sections 4.1.4 and 4.2.3).

TABLE 2. BIOLOGICAL SURVEYS.

Survey Date	Temp.	Wind	Weather Observations	Biologist(s)
April 28, 2017	75 °F	Windy 10- 20 mph	Sunny	Jason Dart
May 3, 2017	90 °F	Calm 0 – 5 mph	Sunny, hot	Jason Dart Kristen Andersen Shannon Henke

3.0 Existing Conditions

Situated in rural eastern Paso Robles, the majority of the Study Area is fallow cropland turned grassland. It has rolling hills and gently sloping plains with more than 100 feet in elevation change from the north to south. The Study Area was first farmed prior to 1949 and has lain fallow since around 2006. Land use in the vicinity of the Study Area includes residential development to the northwest, commercial development to the west and south, a vineyard to the east and undeveloped Chandler Ranch property to the north (Figure 2).

In the southeastern portion of the Study Area approximately 15 acres was subdivided into 54 lots in the 1960's to develop the subdivision Our Town. The project ceased after 13 lots were developed on one of the six cul-de-sacs originating from the constructed Aaroe Road. Currently, some of the homes are inhabited, some dilapidated, and the remaining cul-de-sacs are paved and unmaintained, surrounded by weedy grassland.

The southeastern portion of the Study Area is bisected by a drainage ditch created in the 1960's to direct water from the Our Town subdivision toward a culvert at the intersection of Linne Road and Airport Road. This ditch is predominantly dry and is characterized by intermittent shrubs. Two small wetland features are also found in the Study Area, one in a bowl on the east side and one in a swale feature on the west.

3.1 Soils

Four individual soil map units from the Natural Resource Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO) overlap the Study Area: Arbuckle-Positas complex, Nacimiento-Los Osos complex, Rincon clay loam, and San Ysidro loam (Soil Survey Staff 2017).

3.2 Habitat Types

Table 3 lists four habitat types described and mapped in the Study Area. The Biological Resources Map (Figure 4) provided in Section 8.0 indicates the locations of each habitat type in the Study Area. Most of the Study Area is mapped as California annual grassland with anthropogenic, ruderal, and wetland elements comprising a small portion of the area.

TABLE 3. HABITAT TYPES. The approximate acreage and location are provided for all habitat types occurring in the Study Area.

Habitat Type	Approximate Acreage	Location
California Annual Grassland	108.7	Throughout the Study Area
Anthropogenic	7.1	Southeast portion of Study Area
Ruderal	1.4	Southeast portion of Study Area
Wetland	0.08	On east and west sides of Study Area

3.2.1 California annual grassland

Annual grassland is the predominant habitat in the Study Area, covering approximately 108.7 acres of the site. Most of the area in the Study Area was farmed and ranched prior to 2006. Since then, the fallow cropland has reverted to grassland. Because of previous disturbance, the grassland is comprised mainly of non-native grasses and forbs. Dominant species include wild oats (*Avena barbata* and *A. fatua*), annual bromes (*Bromus diandrus, B. hordeaceus,* and *B. madritensis* subsp. *rubens*), filaree (*Erodium* ssp.), and mustards (*Brassica nigra* and *Hirschfeldia incana*).

Both early and late season wildflowers occur regularly in low abundance. Early season wildflowers include fiddlenecks (*Amsinckia* ssp.), blow wives (*Achyrachaena mollis*), valley tassels (*Castilleja attenuata*), lupines (*Lupinus* ssp.), and valley popcornflower (*Plagiobothrys canescens* var. *canescens*). Late-season wildflowers include spikeweed (*Centromadia fitchii),* clarkias (*Clarkia* ssp.), annual fireweed (*Epilobium brachycarpum*), and navarretia (*Navarretia*

ssp.). Native annual grasses such as bluegrass (*Poa annua*) and native perennial herbs such as milkweeds (*Asclepias* ssp.) and dwarf brodiaea (*Brodiaea terrestris*) are also found in low abundance.

3.2.2 Anthropogenic

Anthropogenic habitat is present on approximately 7.1 acres of the Study Area, in the southeast portion of the property around the unfinished Our Town development. This area is comprised of residences, streets, and yards, as well as associated structures, planted trees, and other landscaping. In these areas, non-native thistles (*Centaurea* ssp. and *Salsola tragus*) and other non-native forbs and grasses are the dominant herbaceous vegetation. Native plant communities are absent.

3.2.3 Ruderal

Ruderal habitat is present on approximately 1.4 acres of the Study Area, in the southeastern portion of the Study Area along the north and west side of the entrance road to Our Town. These disturbed roadside areas consist of bare ground and non-native forbs and grasses, with minimal native herbaceous vegetation.

3.2.4 Wetland

Two potentially jurisdictional wetland patches comprising 0.08 acres of the Study Area were defined in a wetland delineation report (Althouse and Meade, Inc. November 2017). One wetland occurs in a bowl on the east side of the Study Area and one occurs in a swale feature on the west.

The eastern wetland is a low spot 250 feet north of Our Town. It was likely created during the construction of Our Town when a pile of asphalt was left in the field. Plowing around the asphalt may have left the area lower and undisturbed, collecting water and creating a 0.01 acre (602 square feet) isolated wetland. Water enters the wetland through precipitation and surface runoff, but does not drain out except through percolation. Dominant plant species within the wetland are seaside barley (*Hordeum marinum*) and curly dock (*Rumex crispus*). Other wetland species such as toad rush (*Juncus bufonius*) and slender woolly marbles (*Psilocarphus tenellus*) are also present.

The western wetland lies in a swale feature in the northwest portion of the property and is 0.07 acre (2999 square feet). Water originating from surface or subsurface runoff from hills onsite is concentrated in a small swale, and likely sheet or subsurface flows downslope to the street or a culvert at the corner of Fontana Road and Linne Road. Dominant vegetation includes Italian ryegrass (*Festuca perennis*) and seaside barley, with patches of toad rush and slender woolly marbles. Adjacent upland areas and downslope of the wetland feature was dominated by rattail sixweeks grass (*Festuca myuros*).

3.3 Potential Wetlands and Jurisdictional Waters

Technical findings of a delineation of potential jurisdictional wetlands and waters of the United States are reported separately (Althouse and Meade, Inc. 2017).

3.4 Habitat Connectivity and Wildlife Movement

The Study Area is surrounded to the east, west, and south by development and agriculture, and is bordered on the west and south by roads. There is undeveloped ranch land to the north. Wildlife is most likely to move into the Study Area from the north, but may also pass through agriculture from the east or south. Because the Study Area is surrounded on three sides by vineyards, farming, and urban development, it is not likely to be an important corridor for wildlife movement.

4.0 Results

The CNDDB and the CNPS On-line Inventory of Rare and Endangered Plants of California contain records for 75 special status species within the designated search area. The search area includes the following eight USGS 7.5-minute quadrangles surrounding the Study Area: Adelaida, Paso Robles, Estrella, York Mountain, Templeton, Creston, Atascadero, and Santa Margarita.

Appropriate habitat and soil conditions are present in the Study Area for 3 special status plants and 8 special status animals (Tables 4 and 5).

No special status plant or wildlife species were detected in the Study Area. Figure 3 in Section 8.0 depicts the current GIS data for special status species and critical habitat mapped in the vicinity of the Study Area by the CNDDB and the U.S. Fish and Wildlife Service (USFWS).

4.1 Special Status Plants

4.1.1 Introduction to California Rare Plant Ranks

Plant species are considered rare when their distribution is confined to localized areas, when there is a threat to their habitat, when they are declining in abundance, or are threatened in a portion of their range. The California Rare Plant Rank (CRPR) categories range from species with a low threat (CRPR 4) to species that are presumed extinct (CRPR 1A). The plants of CRPR 1B are rare throughout their range. All but a few species are endemic to California. All of them are judged to be vulnerable under present circumstances, or to have a high potential for becoming vulnerable.

4.1.2 Introduction to CNDDB definitions

"Special Plants" is a broad term used to refer to all the plant taxa inventoried by the CNDDB, regardless of their legal or protection status (CDFW January 2018). Special plants include vascular plants, bryophytes (mosses, liverworts, and hornworts), and lichens.

4.1.3 Potential special status plant list

Table 4 lists 54 special status plant species reported from the region. Federal and California State status, global and State rank, and CNPS rank status for each species are given. Typical blooming period, habitat preference, potential habitat on site, and whether or not the species was observed in the Study Area are also provided.

TABLE 4. SPECIAL STATUS PLANT LIST. The 54 special status plants reported from the region are listed below. Potentially suitable habitat is present in the Study Area for three special status plant species. No special status plant species were detected in the Study Area.

	Common and Scientific Names	Fed/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
1.	**Bristlecone Fir** *Abies bracteata*	None/None 1B.3	N/A	Lower montane coniferous forest. Rocky sites in Monterey and SLO Counties. 210-1600 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
2.	**Hoover's Bent Grass** *Agrostis hooveri*	None/None 1B.2	April - July	Sandy soil in oak woodland habitat; <600 m. Endemic to SLO & SB Counties.	No. Suitable habitat is not present in the Study Area.	No	No Effect
3.	**Douglas' Fiddleneck** *Amsinckia douglasiana*	None/None 4.2	March – May	Cismontane woodland, Valley and foothill grassland; unstable shaly sedimentary slopes; (100)150-1600 m. SCoR, w WTR	No. Suitable substrate is not present in the Study Area.	No	No Effect
4.	**Oval-leaved Snapdragon** *Antirrhinum ovatum*	None/None 4.2	May - November	Heavy, adobe-clay soils on gentle, open slopes, also disturbed areas; 200-1000 m. s SnJV, s SCoRI	No. Suitable habitat is not present in the Study Area.	No	No Effect
5.	**Santa Lucia Manzanita** *Arctostaphylos luciana*	None/None 1B.2	December - March	Shale outcrops, slopes, chaparral, 500-700 m. Cuesta Pass, SLO County.	No. Suitable habitat is not present in the Study Area.	No	No Effect
6.	**Bishop Manzanita** *Arctostaphylos obispoensis*	None/None 4.3	February - June	Rocky, generally serpentine soils, chaparral, open closed-cone forest near coast; 60-950 m. SCoRO (c&s Santa Lucia Range).	No. Suitable habitat is not present in the Study Area.	No	No Effect
7.	**Santa Margarita Manzanita** *Arctostaphylos pilosula*	None/None/ 1B.2	December - May	Shale outcrops, slopes, chaparral; 300-1100 m. s SCoRO. Endemic to SLO County	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Fed/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
8.	**Miles' Milk-vetch** *Astragalus didymocarpus* var. *milesianus*	None/None 1B.2	March - May	Grassy areas near coast; < 400 m. s CCo.	No. Suitable habitat is present in the Study Area but the Study Area is outside the known range of this subspecies.	No	No Effect
9.	**Salinas Milk-vetch** *Astragalus macrodon*	None/None 4.3	April - July	Eroded pale shales or sandstone, serpentine alluvium; 200-1550 m. c&s SCoR.	No. Suitable habitat is not present in the Study Area.	No	No Effect
10.	**San Luis Mariposa-lily** *Calochortus obispoensis*	None/None 1B.2	May - June	Dry serpentine, generally open chaparral; 100-500 m. c CCo (e of Morro Bay), s SCoRO (San Luis Obispo Co.).	No. Suitable serpentine soil is not present in the Study Area.	No	No Effect
11.	**La Panza Mariposa-lily** *Calochortus simulans*	None/None 1B.3	April - May	Grassland, oak woodland & pine forest, on sand, granite, or serpentine; <1100 m. Endemic to SLO County	No. Suitable soil is not present in the Study Area.	No	No Effect
12.	**Dwarf Calycadenia** *Calycadenia villosa*	None/None 1B.1	May - October	Dry, rocky hills, ridges, in chaparral, woodland, meadows and seeps; <1100 m. c&s SCoRO	No. Suitable habitat is not present in the Study Area.	No	No Effect
13.	**Cambria morning glory** *Calystegia subacaulis* ssp. *episcopalis*	None/None 4.2	(March)April - June(July)	Dry, open scrub, woodland, or grassland; usually clay <500 m. c SCoRO Endemic to SLO County	No. Suitable habitat is not present in the Study Area.	No	No Effect
14.	**Hardham's Evening-primrose** *Camissoniopsis hardhamiae*	None/None 1B.2	March - May	Decomposed carbonate soils, in chaparral, cismontane woodland. 240-600 m. Monterey, SLO Counties	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Fed/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
15.	**Carex Obispoensis** *San Luis Obispo sedge*	None/None 1B.2	March - June	Springs, streamsides in chaparral, generally on serpentine; < 800 m. PR, SCoRO (Monterey, San Luis Obispo cos.).	No. Suitable habitat is not present in the Study Area.	No	No Effect
16.	**San Luis Obispo Owl's-clover** *Castilleja densiflora* var. *obispoensis*	None/None 1B.2	April	Coastal grassland, <100 m. Endemic to SLO County.	No. Suitable habitat is present in the Study Area, but the Study Area is outside of the known range of this subspecies.	No	No Effect
17.	**Lemmon's Jewelflower** *Caulanthus lemmonii*	None/None 1B.2	March – May	Dry, exposed slopes, grassland, chaparral, scrub; 80-1100 m. sw SnJv, se SnFrb, e SCoRO, SCoRI	No. Suitable grassland is not present in the Study Area.	No	No Effect
18.	**Lompoc Ceanothus** *Ceanothus cuneatus* var. *fascicularis*	None/None 4.2	February - May	Sandy substrates, coastal chaparral; < 275 m. s CCo (Santa Barbara, San Luis Obispo cos.).	No. Suitable habitat is not present in the Study Area.	No	No Effect
19.	**Brewer's Spineflower** *Chorizanthe breweri*	None/None 1B.3	March - July	Gravel or rocks; 60-800 m. SCoRO (sw San Luis Obispo Co.).	No. Suitable habitat is not present in the Study Area.	No	No Effect
20.	**Douglas' Spineflower** *Chorizanthe douglasii*	None/None 4.3	April - July	Sand or gravel; (200)300-1600 m. e SCoRO, SCoRI.	No. Suitable habitat is not present in the Study Area.	No	No Effect
21.	**Palmer's Spineflower** *Chorizanthe palmeri*	None/None 4.2	May - August	Serpentine; 60--700 m. SCoRO (w Monterey, w San Luis Obispo cos.).	No. Suitable serpentine soil is not present in the Study Area.	No	No Effect
22.	**Straight-awned Spineflower** *Chorizanthe rectispina*	None/None 1B.3	May - July	Chaparral, dry woodland in sandy soil; 200-600 m. SCoRO	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Fed/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
23.	**San Luis Obispo Fountain Thistle** *Cirsium fontinale* var. *obispoense*	FE/CE 1B.2	April – October	Serpentine seeps and streams; < 350 m. c SCoRO (San Luis Obispo Co.).	No. Suitable habitat is not present in the Study Area.	No	No Effect
24.	**Cuesta Ridge Thistle** *Cirsium occidentale* var. *lucianum*	None/None 1B.2	April - July	Chaparral, woodland or forest openings, often on serpentine; 500-750 m. s SCoRO (s Santa Lucia Range, San Luis Obispo Co.).	No. Suitable habitat is not present in the Study Area.	No	No Effect
25.	**Slender Clarkia** *Clarkia exilis*	None/None 4.3	April - May	Cismontane woodland; <1000 m.; s SNF, Teh	No. Suitable habitat is not present in the Study Area.	No	No Effect
26.	**Small-flowered Morning-glory** *Convolvulus simulans*	None/None 4.2	April - June	Clay substrates, occasionally serpentine, annual grassland, coastal-sage scrub, chaparral; 30-875 m. s SNF, SnJV/SCoRI, SnFrB, s SCoRO, SCo, ChI, WTR, PR	Moderate. Suitable habitat is present in the Study Area.	No	No Effect
27.	**Paniculate tarplant** *Deinandra paniculata*	None/None 4.2	(March)April - November	Vernally mesic or sandy soils in coastal scrub and grassland habitats; <1320 m.	No. Suitable habitat may be present however Study Area is outside of species known range.	No	No Effect
28.	**Small-flowered Gypsum-loving larkspur** *Delphinium gypsophilum* subsp. *parviflorum*	None/None 3.2	February - June	Slopes in grassland, open oak woodland; 90-1200 m. s SNF, Teh, SnJV, SCoR.	No. As of 2012 this is no longer a valid taxon.	No	No Effect

	Common and Scientific Names	Fed/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
29.	**Dune Larkspur** *Delphinium parryi* ssp. *blochmaniae*	None/None 1B.2	April - June	Coastal chaparral, sand. 0-200 m. s CCo	No. Suitable habitat is not present in the Study Area.	No	No Effect
30.	**Eastwood's Larkspur** *Delphinium parryi* subsp. *eastwoodiae*	None/None 1B.2	March - May	Coastal chaparral, grassland, on serpentine; 100-500m sCCo, SCoRO (San Luis Obispo County)	No. Suitable serpentine soil is not present in the Study Area.	No	No Effect
31.	**Umbrella Larkspur** *Delphinium umbraculorum*	None/None 1B.3	April - June	Moist oak forest; 400-1600 m. SCoRO, WTR.	No. Suitable habitat is not present in the Study Area.	No	No Effect
32.	**Mouse-gray dudleya** *Dudleya abramsii* subsp. *murina*	None/None 1B.3	May - June	Serpentine outcrops; 120-300 m. s SCoRO (San Luis Obispo Co.).	No. Suitable habitat is not present in the Study Area.	No	No Effect
33.	**Small Spikerush** *Eleocharis parvula*	None/None 4.3	(April)June - August(September)	Brackish, wet soil, coastal; <50 m. NCo, SnFrB, SCo; to BC; KS to NL, FL, LA; Mex, C.Am, Eurasia	No. Suitable habitat is not present in the Study Area.	No	No Effect
34.	**Yellow-flowered Eriastrum** *Eriastrum luteum*	None/None 1B.2	May - June	Bare sandy decomposed granite slopes in cismontane woodland, chaparral, forest; 360-1000 m. SCoR (Monterey, SLO cos.).	No. Suitable habitat is not present in the Study Area.	No	No Effect
35.	**Ojai Fritillary** *Fritillaria ojaiensis*	None/None 1B.2	February - May	Rocky slopes, river basins; 300--500 m. s SCoRO (San Luis Obispo, Santa Barbara cos.), WTR (Ventura Co.).	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Fed/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
36.	**Hogwallow Starfish** *Hesperevax caulescens*	None/None 4.2	March - June	Drying shrink-swell clay of vernal pools, flats, steep slopes (sometimes serpentine); < 300(500) m. NCoRI, CaRF, n&s SNF, GV, SCoRO, sw PR.	No. Suitable habitat is not present in the Study Area.	No	No Effect
37.	**Mesa Horkelia** *Horkelia cuneata* var. *puberula*	None/None 1B.1	February - September	Dry, sandy coastal chaparral; gen 70-700 m. SCoRO, SCo.	No. Suitable habitat is not present in the Study Area.	No	No Effect
38.	**Kellogg's Horkelia** *Horkelia cuneata* var. *sericea*	None/None 1B.1	April - September	Old dunes, coastal sand hills; <200 m. CCo	No. Suitable habitat is not present in the Study Area.	No	No Effect
39.	**Santa Lucia Dwarf Rush** *Juncus luciensis*	None/None 1B.2	April - July	Vernal pools, ephemeral drainages, wet meadow habitats, and streams; 300-1900 m. CaRH, n SNH, SCoRO, TR, PR, MP.	Low. Suitable but limited habitat is present in wetlands in the Study Area.	No	No Effect
40.	**Jared's Pepper-Grass** *Lepidium jaredii* subsp. *jaredii*	None/None 1B.2	March - May	Alkali bottoms, slopes, washes, <500 m. SCoRI, SnJV	No. Suitable habitat is not present in the Study Area.	No	No Effect
41.	**Jones' Bush-mallow** *Malacothamnus jonesii*	None/None 4.3	May - July	Open chaparral in foothill woodland; 250-830 m. NCoRI, SCoRO	No. Suitable habitat is not present in the Study Area.	No	No Effect
42.	**Carmel Valley Bush-mallow** *Malacothamnus palmeri* var. *involucratus*	None/None 1B.2	April - October	Chaparral, cismontane woodland, coastal scrub; 30-1100 m. s CCo, SCoRO	No. Suitable habitat is not present in the Study Area.	No	No Effect
43.	**Santa Lucia Bush-mallow** *Malacothamnus palmeri* var. *palmeri*	None/None 1B.2	May - July	Interior valleys foothills; 30-800 m. CCo, SCoRO.	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Fed/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
44.	**Carmel Valley Malacothrix** *Malacothrix saxatilis* var. *arachnoidea*	None/None 1B.2	March - December	Rock outcrops, steep rocky road cuts in chaparral; 25-1215 m. Endemic to Monterey County	No. Suitable habitat is not present in the Study Area.	No	No Effect
45.	**Oregon Meconella** *Meconella oregana*	None/None 1B.1	March - May	Shaded canyons; <1000 m. CCo (Fort Ord), SnFrB	No. Suitable habitat is not present in the Study Area.	No	No Effect
46.	**Palmer's Monardella** *Monardella palmeri*	None/None 1B.2	June - August	Chaparral, forest, on serpentine; 200-800 m. n SCoRO (Santa Lucia Range).	No. Suitable serpentine soil is not present in the Study Area.	No	No Effect
47.	**Woodland Woollythreads** *Monolopia gracilens*	None/None 1B.2	March - July	Chaparral, serpentine grassland, cismontane woodland, sandy to rocky soils; SnFrB, SCoR	No. Suitable serpentine soil is not present in the Study Area.	No	No Effect
48.	**Spreading Navarretia** *Navarretia fossalis*	FT/None 1B.1	April - June	Chenopod scrub, marshes and swamps, playas, and vernal pools; 30-1300 m. SCoRO, SCo, to Baja Cal.	No. Suitable habitat is not present in the Study Area.	No	No Effect
49.	**Shining Navarretia** *Navarretia nigelliformis* subsp. *radians*	None/None 1B.2	May - July	Vernal pools, clay depressions, dry grasslands; 150-1000 m. SCoR	High. Suitable habitat is present in the Study Area and there are occurrences within 0.5 mile on other areas of Chandler Ranch.	No	No Effect
50.	**Large-flowered Nemacladus** *Nemacladus secundiflorus* var. *secundiflorus*	None/None 4.3	April - May	Chaparral, Valley and foothill grassland; dry, gravelly slopes; 200-2000 m. s SNH, SCoR.	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Fed/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
51.	**Hooked Popcornflower** *Plagiobothrys uncinatus*	None/None 1B.2	April - May	Canyon sides, chaparral, rocky outcrops, ± fire follower; on sandstone; 300-600 m. n SCoR (Gabilan Range, Santa Lucia Mountains)	No. Suitable habitat is not present in the Study Area.	No	No Effect
52.	**San Gabriel Ragwort** *Senecio astephanus*	None/None 4.3	April - June	Steep rocky slopes in chaparral/coastal-sage scrub and oak woodland; 400-1500 m. SCoR, TR.	No. Suitable habitat is not present in the Study Area.	No	No Effect
53.	**Cuesta Pass Checkerbloom** *Sidalcea hickmanii* subsp. *anomala*	None/Rare 1B.2	May - June	Closed-cone-conifer forest, generally serpentine; 600-800 m. SCoRO (near Cuesta Pass, San Luis Obispo Co.).	No. Suitable habitat is not present in the Study Area.	No	No Effect
54.	**Most Beautiful Jewelflower** *Streptanthus albidus* subsp. *peramoenus*	None/None 1B.2	April - September	Chaparral, Valley grassland, foothill woodland; strong affinity to serpentine soil; e SnFrB, SCoRO	No. Suitable serpentine soil is not present in the Study Area.	No	No Effect

California Geographic Subregion Abbreviations:

CCo: Central Coast
SCo: South Coast
SCoR: South Coast Ranges
SCoRO: Outer South Coast Ranges
SnFrB: San Francisco Bay
TR: Transverse Ranges
WTR: Western Transverse Ranges
Teh: Tehachapi Mtn Area
SLO: San Luis Obispo
SCoRI: Inner South Coast Ranges
ScV: Sacramento Valley
CW: Central West
PR: Peninsular Range
SnJV: San Joaquin Valley

State/Rank Abbreviations:

FE: Federally Endangered
FT: Federally Threatened
CE: California Endangered

California Rare Plant Ranks:

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California, but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 4: Plants of limited distribution - a watch list

CRPR Threat Ranks:
0.1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

4.1.4 Special status plants discussion

Three special status plant species could potentially occur in the Study Area based on an analysis of known ecological requirements of these species and the habitat conditions that were observed in the Study Area. We discuss each of the three species and describe habitat, range restrictions, known occurrences, and survey results for the Study Area. In order to be consistent with regulatory agency botanical survey guidelines (USFWS 2000, CDFG 2009), seasonally timed floristic surveys were conducted in spring 2017 to coincide with potential special status plant bloom times. No special status plant species were detected in the Study Area during botanical surveys in spring 2017.

A. **Small-flowered Morning-glory** (*Convolvulus simulans*) is a CRPR 4.2 species that is known from scattered localities from the eastern San Francisco Bay area south to San Diego. It is found in valley grassland and coastal scrub habitats, usually with serpentine soils. The closest known record is approximately 6.4 miles northeast of the Study Area near Estrella Road, where it was collected in 1895. Moderately appropriate habitat is present in the annual grassland habitat in the Study Area. Small-flowered morning-glory was not detected in the Study Area during appropriately timed botanical surveys in spring 2017.

B. **Santa Lucia Dwarf Rush** (*Juncus luciensis)* is a CRPR 1B.2 species known from specimens collected in coastal counties from San Diego north to Monterey, and from scattered localities in northern California. It is a very small annual plant that grows in wet sandy soils in a variety of seasonally moist environments. It grows in dense clumps, with small leaves and branches arising from the base, and rarely exceeds two inches in height. The closest reported occurrence to the Study Area is approximately 6 miles southeast, from damp grain fields six miles east of Paso Robles on Creston Road (CNDDB 8). Suitable wet habitats are located in the Study Area for Santa Lucia dwarf rush. Santa Lucia dwarf rush was not detected in the Study Area during appropriately timed botanical surveys in spring 2017.

C. **Shining Navarretia** (*Navarretia nigelliformis* subsp. *radians*) is a CRPR 1B.2 subspecies endemic to California, primarily occurring in central California. It is known to occur in vernal pools, grassland, and cismontane woodland habitats, often on clay and alkaline sites up to 1,000 meters elevation. It is an annual herb that typically blooms between May and July. Shining navarretia was found approximately 0.5 mile north of the Study Area and 2.5 miles south of the Study Area on the former Chandler Ranch during floristic surveys by Althouse and Meade, Inc. in 2005. Shining navarretia was not detected in the Study Area during appropriately timed botanical surveys in spring 2017.

4.2 Special Status Animals

4.2.1 Introduction to CNDDB definitions

"Special Animals" is a general term that refers to all of the animal taxa inventoried by the CNDDB, regardless of their legal or protection status (CDFW October 2017). The Special Animals list is also referred to by the California Department of Fish and Wildlife (CDFW) as the list of "species at risk" or "special status species". These taxa may be listed or proposed for listing under the California and/or Federal Endangered Species Acts, but they may also be species deemed biologically rare, restricted in range, declining in abundance, or otherwise vulnerable.

Animals listed as California Species of Special Concern (SSC) may or may not be listed under California or Federal Endangered Species Acts. They are considered rare or declining in abundance in California. The Special Concern designation is intended to provide the California Department of Fish and Wildlife, biologists, land planners and managers with lists of species that require special consideration during the planning process in order to avert continued population declines and potential costly listing under federal and state endangered species laws. For many species of birds, the primary emphasis is on the breeding population in California. For some species that do not breed in California but winter here, emphasis is on wintering range. The SSC designation thus may include a comment regarding the specific protection provided such as nesting or wintering.

Animals listed as Fully Protected are those species considered by CDFW as rare or faced with possible extinction. Most, but not all, have subsequently been listed under the California Endangered Species Act (CESA) or the Federal Endangered Species Act (FESA). Fully Protected species may not be taken or possessed at any time and no provision of the California Fish and Game code authorizes the issuance of permits or licenses to take any Fully Protected species.

4.2.2 Potential special status animals list

Table 5 lists 21 special status animal species reported from the region. Federal and California State status and CDFW listing status for each species are given. Typical nesting or breeding period, habitat preference, potential habitat on site, and whether or not the species was observed in the Study Area are also provided.

TABLE 5. SPECIAL STATUS ANIMAL LIST. The 21 special status animals known or reported from the region are listed below. There are eight special status animals that could potentially occur within the Study Area based on review of preferred habitat types. No special status animals were detected in the Study Area.

	Common and Scientific Names	Fed/State Status CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
1.	**Tricolored Blackbird** *Agelaius tricolor*	None/CE SSC (Nesting)	March 15 - August 15	Requires open water, protected nesting substrate, & foraging area with insect prey near nesting colony.	No. Suitable nesting habitat is not present in the Study Area.	No	No Effect
2.	**Grasshopper Sparrow** *Ammodramus savannarum*	None/none SSC (Nesting)	March 15 - August 15	Nests in grassland habitats on mountain slopes, foothills, and valleys. May nest colonially.	Low. Appropriate nesting habitat is present. Nearest nesting occurrence is 15 miles south.	No	Potential Adverse Effect Can Be Mitigated
3.	**Northern California Legless Lizard** *Anniella pulchra*	None/None SSC	Early Spring – July (some populations observed to breed biennially)	Chaparral, Coastal dunes, Coastal scrub; sandy or loose loamy soils under sparse vegetation.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
4.	**Pallid Bat** *Antrozous pallidus*	None/None SSC	Spring - Summer	Rock crevices, caves, tree hollows, mines, old buildings, and bridges.	Low. Low quality roosting habitat is present in the Study Area.	No	Potential Adverse Effect Can Be Mitigated
5.	**Golden Eagle** *Aquila chrysaetos*	None/None FP	March 15 - August 15	Nests in large, prominent trees in valley and foothill woodland. Requires adjacent food source.	No. Appropriate nesting habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Fed/State Status CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
6.	***Burrowing Owl** *Athene cunicularia*	None/None SSC	March 15 - August 15	Burrows in squirrel holes in open habitats with low vegetation.	Low. Appropriate habitat is present in the Study Area but conditions are not optimal for species.	No	Potential Adverse Effect Can Be Mitigated
7.	**Lesser Slender Salamander** *Batrachoseps minor*	None/None SSC	Unknown; Terrestrial Reproducti on	Broadleaved upland forest; South Santa Lucia Mountains in tanbark oak, coast live oak, blue oak, sycamore & laurel.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
8.	**Vernal Pool Fairy Shrimp** *Branchinecta lynchi*	FT/None None	Rainy Season	Clear water sandstone depression pools, grassed swale, earth slump, or basalt flow depression pools.	Low. Wetlands in the Study Area are not likely to hold water long enough for reproduction.	No	No Effect
9.	**Townsend's Big-eared Bat** *Corynorhinus townsendii*	None/None SSC	Spring - Summer	Caves, buildings, and mine tunnels. Cave like attics as day roosts. On coast roosts are normally within 100 m. of creeks.	Low. Potentially suitable abandoned structures are present for roosting.	No	Potential Adverse Effect Can Be Mitigated
10.	**Western Pond Turtle** *Emys marmorata*	None/None SSC	April - August	Permanent or semi-permanent streams, ponds, lakes.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
11.	**Monterey Dusky-footed Woodrat** *Neotoma macrotis luciana*	None/None SSC	N/A	Variety of habitats with moderate to dense understory vegetation	No. Appropriate habitat is not present in the Study Area.	No	No Effect
12.	**Salinas Pocket Mouse** *Perognathus inornatus psammophilus*	None/None SSC	N/A	Annual grassland and desert shrub in Salinas Valley, with friable soils	No. Appropriate habitat is not present in the Study Area.	No	No Effect

Common and Scientific Names	Fed/State Status CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
13. **Coast Horned Lizard** *Phrynosoma blainvillii*	None/None SSC	May - September	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
14. **Purple Martin** *Progne subis*	None/none SSC (Nesting)	March 15 - August 15	In San Luis Obispo County prefers nesting in Sycamore trees along riparian corridors.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
15. **Foothill Yellow-legged Frog** *Rana boylii*	None/Cand. T SSC	March - September	Partly shaded, shallow streams and riffles with rocky substrate. Min. 15 weeks for larval development.	No. Appropriate habitat is not present in the Study Area	No	No Effect
16. **California Red-legged Frog** *Rana draytonii*	FT/CT SSC	January - September	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks for larval development.	No. Appropriate deep water sources are not present in the Study Area.	No	No Effect
17. **Western Spadefoot** *Spea hammondii*	None/None SSC	January - August	Vernal pools in grassland and woodland habitats	Low. Wetlands in the Study Area are not likely to hold water long enough for breeding.	No	No Effect
18. **Coast Range Newt** *Taricha torosa*	None/None SSC	December - May	Slow moving streams, ponds, and lakes with surrounding evergreen/oak forests along coast.	No. Appropriate habitat is not present in the Study Area.	No	No Effect

Common and Scientific Names	Fed/State Status CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area	Effect of Proposed Activity
19. **American Badger** *Taxidea taxus*	None/None SSC	February - May	Needs friable soils in open ground with abundant food source such as California ground squirrels.	Moderate. Appropriate habitat is present in the Study Area.	No	Potential Adverse Effect Can Be Mitigated
20. **Least Bell's Vireo** *Vireo bellii pusillus*	FE/CE None	March 15 - August 15	Riparian habitat, near water or dry streambed, <2000 ft. Nests in willows, mesquite, Baccharis.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
21. **San Joaquin Kit Fox** *Vulpes macrotis mutica*	FE/CT None	December - July	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose textured sandy soil and prey base.	Low. Appropriate habitat is present in the Study Area but with no occurrences of species.	No	Potential Adverse Effect Can Be Mitigated

Habitat characteristics are from the Jepson Manual and the CDNNB.

*Not listed in the CNDDB or CNPS for the search area, but possibly for the location.

Abbreviations:
FE: Federally Endangered CE: California Endangered SSC: CDFW Species of Special Concern
FT: Federally Threatened CT: California Threatened FP: CDFW Fully-Protected

4.2.3 Special status animals discussion

Eight special status animals have potential to occur in the Study Area based on an analysis of known ecological requirements and the habitat conditions that were observed in the Study Area. We discuss the species and describe habitat, range restrictions, known occurrences, and survey results.

A. **Grasshopper Sparrow** (*Ammodramus savannarum*) is a California Species of Special Concern (nesting occurrences only) that is distributed across California west of the Cascade-Sierra Nevada crest, primarily as a summer resident from March to September. It has been seen as far north as Del Norte County, with a single disjunct population in Siskiyou County, and more scattered populations as far south as San Diego County. The grasshopper sparrow has been known to winter in California but this is rare. The breeding season is generally April to July with the peak being in May and June (CDFW 2014). This bird prefers large dense, dry grasslands on rolling hills, lowland plains, lower mountain slopes and valleys with scattered sage shrubs for perching (CNDDB 2017; CDFW 2014). If the shrub cover is dominant in the area, the grasshopper sparrow has been found to be absent. The bird needs grassland with patches of bare ground which is important for its foraging behavior (Shuford and Gardali 2008; CDFW 2014). Nests are built in grasses and forbs near the ground (CDFW 2014). The grasshopper sparrow's main food source is grasshoppers but it also eats other insects and seeds of pigweed, knotweed, campion and oats (Shuford and Gardali 2008). No grasshopper sparrows were observed in the Study Area during the spring surveys conducted in 2017. The closest reported occurrence of grasshopper sparrow is approximately 15 miles southeast of the Study Area (CNDDB 11). This record describes one bird and it is not clear that this was nesting. The Study Area contains low suitability grassland habitat for nesting grasshopper sparrows; the species was not seen during spring surveys and there are no nearby records of nesting.

B. **Pallid Bat** (*Antrozous pallidus*) is a California Species of Special Concern. The pallid bat is a large long-eared bat that occurs throughout the state and occupies a wide variety of habitats. Although most common in open, dry areas ideal for foraging with rocky outcrops for roosting, pallid bats are also found regularly in oak and pine woodlands where they roost in caves, mines, rock crevices, hollow trees and buildings (Nowak 1994). Bridges are also frequently used by pallid bats, often as night roosts between foraging periods (Pierson et al. 1996). The closest reported occurrence of the pallid bat is approximately 9.6 miles north of the Study Area under a bridge on River Road in San Miguel (CNDDB 104). Due to the presence of residential structures for roosting and the presence of sparsely vegetated habitats suitable for foraging, there is potential for this species to occur in the Study Area.

C. **Burrowing Owl** (*Athene cunicularia*) is a California Species of Special Concern. It is a small, rare owl that occupies abandoned mammal holes in the ground, most notably those of the California ground squirrel (*Otospermophilus beecheyi*). The burrowing owl is also known to inhabit badger and fox dens and man-made holes, such as pipes and culverts. Rarely, it has been known to dig burrows in softer soil types (Coulombe 1971; Gervais et. al. 2008). In winter months, burrowing owl individuals from other western populations will augment the year-round Californian populations (Gervais et. al. 2008). The breeding season is generally from March through August. Suitable habitat types for the burrowing owl are

dry, open annual or perennial grasslands and deserts with an abundance of burrows (CNDBB 2017; CDFW 2014). More specifically, the owl is found in coastal prairie, coastal scrub, great basin, Mojavean and Sonoran desert scrub and great basin, valley and foothill grassland habitats (CNDBB 2017). Two wintering or migrating burrowing owls were observed on former Chandler Ranch property by Althouse and Meade, Inc. biologists in October 2006, approximately 1.1 miles north of the Study Area. The closest reported CNDDB occurrence of potentially breeding burrowing owls is approximately 11 miles northwest from the Study Area on Camp Roberts Military Reservation (CNDDB 725). There is potential for wintering or transitory individuals to occur, but it is unlikely that burrowing owls would breed in the Study Area. Burrowing owls were not observed in the Study Area during 2017 spring surveys.

D. **Vernal Pool Fairy Shrimp** (*Branchinecta lynchi*) is a small freshwater crustacean that is federally listed as threatened. The species is endemic to California and southern Oregon and has an ephemeral life cycle, existing only in vernal pools or vernal pool-like habitats. The vernal pool fairy shrimp occurs only in cool-water pools. Individuals hatch from cysts during cold-weather winter storms; they require water temperatures of 50 °F or lower to hatch (Helm 1998; Eriksen and Belk 1999). The time to maturity and reproduction is temperature dependent, varying between 18 days and 147 days, with a mean of 39.7 days and immature and adult shrimp are known to die off when water temperatures rise to approximately 75°F (Helm 1998). The species is typically associated with smaller and shallower vernal pools (typically about 6 inches deep) that have relatively short periods of inundation (Helm 1998) and relatively low to moderate total dissolved solids (TDS) and alkalinity (Eriksen and Belk 1999). The nearest reported occurrence of vernal pool fairy shrimp is approximately 2 miles northeast of the Study Area in a vernal pool complex south of Highway 46 (CNDDB 287). The next nearest occurrence is approximately 2.18 miles west of the Study Area, northeast of the intersection of Niblick Road and Spring Street, west of Highway 101 in Paso Robles (CNDDB 621). Protocol-level wet season surveys were conducted in 2011/2012 and in 2012/2013 at 14 locations on Chandler Ranch, including seven locations in the Study Area. However, rainfall levels in both years were below the required 70% of average rainfall required by USFWS. Therefore the surveys were inconclusive (Dallas 2012; Dallas 2013). Dry season sampling conducted at the same 14 locations in 2012 did not detect vernal pool fairy shrimp (Helm Biological Consulting 2012).

E. **Townsend's Big-eared Bat** (*Corynorhinus townsendii*) is a California Species of Special Concern. Townsend's big-eared bat is medium sized with large rabbit-like ears. The subspecies are not distinguishable in the field. Both these subspecies have been recorded in a number of different habitats in California. In our area they are both found consistently in the vicinity of creek beds where they use the riparian corridor for foraging. Typical roost sites are in caves or buildings with cave-like features. Townsend's big-eared bat is sedentary and is presumed to spend the winter within 25 miles of its summer roosts. The nearest reported occurrence of this species is at Camp Roberts, where multiple individuals were observed roosting in buildings on Michigan Avenue, approximately 12.3 miles northwest of the Study Area Townsend's big-eared bat could possibly occur in the structures on the Study Area, but would be unlikely. Townsend's big-eared bat was not observed on the Study Area during 2017 site surveys.

F. **Western Spadefoot Toad** (*Spea hammondii*) is a California Species of Special Concern known from ephemeral pools in open grassland habitats across the interior region of San Luis Obispo County. Spadefoot toads remain underground for most of the year, emerging to breed in seasonal wetland pools during the rainy season. Development of the larvae from egg to metamorphosis can be very quick, depending upon water temperature. Spadefoot toads are known to breed in seasonal pools in the vicinity Highway 46, east of Paso Robles. The nearest reported occurrence is approximately 0.9 miles south of the Study Area on the Olsen Ranch (CNDDB 333). Two wetlands in the Study Area provide low potential breeding habitat; ponded water may not hold long enough for successful breeding.

G. **American Badger** (*Taxidea taxus*) is a California Species of Special Concern that has a widespread range across California (Brehme et. al. 2015; CDFW 2014). It is a permanent but uncommon resident in all parts of California, except for forested region of the far northwestern corner, and is more abundant in dry, open areas of most shrub and forest habitats (CNDDB 2017). The American Badger requires friable soil in order to dig burrows for cover and breeding. The main food source for the American Badger is fossorial rodents, mainly ground squirrels and pocket gophers (CDFW 2014). In habitats with a high density of shrubs, it has been found that both ground squirrel holes and badger mounds increased (Eldridge 2004). The breeding season is in summer and early fall and females give birth to litters usually in March and April (CDFW 2014). The closest reported occurrence of the American Badger is located approximately 4 miles southwest of the Study Area (CNDDB 23). There is potential habitat for American badger in the Study Area, however is unlikely to occur due to the proximity to urban development and intensive agriculture. Sign of American badger was not observed in the Study Area during 2017 surveys.

H. **San Joaquin Kit Fox** (*Vulpes macrotis mutica)* is a federally listed endangered species and a state listed threatened species. They are known from the Carrizo Plains and Camp Roberts, with transient individuals known to move between the two populations. Huerhuero Creek, located just north of Chandler Ranch, is considered to be one of the known movement corridors for kit fox. The two nearest reported occurrences are less than a mile from the Study Area, both on former Chandler Ranch property. One record is from 1990 and is 0.25 miles north (CNDDB 945), and the other is from 1991 and is 0.9 miles north (CNDDB 941). There is potentially suitable grassland habitat for San Joaquin kit fox in the Study Area. A protocol- level survey was conducted for San Joaquin kit fox by Althouse and Meade, Inc. in 2006 which determined that kit fox were not present at that time. San Joaquin kit fox was not observed in the Study Area during 2017 surveys, and is very unlikely to occur onsite.

4.4 Botanical Survey Results

Botanical surveys conducted in spring 2017 identified 84 species, subspecies, and varieties of vascular plant taxa in the Study Area (Table 6). The list includes 35 species native to California and 49 introduced (naturalized or planted) species. Native plant species account for approximately 42 percent of the taxa within the Study Area; introduced species account for approximately 58 percent. The high percentage of introduced species is reflective of the land use history of the site.

TABLE 6. VASCULAR PLANT LIST. The 84 species of vascular plants identified at the Study Area consist of 35 native species and 49 introduced species. The vascular plant list is separated into general life form categories, within which the taxa are listed alphabetically by scientific name.

Scientific Name	Special Status	Origin	Common Name
Trees – 2 Species			
Quercus douglasii	None	Native	Blue oak
Quercus lobata	None	Native	Valley oak
Shrubs – 1 Species			
Baccharis pilularis	None	Native	Coyote brush
Forbs – 68 Species			
Achyrachaena mollis	None	Native	Soft blow wives
Acmispon americanus var. *americanus*	None	Native	Spanish lotus
Acmispon brachycarpus [=*Lotus humistratus*]	None	Native	Short podded lotus
Amaranthus albus	None	Introduced	Tumbleweed
Amaranthus blitoides	None	Native	Procumbent pigweed
Ambrosia psilostachya	None	Native	Western ragweed
Amsinckia intermedia	None	Native	Common fiddleneck
Amsinckia lycopsoides	None	Native	Bugloss fiddleneck
Anagallis arvensis	None	Introduced	Scarlet pimpernel
Asclepias eriocarpa	None	Native	Kotolo
Asclepias fascicularis	None	Native	Narrow-leaf milkweed
Brassica nigra	None	Introduced	Black mustard
Brodiaea terrestris	None	Native	Dwarf brodiaea
Carduus pycnocephalus subsp. *pycnocephalus*	None	Introduced	Italian thistle
Castilleja attenuata	None	Native	Valley tassels
Centaurea melitensis	None	Introduced	Tocalote
Centaurea solstitialis	None	Introduced	Yellow star-thistle

Scientific Name	Special Status	Origin	Common Name
Centromadia [=Hemizonia] fitchii	None	Native	Spikeweed
Chenopodium album	None	Introduced	Lamb's quarters
Clarkia affinis	None	Native	Chaparral clarkia
Clarkia purpurea subsp. *quadrivulnera*	None	Native	Four-spot
Convolvulus arvensis	None	Introduced	Bindweed
Crassula connata	None	Native	Pygmy-weed
Croton setigerus	None	Native	Dove weed
Carduus pycnocephalus subsp. *pycnocephalus*	None	Introduced	Italian thistle
Descurainia sophia	None	Introduced	Flix weed
Epilobium brachycarpum	None	Native	Autumn willoweed
Erigeron bonariensis	None	Introduced	Flax-leaved horseweed
Erodium botrys	None	Introduced	Long beaked filaree
Erodium brachycarpum	None	Introduced	White stemmed filaree
Erodium cicutarium	None	Introduced	Redstem filaree
Eschscholzia californica	None	Native	California poppy
Euphorbia maculata	None	Introduced	Spotted spurge
Hirschfeldia incana	None	Introduced	Short podded mustard
Hypochaeris glabra	None	Introduced	Smooth cat's-ear
Hypochaeris radicata	None	Introduced	Rough cat's-ear
Juncus bufonius	None	Native	Toad rush
Lactuca serriola	None	Introduced	Prickly lettuce
Lepidium latifolium	None	Introduced	Perennial pepperweed
Lepidium nitidum	None	Native	Shining pepperweed
Logfia gallica	None	Introduced	Daggerleaf cottonrose
Lotus corniculatus	None	Introduced	Bird's-foot trefoil
Lupinus microcarpus	None	Native	Chick lupine
Lupinus nanus	None	Native	Sky lupine
Lupinus succulentus	None	Native	Arroyo lupine
Malva nicaeensis	None	Introduced	Bull mallow
Malva parviflora	None	Introduced	Cheeseweed
Matricaria discoidea	None	Introduced	Pineapple weed
Medicago polymorpha	None	Introduced	Bur clover
Melilotus indicus	None	Introduced	Sourclover

Scientific Name	Special Status	Origin	Common Name
Micropus californicus	None	Native	Q-tips
Microseris douglasii	None	Native	Douglas' microseris
Plagiobothrys canescens var. *canescens*	None	Native	Valley popcornflower
Plantago lanceolata	None	Introduced	English plantain
Polygonum aviculare	None	Introduced	Knotweed
Pseudognaphalium microcephalum	None	Native	Wright's cudweed
Psilocarphus tenellus	None	Native	Slender woolly-marbles
Salsola tragus	None	Introduced	Russian thistle
Silybum marianum	None	Introduced	Milk thistle
Sonchus asper subsp. *asper*	None	Introduced	Prickly sow thistle
Sonchus oleraceus	None	Introduced	Common sow thistle
Spergularia rubra	None	Introduced	Red sand-spurrey
Tribulus terrestris	None	Introduced	Puncture vine
Trichostema lanceolatum	None	Native	Vinegar weed
Trifolium hirtum	None	Introduced	Rose clover
Veronica peregrina subsp. *xalapensis*	None	Native	Purslane speedwell
Vicia sativa	None	Introduced	Spring vetch
Vicia villosa	None	Introduced	Hairy vetch
Xanthium strumarium	None	Native	Cocklebur
Grasses – 13 Species			
Avena barbata	None	Introduced	Slender wild oat
Avena fatua	None	Introduced	Wild oat
Bromus diandrus	None	Introduced	Ripgut brome
Bromus hordeaceus	None	Introduced	Soft chess
Bromus madritensis subsp. *rubens*	None	Introduced	Red brome
Cynodon dactylon	None	Introduced	Bermuda grass
Distichlis spicata	None	Native	Salt grass
Elymus caput-medusae	None	Introduced	Medusa head
Festuca myuros	None	Introduced	Rattail sixweeks grass
Festuca perennis	None	Introduced	Italian rye grass
Hordeum murinum	None	Introduced	Foxtail barley
Phalaris paradoxa	None	Introduced	Hood canary grass
Poa annua	None	Introduced	Annual blue grass

4.5 Wildlife Survey Results

At least 66 animal species are listed that could potentially occur in the Study Area (Table 7). These include at least 3 crustaceans, 3 amphibians, 7 reptiles, 38 birds, and 21 mammals. We provide this list as a guide to the wildlife observed in the Study Area and to the species that could potentially be present at least seasonally. Other species could occur as transients, particularly avian fauna.

TABLE 7. WILDLIFE LIST. At least 66 animal species have the potential to occur within the Study Area. The Special Status column indicates listing status of the organism under the Federal Endangered Species Act, the California Endangered Species Act, or by CDFW. Species observed at the site during our surveys are designated by the check symbol (✓) in the fourth column.

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Amphibians – 3 Species				
California (Western) Toad	*Anaxyrus [=Bufo] boreas halophilus*	None		Grassland, woodland
Sierran Treefrog [=Pacific Chorus Frog]	*Pseudacris sierra* [formerly *P. regilla*]	None		Many habitats near water
Western Spadefoot Toad	*Spea hammondii*	SSC		Grassland habitat with seasonal pools
Reptiles –7 Species				
Western Yellow-bellied Racer	*Coluber constrictor mormon*	None		Grasslands, open areas
Monterey Ringneck Snake	*Diadophis punctatus vandenburgii*	None		Woodlands, grasslands, chaparral
California Alligator Lizard	*Elgaria multicarinata multicarinata*	None		Open grassland, woodland, chaparral
California Kingsnake	*Lampropeltis californiae [=getula californiae]*	None		Woodland, grassland, streams
Pacific Gopher Snake	*Pituophis catenifer catenifer*	None		Woodland, grassland, rural
Skilton's [=Western] Skink	*Plestiodon [=Eumeces] skiltonianus skiltonianus*	None		Woodland, grassland, chaparral, inland and coastal
Coast Range [=Western] Fence Lizard	*Sceloporus occidentalis bocourtii*	None		Wide range; variety of habitats
Birds – 36 Species				
Red-winged Blackbird	*Agelaius phoeniceus*	None	✓	Marshes, fields
California Scrub-Jay	*Aphelocoma californica*	None		Oak, riparian woodlands
Burrowing Owl	*Athene cunicularia*	SSC		Grasslands with ground squirrel burrows
Red-tailed Hawk	*Buteo jamaicensis*	None	✓	Open, semi-open country

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
California Quail	*Callipepla californica*	None		Shrubby habitats
Anna's Hummingbird	*Calypte anna*	None		Many habitats
Turkey Vulture	*Cathartes aura*	None		Open country
Rock Pigeon	*Columba livia*	None		Urban areas
American Crow	*Corvus brachyrhynchos*	None		Many habitats, esp. urban
Brewer's Blackbird	*Euphagus cyanocephalus*	None		Open habitats
American Kestrel	*Falco sparverius*	None		Open, semi-open country
Greater Roadrunner	*Geococcyx californianus*	None		Open habitats
House Finch	*Haemorhous mexicanus*	None		Riparian, grasslands, chaparral, woodlands,
Barn Swallow	*Hirundo rustica*	None		Riparian, grasslands, lakes
California Towhee	*Melozone crissalis*	None	✓	Chaparral scrub, shrubby urban areas
Northern Mockingbird	*Mimus polyglottos*	None	✓	Riparian, chaparral, woodlands, urban
Brown-headed Cowbird	*Molothrus ater*	None		Grasslands, ranches
House Sparrow	*Passer domesticus*	None		Urban
Cliff Swallow	*Petrochelidon pyrrhonota*	None		Urban; open areas near water
Spotted Towhee	*Pipilo maculatus*	None		Dense brushy areas
Bushtit	*Psaltriparus minimus*	None		Woodlands, chaparral
Black Phoebe	*Sayornis nigricans*	None		Near water in natural and urban settings
Say's Phoebe	*Sayornis saya*	None		Open country, grassland
Yellow-rumped Warbler	*Setophaga coronata*	None		Coniferous and mixed woodland (breeding)
Western Bluebird	*Sialia mexicana*	None	✓	Woodland near open areas
American Goldfinch	*Spinus tristis*	None		Weedy fields, woodlands
Eurasian Collared-Dove	*Streptopelia decaocto*	None		Urban areas
Western Meadowlark	*Sturnella neglecta*	None		Open habitats, grasslands
European Starling	*Sturnus vulgaris*	None	✓	Agricultural, livestock areas
Bewick's Wren	*Thryomanes bewickii*	None		Riparian woodland, scrub
House Wren	*Troglodytes aedon*	None		Shrubby areas
American Robin	*Turdus migratorius*	None		Streamsides, woodlands, urban parks
Western Kingbird	*Tyrannus verticalis*	None		Grasslands, savannah

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Cassin's Kingbird	*Tyrannus vociferans*	None		Open and semi-open areas
Barn Owl	*Tyto alba*	None		Agricultural, woodlands
Mourning Dove	*Zenaida macroura*	None		Open and semi-open habitats
	Mammals – 20 Species			
Pallid Bat	*Antrozous pallidus*	SSC		Riparian, woodland, urban
Coyote	*Canis latrans*	None		Open woodlands, brushy areas, wide ranging.
Townsend's Big-eared Bat	*Corynorhinus townsendii*	SSC		Arid western desert scrub and pine forest regions
Feral Cat	*Felis catus*	None		Varied
Black-tailed Jackrabbit	*Lepus californicus*	None		Grasslands
Striped Skunk	*Mephitis mephitis*	None		Mixed woods, brush, semi-open country
California Vole	*Microtus californicus*	None		Grassland meadows
Long-tailed Weasel	*Mustela frenata*	None		Grasslands
California Myotis	*Myotis californicus*	None		Tunnels, hollow trees, buildings, bridges.
Mule [Black-tailed] Deer	*Odocoileus hemionus*	None		Many habitats
Deer Mouse	*Peromyscus maniculatus*	None		All dry land habitats
Western Harvest Mouse	*Reithrodontomys megalotis*	None		Grassland, dense vegetation near water
Broad-footed Mole	*Scapanus latimanus*	None		Grasslands, agricultural, in moist soils
California Ground Squirrel	*Spermophilus beecheyi*	None	✓	Grasslands
Western Spotted Skunk	*Spirogale gracilis*	None		Variety of habitats
Brush Rabbit	*Sylvilagus bachmani*	None		Brushy habitats
Mexican Free-tailed Bat	*Tadarida brasiliensis*	None		Variety of habitats; roosts in bridges, buildings, caves
American Badger	*Taxidea taxus*	SSC		Open country
Valley Pocket Gopher	*Thomomys bottae*	None	✓	Variety of habitats
San Joaquin Kit Fox	*Vulpes macrotis mutica*	FE, ST		Open grasslands, scrub

FT = Federally Threatened; FE = Federally Endangered; ST = State Threatened; SSC = Species of Special Concern

5.0 Potential Impacts to Biological Resources

5.1 Regulatory Framework

5.1.1 Federal regulations

Endangered Species Act – The federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a 'take' under the Endangered Species Act. Take of a federally listed threatened or endangered species is prohibited without a special permit. The Endangered Species Act allows for take of a threatened or endangered species incidental to development activities once a habitat conservation plan has been prepared to the satisfaction of the USFWS and an incidental take permit has been issued. The Endangered Species Act also allows for the take of threatened or endangered species after consultation has deemed that development activities will not jeopardize the continued existence of the species. The federal Endangered Species Act also provides for a Section 7 Consultation when a federal permit is required, such as a Clean Water Act Section 404 permit.

"Critical Habitat" is a term within the federal Endangered Species Act designed to guide actions by federal agencies (as opposed to state, local, or other agency actions) and defined as "an area occupied by a species listed as threatened or endangered within which are found physical or geographical features essential to the conservation of the species, or an area not currently occupied by the species which is itself essential to the conservation of the species."

Section 404 Clean Water Act Regulations – The Clean Water Act provides wetland regulation at the federal level and is administered by the U. S. Army Corps of Engineers (USACE). The purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting is required for filling waters of the U.S. (including wetlands). Permits may be issued on an individual basis, or may be covered under approved nationwide permits.

Migratory Bird Treaty Act – All migratory bird species that are native to the U.S. or its territories are protected under the federal Migratory Bird Treaty Act, as amended under the Migratory Bird Treaty Reform Act of 2004. The Migratory Bird Treaty Act is generally protective of migratory birds.

5.1.2 State regulations

California Environmental Quality Act (CEQA) – CEQA requires that biological resources be considered when assessing the environmental impacts that are the result of proposed actions. The lead agencies determine the scope of what is considered an impact and what constitutes an "adverse effect" on a biological resource.

California Fish and Game Code – The California Fish and Game Code regulate the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the California Endangered Species Act, Streambed Alteration Agreement regulations, and California Native Plant Protection Act. Fish

and Game Code states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto," and "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized.

California Endangered Species Act – The California Endangered Species Act (CESA), similar to the federal Endangered Species Act, contains a process for listing of species and regulating potential impacts to listed species. State threatened and endangered species include both plants and wildlife, but do not include invertebrates. The designation "rare species" applies only to California native plants. State threatened and endangered plant species are regulated largely under the Native Plant Preservation Act in conjunction with the California Endangered Species Act. State threatened and endangered animal species are legally protected against "take." The CESA authorizes CDFW to enter into a memorandum of agreement for take of listed species to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met. Section 2080 of the CESA prohibits the take of species listed as threatened or endangered pursuant to the Act. Section 2081 allows CDFW to authorize take prohibited under Section 2080 provided that: 1) the taking is incidental to an otherwise lawful activity; 2) the taking will be minimized and fully mitigated; 3) the applicant ensures adequate funding for minimization and mitigation; and 4) the authorization will not jeopardize the continued existence of the listed species.

Streambed Alteration Agreement Regulations – Section 1602 of the Fish & Game Code requires any person, state, or local governmental agency to provide advance written notification to CDFW prior to initiating any activity that would: 1) divert or obstruct the natural flow of, or substantially change or remove material from the bed, channel, or bank of any river, stream, or lake; or 2) result in the disposal or deposition of debris, waste, or other material into any river, stream, or lake. The state definition of "lakes, rivers, and streams" includes all rivers or streams that flow at least periodically or permanently through a well-defined bed or channel with banks that support fish or other aquatic life, and watercourses with surface or subsurface flows that support or have supported riparian vegetation.

California Native Plant Protection Act – Section 1900-1913 of the California Fish and Game Code contains the regulations of the Native Plant Protection Act of 1977. The intent of this act is to help conserve and protect rare and endangered plants in the state.

Regional Water Quality Control Board – The RWQCB not only regulates impacts to water quality in federal waters of the U.S. under Section 401 of the Clean Water Act, but they also regulate any isolated waters that are impacted under the state Porter Cologne Act utilizing a Waste Discharge Requirement. Discharge of fill material into waters of the State not subject to the jurisdiction of the USACE pursuant to Section 401 of the Clean Water Act may require authorization pursuant to the Porter Cologne Act through application for waste discharge requirements or through waiver of waste discharge requirements.

5.3 Habitat Impacts

The proposed project is anticipated to affect all areas of the 117.3 acre Study Area. This impact analysis assumes all habitat areas of the site will be impacted. See Figure 4 in Section 8.0 for the locations of each habitat type in the Study Area.

TABLE 8. POTENTIAL HABITAT IMPACTS.

Habitat Type	Permanent Impact Acres
California Annual Grassland	108.7
Anthropogenic	7.1
Ruderal	1.4
Wetland	0.08

5.3.1 California annual grassland

Approximately 108.7 acres of annual grassland could be permanently impacted by the Project. The grassland is fairly disturbed habitat dominated by non-native species, but may provide foraging habitat for songbirds, raptors, and small mammals. This is not a sensitive habitat type and does not require mitigation except where it affects special status species (see Section 5.6.3 below).

5.3.2 Anthropogenic

Approximately 7.1 acres of anthropogenic habitat would be permanently impacted by the Project. The Our Town development and all associated structures and roads would be removed. The existing structures and ornamental plants may provide habitat for nesting birds, bats, and small mammals. Anthropogenic habitats are not sensitive habitat types and do not require mitigation. No special status species are expected to be affected by removal of anthropogenic areas of the site.

5.3.3 Ruderal

Approximately 1.4 acres of ruderal habitat would be permanently impacted by the Project. This habitat is highly disturbed and dominated by non-native species, but may provide foraging habitat for songbirds and small mammals. This is not a sensitive habitat type and does not require mitigation. No special status species are expected to be affected by removal of ruderal areas of the site.

5.4 Wetlands and Jurisdictional Waters

Up to 0.08 acres of wetland and up to 591 feet of potential Federal non-wetland waters could be permanently impacted by the Project. The jurisdictional status of wetlands and waters in the Study Area has not yet been determined. Mitigation recommendations are provided if impacts are proposed to potential wetlands and waters on the site (see Section 6.2).

5.5 Nesting Birds

Vegetation removal and construction activities associated with the proposed Project could result in adverse impacts to nesting birds if conducted during nesting season (March 15 through August 15). The potential for impacts to nesting birds can be reduced (refer to Sections 6.3 and 6.4).

5.6 Special Status Species

5.6.1 Special status plants

Special status plants were not detected in the Study Area during appropriately timed botanical surveys in spring 2017. The proposed Project would not affect special status plants.

5.6.2 Special status birds

The Study Area has a moderate potential for wintering burrowing owls, and a low potential for nesting burrowing owls and nesting grasshopper sparrows. Potential impacts to burrowing owls or nesting grasshopper sparrows can avoided by implementing pre-construction surveys (refer to Sections 6.3 and 6.4).

5.6.3 Special status mammals

The removal of old buildings and trees for the proposed Project could impact roosting habitat for pallid bat and Townsend's big-eared bat. Impacts to special status bat species can be avoided by implementing preconstruction surveys (refer to Section 6.4).

There is potential habitat for American badger and San Joaquin kit fox within the Study Area. The grassland habitat within the Study Area is of low quality for these species, but transient individuals may occur. Impacts to these species can be avoided (Section 6.4).

5.6.4 Spadefoot toad

Wetlands on site are not expected to support breeding spadefoot toads. Mitigations for spadefoot toad are not recommended.

5.6.5 Vernal pool fairy shrimp

Multiple wet and dry season surveys for listed branchiopods, including vernal pool fairy shrimp, have had negative survey results. Wetlands on the site are not expected to hold sufficient surface water to support fairy shrimp in 2017-2018. Further protocol level surveys to demonstrate absence of listed branchiopods may be required by the U.S. Fish and Wildlife Service.

6.0 Recommendations and Mitigations

6.1 Habitats

Mitigation is not required for impacts to non-native annual grassland, anthropogenic, or ruderal habitats. See Section 6.4.5 for mitigation requirements for San Joaquin kit fox.

6.2 Wetlands and Jurisdictional Waters

Project activities could result in fill of wetland areas. A wetland delineation report was prepared for the Study Area according to state and federal standards to determine the extent of Clean Water Act section 404 jurisdictional wetlands and waters of the United States (Althouse and Meade, Inc. 2017). A jurisdictional determination of wetlands onsite should be obtained from the U.S. Army Corps of Engineers.

BR-1. If permanent impacts to wetlands are proposed, a mitigation, monitoring, and reporting plan shall be prepared and approved by the City and other jurisdictional agencies, as appropriate (i.e., California Department of Fish and Game, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board). Wetland mitigation should increase the aerial extent of wetland habitat on site at a three-to-one ratio (created wetland area to impacted wetland area). Mitigation implementation and success will be monitored for a minimum of three years, depending on the jurisdictional agencies' requirements.

6.3 Nesting Birds

Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take (as defined therein) of all native birds and their active nests, including raptors and other migratory non-game birds (as listed under the Federal MBTA).

BR-2. Within one week of ground disturbance activities, if work occurs between March 15 and August 15, nesting bird surveys shall be conducted. If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities shall occur within 100 feet of nests until chicks are fledged. A pre-construction survey report shall be submitted to the lead agency immediately upon completion of the survey. The report shall detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements. A map of the Project site and nest locations shall be included with the report. The Project biologist conducting the nesting survey shall have the authority to reduce or increase the recommended buffer depending upon site conditions.

6.4 Avoidance, Minimization, and Mitigation for Special Status Species

6.4.1 Special status plants

Special status plants were not detected in the Study Area during seasonally timed floristic surveys in spring 2017. The proposed Project would not impact special status plants.

6.4.2 Burrowing owl

BR-3. Not more than 14 days prior to any work that affects habitat containing burrows, pre-construction surveys for burrowing owls shall be conducted. The pre-construction surveys shall be conducted in a manner sufficient to determine no burrowing owls are present in the work areas. Pre-construction surveys shall be conducted throughout the year, when work is proposed, to account for breeding, wintering, and transient owls.

BR-4. If burrowing owls are present in the work areas during the breeding season (February 1 through August 31), the burrows must be monitored to determine if a breeding pair is present. If a breeding pair is confirmed, the burrow must be avoided and protected from impacts via a 250 foot setback from the burrow. If a breeding pair is not present, passive relocation may be used. If burrowing owls are present during the non-breeding season, a passive relocation effort, such as a one-way door, may be implemented. Monitoring and mitigation must be conducted under guidance from a qualified wildlife biologist. Mitigation and protection procedures should incorporate recommendations outlined in current survey guidelines from CDFW.

6.4.3 Special status bats

BR-5. Upon project approval, a qualified biologist shall conduct a survey of existing trees and structures on the Study Area to determine if roosting bats are present. If possible, the survey shall be conducted during the non-breeding season (November through March). The biologist shall have access to all interior attics, as needed. If a colony of bats is found roosting in any tree or structure, further surveys shall be conducted sufficient to determine the species present and the type of roost (day, night, maternity, etc.) If the bats are not part of an active maternity colony, passive exclusion measures may be implemented with approval from CDFG. November is the best time of the year to exclude bats from a roost because it is after the breeding season and before winter hibernation (not all species hibernate).

BR-6. If bats are roosting in trees or structures on the Study Area during the daytime but are not part of an active maternity colony, then exclusion measures must include one-way valves that allow bats to get out but are designed so that the bats may not re-enter the structure.

BR-7. If a bat colony is excluded, appropriate alternate bat habitat shall be installed in the Study Area. For each occupied roost removed, one bat box shall be installed in similar habitat and should have similar cavity or crevices properties to those which are

removed, including access, ventilation, dimensions, height above ground, and thermal conditions. Maternal bat colonies may not be disturbed.

6.4.4 American badger

BR-8. Within 15 days of starting any grading, grubbing, or oak tree removal, a preconstruction survey shall be conducted in the Study Area to locate occupied American badger dens within 100 feet of project areas. Orange construction fencing shall be installed under the direction of a project biologist in a manner sufficient to protect the dens from construction equipment. A buffer of 50 feet shall be used for occupied non-maternal dens. A buffer of 150 feet shall be installed if the den is determined to be a maternal pupping den. Construction activities shall not commence within the exclusion area until the badger has moved of its own accord. A preconstruction survey letter report shall be submitted to the lead agency for review within one week after completion of the survey.

6.4.5 San Joaquin kit fox

The Study Area is located within the two to one mitigation ratio area as per the San Luis Obispo County Standard Kit Fox Mitigation Ratios map, which is found at: https://www.slocounty.ca.gov/Departments/Planning-Building/Current-and-Environmental-Planning/Services/Environmental-Review/San-Joaquin-Kit-Fox.aspx.

BR-9. Prior to issuance of grading and/or construction permits, the applicant shall submit evidence to the County of San Luis Obispo, Department of Planning and Building, Environmental and Resource Management Division (County) that states that one or a combination of the following three San Joaquin kit fox mitigation measures has been implemented:

a. Provide for the protection in perpetuity, through acquisition of fee or a conservation easement of **[Total number of mitigation acres required]** acres of suitable habitat in the kit fox corridor area (e.g. within the San Luis Obispo County kit fox habitat area, northwest of Highway 58), either on-site or off-site, and provide for a non-wasting endowment to provide for management and monitoring of the property in perpetuity. Lands to be conserved shall be subject to the review and approval of the California Department of Fish and Game (Department) and the County.

   This mitigation alternative (a.) requires that all aspects if this program must be in place before County permit issuance or initiation of any ground disturbing activities.

b. Deposit funds into an approved in-lieu fee program, which would provide for the protection in perpetuity of suitable habitat in the kit fox corridor area within San Luis Obispo County, and provide for a non-wasting endowment for management and monitoring of the property in perpetuity.

   Mitigation alternative (b) above can be completed by providing funds to The Nature Conservancy (TNC) pursuant to the Voluntary Fee-Based Compensatory Mitigation Program (Program). The Program was established in agreement between the

Department and TNC to preserve San Joaquin kit fox habitat, and to provide a voluntary mitigation alternative to project proponents who must mitigate the impacts of projects in accordance with the California Environmental Quality Act (CEQA). The fee, payable to "The Nature Conservancy", would total **$[Amount of fee based on $___ per acre]**. This fee is calculated based on the current cost-per-unit of $___ per acre of mitigation, which is scheduled to be adjusted to address the increasing cost of property in San Luis Obispo County; your actual cost may increase depending on the timing of payment. This fee must be paid after the Department provides written notification about your mitigation options but prior to County permit issuance and initiation of any ground disturbing activities.

c. Purchase **[Total number of mitigation acres required]** ___credits in a Department-approved conservation bank, which would provide for the protection in perpetuity of suitable habitat within the kit fox corridor area and provide for a non-wasting endowment for management and monitoring of the property in perpetuity.

Mitigation alternative (c) above can be completed by purchasing credits from the Palo Prieto Conservation Bank (see contact information below). The Palo Prieto Conservation Bank was established to preserve San Joaquin kit fox habitat, and to provide a voluntary mitigation alternative to project proponents who must mitigate the impacts of projects in accordance with the California Environmental Quality Act (CEQA). The cost for purchasing credits is payable to the owners of The Palo Prieto Conservation Bank, and would total **$[Amount of mitigation acres required (i.e. credits), currently priced at $___ per credit]**. This fee is calculated based on the current cost-per-credit of $___ per acre of mitigation. The fee is established by the conservation bank owner and may change at any time. Your actual cost may increase depending on the timing of payment. Purchase of credits must be completed prior to County permit issuance and initiation of any ground disturbing activities.

BR-10. Prior to issuance of grading and/or construction permits, the applicant shall provide evidence that they have retained a qualified biologist acceptable to the City. The retained biologist shall perform the following monitoring activities:

i. Prior to issuance of grading and/or construction permits and within 30 days prior to initiation of site disturbance and/or construction, the biologist shall conduct a pre-activity (i.e. pre-construction) survey for known or potential kit fox dens and submit a letter to the City reporting the date the survey was conducted, the survey protocol, survey results, and what measures were necessary (and completed), as applicable, to address any kit fox activity within the project limits.

ii. The qualified biologist shall conduct weekly site visits during site-disturbance activities (i.e. grading, disking, excavation, stock piling of dirt or gravel, etc.) that proceed longer than 14 days, for the purpose of monitoring compliance with required Mitigation Measures BR-11 through BR-19. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends monitoring for some other reason (see BR-10.iii). When weekly

monitoring is required, the biologist shall submit weekly monitoring reports to the City.

iii. **Prior to or during project activities**, if any observations are made of San Joaquin Kit fox, or any known or potential San Joaquin kit fox dens are discovered within the project limits, the qualified biologist shall re-assess the probability of incidental take (e.g. harm or death) to kit fox. At the time a den is discovered, the qualified biologist shall contact USFWS and the CDFW for guidance on possible additional kit fox protection measures to implement and whether or not a Federal and/or State incidental take permit is needed. If a potential den is encountered during construction, work shall stop until such time the USFWS/CDFW determines it is appropriate to resume work.

If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS. The results of this consultation may require the applicant to obtain a Federal and/or State permit for incidental take during project activities. The applicant should be aware that the presence of kit foxes or known or potential kit fox dens at the project site could result in further delays of project activities.

iv. In addition, the qualified biologist shall implement the following measures:

1. Within 30 days prior to initiation of site disturbance and/or construction, fenced exclusion zones shall be established around all known and potential kit fox dens. Exclusion zone fencing shall consist of either large flagged stakes connected by rope or cord, or survey laths or wooden stakes prominently flagged with survey ribbon. Each exclusion zone shall be roughly circular in configuration with a radius of the following distance measured outward from the den or burrow entrances:
   - Potential kit fox den: 50 feet
   - Known or active kit fox den: 100 feet
   - Kit fox pupping den: 150 feet
2. All foot and vehicle traffic, as well as all construction activities, including storage of supplies and equipment, shall remain outside of exclusion zones. Exclusion zones shall be maintained until all project-related disturbances have been terminated, and then shall be removed.
3. If kit foxes or known or potential kit fox dens are found on site, daily monitoring by a qualified biologist shall be required during ground disturbing activities.

BR-11. Prior to issuance of grading and/or construction permits, the applicant shall clearly delineate the following as a note on the project plans: "*Speed signs of 25 mph (or lower) shall be posted for all construction traffic to minimize the probability of road mortality of the San Joaquin kit fox*". Speed limit signs shall be installed on the project site within 30 days prior to initiation of site disturbance and/or construction.

BR-12. Prior to issuance of grading and/or construction permit and within 30 days prior to initiation of site disturbance and/or construction, all personnel associated with the project shall attend a worker education training program, conducted by a qualified biologist, to avoid or reduce impacts on sensitive biological resources (i.e. San Joaquin kit fox). At a minimum, as the program relates to the kit fox, the training shall include the kit fox's life history, all mitigation measures specified by the City, as well as any related biological report(s) prepared for the project. The applicant shall notify the City shortly prior to this meeting. A kit fox fact sheet shall also be developed prior to the training program, and distributed at the training program to all contractors, employers and other personnel involved with the construction of the project.

BR-13. Prior to, during and after the site disturbance and/or construction phase, use of pesticides or herbicides shall be in compliance with all local, State and Federal regulations. This is necessary to minimize the probability of primary or secondary poisoning of endangered species utilizing adjacent habitats, and the depletion of prey upon which San Joaquin kit foxes depend.

BR-14. During the site disturbance and/or construction phase, grading and construction activities after dusk shall be prohibited unless coordinated through the City, during which additional kit fox mitigation measures may be required.

BR-15. During the site disturbance and/or construction phase, to prevent entrapment of the San Joaquin kit fox, all excavations, steep-walled holes and trenches in excess of two feet in depth shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Trenches shall also be inspected for entrapped kit fox each morning prior to onset of field activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they shall be thoroughly inspected for entrapped kit fox. Any kit fox so discovered shall be allowed to escape before field activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.

BR-16. During the site disturbance and/or construction phase, any pipes, culverts, or similar structures with a diameter of four inches or greater, stored overnight at the project site shall be thoroughly inspected for trapped San Joaquin kit foxes before the subject pipe is subsequently buried, capped, or otherwise used or moved in any way. If during the construction phase a kit fox is discovered inside a pipe, that section of pipe will not be moved. If necessary, the pipe may be moved only once to remove it from the path of activity, until the kit fox has escaped.

BR-17. During the site disturbance and/or construction phase, all food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of only in closed containers. These containers shall be regularly removed from the site. Food items may attract San Joaquin kit foxes onto the project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.

BR-18. During the site disturbance and/or construction phase, any contractor or employee that inadvertently kills or injures a San Joaquin kit fox or who finds any such animal either dead, injured, or entrapped shall be required to report the incident immediately to the

applicant and City. In the event that any observations are made of injured or dead kit fox, the applicant shall immediately notify the USFWS and CDFW by telephone. In addition, formal notification shall be provided in writing within three working days of the finding of any such animal(s). Notification shall include the date, time, location and circumstances of the incident. Any threatened or endangered species found dead or injured shall be turned over immediately to CDFW for care, analysis, or disposition.

BR-19. Prior to final inspection, or occupancy, whichever comes first, should any long internal or perimeter fencing be proposed or installed, the applicant shall do the following to provide for kit fox passage:

i. If a wire strand/pole design is used, the lowest strand shall be no closer to the ground than 12 inches.
ii. If a more solid wire mesh fence is used, 8" x 12" openings near the ground shall be provided every 100 yards
iii. Upon fence installation, the applicant shall notify the City to verify proper installation. Any fencing constructed after issuance of a final permit shall follow the above guidelines

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8.0 Figures

- Figure 1. USGS Topographic Map
- Figure 2. Aerial Photograph
- Figure 3. CNDDB Plants and Animals Map
- Figure 4. Biological Resource Map

Figure 1. United States Geological Survey Topographic Map

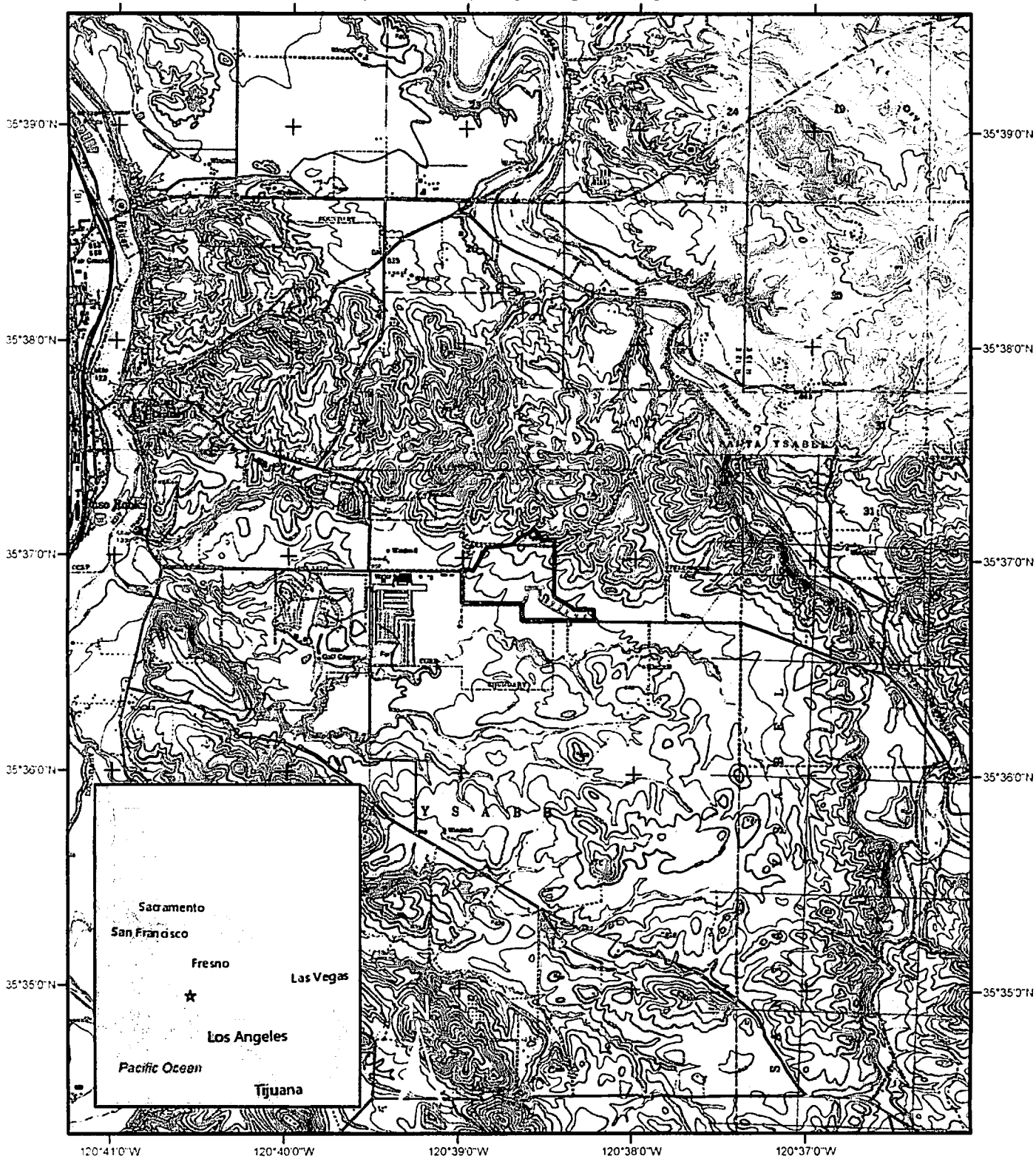
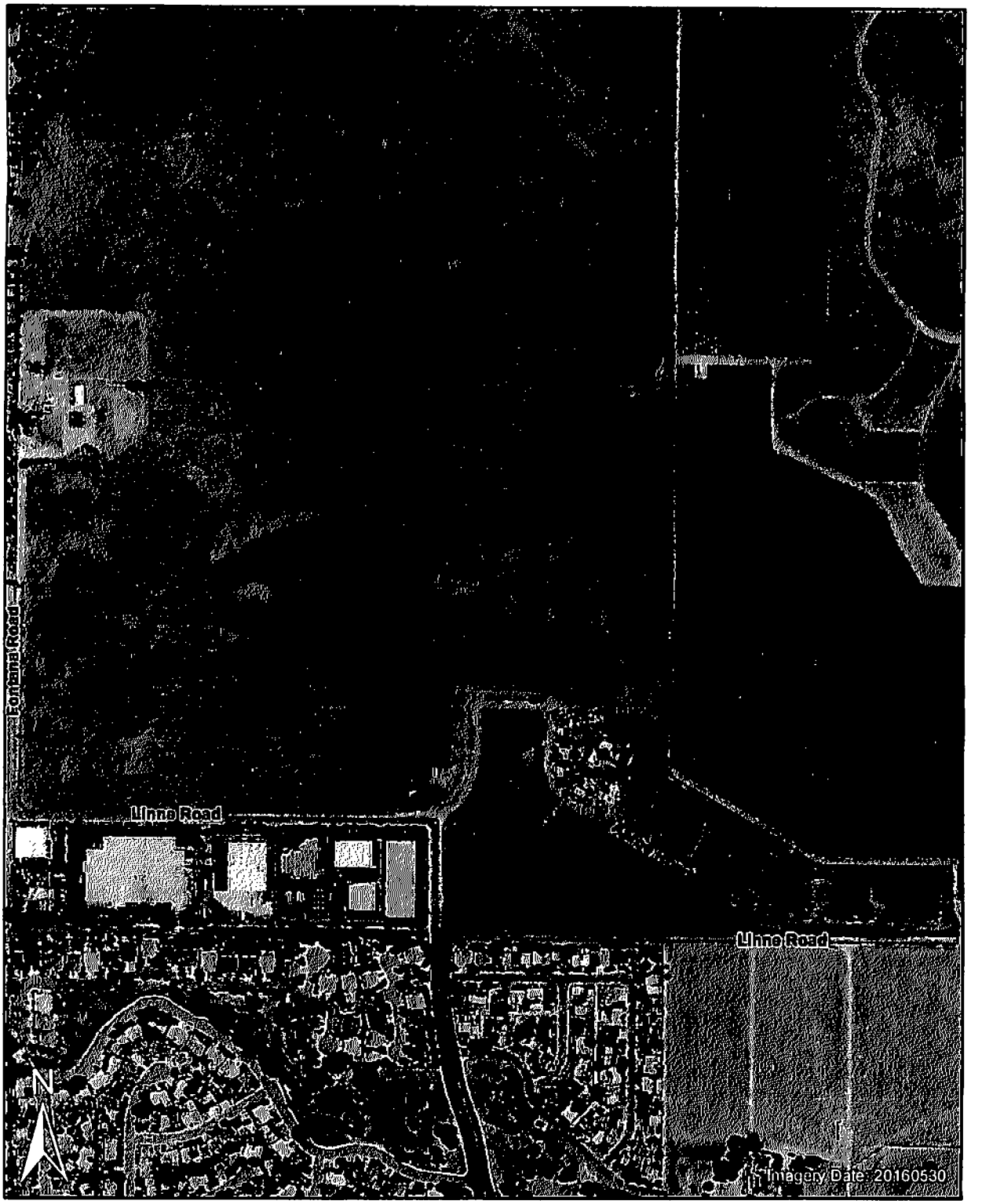


Figure 2. Aerial Photograph



Study Area (117.3 acres)

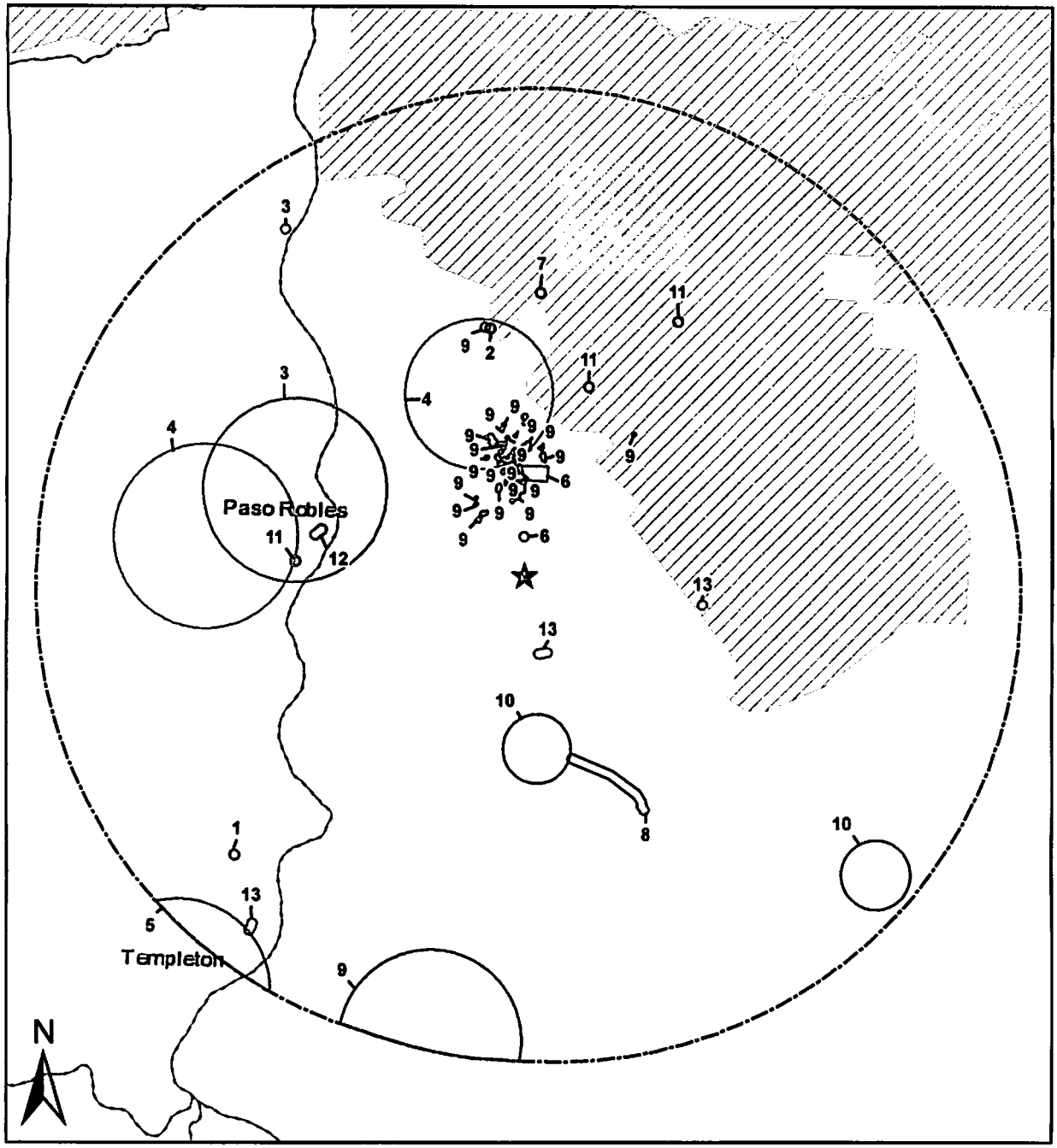
1 inch = 600 feet

0 200 400 800

Feet

Updated February 15, 2018 10:53 AM by JBB

Figure 3. California Natural Diversity Database Records and United States Fish and Wildlife Service Critical Habitat Map



Label	Common Name	Label	Common Name
1	American Badger	10	Tricolored Blackbird
2	Golden Eagle	11	Vernal Pool Fairy Shrimp
3	Least Bell's Vireo	12	Western Pond Turtle
4	Lemmon's Jewelflower	13	Western Spadefoot
5	Mesa Horkelia		
6	San Joaquin Kit Fox		
7	San Luis Obispo Owl's Clover		
8	Santa Lucia Dwarf Rush		
9	Shining Navarretia		

Project Location

5-Mile Radius

Critical Habitat

Vernal pool fairy shrimp

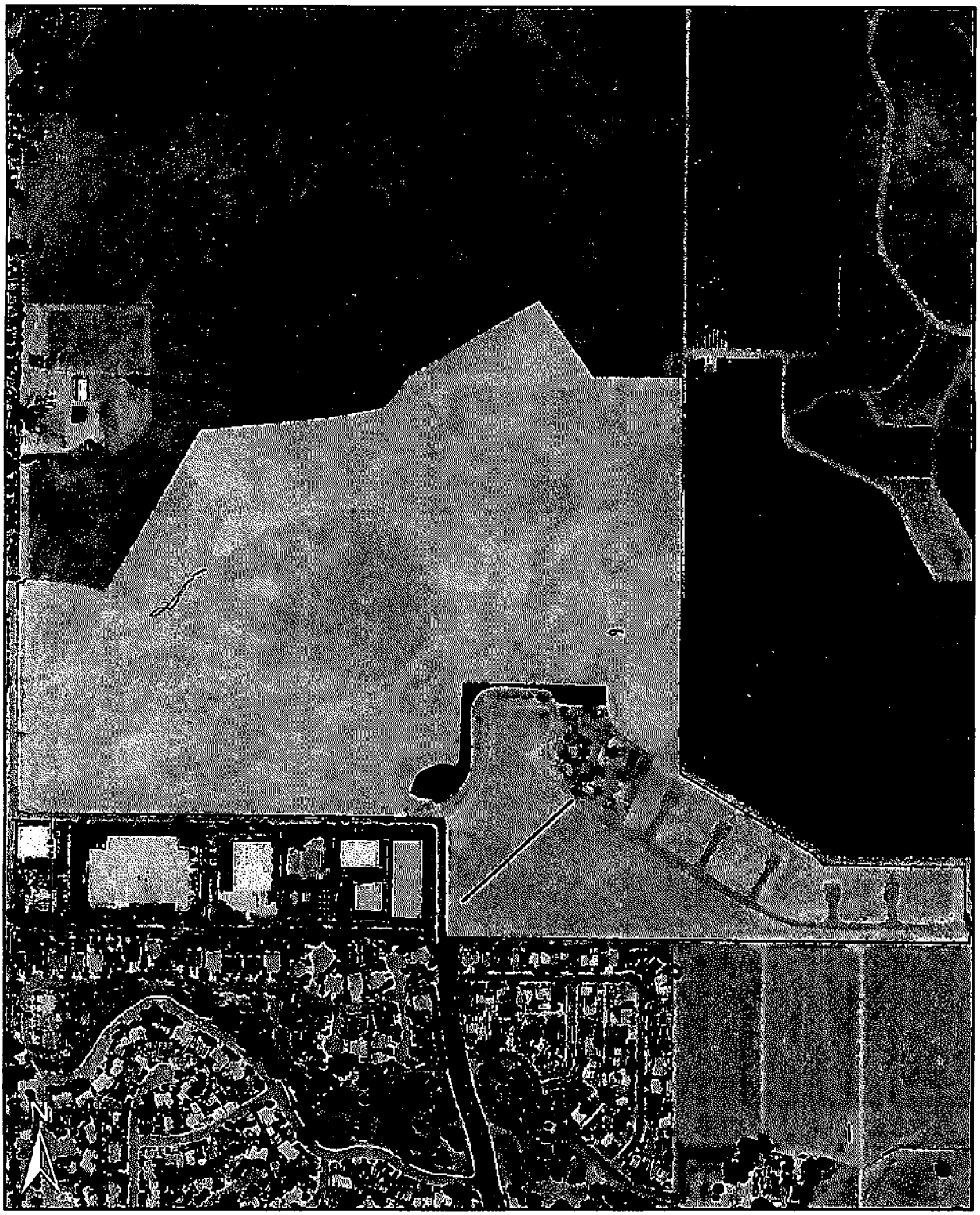
Steelhead

1 inch = 1.75 miles

0 0.5 1 2 3 Miles

Updated February 15, 2018 10:48 AM by: JBB

Figure 4. Biological Resources



9.0 Photographs

Photo 1. Annual grassland habitat. April 28, 2017.

Photo 2. Our Town abandoned road. April 28, 2017.

Photo 3. Potential wetland swale. May 3, 2017.

Photo 4. Potential wetland, center of Study Area. May 3, 2017.

Appendix A – Assessor Parcel Numbers within Study Area

APN	Acres
020-211-006	1.21
020-211-009	0.89
020-211-010	0.10
020-211-012	10.63
020-321-001	1.11
020-321-002	0.25
020-322-001	0.17
020-322-002	0.15
020-322-003	0.11
020-322-004	0.18
020-322-005	0.16
020-322-006	0.16
020-322-007	0.17
020-322-008	0.17
020-322-009	0.17
020-323-001	0.16
020-323-002	0.14
020-323-003	0.12
020-323-004	0.19
020-323-005	0.20
020-323-006	0.12
020-323-007	0.17
020-323-008	0.19
020-324-001	0.16
020-324-002	0.14
020-324-003	0.12
020-324-004	0.19
020-324-005	0.19
020-324-006	0.12
020-324-007	0.14
020-324-008	0.16

APN	Acres
020-331-001	0.16
020-331-002	0.14
020-331-003	0.12
020-331-004	0.19
020-331-005	0.19
020-331-006	0.12
020-331-007	0.14
020-331-008	0.16
020-332-001	0.20
020-332-002	0.17
020-332-003	0.16
020-332-004	0.19
020-332-005	0.19
020-332-006	0.12
020-332-007	0.15
020-332-008	0.16
020-333-001	0.17
020-333-002	0.16
020-333-003	0.15
020-333-004	0.15
020-333-005	0.16
020-333-006	0.17
020-334-001	0.18
020-334-002	0.24
020-334-003	0.19
020-334-004	0.15
020-334-005	0.16
020-334-006	0.17
025-362-037	0.76
025-381-001	4.45
025-381-005	83.46

Kit Fox Habitat Evaluation Form
Cover Sheet

Project Name **South Chandler Ranch** Date **7-12-2019**

Project Location **Paso Robles, CA**

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

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

Lat/Long or UTM coordinates (if available) **N 35.6157º**

W -120.64617º

Project Description **Residential Subdivision**

Project Size**:** ~95.5 Amount of Kit Fox Habitat Affected**:** **~95.5**

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

WHR type California Annual Grassland **95.5 Acres**

Comments:

Acreage affected listed on this form is an estimate. Actual acreage affected will be determined by final grading plans.

Form Completed by: Daniel E. Meade

Revised 03/02

San Joaquin Kit Fox Habitat Evaluation Form

Is the project within 10 miles from a recorded San Joaquin kit fox observation or within contiguous suitable habitat as defined in Question 2(A-E)?

YES – Continue with evaluation form
NO – Evaluation form/surveys are not necessary

1. Importance of the project area relative to Recovery Plan for Upland Species of the San Joaquin Valley, California (Williams et al, 1998).
   - **A. Project would block or degrade an existing corridor linking core populations or isolate a subpopulation (20).**
   - B. Project is within a core population (15)
   - C. Project area is identified within satellite population (12)
   - D. Project area is within a corridor linking satellite populations (10)
   - E. Project area is not within any of the previously described areas but is within known kit fox range (5)

2. Habitat characteristics of the project area.
   - **A. Annual grassland or saltbush scrub present >50% of site (15)**
   - B. Grassland or saltbush scrub present but comprises <50% of project area (10)
   - C. Oak savannah present on >50% of site (8)
   - D. Fallow ag fields or grain/alfalfa crops (7)
   - E. Orchards/vineyards (5)
   - F. Intensively maintained row crops or suitable vegetation absent (0)

3. Isolation of project area
   - A. Project area surrounded by contiguous kit fox habitat as described in Question 2a-e (15)
   - **B. Project area adjacent to at least 40 acres of contiguous habitat or part of an existing corridor (10)**
   - C. Project area adjacent to <40 acres of habitat but linked by existing corridor (i.e.-river, canal, aqueduct) (7)
   - D. Project area surrounded by ag but less than 200 yards from habitat (5)
   - E. Project area completely isolated by row crops or development and is greater than 200 yards from potential habitat (0)

4. Potential for increased mortality as a result of the project implementation. Mortality may come from direct (e.g. – construction related) or indirect (e.g. – vehicle strikes due to increases in post development traffic) sources.
   - A. Increase in mortality likely (10)
   - **B. Unknown mortality effects (5)**
   - C. No long term effect on mortality (0)

5. Amount of potential kit fox habitat affected

A. > 320 acres (10)
B. 160-319 acres (7)
C. 80-159 acres (5)
D. 40-79 acres (3)
E. <40 acres (1)

6. Results of project implementation

A. Project site will be permanently converted and will no longer support foxes (10)
B. Project area will be temporarily impacted but will require periodic disturbance for ongoing maintenance (7)
C. Project area will be temporarily impacted and no maintenance necessary (5)
D. Project will result in changes to agricultural crops (2)
E. No habitat impacts (0)

7. Project shape

A. Large block (10)
B. Linear with >40 foot right-of way (5)
C. Linear with <40 foot right-of-way (3)

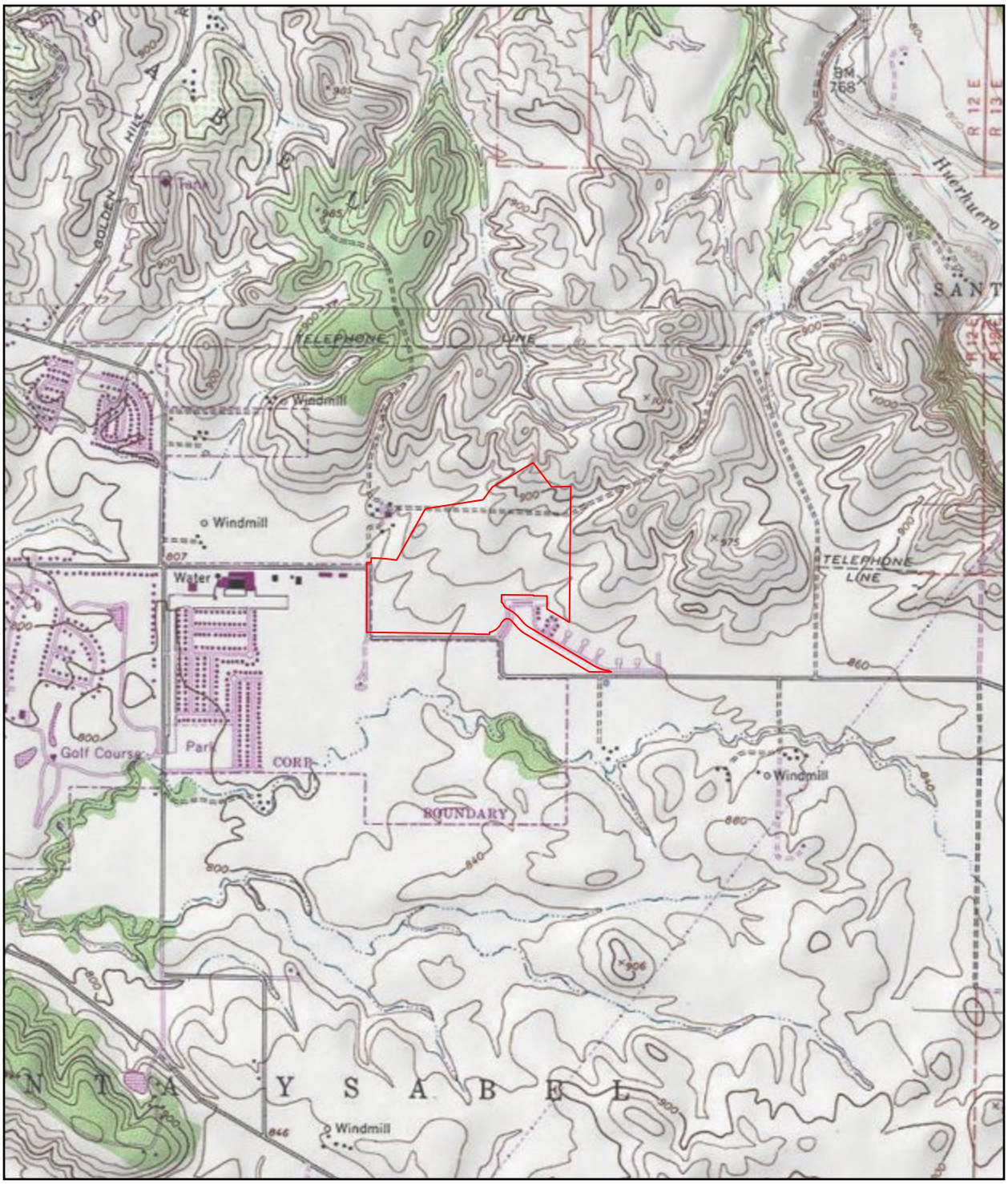
8. Have San Joaquin kit foxes been observed within 3 miles of the project area within the last 10 years?

A. Yes (10)
B. No (0)

Scoring

1.	Recovery importance	20
2.	Habitat condition	15
3.	Isolation	10
4.	Mortality	5
5.	Quantity of habitat impacted	5
6.	Project results	10
7.	Project shape	10
8.	Recent observations	0
Total		75

Figure 1. United States Geological Survey Topographic Map



Legend

South Chandler Ranch

N

0 500 1,000 2,000 Feet

South Chandler Ranch
Map Center: 120.64403°W 35.61482°N
Paso Robles, San Luis Obispo County

USGS Quadrangle: Templeton

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
July 12, 2019 01:08 PM by JBB

Biological Report

for

Olsen Ranch

City of El Paso de Robles, California

Prepared for

Olsen Ranch 212, LLC
Mike Naggar & Associates
445 S. D St.
Perris, CA 92570

by

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES
1602 Spring Street
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(805) 237-9626

May 2019

1154.02

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APPENDIX D. ARBORIST REPORT

Cover Page: View northeast of grassland and cropland habitats in the middle of the Olsen Ranch

SYNOPSIS

- This biological report describes biological resources at a 254.1-acre property located in the City of El Paso de Robles, San Luis Obispo County, California (Study Area). The Study Area includes Assessor's Parcel Number (APN) 009-795-001, 009-795-002, 009-795-003, 009-795-004, 009-795-005, and 009-795-006.
- The proposed project (Project) is a residential development on approximately 188 acres of the Study Area. A preliminary site plan was evaluated for this report. It is expected that a final site plan will be evaluated in a final Environmental Impact Report for the Project.
- Five habitat types were identified and mapped in the Study Area, including cropland, California annual grassland, riparian, wetlands and drainages, and anthropogenic.
- Botanical surveys conducted in the Study Area identified 134 species, subspecies, and varieties of vascular plants. Appropriate habitat and soil conditions are suitable for five special status plant species. No special status plant species were detected in the Study Area during appropriately timed botanical surveys.
- Wildlife species that could be present in the Study Area include three species of amphibians, nine reptiles, 50 birds, and 24 mammals. Appropriate habitat is present in the Study Area for seven special status animals. No special status animals were detected in the Study Area in 2018 and 2019. Western spadefoot toad, a California Species of Special Concern was observed onsite in 2004.
- Biological resources that could be impacted by the Project are evaluated based on preliminary site plans. Actual acreage of Project impacts would be based on approved final site plans. Mitigation recommendations are provided where applicable to reduce potential significant impacts to sensitive biological resources.

1 INTRODUCTION

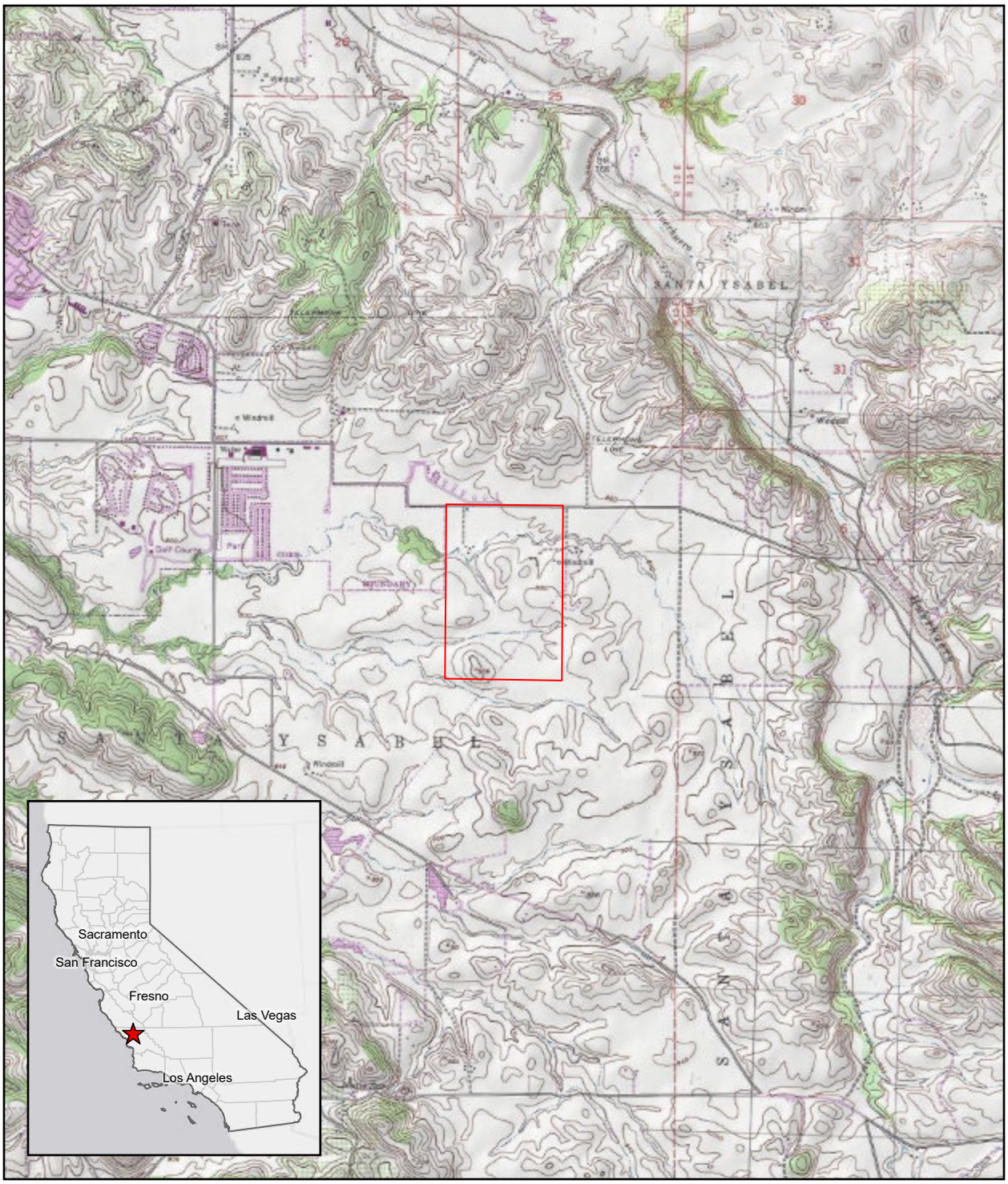
This report provides results from the study of biological resources on the Olsen Ranch Property (Study Area), an approximately 254.1-acre property in the City of Paso Robles, San Luis Obispo County, California (Figure 1). This report also provides analysis of the potential impacts to identified biological resources from the proposed residential development project (Project). Results include a habitat assessment, botanical and wildlife inventories, special status species database search, and literature review. Discussion of special status species that have potential to occur within the Study Area, or be affected by the proposed Project, is also included. The effects of the proposed Project on biological resources are evaluated and mitigation recommendations are included.

1.1 Project Location and Description

Olsen Ranch is located just inside the eastern edge of the City of Paso Robles, where it is bounded by Linne Road to the north, Hanson Road to the east, Meadowlark Road to the south, and a subdivision to the west (Figure 2). The Project is located within the Templeton United States Geological Survey (USGS) 7.5-minute quadrangle and is comprised of six legal parcels (APNs 009-795-001, 009-795-002, 009-795-003, 009-795-004, 009-795-005, 009-795-006). Approximate coordinates for the center of the Study Area are 35.606 °N, 120.637°W (WGS 84). Elevation ranges from approximately 815 feet to 930 feet above mean sea level.

The proposed Project is a residential development in the Olsen-Chandler Ranch Specific Plan area. The Project includes 673 residential units, a community center, mixed-use consisting of light retail, a corner store and office, and community gardens and recreation areas.

Figure 1. United States Geological Survey Topographic Map



Legend

Olsen Ranch Boundary

N

0 0.25 0.5 1 Mile

Olsen Ranch
Map Center: 120.63666°W 35.60646°N
Paso Robles, San Luis Obispo County

USGS Quadrangle: Templeton

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Map Updated:
April 19, 2019 02:25 PM by MMP

1.2 Regulatory Framework

Standards for environmental protection and restoration, in the form of laws and regulations, are created within three different organizational levels of the government: Federal, State, and Local. Entities exist within each level to create and enforce regulations that help ensure protection of specific and pertinent regional issues threatening ecosystems and environments. The following regulations are applicable to the proposed Project.

1.2.1 Federal Regulations

Endangered Species Act. The federal Endangered Species Act (FESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. "Critical Habitat" is a term within the FESA designed to guide actions by federal agencies and is defined as "an area occupied by a species listed as threatened or endangered within which are found physical or geographical features essential to the conservation of the species, or an area not currently occupied by the species which is itself essential to the conservation of the species." Actions that jeopardize endangered or threatened species and/or critical habitat are considered a 'take' under the FESA. "Take" under federal definition means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Projects that would result in "take" of any federally listed threatened or endangered species, or critical habitats, are required to obtain permits from the USFWS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. Through Section 10, it is required to prepare a Habitat Conservation Plan (HCP) to be approved by the United States Fish and Wildlife Service (USFWS), which results in the issuance of an Incidental Take Permit (ITP). Through Section 7, which can only occur when a separate federal nexus in a project exists (prompting interagency consultation), a consultation by the various federal agencies involved can take place to determine appropriate actions to mitigate negative effects on endangered and threatened species and their habitat.

Migratory Bird Treaty Act. All migratory bird species that are native to the U.S. or its territories are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13), as amended under the Migratory Bird Treaty Reform Act of 2004. The MBTA makes it illegal to purposefully take (pursue, hunt, shoot, wound, kill, trap, capture, or collect) any migratory bird, or the parts, nests, or eggs of such a bird, except under the terms of a valid Federal permit.

Section 404 Clean Water Act Regulations. The Clean Water Act provides wetland regulation at the federal level and is administered by the U. S. Army Corps of Engineers (USACE). The purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permits are required for temporary or permanent fill within waters of the U.S. (WOTUS; including wetlands). Permits may be issued on an individual basis or may be covered under approved nationwide permits.

1.2.2 State Regulations

California Environmental Quality Act (CEQA). CEQA defines a "project" as any action undertaken from public or private entity that requires discretionary governmental review (a non-ministerial permittable action). All "projects" are required to undergo some level of environmental review pursuant to CEQA, unless an exemption applies. CEQA's environmental review process includes an assessment of existing resources, broken up by categories (i.e., air quality, aesthetics, etc.), a catalog of potential impacts to those resources caused by the proposed project, and a quantifiable result determining the level of significance an impact would generate. The goal of environmental review under CEQA is to avoid or mitigate impacts that would lead to a "significant effect" on a given resource; section 15382 of the CEQA Guidelines defines a "significant effect" as

> *a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.*

Public agencies are required to implement CEQA and execute jurisdiction to determine when applicable activities are or are not subject to CEQA. A public agency with the most prominent nexus and jurisdiction to a project is called the lead agency. The lead agencies determine the scope of what is considered an impact and what constitutes a "significant effect". "Biological resources" is one of the varying categories considered during environmental review through CEQA. A lead agency can require a biological assessment to be prepared to report on existing biological resources and recommend mitigation measures that will reduce or lessen potential negative impacts to those biological resources. The questions listed in CEQA's Appendix G: Biological Resources section, which are used to guide assessment of impacts to biological resources are as follows:

- *Does the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*
- *Does the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*
- *Does the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*
- *Does the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*
- *Does the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*
- *Does the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The lead agency has the final determination over whether a project is or is not permissible, based upon the environmental review, completed requirements and environmental documentation, and their judgement that the project would not have a significant effect on the environment, or that all significant effects would be mitigated.

California Fish and Game Code. The California Fish and Game Code regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the California Endangered Species Act, Streambed Alteration Agreement regulations, and California Native Plant Protection Act. Fish and Game Code states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto," and "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized.

California Endangered Species Act. The California Endangered Species Act (CESA), like FESA, contains procedures for listing species and regulating potential impacts to listed species. State threatened or endangered species include both plants and wildlife, but do not include invertebrates. The designation "rare species" applies only to California native plants. State threatened and endangered plant species are regulated largely under the Native Plant Preservation Act in conjunction with the CESA. Section 2080 of CESA prohibits the take of species listed as threatened or endangered pursuant to the CESA. CESA authorizes the California Department of Fish and Wildlife (CDFW) to enter into a memorandum of agreement for take of listed species to issue an Incidental Take Permit (ITP) for a state-listed threatened or endangered species, only if specific criteria are met. Section 2081 allows CDFW to authorize take provided that: 1) the taking is incidental to an otherwise lawful activity; 2) the taking will be minimized and fully mitigated; 3) the applicant ensures adequate funding for minimization and mitigation; and 4) the authorization will not jeopardize the continued existence of the listed species.

CEQA requires that public agencies evaluate and disclose impacts to plant species protected under CESA and the NPPA. In addition, public agencies must also address plant species that may not be listed under CESA or the NPPA, but that may nevertheless meet the definition of rare or endangered provided in CEQA. CDFW works in collaboration with the California Native Plant Society and with botanical experts throughout the state to maintain an Inventory of Rare and Endangered Plants, and the similar Special Vascular Plants, Bryophytes, and Lichens List. Species on these lists may meet the CEQA definition of rare or endangered. As the trustee agency for the wildlife of California, which includes plants, ecological communities and the habitat upon which they depend, CDFW advises public agencies during the CEQA process to help ensure that the actions they approve do not significantly impact such resources. CDFW often advises that impacts to plant species with a California Rare Plant Rank in the Inventory be disclosed by the lead agency during project review to ensure compliance with CEQA.

California Native Plant Protection Act. Section 1900-1913 of the California Fish and Game Code contains the regulations of the Native Plant Protection Act of 1977. The intent of this act is to help conserve and protect rare and endangered plants in the state.

Streambed Alteration Agreement Regulations. Section 1602 of the Fish & Game Code requires any person, state, or local governmental agency to provide advance written notification to CDFW prior to initiating any activity that would: 1) divert or obstruct the natural flow of, or substantially change or remove material from the bed, channel, or bank of any river, stream, or lake; or 2) result in the disposal or deposition of debris, waste, or other material into any river, stream, or lake. The state definition of "lakes, rivers, and streams" includes all rivers or streams that flow at least periodically or permanently through a well-defined bed or channel with banks that support fish or

other aquatic life, and watercourses with surface or subsurface flows that support or have supported riparian vegetation.

Regional Water Quality Control Board. The RWQCB regulates impacts to water quality in federal waters of the U.S. under Section 401 of the Clean Water Act. RWQCB also regulates impacts to isolated waters, wetlands, riparian areas, and headwaters that may not be covered under the Clean Water Act. Statewide general waste discharge requirements for dredged or fill discharges to waters deemed by USACE to be outside of federal jurisdiction (General WDRs) are covered by Water Code section 13263(a) as implemented by the State Water Resources Control Board's Water Quality Order No. 2004-0004-DWQ. It is the intent of the General WDRs to regulate a subset of the discharges determined not to fall within federal jurisdiction, particularly those projects involving impacts to small acreage or linear feet and those involving a small volume or dredged material.

1.2.3 Local Regulations

California Oak Woodland Conservation Act – This act established the Oak Woodland Conservation Program in 2001, administered by the Wildlife Conservation Board, to help local jurisdictions protect and enhance their oak woodland resources. It offers landowners, conservation groups, and cities/counties and opportunity to obtain funding for projects designed to conserve and restore California's oak woodlands.

California Oak Woodlands Conservation: Environmental Quality -- Senate Bill 1334 requires a county to determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county shall require one or more of the following oak woodlands mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands: (1) Conserve oak woodlands through the use of conservation easements; (2)(A) Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees; (B) The requirement to maintain trees pursuant to this paragraph terminates seven years after the trees are planted; (C) Mitigation pursuant to this paragraph shall not fulfill more than one-half of the mitigation requirement for the project; (D) The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands; (3) Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project; (4) Other mitigation measures developed by the county. Under this regulation, a lead agency that adopts, and a project that incorporates, one or more of the measures specified to mitigate the significant effects to oaks and oak woodlands shall be deemed to be in compliance.

City of Paso Robles Oak Tree Preservation Ordinance – The City of Paso Robles requires review of request to remove oak trees with trunk diameter of six inches (dbh) or greater. The Ordinance also requires approval for trimming branches 6 inches or greater on undeveloped or vacant sites, designation of critical root zones, and replacement requirements for tree removals.

2 METHODS

2.1 Literature Review

Relevant literature, including previous biological resource studies conducted in the vicinity and queries of special status species occurrence records were reviewed to determine what biological resources may occur near the Study Area. A previous Biological Report for the Olsen property (A&M 2004) was reviewed for this current study.

The California Natural Diversity Database (CDFW 2019a) and the California Native Plant Society (CNPS) On-line Inventory of Rare and Endangered Plants of California were reviewed for special status species known to occur in the eight USGS 7.5-minute quadrangles surrounding the Property: Adelaida, Atascadero, Creston, Estrella, Paso Robles, Santa Margarita, Templeton, and York Mountain. The Morro Bay North quadrangle was omitted from the CNDDB and CNPS search results because the quad is separated from the site by the coastal mountains and contains results for coastal species which would not be present in the Study Area. Additional special status species research consisted of reviewing previous biological reports for the area and searching online museum and herbarium specimen records for locality data within San Luis Obispo County. We reviewed online databases of specimen records maintained by the Museum of Vertebrate Zoology at the University of California, Berkeley, the California Academy of Sciences, and the Consortium of California Herbaria. Additional special status species with potential to occur on or near the Property were added to our special status species list (refer to Table 3 and Table 4).

Special status species lists produced by database and literature searches were cross-referenced with the described habitat types in the Study Area to identify all potential special status species that could occur on or near the Property. Each special status species that could occur on or near the Property is individually discussed (refer to Section 3.8 and 3.9).

After review of special status species data, the following criteria were used to determine the potential for special-status species to occur in the Study Area:

- ***Present:*** The species was observed in the Study Area during field surveys.
- ***High Potential:*** High habitat quality combined with CNDDB occurrences or other records indicate the species is likely to occur in the Study Area. Individuals may not have been observed in the Study Area during field surveys; however, the species likely occurs in the Project vicinity and could move into the Project site in the future.
- ***Moderate Potential:*** Suitable habitat is present in the Study Area and CNDDB occurrences or surveys have recorded the species within 10 miles of the Project. Individuals were not observed during surveys, but the species could be present, at least seasonally or as a transient.
- ***Low Potential:*** Marginally suitable habitat is present in the Study Area, but there are no occurrence records or only historical (i.e., 50 years or older) records within 10 miles of the Project area. Individuals were not observed during surveys and are not expected to be present.
- ***No Potential:*** Species, sign, or habitat were not observed in the Study Area during surveys and suitable habitat is not present.

2.2 Mapping

Mapping efforts utilized Samsung Galaxy Tab 4 tablets equipped with Garmin GLO GPS Receivers and a third-party mapping application. Biological resource constraints were mapped in the field on site. Hand notation of habitats on high resolution aerials were digitized into polygon layers. Maps were created using aerial photo interpretation, field notation, and spatial data imported to Esri ArcGIS, a Geographic Information System (GIS) software program. Data were overlaid on a 2016 National Agriculture Imagery Program (NAIP) aerial of San Luis Obispo County (NAIP and USDA 2016). Impacts were calculated using recent CAD site plans from Wallace Group Engineering.

Habitat types within the northern section of the property was digitized using airborne digital photographs of the Study Area that were acquired on March 18, 2019 using a commercially available sUAV by Part 107 certified pilot and visual spotter. A georeferenced RGB orthomosaic image of the Study Area was generated from the acquired aerial images for baseline review. All flight operations were conducted within visual line of sight and below a maximum altitude of 200 feet above-ground level. The study area occurs in class E2 airspace and ATC authorization was acquired through the FAA UAS Data Exchange (confirmation number: ARMZZ116XR) prior to flying. Permission from the property owner was granted before flight.

2.3 Soils

A custom soil report was created by importing the Study Area as an Area of Interest (AOI) into the Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database (SSURGRO) via their online portal (USDA and NRCS 2019). The exported custom soil report, provided in Appendix A, includes a map showing an overlay of the seven soil map units within the AOI as well as a description of each.

2.4 Surveys

Olsen Ranch was surveyed for biological resources from September 2018 through May 2019 by Althouse and Meade, Inc. Surveys were conducted by Principal Biologists Jason Dart, LynneDee Althouse, and Daniel Meade, Biologists Jessica Griffiths, Diondra Jones, Will Knowlton and Darcee Gutilla, and Botanists Kristen Andersen, Shannon Henke, and Kyle Nessen (Table 1). Surveys were conducted on foot in order to compile species lists, search for special status plants and animals, to map habitats, and to photograph the Property.

Each habitat type occurring in the Study Area was inspected, described, and catalogued (Section 3.4, Table 2). All plant and animal species observed in the Study Area were identified and recorded (Section 3.10 and 3.11). Survey transects were meandering with an emphasis on locating habitat appropriate for special status plants while achieving full coverage of the Study Area. Transects were utilized to map boundaries of different vegetation types, describe general conditions and dominant species, compile species lists, and evaluate potential habitat for special status species. Identification of botanical resources included field observations and laboratory analysis of collected material. Botanical surveys were conducted according to agency guidelines (USFWS 2000; CNPS 2001; CDFW 2018). Botanical surveys were appropriately timed to identify all special status plant species known from the region (refer to Section 3.8, and Table 3) that have potential to occur in the Study Area. Botanical nomenclature used in this document follows the Jepson eFlora (Jepson Flora Project (eds.) 2019).

Wildlife documentation included observations of animal presence and wildlife sign such as nests, tracks, and scat. Observations of wildlife were recorded during field surveys in all areas of the Study Area (Table 6). Birds were identified by sight, using 10-power binoculars, or by vocalizations. Reptiles and amphibians were identified by sight, often using binoculars; traps were not used. Mammals recorded in the Study Area were identified by sight and tracks.

Special status species lists produced by database and literature searches were cross-referenced with the described habitat types in the Study Area to identify all potential special status species that could occur on or near the site. Each special status species that could occur on or near the Property is individually discussed (refer to Sections 3.8.4 and 3.9.3).

TABLE 1. BIOLOGICAL SURVEYS

Survey Date	Biologist(s)	Weather Observations	Activities
September 7, 2018	Shannon Henke Kyle Nessen	60 °F, clear and sunny	Vegetation Survey
October 16, 2018	Will Knowlton Diondra Jones	50 – 75 °F, clear, winds to 10 mph	Transect Den Survey
February 18, 2019	Shannon Henke	32 - 42 °F, winds 0 – 5 mph, 20 percent cloud cover	Botanical and Wildlife Surveys
March 12, 2019	Jason Dart Jacqueline Tilligkeit	65 °F, partly cloudy and breezy	Wetland and Botanical Surveys
March 14, 2019	Dan Meade	62 °F, partly cloudy 5- 10 mph.	Wetland and Vernal Pool Surveys
March 21, 2019	Dan Meade	60 °F, Cloudy, 5 mph	Wetland and Vernal Pool Surveys
March 26, 2019	Kristen Andersen Jacqueline Tilligkeit	70 °F, partly cloudy, calm	Wetland and Botanical Surveys
March 27, 2019	Dan Meade	56 °F, calm, cloudy with rain showers	Botanical and Wildlife Surveys
April 4, 2019	Jacqueline Tilligkeit	60 °F, overcast, calm	Habitat Mapping
April 8, 2019	Kyle Nessen	75 °F, clear, winds 0-5 mph	Drone Survey
April 16, 2019	LynneDee Althouse Jacqueline Tilligkeit	65 °F, partly cloudy, calm	Wetland Delineation
April 15, 2019	Kyle Nessen	67 °F, partly cloudy, winds 0-5 mph	Vernal Pool Botanical Survey
April 19, 2019	Kyle Nessen	70 °F, clear, winds 0-5 mph	Drone Survey
May 2, 2019	Jason Dart	66 °F, sunny, winds 0-5 mph	Botanical Survey
May 10, 2019	Darcee Guttilla	56 °F, cloudy, winds 5-10 mph	Nesting Bird Survey
May 13, 2019	Jessica Griffiths	56 °F, clear and sunny, calm	Nesting Bird Survey

3 RESULTS

3.1 Regional Context

The Olsen Ranch is an agricultural property situated on the eastern side of the Salinas River valley, east of Paso Robles, in an area of rolling hills and ephemeral waterways. The site is approximately 2.75 miles east of Highway 101, 2.25 miles south of State Route 46, and 1.5 miles west of Huerhuero Creek, on the south side of Linne Road. Waterways flow in a westerly direction to the Salinas River, which flows northward to Monterey Bay. The area is distinguished by expanses of rangeland, dry farmed croplands, scattered oak trees, and increasing residential, commercial and vineyard development.

3.2 Existing Conditions

Olsen Ranch topography is rolling hills, gently sloping alluvial terraces, and ephemeral waterways. Three residences are located on the site, fronting on Linne Road at the north end of the Study Area, with barns, irrigated and non-irrigated pastures, and other livestock and ranching infrastructure. A high voltage overhead power line passes through the southeastern portion of the Study Area. No other structures are in the southern two-thirds of the site.

Riparian habitat is associated with the northern drainage within the Study Area and is mapped to include portions of the waterway that have tree canopy directly associated with the waterway feature (refer to Figure 3). Riparian habitat consists of oak tree canopy with a few cottonwoods and willows that provide shade to an ephemeral waterway with a grass understory.

Mature oak trees, both valley oak and blue oak, are located in the riparian habitat and scattered in cropland and grassland fields. The number of mature oaks has been significantly reduced over decades and grazing and crop practices have eliminated recruitment of young trees. The trees that remain provide nesting habitat for a variety of birds.

The Study Area is sectioned off into fields that have been managed independently. Along Linne Road is an active cropland in the northwest corner of the Study Area that is further sectioned into several dry-farmed crop fields. Around the two residences in that area are several additional acres that are variously cropped or mowed annually. To the east, in the far northeast corner of the Study Area is an overgrown and weedy grassland that has not been cropped in the last 20 years, although it is periodically mowed. A few coyote brush shrubs have become established, but the only trees are associated with the ephemeral waterway and riparian habitat. One residence is located south of the waterway and is surrounded by grassland habitat that is seasonally mowed but not cropped. The southern two-thirds of the Study Area is divided unevenly from north to south by a ranch road, with all fields to the east actively cropped and the fields to the west have remained an untilled but heavily grazed grassland habitat. These fields are characterized by scattered mature oaks and rolling hills.

A man-made stockpond is situated along the western Study Area boundary where a wetland swale feature drainage saturated return flow westward off the property. The stockpond is decades old and supports mature willow trees and emergent wetland vegetation. The pond is seasonal, holding water into summer during most years, and it provides breeding habitat for several amphibian species and nesting habitat for a variety of birds.

Figure 2. Aerial Photograph

Legend

Olsen Ranch Boundary (254.1 acres)

N

0 500 1,000 Feet

Olsen Ranch
Map Center: 120.63666°W 35.60646°N
Paso Robles, San Luis Obispo County

Imagery Source and Date: USDA NAIP, 09/28/2016

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Map Updated:
May 21, 2019 08:49 AM by MMP

3.3 Soils

Six individual soil map units from the NRCS Soil Survey Geographic Database (SSURGO) overlap the Study Area: Arbuckle-Positas complex, Arbuckle-San Ysidro complex, Cropley clay, Nacimiento-Los Osos complex, Rincon clay loam, and San Ysidro loam (USDA and NRCS 2019). These soil types are typically found on terraces and have alluvium parent material derived from calcareous or sedimentary rock. Slopes range from flat to 15 percent and the drainage class is well drained to moderately well drained. A custom USDA soils report is provided in Appendix A.

3.4 Habitat Types

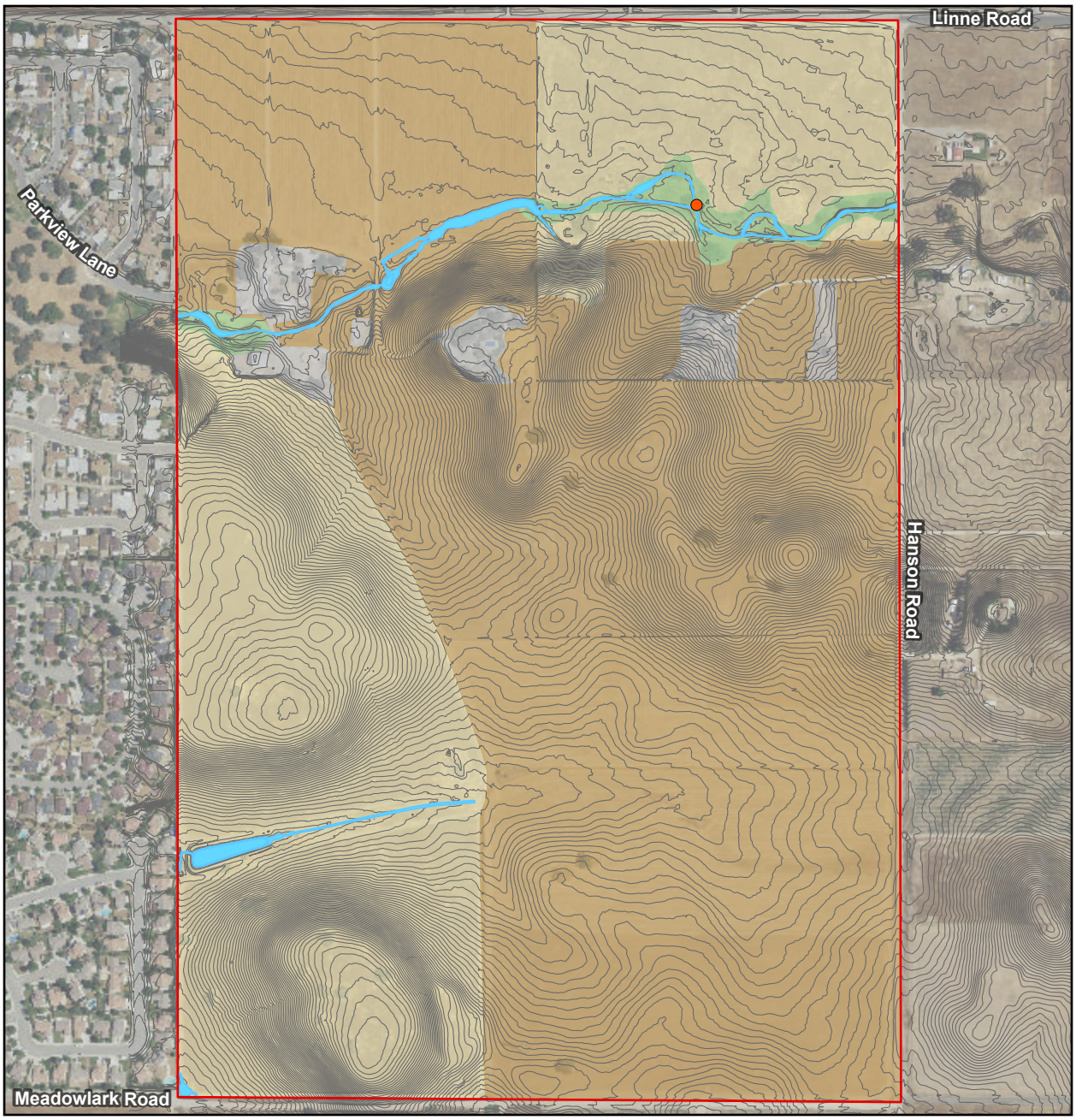
Five general habitat types are described for the Olsen Ranch Study Area: cropland, California annual grassland, riparian, wetlands and waters, and anthropogenic. Habitats are characterized and acreages occurring in the Study Area are provided (Table 2; Figure 3). All habitats in the Study Area show signs of disturbance from long term rural residential practices on the site. Most of the Study Area is dry farmed in most years and is described as 147.3-acres of cropland habitat. California annual grassland is mapped in two areas comprising 82.1 acres where review of aerial photographs indicates farming has not occurred since at least 2003, and the vegetation is typical of non-native grasslands in the region. Approximately 4.0 acres of riparian habitat is associated with an ephemeral waterway that flows westward across the northern end of the Study Area. Wetlands are associated with riparian habitat, with a man-made stockpond in the central west portion of the site, and in a small low area in the southwest corner of the site, with a total of 0.2 acres mapped. Non-wetland waters comprise approximately 1.3 acres. Three residences and associated outbuildings, roads, and other agricultural infrastructure are mapped as 7.5 acres of anthropogenic habitat.

In its current condition, the Study Area habitats are relatively degraded and support an overall low diversity of native plant species. Grassland areas are overgrazed, and lack wildflower displays. The riparian habitat supports mature oak and cottonwood trees in an open canopy but is overgrown with weeds in the understory and lacks substantial shrub and tree recruitment. Croplands are very low in species diversity, and wetlands are also relatively low diversity compared to undisturbed wetland habitats and have poor functions and values due to past land use practices.

TABLE 2. HABITAT TYPES

Habitat Type	Location	Approximate Acreage
Cropland	NW field, W and SW fields	147.3
California Annual Grassland	NE field, SW fields	82.1
Riparian	Northern drainage	4.0
Wetlands and Waters	Northern drainage, central pond and drainage, southern corner wetland	1.5
Anthropogenic	Three residences and outbuildings in north	7.5

Figure 3. Biological Resources



Legend

- Inactive Raptor Nest
- 1-Foot Contours
- Olsen Ranch Boundary (254.1 acres)
- Wetlands and Drainages (1.5 acres)

Habitat Type*

- Anthropogenic (7.5 acres)
- California Annual Grassland (82.1 acres)
- Cropland (147.3 acres)
- Riparian (4.0 acres)

N

0 300 600 Feet

Olsen Ranch
Map Center: 120.63666°W 35.60646°N
Paso Robles, San Luis Obispo County

Biological Survey Date: 10/16/2018

*Reported areas are approximations and may not total to acreages reported in legal land description.

3.4.1 Cropland

Olsen Ranch is an historical livestock and ranching operation with dry-farmed grain and hay crops to support their livestock. The 147.3-acres of cropland habitat is comprised of plant species adapted to frequent disturbances, consistent with routine tilling (Photo 1). Typical dry-farming practices require tilling the land one to three times a year to maintain soil moisture. Fallow cropland fields used for rangeland are dominated by wild oats (*Avena barbata* and *A. fatua*), annual bromes (*Bromus diandrus, B. hordeaceus,* and *B. madritensis* subsp. *rubens*), and mustards (*Brassica nigra* and *Hirschfeldia incana*) are prevalent. Significant patches of dense yellow star-thistle (*Centaurea solstitialis*), an invasive plant, occur in the northern fields and invasive annual grass, medusahead (*Elymus caput-medusae*) is common in the southern fields.

3.4.2 California Annual Grassland

Annual grassland habitat occupies approximately 82.1 acres of the Study Area, occurring in a field at the northeast property corner and on the southwest section of the property adjacent to residential neighborhoods (Photo 2). The habitat was likely farmed many decades ago but has been fallow for at least the last 25 years based on review of aerial imagery. In 2004 it was noted that the land was heavily grazed by sheep (Althouse and Meade, Inc. 2004), and the low species diversity and predominance of non-native Mediterranean annual grasses in 2019 are typical of heavily grazed and fallow grassland systems, even after decades of rest. The grassland species composition varies across the site but is primarily brome and oat dominated. It conforms best to the *Bromus* (*diandrus*, *hordeaceus*) – *Brachypodium distachyon* Alliance, also called Annual Brome Grasslands (Sawyer et al. 2009). Common grass species identified include wild oats, soft chess brome, and ripgut brome. Some native forbs are present, including Fitch's tarweed (*Centromadia fitchii*), red maids (*Calandrinia menziesii*), and clarkia (*Clarkia affinis, C. purpurea* subsp. *quadrivulnera*). No special status plants were identified in the grassland habitat, although potential habitat is present (refer to Section 3.8.3).

Wildlife in the grassland habitat is limited to a low abundance of small mammals such as California ground squirrel (*Otospermophilus beecheyi*), pocket gopher (*Thomomys bottae*), deer mice (*Peromyscus maniculatus*), voles (*Microtus californicus*), and harvest mice (*Reithrodontomys megalotis*). Coyote (*Canus latrans*) and red fox (*Vulpes vulpes*) likely pass through the property on occasion and American badger (*Taxidea taxus*) was not identified but has low potential to occur on site. The habitat is potentially suitable for San Joaquin kit fox (*Vulpes macrotis mutica*), however no sign was observed, and kit fox is currently not known to occur in the area. Striped skunk (*Mephitis mephitis*) was observed onsite, and California toad (*Bufo boreas halophilus*) occupies mammal burrows in the habitat.

3.4.3 Riparian

Riparian habitat is dominated by valley oak trees (*Quercus lobata*) in an intermittent oak woodland tree canopy layer along the waterway, and includes typical riparian trees such as Fremont cottonwood (*Populus fremontii*) and occasional red willow (*Salix laevigata*). Riparian habitat in the Study Area is limited to the northernmost drainage, approximately 700 feet south of Linne Road. It is associated with an ephemeral waterway that conveys water from east to west in a sinuous swale feature, paralleling Linne Road. The waterway captures runoff from a watershed originating about a mile to the east of the Study Area from a low rise on the west side of Huerhuero

Creek and flows through residential and commercial development in the southeast corner of the City toward the Salinas River.

Within the Study Area is an open riparian habitat with willows, oaks, and cottonwoods as the dominant canopy vegetation, and non-native grasses and forbs the dominant herbaceous vegetation in the understory. A more developed riparian zone occurs just west of Hanson Road (Photo 3) and then transitions to widely spaced trees and shrubs (Photo 4). Riparian understory is primarily ripgut brome with a few patches of creeping wild rye (*Elymus triticoides*), a native perennial grass species.

The eastern section of the stream meanders along the southern side of a weedy grassland field. A distinct channel has been formed from the outflow of the culvert under Hanson Road. The channel becomes shallower in the flat mid-section reach and forms a braided channel. An in-stream pond is present on the upstream side of the main access road into the ranch. During periods of stormflow water backs up and spreads out into the cropland fields (Photo 5). West of the main access road the waterway is within an irrigated sheep pasture where it lacks a defined bed and bank and associated riparian vegetation. A stand of valley and blue oaks occurs in the waterway at the west end of the Study Area.

Some wildlife may use the waterway as a movement corridor through the Study Area, however it appears to be overgrown with weeds and may not be conducive to animal movements for most of the year. A variety of bird species are expected to breed in the riparian habitat, including house finch, western kingbird, European starling, and oak titmouse.

3.4.4 Wetlands and Drainages

Wetlands in the Study Area are restricted to patches in the northern drainage, a man-made stock pond in the central drainage, and a weedy patch at the southwest corner of the Study Area. A wetland delineation for the property was produced by Althouse and Meade, Inc. in 2019.

Characteristic wetland indicators within the northern stream channel include dominance of spikerush (*Eleocharis macrostachya*) and Italian ryegrass (*Lolium perenne*). Where the stream is unvegetated and not a wetland, it is incised with a clear bed and bank and is covered in algal mats. Some portions of the northern drainage have multiple flow paths as it meanders through oak riparian habitat. The stream has also been bifurcated through fence installations and ranch activities. A small unvegetated pond within the northern drainage was likely created through the installation of an above-grade culvert under a ranch road. The pond serves as a stock pond for sheep.

The stock pond in the central drainage is larger and is vegetated at the mouth and along the edges with spikerush. It is fed by a small (approximately two feet wide and deep) ephemeral drainage flowing from east to west. For water to exit the stock pond, it reaches an overflow path on the west side of the pond and flows in a short swale feature (Photo 6). The overflow swale conveys water east towards a storm water ditch and then south to a storm water drain, on the west edge of the property.

At the southwest corner of the Study Area there is a poor-quality wetland supported by surface sheetflow and subsurface lateral return flow from the hills directly east. The elevation of the wetland is one to three feet lower than the adjacent Meadowlark Road and neighboring subdivision. Stormwater from surrounding, higher elevations flow to this corner where it is

trapped and pools in the Study Area. Biotic crust was present within the wetland area and hydrophytes such as toad rush (*Juncus bufonius*) and hyssop loosestrife (*Lythrum hyssopifolia*).

3.4.5 Anthropogenic

Anthropogenic habitat is present in the northern portion of Olsen Ranch. This area is comprised of residences and associated structures, yards with planted trees and other landscaping, and roads (Photo 7). Non-native, herbaceous forbs and grasses are the dominant vegetation including weedy species such as yellow star-thistle (*Centaurea solstitialis*) and Russian thistle (*Salsola tragus*).

3.5 Potential Wetlands and Jurisdictional Waters

Althouse and Meade, Inc. performed a wetland delineation for the Study Area in 2019 (A&M 2019). This work resulted in delineation of 0.24 acres of federal and state jurisdictional wetlands, and 4,594 linear feet covering 1.26 acres of non-wetland waters. Approximately 0.68 of the 1.26 acres has the potential to support non-persistent emergent wetlands. Approximately 0.02 acre of the 1.26 acres may be considered a wetland by RWQCB standards but not USACE. The project proposes to have minimal impacts to wetlands and waters and obtain necessary federal and state permits for any fill to jurisdictional aquatic features.

3.6 Oak Trees

Mature native oak trees occur in riparian, grassland and cropland habitats in the Study Area, and occur primarily as scattered canopy in a savannah-like habitat context. Woodland habitat is only present in the riparian habitat (see Section 3.4.3). A total of 172 oak trees were identified, including blue oak (*Quercus douglasii*) and valley oak species (refer to Arborist Report in Appendix D). All oak trees greater than four inches in diameter at breast height (dbh) in the Study Area were mapped, numbered, tagged, and assessed for health and habitat qualities.

In the grassland and cropland habitats of the southern two-thirds of the Study Area, mature oaks are scattered in low density. They are most notable in a hilltop grouping in the southwest corner of the Study Area. There is no recruitment of young oaks due to a long history of grazing. The trees are part of a relict oak savanna habitat that existed throughout the eastern Paso Robles region prior to modern agricultural practices. The current distribution of oak canopy outside the riparian habitat comprises an estimated 1.0 percent of the grassland and cropland habitats and is not considered oak savanna habitat, which is generally defined as an area of at least 10 percent cover of oaks.

Oak trees on site provide nesting habitat for a variety of birds, and natural trunk cavities may be suitable for roosting bats and mammals such as striped skunk and Virginia opossum.

3.7 Habitat Connectivity and Wildlife Movement

The Study Area provides moderate habitat connectivity to habitats north and south of the Study Area. Urban development of the City of Paso Robles is on the west side of the Study Area and vineyard occurs on portions of the north, east, and south boundaries. Rural residential parcels are to the east and south of the Study Area. Riparian and wetland habitats of the Study Area provide connectivity across the northern portion of the property and will remain in place. Although

common wildlife may use the Study Area habitats for local foraging and movement opportunities, it is not part of a significant wildlife movement corridor.

3.8 Botanical Resources

Review of special status plant occurrences within the designated search area determined 53 special status plant species are known to occur in the region (refer to Appendix B). Appropriate habitat and soil conditions are present in the Study Area for five special status plants (Table 3). Figure 4 in Section 3.8.4 depicts the current GIS data for special status plants and critical habitat mapped near the Study Area by the CNDDB and the United States Fish and Wildlife Service (USFWS).

3.8.1 CNDDB Definitions

"Special Plants" is a broad term used to refer to all the plant taxa inventoried by the CNDDB, regardless of their legal or protection status (CDFW and CNDDB 2019). Special plants include vascular plants, high priority bryophytes (mosses, liverworts, and hornworts), and lichens.

3.8.2 California Rare Plant Ranks

Plant species are considered rare when their distribution is confined to localized areas, when there is a threat to their habitat, when they are declining in abundance, or are threatened in a portion of their range. The California Rare Plant Rank (CRPR) categories range from species with a low threat (CRPR 4) to species that are presumed extinct (CRPR 1A). The plants of CRPR 1B are rare throughout their range. All but a few species are endemic to California. All of them are judged to be vulnerable under present circumstances, or to have a high potential for becoming vulnerable.

3.8.3 Potential Special Status Plant List

Error! Reference source not found. lists 5 special status plant species that could potentially occur in the Study Area. Federal and California State status, global and State rank, and CNPS rank status for each species are given. Also included are typical blooming periods, habitat preference, potential to occur on site, whether the species was detected in the Study Area, and effect of proposed activity. A comprehensive list of special status plant species reviewed is included as Appendix B.

TABLE 3. SPECIAL STATUS PLANT LIST

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
1.	**Lemmon's Jewelflower** *Caulanthus lemmonii*	None/None G3/S3 1B.2	March – May	Dry, exposed slopes, grassland, chaparral, scrub; 80-1100 m.	Low. Suitable habitat may be present on dry slopes in the Study Area.	No	No Effect
2.	**Small-flowered Morning-glory** *Convolvulus simulans*	None/None G4/S4 4.2	April - June	Clay substrates, occasionally serpentine, annual grassland, coastal-sage scrub, chaparral; 30-875 m.	Low. Suitable clay substrates may be present in the Study Area, in Cropley clay and/or Rincon clay loam.	No	No Effect
3.	**Hogwallow Starfish** *Hesperevax caulescens*	None/None G3/S3 4.2	March - June	Drying shrink-swell clay of vernal pools, flats, steep slopes (sometimes serpentine); < 300(500) m.	Low. Suitable clay substrates may be present in the Study Area, in Cropley clay and/or Rincon clay loam.	No	No Effect
4.	**Santa Lucia Dwarf Rush** *Juncus luciensis*	None/None G3/S3 1B.2	April - July	Vernal pools, ephemeral drainages, wet meadow habitats, and streams; 300-1900 m.	Moderate. Suitable wetland habitat is present in the Study Area.	No	No Effect
5.	**Shining Navarretia** *Navarretia nigelliformis* subsp. *radians*	None/None G4T2/S2 1B.2	May - July	Vernal pools, clay depressions, dry grasslands; 150-1000 m.	High. Suitable habitat is present in grassland habitat in the Study Area. There are known occurrences within 0.5 mile of the Study Area.	No	No Effect

California Rare Plant Ranks:

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California, but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 4: Plants of limited distribution - a watch list

CRPR Threat Ranks:

0.1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

3.8.4 Special Status Plants Discussion

Based on an analysis of known ecological requirements for the special status plant species reported from the region (**Error! Reference source not found.**), and the habitat conditions that were observed in the Study Area, it was determined that five special status plant species have some potential to occur in the Study Area. One special status plant species has a high potential to occur (shining navarretia), one species has a moderate potential to occur (Santa Lucia dwarf rush), and three species have a low potential to occur (Lemmon's Jewelflower, small-flowered morning glory, hogwallow starfish). There are no federal or state listed plant species with potential to occur in the Study Area. A total of five special status species are discussed below, including descriptions of habitat, range restrictions, known occurrences, and 2019 survey results for the Property.

A. **Lemmon's Jewel-flower** (*Caulanthus lemmonii*) is a CRPR 1B.2 species endemic to California. It is known to occur on dry, exposed slopes in grassland and pinyon and juniper woodland habitats between 80 to 1580 meters elevation. It is an annual herb that typically blooms between February and May (CNPS 2019). The closest specimen record is from 1960 from an unknown location approximately 2 miles west of Paso Robles (CNDDB 83). There are no recent records documented within 10 miles of the Property (CCH 2019). The annual grassland habitat on moderately sloping terrain in the Study Area is potentially suitable for this species, however due the lack of recent record in the vicinity, this species has low potential to occur in the Study Area. Lemmon's jewel-flower was not detected in the Study Area during appropriately timed botanical surveys conducted in 2019.

B. **Small-flowered Morning-glory** (*Convolvulus simulans*) is a CRPR 4.2 species that is known from scattered localities from the eastern San Francisco Bay area south to San Diego. It occurs in valley grassland, coastal scrub and chaparral habitats with clay substrates or serpentine seeps (CNPS 2019). The closest specimen record to the Property is a collection from 1895 near Estrella Road, approximately 6.5 miles northeast of the Property (CCH 2019). There are no other records of this species in the Paso Robles vicinity. Moderately suitable annual grassland habitat and the clay soils are present in the Study Area. Small-flowered morning-glory was not detected in the Study Area during appropriately timed botanical surveys conducted in 2019.

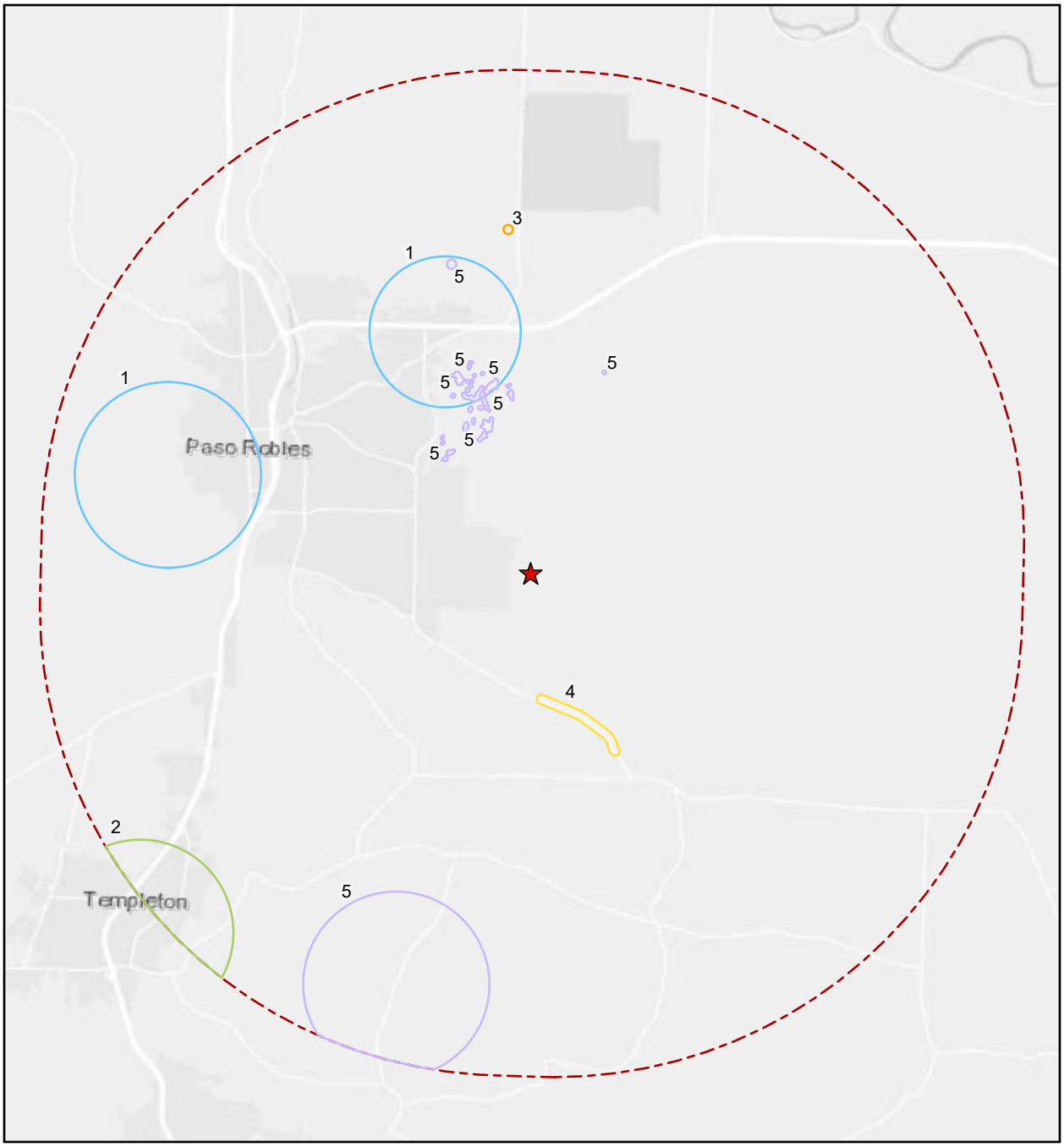
C. **Hogwallow Starfish** (*Hesperevax caulescens*) is a CRPR 4.2 species endemic to California. It is known to occur on clay soils and mesic sites in grassland and vernal pool habitats from 0 to 505 meters elevation. It is an annual herb that typically blooms between March and June (CNPS 2019). The closest known record is from approximately 13.5 miles northwest of the Property (CCH 2019). The clay soils in the mesic grassland and wetland habitats are suitable for this species however the lack of a nearby record makes this species unlikely to occur in the Study Area. Hogwallow starfish was not detected in the Study Area during appropriately timed botanical surveys conducted in 2019.

D. **Santa Lucia Dwarf Rush** (*Juncus luciensis)* is a CRPR 1B.2 species known from coastal counties extending from San Diego north to Monterey, and from scattered localities in northern California. It is a very small annual plant that grows in wet sandy soils in a variety of seasonally moist environments. It grows in dense clumps, with small leaves and branches arising from the base, and rarely exceeds two inches in height. The closest reported occurrence (CNDDB 8) was observed growing on damp grain fields approximately 0.9 miles south of the Property on Creston Road (CDFW 2019a). The suitable seasonal mesic habitats and the

proximity of a known occurrence of Santa Lucia dwarf rush indicates moderate potential for this species to occur in the Study Area. Santa Lucia dwarf rush was not detected in the Study Area during appropriately timed botanical surveys conducted in 2019.

E. **Shining Navarretia** (*Navarretia nigelliformis* subsp. *radians*) is a CRPR 1B.2 subspecies endemic to California, primarily occurring in central California. It is known to occur in vernal pools, grassland, and cismontane woodland habitats, often on clay and alkaline soils from 65 to 1,000 meters elevation (CNPS 2019; Jepson Flora Project (eds.) 2019). It is an annual herb that typically blooms between May and July. The closest reported occurrence is reported from approximately 0.8 mile northwest of the Property (CCH 2019) during floristic surveys conducted by Althouse and Meade, Inc. in 2005 on property that was formerly part of Chandler Ranch. Shining Navarretia has a high potential to occur in the Study Area. Shining navarretia was not detected in the Study Area during appropriately timed botanical surveys conducted in 2019.

Figure 4. CNDDB Plant Records and USFWS Critical Habitat



Label	CNDDB Record Common Name
1	Lemmon's jewelflower
2	Mesa horkelia
3	San Luis Obispo owl's-clover
4	Santa Lucia dwarf rush
5	Shining navarretia

Legend

Project Location

5 Mile Radius

No USFWS Critical Habitat for plants present within 5 mile radius.

N

0 0.5 1 2 Miles

Olsen Ranch
Map Center: 120.63666°W 35.60646°N
Paso Robles, San Luis Obispo County

CNDDB GIS Data Last Updated: April 2019

3.9 Wildlife Resources

Research on special status animal occurrences conducted within the designated search area (see Methods) determined 27 special status animal species are known to occur in the region (Appendix C). Appropriate habitat conditions are present in the Study Area for seven special status animals (Table 4). Figure 5 in Section 3.9.3 depicts the current GIS data for special status species and critical habitat mapped near the Property by the CNDDB and the United States Fish and Wildlife Service (USFWS).

3.9.1 CNDDB Definitions

"Special Animals" is a general term that refers to all of the animal taxa inventoried by the CNDDB, regardless of their legal or protection status (CDFW 2019b). The Special Animals list is also referred to by the California Department of Fish and Wildlife (CDFW) as the list of "species at risk" or "special status species." These taxa may be listed or proposed for listing under the California and/or Federal Endangered Species Acts, but they may also be species deemed biologically rare, restricted in range, declining in abundance, or otherwise vulnerable.

Animals listed as California Species of Special Concern (SSC) may or may not be listed under California or Federal Endangered Species Acts. They are considered rare or declining in abundance in California. The Special Concern designation is intended to provide the California Department of Fish and Wildlife, biologists, land planners and managers with lists of species that require special consideration during the planning process to avert continued population declines and potential costly listing under federal and state endangered species laws. For many species of birds, the primary emphasis is on the breeding population in California. For some species that do not breed in California but winter here, emphasis is on wintering range. The SSC designation thus may include a comment regarding the specific protection provided such as nesting or wintering.

Animals listed as Fully Protected are those species considered by CDFW as rare or faced with possible extinction. Most, but not all, have subsequently been listed under the California Endangered Species Act (CESA) or the Federal Endangered Species Act (FESA). Fully Protected species may not be taken or possessed at any time and no provision of the California Fish and Game code authorizes the issuance of permits or licenses to take any Fully Protected species.

3.9.2 Potential Special Status Animals List

Table 4 lists seven special status animal species that could potentially occur in the Study Area. Federal and California State status, global and State rank, and CDFW listing status for each species are given. Typical nesting or breeding period, habitat preference, potential habitat on site, whether the species was detected in the Study Area, and effect of proposed activity are also provided. A comprehensive list of special status animal species reviewed is included as Appendix C.

TABLE 4. SPECIAL STATUS ANIMAL LIST

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
1.	**Pallid Bat** *Antrozous pallidus*	None/None G5/S3 SSC	Spring - Summer	Rock crevices, caves, tree hollows, mines, old buildings, and bridges.	Low. Low quality roosting habitat is present in the Study Area.	No	Potential Adverse Effect Can Be Mitigated
2.	**Vernal Pool Fairy Shrimp** *Branchinecta lynchi*	FT/None G3/S3 None	Rainy Season	Clear water sandstone depression pools, grassed swale, earth slump, or basalt flow depression pools.	Low. Appropriate habitat is not present in the Study Area.	No	To Be Determined by Dry Season Surveys in 2019
3.	**Townsend's Big-eared Bat** *Corynorhinus townsendii*	None/None G3G4/S2 SSC	Spring - Summer	Caves, buildings, and mine tunnels. Cave like attics as day roosts. On coast roosts are normally within 100 m. of creeks.	Low. Potentially suitable abandoned structures are present for roosting.	No	Potential Adverse Effect Can Be Mitigated
4.	**California Linderiella** *Linderiella occidentalis*	None/None G2G3/S2S3 SA	Rainy season	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.	Low. Appropriate habitat is not present in the Study Area.	No	No Effect
5.	**Western Spadefoot** *Spea hammondii*	None/None G3/S3 SSC	January - August	Vernal pools in grassland and woodland habitats	High. Appropriate habitat is present in the Study Area.	Yes	Potential Adverse Effect Can Be Mitigated

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
6.	**American Badger** *Taxidea taxus*	None/None G5/S3 SSC	February -May	Needs friable soils in open ground with abundant food source such as California ground squirrels.	Moderate. Appropriate habitat is present in the Study Area.	No	Potential Adverse Effect Can Be Mitigated
7.	**San Joaquin Kit Fox** *Vulpes macrotis mutica*	FE/CT G4T2/S2 None	December - July	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose textured sandy soil and prey base.	Low. Appropriate habitat is present in the Study Area, but kit fox is not known to occur in the Paso Robles area at this time.	No	Potential Adverse Effect Can Be Mitigated

Habitat characteristics are from the Jepson Manual and the CDNNB.
*not listed in the CNDDB for the search area, but possibly for the location.

Abbreviations:

FE: Federally Endangered
FT: Federally Threatened
PE: Proposed Federally Endangered
PT: Proposed Federally Threatened
CE: California Endangered
CT: California Threatened
Cand. CE: Candidate for California Endangered
Cand. CT: Candidate for California Threatened
SSC: CDFW Species of Special Concern
FP: CDFW Fully Protected

3.9.3 Special Status Animals Discussion

Seven special status animals have potential to occur in the Study Area based on an analysis of known ecological requirements and the habitat conditions that were observed in the Study Area. We discuss the species and describe habitat, range restrictions, known occurrences, and survey results.

A. Pallid Bat (*Antrozous pallidus*) is a California Species of Special Concern. The pallid bat is a large long-eared bat that occurs throughout the state and occupies a wide variety of habitats. Although most common in open, dry areas ideal for foraging with rocky outcrops for roosting, pallid bats are also found regularly in oak and pine woodlands where they roost in caves, mines, rock crevices, hollow trees and buildings (Nowak et al. 1994). Bridges are also frequently used by pallid bats, often as night roosts between foraging periods (Pierson et al. 1996). The closest CNDDB occurrence of the pallid bat is a 2001 record approximately 10.6 miles north of the Property under River Road bridge in San Miguel (CNDDB 104). Due to the presence of residential structures for roosting and of sparsely vegetated habitats suitable for foraging, there is potential for this species to occur in the Study Area.

B. Vernal Pool Fairy Shrimp (*Branchinecta lynchi*) is a small freshwater crustacean that is federally listed as threatened. The species is endemic to California and southern Oregon and has an ephemeral life cycle, existing only in vernal pools or vernal pool-like habitats. The vernal pool fairy shrimp occurs only in cool-water pools. Individuals hatch from cysts during cold-weather winter storms; they require water temperatures of 50 °F or lower to hatch (Helm 1998; Eriksen and Belk 1999). The time to maturity and reproduction is temperature dependent, varying between 18 days and 147 days, with a mean of 39.7 days and immature and adult shrimp are known to die off when water temperatures rise to approximately 75°F (Helm 1998). The species is typically associated with smaller and shallower vernal pools (typically about 6 inches deep) that have relatively short periods of inundation (Helm 1998) and relatively low to moderate total dissolved solids (TDS) and alkalinity (Eriksen and Belk 1999). The nearest reported occurrence is a 1992 record approximately 2.7 miles northeast of the Study Area in a vernal pool complex south of Highway 46 (CNDDB 287). The next nearest occurrence is a 2005 record approximately 3 miles west of the Study Area, 1.3 miles northeast of the intersection of Niblick Road and Spring Street, west of Highway 101 in Paso Robles (CNDDB 621). Protocol surveys for rare branchiopods are in process for the Olsen property. Initial results have been negative for listed branchiopods, including *B. lynchii*. A complete report will be provided upon completion of the dry season survey portion of the protocol in summer 2019. Considering the above-average rainfall during the study period, it is unlikely that rare branchiopods occur in the Study Area as they were not detected in the wet season survey.

C. Townsend's Big-eared Bat (*Corynorhinus townsendii*) is a California Species of Special Concern. Townsend's big-eared bat is medium sized with large rabbit-like ears. In San Luis Obispo County Townsend's big-eared bat is consistently found in the vicinity of creek beds where they use the riparian corridors for foraging. Typical roost sites include caves or buildings with cave-like features. Townsend's big-eared bat is sedentary and presumed to spend the winter within 25 miles of its summer roosts. The nearest reported occurrence of this species is at Camp Roberts, where multiple individuals were observed roosting in buildings on

Michigan Avenue, approximately 12.3 miles northwest of the Property. Townsend's big-eared bat could possibly roost in structures in the Study Area, but the potential is expected to be low. Townsend's big-eared bat was not observed on the Study Area during site surveys.

D. California Linderiella (*Linderiella occidentalis*) is neither federally nor state listed but holds a Global Rank of G2G3 and a State Rank of S2S3 (NatureServe 2018). Both the global and state ranks for this species indicate that it is uncertain whether it should be considered either Imperiled (G2/S2) or Vulnerable (G3/S3) though NatureServe rounds its global status to G2. The reasoning for this ranking is that while it is not as restricted in range as some of the other California fairy shrimp, it is not considered abundant at any site, and its habitat continues to be threatened by urban and agricultural development (USFWS 1992). Its distribution ranges from Shasta County south to Fresno County, across the Central Valley, and the Coast and Transverse Ranges from Willits in Mendocino County south to near Sulfur Mountain in Ventura County. This species inhabits small, seasonal vernal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions, throughout central California. The closest reported occurrence of California linderiella is a 2003 record Santa Margarita Ranch approximately 12.8 miles south of the Property (CNDDB 218). Protocol surveys for rare branchiopods are in process for the Olsen property. Initial results have been negative for *L. occidentalis*, and any rare branchiopod. A complete report will be provided upon completion of the dry season survey portion of the protocol. Considering the above-average rainfall during the study period, it is unlikely that rare branchiopods occur in the Study Area and were not detected in the wet season survey.

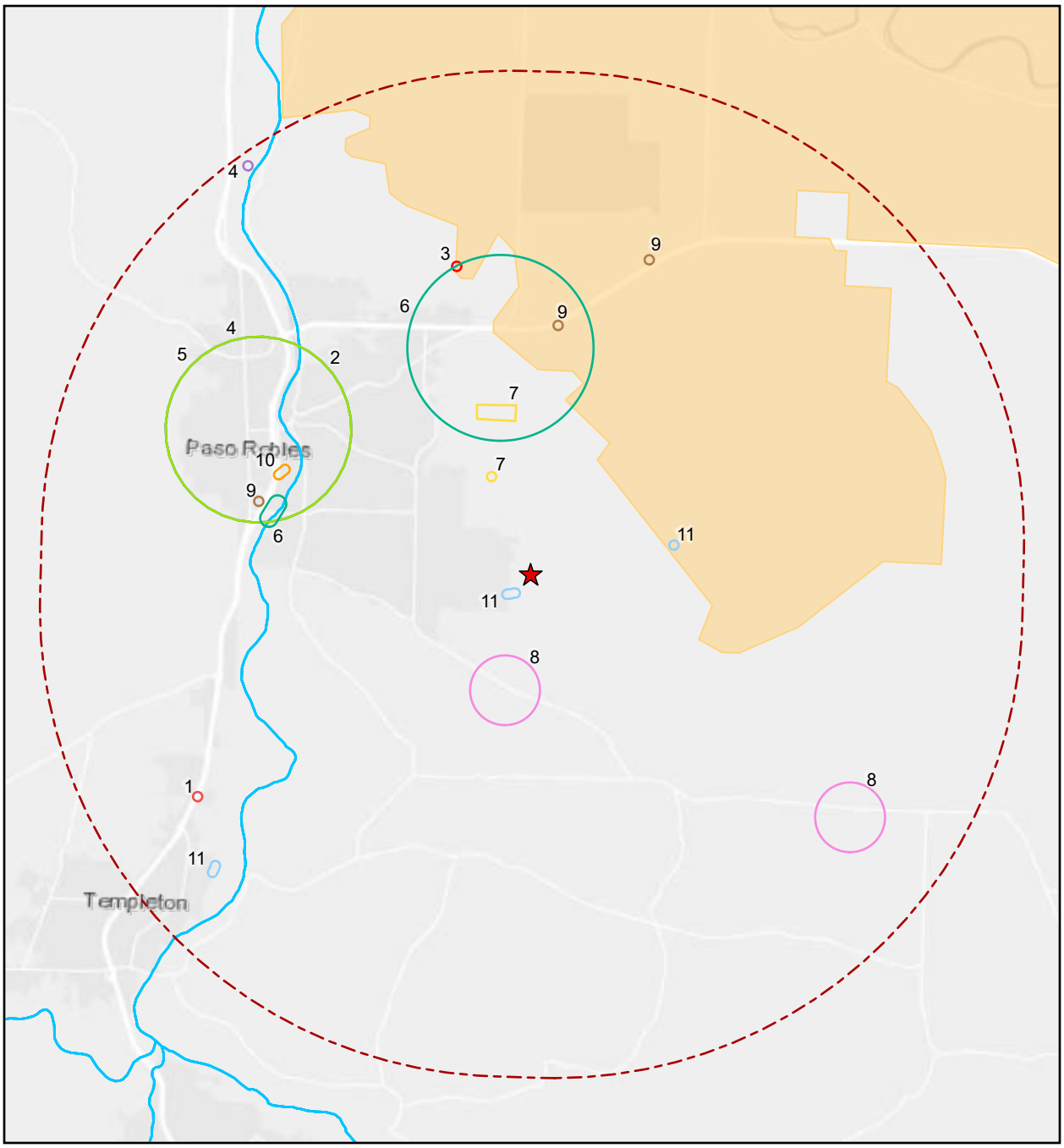
E. Western Spadefoot Toad (*Spea hammondii*) is a California Species of Special Concern known from ephemeral pools in open grassland habitats across the interior region of San Luis Obispo County. Spadefoot toads remain underground for most of the year, emerging to breed in seasonal wetland pools during the rainy season. Development of the larvae from egg to metamorphosis can be very quick, depending upon water temperature. Spadefoot toad was documented breeding in the stock pond in the Study Area in 2004 (CNDDB 333). Spadefoot toads were not detected in 2019.

F. American Badger (*Taxidea taxus*) is a California Species of Special Concern that has a widespread range across California (CDFW 2014; Brehme et al. 2015). It is a permanent but uncommon resident in all parts of California, except for forested region of the far northwestern corner, and is more abundant in dry, open areas of most shrub and forest habitats (CDFW 2019). The American badger requires friable soil in order to dig burrows for cover and breeding. The main food source for the American badger is fossorial rodents, mainly ground squirrels and pocket gophers (CDFW 2014). The breeding season is in summer and early fall and females give birth to litters usually in March and April (CDFW 2014). The closest reported occurrence of the American badger is located approximately four miles southwest of the Study Area (CNDDB 23). There is potential habitat for American badger in the Study Area, however it is unlikely to occur due to the proximity to urban development and intensive agriculture. Transect den surveys of the entire Study Area did not detect badgers or their sign.

G. San Joaquin Kit Fox (*Vulpes macrotis mutica)* is a federally listed endangered species and a state listed threatened species. They are known from the Carrizo Plain and Camp Roberts, with transient individuals reported to move between the two populations. Huerhuero Creek, located approximately one mile east of Olsen Ranch, is one of the known movement corridors for kit fox. The two nearest reported occurrences are less than a mile north of the Property

near Barney Schwarz Park. One record is from 1990 and is 0.25 miles north (CNDDB 945), and the other is from 1991 and is 0.9 miles north (CNDDB 941). There is potentially suitable grassland habitat for San Joaquin kit fox in the Study Area, however kit foxes are not currently known to occupy lands in the Paso Robles region and are not expected to be onsite.

Figure 5. CNDDB Animal Records and USFWS Critical Habitat



Label	CNDDB Record Common Name
1	American badger
2	Atascadero June beetle
3	Golden eagle
4	Least Bell's vireo
5	Lompoc grasshopper
6	Northern California legless lizard
7	San Joaquin kit fox
8	Tricolored blackbird
9	Vernal pool fairy shrimp
10	Western pond turtle
11	Western spadefoot

Legend

Project Location

5 Mile Radius

USFWS Critical Habitat for Animals

Steelhead

Vernal Pool Fairy Shrimp

N

0 0.5 1 2 Miles

Olsen Ranch
Map Center: 120.63666°W 35.60646°N
Paso Robles, San Luis Obispo County

CNDDB GIS Data Last Updated: April 2019

3.10 Botanical Survey Results

Botanical surveys conducted in the Study Area identified 134 species, subspecies, and varieties of vascular plant taxa in the Study Area (**Error! Reference source not found.**). The list includes 61 species native to California and 73 introduced (naturalized or planted) species. Native plant species account for approximately 46 percent of the Study Area flora; introduced species account for approximately 54 percent. No special status plant species were identified in the Study Area. One introduced species, *Trifolium tomentosum*, is a first record of this species in San Luis Obispo County (D. Keil, pers. comm).

TABLE 5. VASCULAR PLANT LIST

Common Name	Scientific Name	Special Status	Origin
Trees - 7 Species			
Tree tobacco	*Nicotiana glauca*	None	Introduced
Fremont cottonwood	*Populus fremontii* ssp. *fremontii*	None	Native
Almond	*Prunus dulcis*	None	Planted
Blue oak	*Quercus douglasii*	None	Native
Oak hybrid	*Quercus douglasii* x *lobata*	None	Native
Valley oak	*Quercus lobata*	None	Native
Red willow	*Salix laevigata*	None	Native
Shrubs – 2 Species			
Coyote brush	*Baccharis pilularis*	None	Native
Big leaf mistletoe	*Phoradendron leucarpum* ssp. *macrophyllum*	None	Native
Forbs – 111 Species			
Blow wives	*Achyrachaena mollis*	None	Native
Spanish clover	*Acmispon americanus* var. *americanus*	None	Native
Short podded lotus	*Acmispon brachycarpus*	None	Native
Tumbleweed amaranth	*Amaranthus albus*	None	Introduced
Mat amaranth	*Amaranthus blitoides*	None	Native
Western ragweed	*Ambrosia psilostachya*	None	Native
Common fiddleneck	*Amsinckia intermedia*	None	Native
Fiddleneck	*Amsinckia lycopsoides*	None	Native
Mayweed	*Anthemis cotula*	None	Introduced
Indian milkweed	*Asclepias eriocarpa*	None	Native
Narrow-leaved milk	*Asclepias fascicularis*	None	Native
Garden asparagus	*Asparagus officinalis*	None	Introduced
Australian saltbush	*Atriplex semibaccata*	None	Introduced
Black mustard	*Brassica nigra*	None	Introduced

Common Name	Scientific Name	Special Status	Origin
Dwarf brodiaea	*Brodiaea terrestris*	None	Native
Red maids	*Calandrinia menziesii*	None	Native
Bolander's water starwort	*Callitriche heterophylla* var. *bolanderi*	None	Native
Shepherd's purse	*Capsella bursa-pastoris*	None	Introduced
Italian thistle	*Carduus pycnocephalus*	None	Introduced
Slender owl's clover	*Castilleja attenuata*	None	Native
Purple owl's clover	*Castilleja exserta*	None	Native
Tocolote	*Centaurea melitensis*	None	Introduced
Yellow star thistle	*Centaurea solstitialis*	None	Introduced
Fitch's tarweed	*Centromadia fitchii*	None	Native
Lamb's-quarters	*Chenopodium album*	None	Introduced
Skeleton weed	*Chondrilla juncea*	None	Introduced
Fairy fan	*Clarkia affinis*	None	Native
Four spot	*Clarkia purpurea* subsp. *quadrivulnera*	None	Native
Clarkia	*Clarkia unguiculata*	None	Native
Miner's lettuce	*Claytonia perfoliata*	None	Native
Bindweed	*Convolvulus arvensis*	None	Introduced
Pygmyweed	*Crassula connata*	None	Native
Doveweed	*Croton setiger*	None	Native
Jimsonweed	*Datura wrightii*	None	Native
Salinas tarplant	*Deinandra pentactis*	None	Native
Tansy mustard	*Descurainia sophia*	None	Introduced
Annual willow-herb	*Epilobium brachycarpum*	None	Native
Asthma weed	*Erigeron bonariensis*	None	Introduced
Common horseweed	*Erigeron canadensis*	None	Native
Longbeak storksbill	*Erodium botrys*	None	Introduced
Foothill filaree	*Erodium brachycarpum*	None	Introduced
Redstem filaree	*Erodium cicutarium*	None	Introduced
California poppy	*Eschscholzia californica*	None	Native
Spotted spurge	*Euphorbia maculata*	None	Introduced
Common bedstraw	*Galium aparine*	None	Native
Wall bedstraw	*Galium parisiense*	None	Introduced
Lotus sweetjuice	*Glinus lotoides*	None	Introduced
Seaside heliotrope	*Heliotropium curassavicum* var. *oculatum*	None	Native
Bristly ox tongue	*Helminthotheca echioides*	None	Introduced

Common Name	Scientific Name	Special Status	Origin
Field mustard	*Hirschfeldia incana*	None	Introduced
Smooth cat's ear	*Hypochaeris glabra*	None	Introduced
Rough cat's-ear	*Hypochaeris radicata*	None	Introduced
Prickly lettuce	*Lactuca serriola*	None	Introduced
Slender hareleaf	*Lagophylla ramosissima*	None	Native
Henbit	*Lamium amplexicaule*	None	Introduced
Perennial pepperweed	*Lepidium latifolium*	None	Introduced
Pepperwort	*Lepidium nitidum*	None	Native
Narrowleaf cottonrose	*Logfia gallica*	None	Introduced
Birdfoot trefoil	*Lotus corniculatus*	None	Introduced
Miniature lupine	*Lupinus bicolor*	None	Native
Chick lupine	*Lupinus microcarpus*	None	Native
Sky blue lupine	*Lupinus nanus*	None	Native
Arroyo lupine	*Lupinus succulentus*	None	Native
Scarlet pimpernel	*Lysimachia arvensis*	None	Introduced
Hyssop loosestrife	*Lythrum hyssopifolia*	None	Introduced
Bull mallow	*Malva nicaeensis*	None	Introduced
Cheeseweed	*Malva parviflora*	None	Introduced
Horehound	*Marrubium vulgare*	None	Introduced
Pineapple weed	*Matricaria discoidea*	None	Introduced
California burclover	*Medicago polymorpha*	None	Introduced
Douglas' Microseris	*Microseris douglasii*	None	Native
Annual sweetclover	*Melilotus indicus*	None	Introduced
Slender cottonweed	*Micropus californicus*	None	Native
Douglas' microseris	*Microseris douglasii*	None	Native
Adobe popcornflower	*Plagiobothrys acanthocarpus*	None	Native
Valley popcornflower	*Plagiobothrys canescens* var. *canescens*	None	Native
English plantain	*Plantago lanceolata*	None	Introduced
Common knotweed	*Polygonum aviculare*	None	Introduced
Jersey cudweed	*Pseudognaphalium luteoalbum*	None	Introduced
Wright's cudweed	*Pseudognaphalium microcephalum*	None	Native
Woolly marbles	*Psilocarphus tenellus*	None	Native
Curly dock	*Rumex crispus*	None	Introduced
Russian thistle	*Salsola tragus*	None	Introduced
Common groundsel	*Senecio vulgaris*	None	Introduced

Common Name	Scientific Name	Special Status	Origin
Catchfly	*Silene gallica*	None	Introduced
Milk thistle	*Silybum marianum*	None	Introduced
Prickly sow-thistle	*Sonchus asper* subsp. *Asper*	None	Introduced
Common sow thistle	*Sonchus oleraceus*	None	Introduced
Stickwort	*Spergula arvensis*	None	Introduced
Red sand spurrey	*Spergularia rubra*	None	Introduced
Chickweed	*Stellaria media*	None	Introduced
White plume wirelettuce	*Stephanomeria exigua* subsp. *coronaria*	None	Native
Common fringe pod	*Thysanocarpus curvipes*	None	Native
Puncture vine	*Tribulus terrestris*	None	Introduced
Vinegar weed	*Trichostema lanceolatum*	None	Native
Rose clover	*Trifolium hirtum*	None	Introduced
Hairy clover	*Trifolium microcephalum*	None	Native
Woolly clover	*Trifolium tomentosum*	None	Introduced
Purslane speedwell	*Veronica peregrina* subsp. *xalapensis*	None	Native
Common vetch	*Vicia sativa*	None	Introduced
Winter vetch	*Vicia villosa*	None	Introduced
Cocklebur	*Xanthium strumarium*	None	Native
Graminoids - 23 Species			
Slender wild oat	*Avena barbata*	None	Introduced
Wild oat	*Avena fatua*	None	Introduced
Ripgut brome	*Bromus diandrus*	None	Introduced
Soft chess brome	*Bromus hordeaceus*	None	Introduced
Red top brome	*Bromus madritensis* subsp. *rubens*	None	Introduced
Bermuda grass	*Cynodon dactylon*	None	Introduced
Umbrella sedge	*Cyperus eragrostis*	None	Native
Saltgrass	*Distichlis spicata*	None	Native
Barnyard grass	*Echinochloa crus-galli*	None	Introduced
Pale spikerush	*Eleocharis macrostachya*	None	Native
Medusahead	*Elymus caput-medusae*	None	Introduced
Creeping wild rye	*Elymus triticoides*	None	Native
Rattail sixweeks grass	*Festuca myuros*	None	Introduced
Italian rye grass	*Festuca perennis*	None	Introduced
Seaside barley	*Hordeum marinum* subsp. *gussoneanum*	None	Introduced
Foxtail barley	*Hordeum murinum*	None	Introduced
Barley	*Hordeum vulgare*	None	Introduced

Common Name	Scientific Name	Special Status	Origin
Toadrush	*Juncus bufonius*	None	Native
Mexican rush	*Juncus mexicanus*	None	Native
Hood canarygrass	*Phalaris paradoxa*	None	Introduced
Annual bluegrass	*Poa annua*	None	Introduced
Annual beardgrass	*Polypogon monspeliensis*	None	Introduced
Needlegrass	*Stipa pulchra*	None	Native

3.11 Wildlife Survey Results

At least 86 animal species are listed that could potentially occur in the Study Area (Table 6). These include at least 3 amphibians, 9 reptiles, 50 birds, and 24 mammals. We provide this list as a guide to the wildlife observed in the Study Area and to the species that could potentially be present at least seasonally. Other species could occur as transients, particularly avian fauna. Species observed at the site during our surveys are designated by the check symbol (✓) in the fourth column.

TABLE 6. WILDLIFE LIST

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Amphibians – 3 Species				
California (Western) Toad	*Anaxyrus boreas halophilus*	None	✓	Grassland, woodland
Sierran Treefrog	*Pseudacris sierra*	None	✓	Many habitats near water
Western Spadefoot Toad	*Spea hammondii*	SSC	✓ 2004	Grassland habitat with seasonal pools
Reptiles – 9 Species				
Northern California Legless Lizard	*Anniella pulchra*	SSC		Sandy soils and leaf litter
Western Yellow-bellied Racer	*Coluber constrictor mormon*	None		Grasslands, open areas
Monterey Ringneck Snake	*Diadophis punctatus vandenburgii*	None		Woodlands, grasslands, chaparral
California Alligator Lizard	*Elgaria multicarinata webbii*	None		Open grassland, woodland, chaparral
California Kingsnake	*Lampropeltis californiae*	None	✓	Woodland, grassland, streams
Pacific Gopher Snake	*Pituophis catenifer catenifer*	None		Woodland, grassland, rural
Skilton's Skink	*Plestiodon skiltonianus skiltonianus*	None		Woodland, grassland, chaparral, inland and coastal
Coast Range Fence Lizard	*Sceloporus occidentalis bocourtii*	None	✓	Wide range; variety of habitats

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Western Side-blotched Lizard	*Uta stansburiana elegans*	None	✓	Wide range; variety of habitats
Birds – 50 Species				
Red-winged Blackbird	*Agelaius phoeniceus*	None	✓	Marshes, fields
American Pipit	*Anthus rubescens*		✓	Open habitat agricultural fields (in stubble or plowed)
California Scrub-jay	*Aphelocoma californica*	None	✓	Oak, riparian woodlands
Burrowing Owl	*Athene cunicularia*	SSC		Grasslands with ground squirrel burrows
Oak Titmouse	*Baeolophus inornatus*	Special Animal	✓	Open Woodlands
Red-tailed Hawk	*Buteo jamaicensis*	None	✓	Open, semi-open country
California Quail	*Callipepla californica*	None		Shrubby habitats
Anna's Hummingbird	*Calypte anna*	None	✓	Many habitats
Turkey Vulture	*Cathartes aura*	None	✓	Open country
Lark Sparrow	*Chondestes grammacus*	None	✓	Grasslands
Northern Flicker	*Colaptes auratus*	None	✓	Open Woodlands
Rock Pigeon	*Columba livia*	None	✓	Urban areas
American Crow	*Corvus brachyrhynchos*	None	✓	Many habitats, esp. urban
Common Raven	*Corvus corax*	None	✓	Many habitats, esp. urban
Brewer's Blackbird	*Euphagus cyanocephalus*	None	✓	Open habitats
American Kestrel	*Falco sparverius*	None	✓	Open, semi-open country
Greater Roadrunner	*Geococcyx californianus*	None		Open habitats
House Finch	*Haemorhous mexicanus*	None	✓	Many habitats, esp. urban
Barn Swallow	*Hirundo rustica*	None		Riparian, grasslands, lakes
Acorn woodpecker	*Melanerpes formicivorus*	None	✓	Open woodlands
California Towhee	*Melozone crissalis*	None	✓	Scrub habitats
Northern Mockingbird	*Mimus polyglottos*	None	✓	Mixed habitats, urban
Brown-headed Cowbird	*Molothrus ater*	None		Grasslands, ranches
House Sparrow	*Passer domesticus*	None	✓	Urban
Savannah Sparrow	*Passerculus sandwichensis*	None	✓	Grasslands
Cliff Swallow	*Petrochelidon pyrrhonota*	None		Urban; open areas near water
Nuttall's Woodpecker	*Picoides nuttallii*	None	✓	Open woodland
Spotted Towhee	*Pipilo maculatus*	None		Dense brushy areas
Bushtit	*Psaltriparus minimus*	None		Woodlands, chaparral
Ruby-crowned Kinglet	*Regulus calendula*	None	✓	Forests
Black Phoebe	*Sayornis nigricans*	None	✓	Near water in natural and urban settings

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Say's Phoebe	*Sayornis saya*	None	✓	Open country, grassland
Yellow-rumped Warbler	*Setophaga coronata*	None	✓	Coniferous and mixed woodland (breeding)
Yellow Warbler	*Setophaga petechia*	SSC	✓	Riparian woodland
Western Bluebird	*Sialia mexicana*	None	✓	Woodland near open areas
Lawrence's Goldfinch	*Spinus lawrencei*	None	✓	Open Woodland
Lesser Goldfinch	*Spinus psaltria*	None	✓	Open Woodland
American Goldfinch	*Spinus tristis*	None		Weedy fields, woodlands
Eurasian Collared-Dove	*Streptopelia decaocto*	None	✓	Urban areas
Western Meadowlark	*Sturnella neglecta*	None	✓	Open habitats, grasslands
European Starling	*Sturnus vulgaris*	None	✓	Agricultural, livestock areas
Bewick's Wren	*Thryomanes bewickii*	None		Riparian woodland, scrub
California Thrasher	*Toxostoma redivivum*	None	✓	Chaparral, suburban areas
House Wren	*Troglodytes aedon*	None		Shrubby areas
American Robin	*Turdus migratorius*	None		Streamsides, woodlands, urban parks
Western Kingbird	*Tyrannus verticalis*	None	✓	Grasslands, savannah
Cassin's Kingbird	*Tyrannus vociferans*	None	✓	Open and semi-open areas
Barn Owl	*Tyto alba*	None	✓	Agricultural, woodlands
Mourning Dove	*Zenaida macroura*	None	✓	Open and semi-open habitats
White-crowned sparrow	*Zonotrichia leucophrys*	None	✓	Open and shrubby habitats
Mammals – 24 Species				
Pallid Bat	*Antrozous pallidus*	SSC		Riparian, woodland, urban
Coyote	*Canis latrans*	None	✓	Open woodlands, brushy areas, wide ranging.
Townsend's Big-eared Bat	*Corynorhinus townsendii*	SSC		Arid western desert scrub and pine forest regions
Virginia Opossum	*Didelphis virginiana*	None		Woodlands, streams
Feral Cat	*Felis catus*	None	✓	Varied
Black-tailed Jackrabbit	*Lepus californicus*	None		Grasslands
Striped Skunk	*Mephitis mephitis*	None	✓	Mixed woods, brush, semi-open country
California Vole	*Microtus californicus*	None		Grassland meadows
Long-tailed Weasel	*Mustela frenata*	None		Grasslands
California Myotis	*Myotis californicus*	None		Tunnels, hollow trees, buildings, bridges.
Mule Deer	*Odocoileus hemionus*	None	✓	Many habitats
California Ground Squirrel	*Otospermophilus beecheyi*	None	✓	Grasslands

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Deer Mouse	*Peromyscus maniculatus*	None		All dry land habitats
Raccoon	*Procyon lotor*	None		Urban and wildlands
Western Harvest Mouse	*Reithrodontomys megalotis*	None		Grassland, dense vegetation near water
Desert Cottontail	*Sylvilagus audubonii*	None	✓	Brushy habitats
Brush Rabbit	*Sylvilagus bachmani*	None		Brushy habitats
Mexican Free-tailed Bat	*Tadarida brasiliensis*	None		Variety of habitats; roosts in bridges, buildings, caves
American Badger	*Taxidea taxus*	SSC		Open country
Valley Pocket Gopher	*Thomomys bottae*	None	✓	Variety of habitats
San Joaquin Kit Fox	*Vulpes macrotis mutica*	FE, ST		Open grasslands, scrub
Red Fox	*Vulpes vulpes*	None	✓	Variety of habitats

FT = Federally Threatened; FE = Federally Endangered; ST = State Threatened; SSC = Species of Special Concern

4 POTENTIAL IMPACTS TO BIOLOGICAL RESOURCES

The proposed Project is a residential development that would occupy approximately 188 acres of the 254-acre Olsen Ranch. The project is in the design phase at the time of this writing, but preliminary site plans were provided in digital format by Wallace Group for overlay on biological resources (refer to Figure 6). Primary development areas for the residential lots would occupy grassland and cropland habitats. All existing residences would be removed. Three access roads would cross the unnamed drainage at the north end of the site. Open space areas are proposed along the riparian corridor, and in grassland and cropland areas associated with the transmission line corridor.

4.1 Habitat Impacts

The proposed project is anticipated to affect approximately 188 acres of the 254-acre Study Area and would affect portions of all habitat types mapped on site. Table 7 shows the breakdown of habitat impacts based on the preliminary site plan layout.

TABLE 7. POTENTIAL HABITAT IMPACTS

Habitat Type	Permanent Impact Acres
Anthropogenic	5.55
California Annual Grassland	64.92
Cropland	116.73
Riparian	0.18
Wetlands	0.12
Non-Wetland Waters	0.44

4.1.1 California Annual Grassland

Approximately 64.9 acres of annual grassland could be permanently impacted by the Project. The grassland is a fairly disturbed habitat dominated by non-native species, but may provide foraging habitat for songbirds, raptors, and small to medium sized mammals. Development of this habitat would impact 10 oak trees, remove 12 oak trees, and remove three willows from near the stockpond. Twenty-six oaks would be avoided in this habitat type. This is not a sensitive habitat type and does not require mitigation except where it affects special status species such as San Joaquin kit fox, or oak trees (see Section 5.4).

TABLE 8. POTENTIAL OAK AND RIPARIAN TREE IMPACTS IN GRASSLAND

Tree Species	Remain	Impacted	Removed	Total
Blue Oak	14	5	7	**26**
Oak sp.	5	3	2	**10**
Red Willow	0	0	3	**3**
Valley Oak	7	2	3	**12**
Total	**26**	**10**	**15**	**51**

4.1.2 Anthropogenic

Three residences and their associated barns, outbuildings, ranch facilities, and ruderal surroundings would be removed. Anthropogenic habitats are not sensitive habitat types and do not require mitigation. No special status species are expected to be affected by removal of anthropogenic areas of the Olsen Ranch. The permanent impact of this habitat includes the impact of three oaks, removal of 17 oaks, and removal of one Fremont cottonwood. Two blue oaks would be avoided.

TABLE 9. POTENTIAL OAK AND RIPARIAN TREE IMPACTS IN ANTHROPOGENIC HABITAT

Tree Species	Remain	Impacted	Removed	Total
Blue Oak	2	1	14	**17**
Fremont Cottonwood	0	0	1	**1**
Valley Oak	0	2	3	**5**
Total	**2**	**3**	**18**	**23**

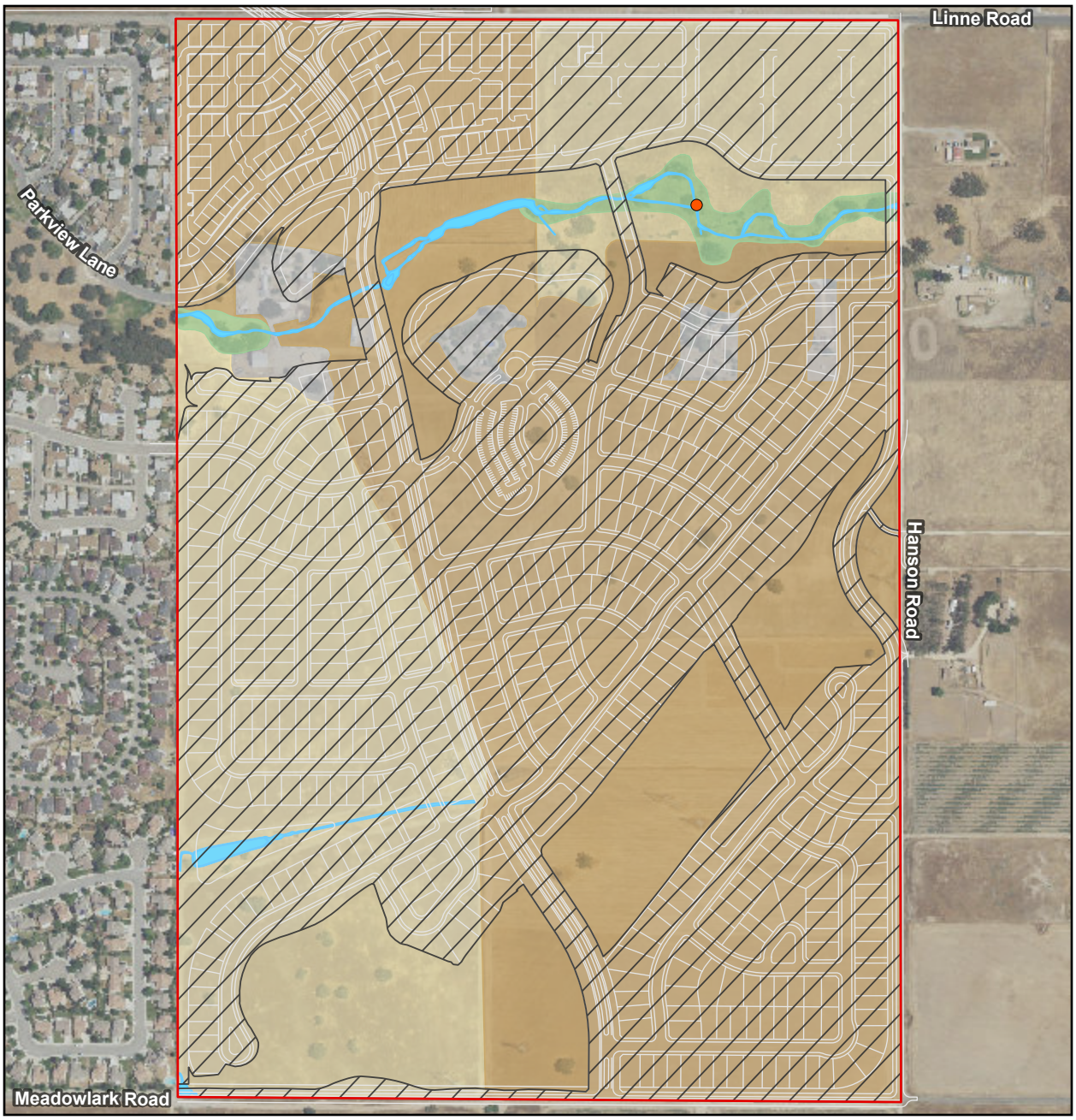
4.1.3 Riparian

Approximately 0.18 acre of riparian habitat could be permanently impacted by the Project. The Project was designed to avoid and protect 95 percent of the riparian/oak woodland habitat. The only impacts to the riparian habitat will occur from two road crossings and the widening of Hansen Road on the eastern edge of the Property. Impacts to this habitat include the impact of seven oaks and removal of 11 oaks. Sixty-four oaks and five Fremont cottonwoods will be avoided within the riparian area.

TABLE 10. POTENTIAL OAK AND RIPARIAN TREE IMPACTS IN RIPARIAN HABITAT

Tree Species	Remain	Impacted	Removed	Total
Blue Oak	5	0	0	**5**
Fremont Cottonwood	5	0	0	**5**
Red Willow	1	0	0	**1**
Valley Oak	59	7	11	**77**
Total	**70**	**7**	**11**	**88**

Figure 6. Proposed Impacts to Biological Resources



Legend

Habitat Type*

- Anthropogenic (7.5 acres; 5.6 acres impacted)
- California Annual Grassland (82.1 acres; 64.9 acres impacted)
- Cropland (147.3 acres; 116.7 acres impacted)
- Riparian (4.0 acres; 0.2 acres impacted)

- Inactive Raptor Nest
- Site Plans
- Proposed Impact Area (188.0 acres)
- Wetlands and Waters (1.5 acres)
- Olsen Ranch Boundary (254.1 acres)

N

0 300 600 Feet

*Reported areas are approximations and may not total to acreages reported in legal land description.

Olsen Ranch
Map Center: 120.63666°W 35.60646°N
Paso Robles, San Luis Obispo County

Biological Survey Date: 10/16/2018

4.2 Wetlands and Jurisdictional Waters

Up to 0.12 acre of wetland and up to 944 feet of potentially jurisdictional non-wetland waters could be permanently impacted by the Project. These impacts would occur in the northern drainage through two road crossings and Hanson Road widening, in the central drainage through housing development, and in the southwest corner wetland through housing development and Meadowlark Road widening. The jurisdictional status of wetlands and waters in the Study Area has not yet been formerly determined by agencies. Mitigation recommendations are provided if impacts are proposed to wetlands and waters on the site (see Section 5.2).

4.3 Oak Trees

The Project has the potential to remove 49 oak trees and impact an additional 24 oak trees while retaining 99 oaks (refer to Figure 7). Mitigation recommendations are provided for oak trees (refer to Section 5.4.7).

TABLE 11. OAK TREE IMPACTS

Tree Species	Remain	Impacted	Removed	Total
Blue Oak	22	8	28	**58**
Valley Oak	71	13	19	**103**
Oak sp.	6	3	2	**11**
Total	**99**	**24**	**49**	**172**

4.4 Nesting Birds

Vegetation removal and construction activities associated with the proposed Project could result in adverse impacts to nesting birds if conducted during nesting season (March 15 through August 15). The potential for impacts to nesting birds can be reduced (refer to Section 5.4).

4.5 Special Status Species

4.5.1 Special Status Plants

Special status plants were not detected in the Study Area during appropriately timed botanical surveys in spring 2019. The proposed Project would not affect special status plants, and no further surveys are recommended.

4.5.2 Special Status Birds

Special status birds were not detected in the Study Area. The proposed Project is not expected to affect special status birds.

4.5.3 Special Status Mammals

The removal of old buildings and trees for the proposed Project could impact roosting habitat for pallid bat and Townsend's big-eared bat. Impacts to special status bat species can be avoided by implementing preconstruction surveys (refer to Section 5.4.4).

There is potential habitat for American badger and San Joaquin kit fox within the Study Area. The grassland habitat within the Study Area is of low quality for these species, but transient individuals may occur. Impacts to these species can be mitigated (Sections 5.4.5 and 5.4.6).

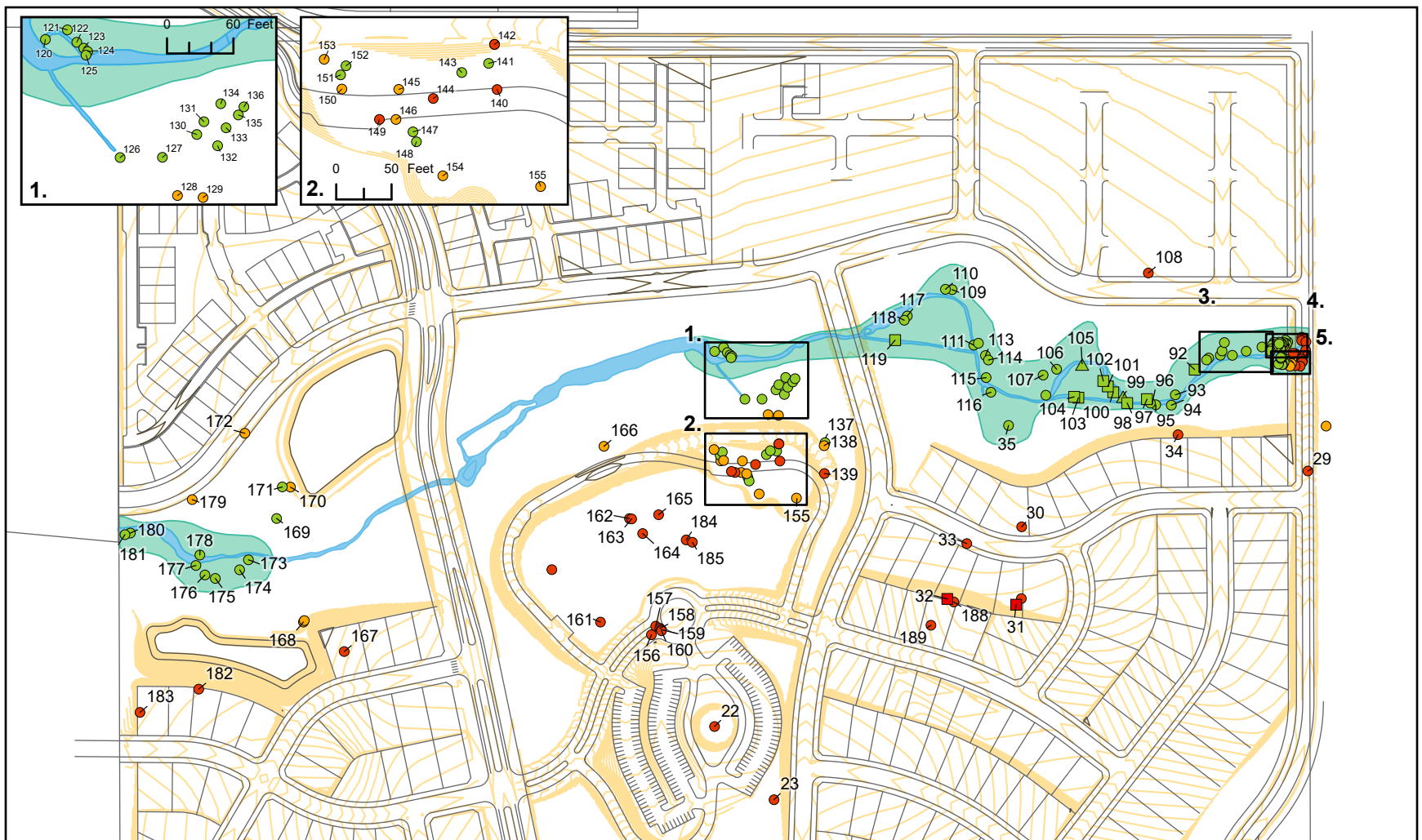
4.5.4 Spadefoot Toad

Spadefoot toad tadpoles were observed during surveys in the Study Area. Recommendations to avoid effects to this species are provided in Section 5.4.2.

4.5.5 Vernal Pool Fairy Shrimp

A protocol level survey for rare branchiopods is being conducted during the 2018-2019 season. Rainfall was above average for the rain season. No rare branchiopods were detected as of May 2019 during wet season surveys. A dry season survey of the stockpond was completed in fall 2018 that found no rare branchiopods present in that feature. A dry season survey will be accomplished for the remained of the Study Area in 2019 to complete the protocol.

Figure 7. Olsen Ranch Tree Impact Status



Legend

Tree Species

- ○ Oak*
- △ Red Willow
- □ Fremont Cottonwood

Tree Impact Status

- Remain
- Impacted
- Remove

- Grading Limits
- Site Plans
- Wetlands and Waters
- Riparian Habitat

N

0 300 600 Feet

*Oaks with a DBH of 4 inches or less were not tagged.

Olsen Ranch
Map Center: 120.63668°W 35.60643°N
Paso Robles, San Luis Obispo County

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
May 21, 2019 08:44 AM by MMP

5 RECOMMENDATIONS AND MITIGATIONS

Mitigation is not required for impacts to cropland, non-native annual grassland, or anthropogenic habitats. Mitigation recommendations are provided for riparian habitat, wetlands and drainages, and wildlife.

5.1 Riparian Habitat

Approximately 0.18 acre of riparian habitat is predicted to be impacted by the Project. The Applicant may need to obtain permits from Army Corps of Engineers, California Department of Fish and Wildlife, and certification from the Regional Water Quality Control Board. As part of this process we recommend a restoration and enhancement plan for offsetting temporary impacts to these habitat types. Project design should consider crossing designs with minimal impact to streams, such as span bridges or rail car bridges.

BR-1. To minimize impacts on riparian habitat, prepare a restoration and enhancement plan. Temporary impacts typically require a minimum 1 to 1 ratio restoration (area of restored habitat to impacted habitat). Appropriate restoration and enhancement activities include planting appropriate native species, correcting bank stabilization issues, and providing habitat enhancements.

5.2 Wetlands and Drainages

Project activities could result in fill of wetlands and non-wetland drainages. A wetland delineation report was prepared for the Study Area according to state and federal standards to determine the extent of Clean Water Act section 404 jurisdictional wetlands and waters of the United States (Althouse and Meade, Inc. 2019). A jurisdictional determination of wetlands onsite should be obtained from the U.S. Army Corps of Engineers.

BR-2. If permanent impacts to wetlands are proposed, a mitigation, monitoring, and reporting plan shall be prepared and approved by the City and other jurisdictional agencies, as appropriate (i.e., California Department of Fish and Game, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board). Wetland mitigation should increase the aerial extent of wetland habitat on site at a three-to-one ratio (created wetland area to impacted wetland area). Mitigation implementation and success will be monitored for a minimum of three years, depending on the jurisdictional agencies' requirements.

5.3 Nesting Birds

Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take (as defined therein) of all native birds and their active nests, including raptors and other migratory non-game birds (as listed under the Federal MBTA).

BR-3. Within one week of ground disturbance activities, if work occurs between March 15 and August 15, nesting bird survey**s** shall be conducted**.** If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities shall occur within 100 feet of nests until chicks are fledged. A pre-construction survey report shall be submitted to the lead agency immediately upon completion of the survey. The report shall detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements. A map of the Project site and nest locations shall be included with the report. The Project biologist conducting the nesting survey shall have the authority to reduce or increase the recommended buffer depending upon site conditions.

5.4 Avoidance, Minimization, and Mitigation for Special Status Species

5.4.1 Special Status Plants

Special status plants were not detected in the Study Area during seasonally timed floristic surveys in spring 2019. The proposed Project would not impact special status plants.

5.4.2 Spadefoot Toad

To minimize impacts to western spadefoot toad the following measure is recommended (CDFW 2013):

BR-4. For work conducted during the western spadefoot toad migration and breeding season (November 1 to May 31), a qualified biologist will survey the active work areas (including access roads) in mornings following measurable precipitation events. Construction may commence once the biologist has confirmed that no spadefoot toads are in the work area.

When feasible, there will be a 50-foot no-disturbance buffer around burrows that provide suitable upland habitat for western spadefoot toad. Burrows considered suitable for spadefoot will be identified by a CDFW approved biologist. The biologist will delineate and mark the no-disturbance buffer.

If western spadefoot toad is found within the construction footprint, it will be allowed to move out of harm's way of its own volition, or a qualified biologist will relocate the organism to the nearest burrow that is outside of the construction impact area.

Prior to beginning work each day, a qualified biologist will inspect underneath equipment and stored pipes greater than 1.2 inches (3 cm) in diameter for western spadefoot toad. If any are found, they will be allowed to move out of the construction area under their own accord.

Trenches and holes will be covered and inspected daily for stranded animals. Trenches and holes deeper than one foot deep will contain escape ramps (maximum slope of 2:1) to allow trapped animals to escape uncovered holes or trenches. Holes and trenches will be inspected prior to filling.

5.4.3 Special Status Bats

BR-5. Upon project approval, a qualified biologist shall conduct a survey of existing trees and structures on the Study Area to determine if roosting bats are present. If possible, the survey shall be conducted during the non-breeding season (November through March). The biologist shall have access to all interior attics, as needed. If a colony of bats is found roosting in any tree or structure, further surveys shall be conducted sufficient to determine the species present and the type of roost (day, night, maternity, etc.) If the bats are not part of an active maternity colony, passive exclusion measures may be implemented with approval from CDFW. November is the best time of the year to exclude bats from a roost because it is after the breeding season and before winter hibernation (not all species hibernate).

BR-6. If bats are roosting in trees or structures on the Study Area during the daytime but are not part of an active maternity colony, then exclusion measures must include one-way valves that allow bats to get out but are designed so that the bats may not re-enter the structure.

BR-7. If a bat colony is excluded, appropriate alternate bat habitat shall be installed in the Study Area. For each occupied roost removed, one bat box shall be installed in similar habitat and should have similar cavity or crevices properties to those which are removed, including access, ventilation, dimensions, height above ground, and thermal conditions. Maternal bat colonies may not be disturbed.

5.4.4 American Badger

American badger could occur within the proposed Project areas. Project activities including grading and other excavation work could result in take of American badger adults or young, or disturbance of natal dens and abandonment by adult badgers. To reduce this potential impact the following measure is recommended:

BR-8. Within 15 days of starting any grading, grubbing, or tree removal, a preconstruction survey shall be conducted in the Study Area to locate occupied American badger dens within 100 feet of project areas. A preconstruction survey letter report shall be submitted to the lead agency for review within one week after completion of the survey. The survey shall cover the entire Study Area and shall examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope shall be used to examine the den to the end. A project biologist will install orange construction fencing in a manner sufficient to protect found dens from construction equipment. If badgers are found in dens in the Study Area from February 1 to July 1, nursing young may be present. Between February and July, to avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers from becoming trapped in burrows during construction activity, no grading shall occur within a 100-foot buffer of active badger dens. Between July 1 and February 1 all potential badger dens shall be inspected to determine if badgers are present. No grading will occur within a 50-foot buffer of active, non-maternal badger dens, from July to February. Construction activities shall not commence within the exclusion area until the badger has moved of its own accord. Inactive dens may be excavated by hand with a shovel to prevent re-use of dens during construction. During the winter badgers do not truly hibernate but are inactive

and asleep in their dens for several days at a time. Badgers can be torpid during the winter and they are vulnerable to disturbances that may collapse their dens before they rouse and emerge; surveys shall be conducted for badger dens throughout the entire year. If badger dens are found in the Study Area during the pre-construction survey, the CDFW wildlife biologist for the area shall be contacted to review current allowable management practices.

5.4.5 San Joaquin Kit Fox

San Joaquin kit fox could occur in the project area. The project would result in a net loss of kit fox habitat. Construction activities could directly impact (take) San Joaquin kit fox. Because the project is larger than 40 acres, a San Joaquin kit fox habitat evaluation form is required to determine the correct level of mitigation. A preliminary evaluation was completed by Daniel E. Meade and produced a score of 77 which translates to a 3 to 1 mitigation ratio, that is three acres required for mitigation for every acre removed as habitat. The exact acreage of habitat to be permanently removed has not been determined pending final project approval. The following mitigation recommendations are designed to reduce the potential for direct impacts to kit fox to a less than significant level.

BR-9. Prior to issuance of grading and/or construction permits, the applicant shall submit evidence to the City of Paso Robles that states that one or a combination of the following three San Joaquin kit fox mitigation measures has been implemented:

a. Provide for the protection in perpetuity, through acquisition of fee or a conservation easement of **[Total number of mitigation acres required]** acres of suitable habitat in the kit fox corridor area (e.g. within the San Luis Obispo County kit fox habitat area, northwest of Highway 58), either on-site or off-site, and provide for a non-wasting endowment to provide for management and monitoring of the property in perpetuity. Lands to be conserved shall be subject to the review and approval of the California Department of Fish and Game (Department) and the City.

   This mitigation alternative (a.) requires that all aspects if this program must be in place before City permit issuance or initiation of any ground disturbing activities.

b. Deposit funds into an approved in-lieu fee program, which would provide for the protection in perpetuity of suitable habitat in the kit fox corridor area within San Luis Obispo County, and provide for a non-wasting endowment for management and monitoring of the property in perpetuity.

   Mitigation alternative (b) above can be completed by providing funds to The Nature Conservancy (TNC) pursuant to the Voluntary Fee-Based Compensatory Mitigation Program (Program). The Program was established in agreement between the Department and TNC to preserve San Joaquin kit fox habitat, and to provide a voluntary mitigation alternative to project proponents who must mitigate the impacts of projects in accordance with the California Environmental Quality Act (CEQA). The fee, payable to "The Nature Conservancy", would total $**[Amount of fee based on $___ per acre]**. This fee is calculated based on the current cost-per-unit of $___ per acre of mitigation, which is scheduled to be adjusted to address the increasing cost of property in San Luis Obispo County; your actual cost may increase depending on the timing of payment. This fee must be paid after the Department provides written

notification about your mitigation options but prior to City permit issuance and initiation of any ground disturbing activities.

c. Purchase **[Total number of mitigation acres required]** ___credits in a Department-approved conservation bank, which would provide for the protection in perpetuity of suitable habitat within the kit fox corridor area and provide for a non-wasting endowment for management and monitoring of the property in perpetuity.

Mitigation alternative (c) above can be completed by purchasing credits from the Palo Prieto Conservation Bank (see contact information below). The Palo Prieto Conservation Bank was established to preserve San Joaquin kit fox habitat, and to provide a voluntary mitigation alternative to project proponents who must mitigate the impacts of projects in accordance with the California Environmental Quality Act (CEQA). The cost for purchasing credits is payable to the owners of The Palo Prieto Conservation Bank, and would total $**[Amount of mitigation acres required (i.e. credits), currently priced at $___ per credit]**. This fee is calculated based on the current cost-per-credit of $___ per acre of mitigation. The fee is established by the conservation bank owner and may change at any time. Your actual cost may increase depending on the timing of payment. Purchase of credits must be completed prior to City permit issuance and initiation of any ground disturbing activities.

BR-10. Prior to issuance of grading and/or construction permits, the applicant shall provide evidence that they have retained a qualified biologist acceptable to the City. The retained biologist shall perform the following monitoring activities:

a. Prior to issuance of grading and/or construction permits and within 30 days prior to initiation of site disturbance and/or construction, the biologist shall conduct a pre-activity (i.e. pre-construction) survey for known or potential kit fox dens and submit a letter to the City reporting the date the survey was conducted, the survey protocol, survey results, and what measures were necessary (and completed), as applicable, to address any kit fox activity within the project limits.

b. The qualified biologist shall conduct weekly site visits during site-disturbance activities (i.e. grading, disking, excavation, stock piling of dirt or gravel, etc.) that proceed longer than 14 days, for the purpose of monitoring compliance with required Mitigation Measures BR-11 through BR-19. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends monitoring for some other reason. When weekly monitoring is required, the biologist shall submit weekly monitoring reports to the City.

c. **Prior to or during project activities**, if any observations are made of San Joaquin Kit fox, or any known or potential San Joaquin kit fox dens are discovered within the project limits, the qualified biologist shall re-assess the probability of incidental take (e.g. harm or death) to kit fox. At the time a den is discovered, the qualified biologist shall contact USFWS and the CDFW for guidance on possible additional kit fox protection measures to implement and whether or not a Federal and/or State incidental take permit is needed. If a potential den is encountered during construction, work shall stop until such time the USFWS/CDFW determines it is appropriate to resume work.

If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS. The results of this consultation may require the applicant to obtain a Federal and/or State permit for incidental take during project activities. The applicant should be aware that the presence of kit foxes or known or potential kit fox dens at the project site could result in further delays of project activities.

d. In addition, the qualified biologist shall implement the following measures:

   1. Within 30 days prior to initiation of site disturbance and/or construction, fenced exclusion zones shall be established around all known and potential kit fox dens. Exclusion zone fencing shall consist of either large flagged stakes connected by rope or cord, or survey laths or wooden stakes prominently flagged with survey ribbon. Each exclusion zone shall be roughly circular in configuration with a radius of the following distance measured outward from the den or burrow entrances:

      - Potential kit fox den: 50 feet
      - Known or active kit fox den: 100 feet
      - Kit fox pupping den: 150 feet

   2. All foot and vehicle traffic, as well as all construction activities, including storage of supplies and equipment, shall remain outside of exclusion zones. Exclusion zones shall be maintained until all project-related disturbances have been terminated, and then shall be removed.

   3. If kit foxes or known or potential kit fox dens are found on site, daily monitoring by a qualified biologist shall be required during ground disturbing activities.

BR-11. **Prior to issuance of grading and/or construction permits**, the applicant shall clearly delineate the following as a note on the project plans: "*Speed signs of 25 mph (or lower) shall be posted for all construction traffic to minimize the probability of road mortality of the San Joaquin kit fox".* Speed limit signs shall be installed on the project site within 30 days prior to initiation of site disturbance and/or construction.

BR-12. Prior to issuance of grading and/or construction permit and within 30 days prior to initiation of site disturbance and/or construction, all personnel associated with the project shall attend a worker education training program, conducted by a qualified biologist, to avoid or reduce impacts on sensitive biological resources (i.e. San Joaquin kit fox). At a minimum, as the program relates to the kit fox, the training shall include the kit fox's life history, all mitigation measures specified by the City, as well as any related biological report(s) prepared for the project. The applicant shall notify the City shortly prior to this meeting. A kit fox fact sheet shall also be developed prior to the training program, and distributed at the training program to all contractors, employers and other personnel involved with the construction of the project.

BR-13. Prior to, during and after the site disturbance and/or construction phase, use of pesticides or herbicides shall be in compliance with all local, State and Federal regulations. This is necessary to minimize the probability of primary or secondary poisoning of endangered

species utilizing adjacent habitats, and the depletion of prey upon which San Joaquin kit foxes depend.

BR-14. During the site disturbance and/or construction phase, grading and construction activities after dusk shall be prohibited unless coordinated through the City, during which additional kit fox mitigation measures may be required.

BR-15. During the site disturbance and/or construction phase, to prevent entrapment of the San Joaquin kit fox, all excavations, steep-walled holes and trenches in excess of two feet in depth shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Trenches shall also be inspected for entrapped kit fox each morning prior to onset of field activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they shall be thoroughly inspected for entrapped kit fox. Any kit fox so discovered shall be allowed to escape before field activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.

BR-16. During the site disturbance and/or construction phase, any pipes, culverts, or similar structures with a diameter of four inches or greater, stored overnight at the project site shall be thoroughly inspected for trapped San Joaquin kit foxes before the subject pipe is subsequently buried, capped, or otherwise used or moved in any way. If during the construction phase a kit fox is discovered inside a pipe, that section of pipe will not be moved. If necessary, the pipe may be moved only once to remove it from the path of activity, until the kit fox has escaped.

BR-17. During the site disturbance and/or construction phase, all food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of only in closed containers. These containers shall be regularly removed from the site. Food items may attract San Joaquin kit foxes onto the project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.

BR-18. During the site disturbance and/or construction phase, any contractor or employee that inadvertently kills or injures a San Joaquin kit fox or who finds any such animal either dead, injured, or entrapped shall be required to report the incident immediately to the applicant and City. In the event that any observations are made of injured or dead kit fox, the applicant shall immediately notify the USFWS and CDFW by telephone. In addition, formal notification shall be provided in writing within three working days of the finding of any such animal(s). Notification shall include the date, time, location and circumstances of the incident. Any threatened or endangered species found dead or injured shall be turned over immediately to CDFW for care, analysis, or disposition.

BR-19. Prior to final inspection, or occupancy, whichever comes first, should any long internal or perimeter fencing be proposed or installed, the applicant shall do the following to provide for kit fox passage:

a. If a wire strand/pole design is used, the lowest strand shall be no closer to the ground than 12 inches.
b. If a more solid wire mesh fence is used, 8" x 12" openings near the ground shall be provided every 100 yards

c. Upon fence installation, the applicant shall notify the City to verify proper installation. Any fencing constructed after issuance of a final permit shall follow the above guidelines

5.4.6 Oak Trees

Oak tree impacts and mitigation requirements shall be compiled by the project arborist or botanist upon completion of the final Project site plans. The following mitigation recommendations are modeled after guidelines set forth in the Paso Robles Tree Ordinance (City of El Paso De Robles 2002)

BR-20. Tree canopies and trunks within 50 feet of proposed disturbance zones should be mapped and numbered by a qualified biologist and a licensed land surveyor. Data for each tree should include date, species, number of stems, diameter at breast height (DBH) of each stem, critical root zone (CRZ) diameter, canopy diameter, tree height, health, habitat notes, and nests observed.

BR-21. An oak tree protection plan shall be prepared and approved by the City of Paso Robles.

BR-22. Impacts to the oak canopy or critical root zone (CRZ) should be avoided where practicable. Impacts include pruning, any ground disturbance within the dripline or CRZ of the tree (whichever distance is greater), and trunk damage.

BR-23. Impacted oaks shall be mitigated for by planting one 24-inch boxed tree for impacts up to 25 percent of the root zone or canopy. Two 24-inch boxed trees shall be planted for trees with impacts up to 50 percent of the tree, and so on. The mitigation trees shall be incorporated into the landscape plan.

BR-24. Replacement oaks for removed trees must be equivalent to 25 percent of the diameter of the removed tree(s). For example, the replacement requirement for removal of two trees of 15 inches DBH (30 total diameter inches), would be 7.5 inches (30 inches removed x 0.25 replacement factor). This requirement could be satisfied by planting five 1.5-inch trees, or three 2.5-inch trees, or any other combination totaling 7.5 inches. A minimum of two 24-inch box, 1.5-inch trees shall be required for each oak tree removed.

BR-25. Replacement trees should be seasonally maintained (browse protection, weed reduction and irrigation, as needed) and monitored annually for at least 7 years.

BR-26. It is the responsibility of the owner or project manager to provide a copy of the tree protection plan to any and all contractors and subcontractors that work within the critical root zone of any native tree and confirm they are trained in maintaining fencing, protecting root zones and conforming to all tree protection goals. It is highly recommended that each contractor sign and acknowledge this tree protection plan.

BR-27. Any future changes (within the critical root zone) in the project will need Project Arborist review and implementation of potential mitigation measures before any said changes can proceed.

BR-28. Fencing: The proposed fencing shall be shown on the grading plan. It must be a minimum of 4' high chain link, snow or safety fence staked (with t posts 8 feet on center) at the edge of the critical root zone or line of encroachment for each tree or group of trees. The fence

shall be up before any construction or earth moving begins. The owner shall be responsible for maintaining an erect fence throughout the construction period. The arborist(s), upon notification, will inspect the fence placement once it is erected. After this time, fencing shall not be moved without arborist inspection/approval. If the orange plastic fencing is used, a minimum of four zip ties shall be used on each stake to secure the fence. All efforts shall be made to maximize the distance from each saved tree. Weatherproof signs shall be permanently posted on the fences every 50 feet, with the following information: Tree Protection Zone: No personnel, equipment, materials, or vehicles allowed.

BR-29. Soil Aeration Methods: Soils within the critical root zone that have been compacted by heavy equipment and/or construction activities must be returned to their original state before all work is completed. Methods include water jetting, adding organic matter, and boring small holes with an auger (18" deep, 2-3' apart with a 2-4" auger) and the application of moderate amounts of nitrogen fertilizer. The arborist(s) shall advise.

BR-30. Chip Mulch: All areas within the critical root zone of the trees that can be fenced shall receive a 4-6" layer of chip mulch to retain moisture, soil structure and reduce the effects of soil compaction.

BR-31. Trenching Within Critical Root Zone: All trenching within the critical root zone of native trees shall be hand dug. All major roots shall be avoided whenever possible. All exposed roots larger than 1" in diameter shall be clean cut with sharp pruning tools and not left ragged. A Mandatory meeting between the arborists and grading contractor(s) must take place prior to work start.

BR-32. Grading Within the Critical Root Zone: Grading should not encroach within the critical root zone unless authorized. Grading should not disrupt the normal drainage pattern around the trees. Fills should not create a ponding condition and excavations should not leave the tree on a rapidly draining mound. Any exposed roots shall be covered the same day they were exposed if possible. If they cannot, they must be covered with burlap or another suitable material and wetted down 2 times per day until reburied.

BR-33. Equipment Operation: Vehicles and all heavy equipment shall not be driven under the trees, as this will contribute to soil compaction. Also, there is to be no parking of equipment or personal vehicles in these areas. All areas behind fencing are off limits unless pre-approved by the arborist.

BR-34. Existing Surfaces: The existing ground surface within the critical root zone of all oak trees shall not be cut, filled, compacted or pared, unless shown on the grading plans and approved by the arborist.

BR-35. Construction Materials and Waste: No liquid or solid construction waste shall be dumped on the ground within the critical root zone of any native tree. The critical root zone areas are not for storage of materials either.

BR-36. Arborist Monitoring: An arborist shall be present for soil disturbance work within the critical root zone of oak trees. Monitoring does not necessarily have to be continuous but

observational at times during these activities. All monitoring will be documented on the field report form which will be forwarded to the project manager and the City of Paso Robles Planning Department.

BR-37. Impacted Root Treatment: Roots impacted during construction (e.g., trenching or grading operations) shall be treated by the arborist on a case-by-case basis using best practices such as clean cuts accompanied by application of appropriate fungicides and insecticides by a licensed pest control applicator.

BR-38. Pre-Construction Meeting: An on-site pre-construction meeting with the Arborist(s), Owner(s), Planning Staff, and the earth moving team shall be required for this project. Prior to final occupancy, a letter from the arborist(s) shall be required verifying the health/condition of all impacted trees and providing any recommendations for any additional mitigation. The letter shall verify that the arborist(s) were on site for all grading and/or trenching activity that encroached into the critical root zone of the selected native trees, and that all work done in these areas was completed to the standards set forth above.

BR-39. Pruning: Class 1 pruning has emphasis on aesthetics, removal of dead, dying, decaying weak branches and selective thinning to lesson wind resistance. Class 2 pruning is recommended where aesthetic conditions are secondary to structural integrity and tree health concerns. It shall consist of removal of dead, dying, decaying, interfering, obstructing and weak branches as well as selective thinning to lesson wind resistance. Class 4 pruning, including crown reduction pruning, shall consist of reduction of tops, sides or individual limbs. A certified arborist shall direct all pruning. No pruning shall take more than 25% of the live crown of any native tree. Any trees that may need pruning for road/home clearance shall be pruned prior to any grading activities to avoid any branch tearing.

BR-40. Landscape: All landscape within the critical root zone shall consist of drought tolerant or native varieties. Lawns shall be avoided. All irrigation trenching shall be routed around critical root zones, otherwise above ground drip-irrigation shall be used. It is the owner's responsibility to notify the landscape contractor regarding this mitigation. For this site it is strongly recommended that drought tolerant native landscape is used with the approval of the arborist. This includes all city sidewalk/greenbelt areas.

BR-41. Utility Placement: All utilities, sewer and storm drains shall be placed down the roads and driveways and when possible outside of the critical root zones. The arborist shall supervise trenching within the critical root zone. All trenches in these areas shall be exposed by air spade or hand dug with utilities routed under/over roots larger than 3 inches in diameter.

BR-42. Fertilization and Cultural Practices: As the project moves toward completion, the arborist(s) may suggest either fertilization and/or mycorrhizal inoculation applications that will benefit tree health. Application of mycorrhizal inoculum offers several benefits to the host plant, including faster growth, improved nutrition, greater drought resistance, and protection from pathogens.

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7 PHOTOGRAPHS

Photo 1. Cropland. View to the northwest from the northern drainage edge. September 7, 2018.

Photo 2. California Annual Grassland on the northeastern portion of the Study Area, View to the morthwest on September 7, 2018.

Photo 3. Riparian corridor of the northern drainage, View to the west from Hanson Road on February 18, 2019.

Photo 4. Riparian corridor near the middle of the Study area on the northern drainage. Trees are widely spaced in this section and the ground cover is weedy annual grasses. View to the west on September 7, 2018.

Photo 5. Water in cropland field following ten days of rainfall. View west on March 12, 2019.

Photo 6. Wetlands and Drainages. Stock pond on western Project boundary full and flowing following ten days of rainfall. View east on March 12, 2019.

Photo 7. Structures and fenced areas along the northern drainage feature. View is in the drainage looking to the east from near the western Study Area boundary on April 4, 2019.

8 APPENDICES

- **Appendix A. USDA Custom Soil Resource Report**
- **Appendix B. Special Status Plants Reported from the Region**
- **Appendix C. Special Status Animals Reported from the Region**
- **Appendix D. Arborist Report**

APPENDIX A. USDA CUSTOM SOIL RESOURCE REPORT

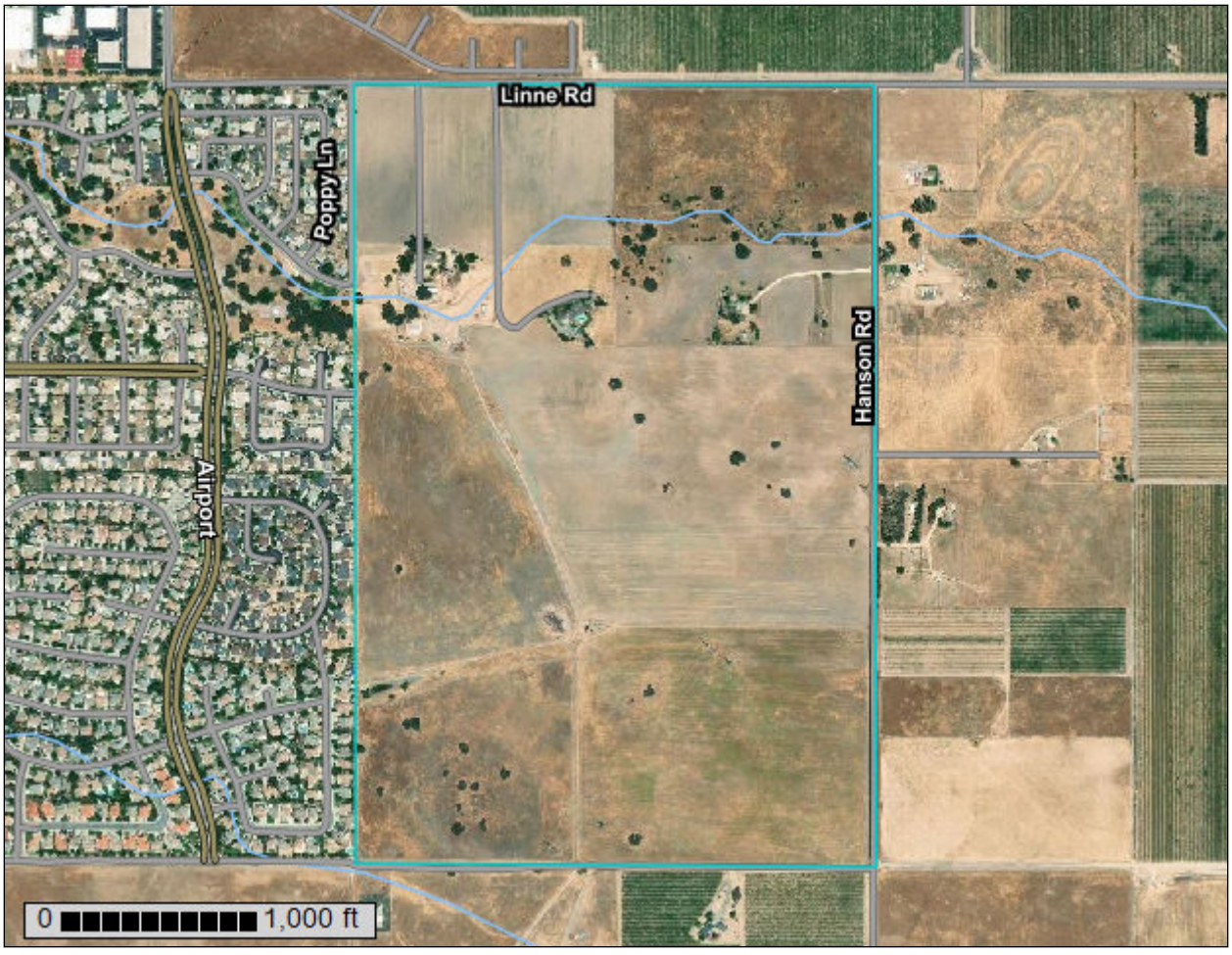
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Luis Obispo County, California, Paso Robles Area



April 5, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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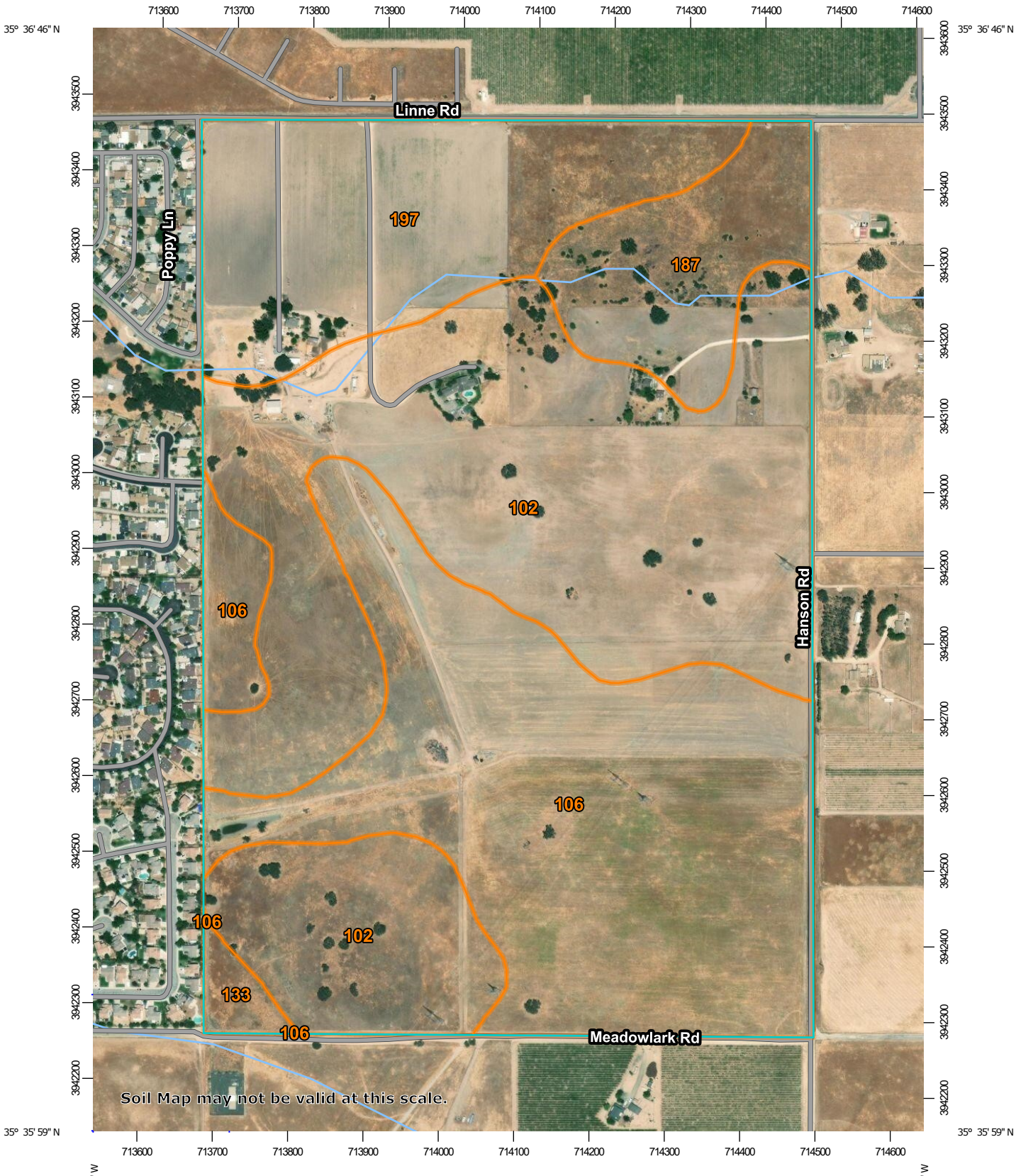
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:7,110 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Luis Obispo County, California, Paso Robles Area
Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 17, 2016—Oct 1, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
102	Arbuckle-Positas complex, 9 to 15 percent slopes	101.7	41.9%
106	Arbuckle-San Ysidro complex, 2 to 9 percent slopes	80.6	33.3%
133	Cropley clay, 2 to 9 percent slopes, MLRA 14	2.5	1.0%
187	Rincon clay loam, 0 to 2 percent slopes	18.7	7.7%
197	San Ysidro loam, 0 to 2 percent slopes, MLRA 14	38.9	16.1%
Totals for Area of Interest		**242.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Luis Obispo County, California, Paso Robles Area

102—Arbuckle-Positas complex, 9 to 15 percent slopes

Map Unit Setting

National map unit symbol: hbrk
Elevation: 600 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 60 to 61 degrees F
Frost-free period: 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Arbuckle and similar soils: 40 percent
Positas and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arbuckle

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium from mixed rock sources

Typical profile

H1 - 0 to 29 inches: fine sandy loam
H2 - 29 to 53 inches: sandy clay loam
H3 - 53 to 62 inches: stratified sandy loam to very gravelly sandy clay loam

Properties and qualities

Slope: 9 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: COARSE LOAMY (R014XE003CA)
Hydric soil rating: No

Description of Positas

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium from mixed rock sources

Typical profile

H1 - 0 to 10 inches: coarse sandy loam
H2 - 10 to 28 inches: clay
H3 - 28 to 40 inches: sandy clay loam
H4 - 40 to 60 inches: stratified sandy loam to gravelly clay loam

Properties and qualities

Slope: 9 to 15 percent
Depth to restrictive feature: 9 to 20 inches to abrupt textural change
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: COARSE LOAMY CLAYPAN (R014XE005CA)
Hydric soil rating: No

Minor Components

Greenfield, fine sandy loam

Percent of map unit: 10 percent
Hydric soil rating: No

Positas

Percent of map unit: 10 percent
Hydric soil rating: No

Cropley

Percent of map unit: 4 percent
Hydric soil rating: No

Hanford, fine sandy loam

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed, areas of 15 to 30 percent slope

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, areas of 15 to 30 percent slope

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, areas with cobbles on the surface

Percent of map unit: 1 percent
Hydric soil rating: No

106—Arbuckle-San Ysidro complex, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: hbrp
Elevation: 600 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 60 to 61 degrees F
Frost-free period: 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Arbuckle and similar soils: 40 percent
San ysidro and similar soils: 20 percent
Minor components: 39 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arbuckle

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium from mixed rock sources

Typical profile

H1 - 0 to 29 inches: fine sandy loam
H2 - 29 to 38 inches: sandy clay loam
H3 - 38 to 62 inches: stratified sandy loam to very gravelly sandy clay loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: COARSE LOAMY (R014XE003CA)
Hydric soil rating: No

Description of San Ysidro

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed rocks

Typical profile

H1 - 0 to 23 inches: loam
H2 - 23 to 38 inches: clay loam
H3 - 38 to 71 inches: sandy loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: 20 to 37 inches to abrupt textural change
Natural drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: LOAMY CLAYPAN (R014XE029CA)
Hydric soil rating: No

Minor Components

Greenfield, fine sandy loam

Percent of map unit: 14 percent
Hydric soil rating: No

Unnamed, similar to san ysidro soil

Percent of map unit: 10 percent
Hydric soil rating: No

Hanford, fine sandy loam

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed, simialr to arbuckle

Percent of map unit: 5 percent
Hydric soil rating: No

Cropley, clay

Percent of map unit: 2 percent

Hydric soil rating: No

Rincon, clay loam

Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 1 percent
Landform: Drainageways
Hydric soil rating: Yes

133—Cropley clay, 2 to 9 percent slopes, MLRA 14

Map Unit Setting

National map unit symbol: 2tb9j
Elevation: 0 to 2,340 feet
Mean annual precipitation: 12 to 28 inches
Mean annual air temperature: 56 to 60 degrees F
Frost-free period: 270 to 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Cropley and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cropley

Setting

Landform: Alluvial fans, terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Base slope, tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from calcareous shale

Typical profile

A1 - 0 to 11 inches: clay
Bss1 - 11 to 51 inches: clay
BCk1 - 51 to 79 inches: sandy clay loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Gypsum, maximum in profile: 2 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (1.0 to 3.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: CLAYEY (R014XD001CA)
Hydric soil rating: No

Minor Components

Salinas

Percent of map unit: 3 percent
Landform: Terraces, alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Base slope, tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Los osos

Percent of map unit: 3 percent
Landform: Hillslopes, ridges
Landform position (two-dimensional): Backslope, shoulder, footslope, summit
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, concave
Across-slope shape: Convex, concave
Hydric soil rating: No

Clear lake

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Capay

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Base slope, dip
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

187—Rincon clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hbv9
Elevation: 600 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 60 degrees F
Frost-free period: 200 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Rincon and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rincon

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

H1 - 0 to 18 inches: clay loam
H2 - 18 to 64 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: C
Ecological site: FINE LOAMY BOTTOM (R014XE025CA)
Hydric soil rating: No

Minor Components

Unnamed
Percent of map unit: 10 percent
Hydric soil rating: No

San ysidro, loam
Percent of map unit: 5 percent
Hydric soil rating: No

Cropley, clay
Percent of map unit: 3 percent
Hydric soil rating: No

Lockwood, shaly loam
Percent of map unit: 2 percent
Hydric soil rating: No

197—San Ysidro loam, 0 to 2 percent slopes, MLRA 14

Map Unit Setting
National map unit symbol: 2tyys
Elevation: 70 to 1,990 feet
Mean annual precipitation: 13 to 22 inches
Mean annual air temperature: 59 to 61 degrees F
Frost-free period: 300 to 360 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
San ysidro and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of San Ysidro

Setting
Landform: Alluvial fans, valley floors, terraces
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile
A - 0 to 23 inches: loam
B1 - 23 to 38 inches: clay loam
Bt2 - 38 to 64 inches: loam

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: 16 to 24 inches to abrupt textural change

Natural drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: LOAMY CLAYPAN (R014XE029CA)
Hydric soil rating: No

Minor Components

Arbuckle

Percent of map unit: 6 percent
Hydric soil rating: No

Rincon

Percent of map unit: 2 percent
Hydric soil rating: No

Solano

Percent of map unit: 2 percent
Hydric soil rating: No

Pleasanton, loam

Percent of map unit: 2 percent
Hydric soil rating: No

Pescadero

Percent of map unit: 1 percent
Landform: Basin floors
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Cropley, clay

Percent of map unit: 1 percent
Hydric soil rating: No

Palexeralfs

Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

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APPENDIX B. SPECIAL STATUS PLANTS REPORTED FROM THE REGION

The 53 special status plants reported from the region are listed below. Potentially suitable habitat is present in the Study Area for five special status plant species. No special status plant species were detected in the Study Area.

	Common Name *Scientific Name*	Fed/State Status Global/State Rank Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
1.	**Bristlecone Fir** *Abies bracteata*	None/None G2G3/S2S3 1B.3	N/A	Lower montane coniferous forest. Rocky sites in Monterey and SLO counties. 210-1600 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
2.	**Hoover's Bent Grass** *Agrostis hooveri*	None/None G2/S2 1B.2	April - July	Sandy soil in oak woodland habitat; endemic to SLO & SB counties. <600 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
3.	**Douglas' Fiddleneck** *Amsinckia douglasiana*	None/None G4/S4 4.2	March – May	Cismontane woodland, Valley and foothill grassland; unstable shaly sedimentary slopes; (100)150-1600 m.	No. Suitable substrate is not present in the Study Area.	No	No Effect
4.	**Oval-leaved Snapdragon** *Antirrhinum ovatum*	None/None G3/S3 4.2	May - November	Heavy, adobe-clay soils on gentle, open slopes, also disturbed areas; 200-1000 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
5.	**Santa Lucia Manzanita** *Arctostaphylos luciana*	None/None G2/S2 1B.2	December - March	Shale outcrops, slopes, chaparral; Cuesta Pass, SLO County. 500-700 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
6.	**Bishop Manzanita** *Arctostaphylos obispoensis*	None/None G3/S3 4.3	February - June	Rocky, generally serpentine soils, chaparral, open closed-cone forest near coast in Santa Lucia Range; 60-950 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
7.	**Santa Margarita Manzanita** *Arctostaphylos pilosula*	None/None G2?/S2? 1B.2	December - May	Shale outcrops, slopes, chaparral;. endemic to SLO County. 300-1100 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
8.	**Miles' Milk-vetch** *Astragalus didymocarpus* var. *milesianus*	None/None G5T2/S2 1B.2	March - May	Grassy areas near coast; < 400 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
9.	**Salinas Milk-vetch** *Astragalus macrodon*	None/None G4/S4 4.3	April - July	Eroded pale shales or sandstone, serpentine alluvium; 200-1550 m.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
10.	**San Luis Mariposa-lily** *Calochortus obispoensis*	None/None G2/S2 1B.2	May - June	Dry serpentine, generally open chaparral; east of Morro Bay, San Luis Obispo Co. 100-500 m.	No. Serpentine soil is not present in the Study Area.	No	No Effect
11.	**La Panza Mariposa-lily** *Calochortus simulans*	None/None G2/S2 1B.3	April - May	Grassland, oak woodland & pine forest, on sand, granite, or serpentine; endemic to SLO County. <1100 m.	No. Suitable soil type is not present in the Study Area.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
12.	**Dwarf Calycadenia** *Calycadenia villosa*	None/None G3/S3 1B.1	May - October	Dry, rocky hills, ridges, in chaparral, woodland, meadows and seeps. <1100 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
13.	**Cambria morning glory** *Calystegia subacaulis* subsp. *episcopalis*	None/None G3T2/S2 4.2	(March)April - June(July)	Dry, open scrub, woodland, or grassland; usually clay; endemic to SLO County. <500 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
14.	**Hardham's Evening-primrose** *Camissoniopsis hardhamiae*	None/None G2/S2 1B.2	March - May	Decomposed carbonate soils, in chaparral, cismontane woodland; Monterey, SLO counties. 240-600 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
15.	**San Luis Obispo Sedge** *Carex obispoensis*	None/None G3?/S3? 1B.2	March - June	Springs, streamsides in chaparral, generally on serpentine; Monterey, SLO counties. < 800 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
16.	**San Luis Obispo Owl's-clover** *Castilleja densiflora* var. *obispoensis*	None/None G5T2/S2 1B.2	April	Coastal grassland; endemic to SLO County. <100 m.	No. Suitable habitat is present however the Property is outside of the known range of this variety.	No	No Effect
17.	**Lemmon's Jewelflower** *Caulanthus lemmonii*	None/None G3/S3 1B.2	March – May	Dry, exposed slopes, grassland, chaparral, scrub. 80-1100 m.	Low. Suitable habitat may be present on dry slopes in the Study Area.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
18.	**Lompoc Ceanothus** *Ceanothus cuneatus* var. *fascicularis*	None/None G5T4/S4 4.2	February - May	Sandy substrates, coastal chaparral; Santa Barbara, SLO cos. < 275 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
19.	**Brewer's Spineflower** *Chorizanthe breweri*	None/None G3/S3 1B.3	March - July	Gravel or rocks; endemic to SLO Co. 60-800 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
20.	**Douglas' Spineflower** *Chorizanthe douglasii*	None/None G4/S4 4.3	April - July	Sand or gravel; (200)300-1600 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
21.	**Palmer's Spineflower** *Chorizanthe palmeri*	None/None G4/S4 4.2	May - August	Serpentine; Monterey, SLO counties. 60--700 m.	No. Serpentine soil is not present in the Study Area.	No	No Effect
22.	**Straight-awned Spineflower** *Chorizanthe rectispina*	None/None G2/S2 1B.3	May - July	Chaparral, dry woodland in sandy soil. 200-600 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
23.	**San Luis Obispo Fountain Thistle** *Cirsium fontinale* var. *obispoense*	Endangered/Endangered G2T2/S2 1B.2	April – October	Serpentine seeps and streams; endemic to SLO Co. < 350 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
24.	**Cuesta Ridge Thistle** *Cirsium occidentale* var. *lucianum*	None/None G3G4T2/S2 1B.2	April - July	Chaparral, woodland or forest openings, often on serpentine; endemic to SLO Co. 500-750 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
25.	**Slender Clarkia** *Clarkia exilis*	None/None G3/S3 4.3	April - May	Cismontane woodland; <1000 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
26.	**Small-flowered Morning-glory** *Convolvulus simulans*	None/None G4/S4 4.2	April - June	Clay substrates, occasionally serpentine, annual grassland, coastal-sage scrub, chaparral; 30-875 m.	Low. Soils in the Study Area are poorly suited for this species.	No	No Effect
27.	**Paniculate tarplant** *Deinandra paniculata*	None/None G4/S4 4.2	(March)April - November	Vernally mesic or sandy soils in coastal scrub and grassland habitats; <1320 m.	No. Suitable habitat may be present however Property is outside of species known range.	No	No Effect
28.	**Small-flowered Gypsum-loving larkspur** *Delphinium gypsophilum* subsp. *parviflorum*	None/None G4T2T3Q/S2S3 3.2	February - June	Slopes in grassland, open oak woodland; 90-1200 m.	No. As of 2012 this is no longer a valid taxon.	No	No Effect
29.	**Dune Larkspur** *Delphinium parryi* ssp. *blochmaniae*	None/None G4T2/S2 1B.2	April - June	Coastal chaparral, sand. 0-200 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
30.	**Eastwood's Larkspur** *Delphinium parryi* subsp. *eastwoodiae*	None/None G4T2/S2 1B.2	March - May	Coastal chaparral, grassland, on serpentine; SLO Co. 100-500 m.	No. Serpentine soil is not present in the Study Area.	No	No Effect
31.	**Umbrella Larkspur** *Delphinium umbraculorum*	None/None G3/S3 1B.3	April - June	Moist oak forest; 400-1600 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
32.	**Mouse-gray dudleya** *Dudleya abramsii* subsp. *murina*	None/None G4T2/S2 1B.3	May - June	Serpentine outcrops; SLO Co. 120-300 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
33.	**Small Spikerush** *Eleocharis parvula*	None/None G5/S3 4.3	(April) June – August (September)	Brackish, wet soil, coastal; <50 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
34.	**Yellow-flowered Eriastrum** *Eriastrum luteum*	None/None G2/S2 1B.2	May - June	Bare sandy decomposed granite slopes in cismontane woodland, chaparral, forest; Monterey, SLO cos. 360-1000 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
35.	**Ojai Fritillary** *Fritillaria ojaiensis*	None/None G3/S3 1B.2	February - May	Rocky slopes, river basins; 300-500 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
36.	**Hogwallow Starfish** *Hesperevax caulescens*	None/None G3/S3 4.2	March - June	Drying shrink-swell clay of vernal pools, flats, steep slopes. <300 (500) m.	Low. Suitable clay substrates may be present in the Study Area, in Cropley clay and/or Rincon clay loam.	No	No Effect
37.	**Mesa Horkelia** *Horkelia cuneata* var. *puberula*	None/None G4T1/S1 1B.1	February - September	Dry, sandy coastal chaparral. 70-700 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
38.	**Kellogg's Horkelia** *Horkelia cuneata* var. *sericea*	None/None G4T1?/S1? 1B.1	April - September	Old dunes, coastal sand hills; <200 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
39.	**Santa Lucia Dwarf Rush** *Juncus luciensis*	None/None G3/S3 1B.2	April - July	Vernal pools, ephemeral drainages, wet meadow habitats, and streams. 300-1900 m.	Moderate. Suitable habitat is present in the Study Area.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
40.	**Jared's Pepper-Grass** *Lepidium jaredii* subsp. *jaredii*	None/None G2G3T1T2/S1S2 1B.2	March - May	Alkali bottoms, slopes, washes. <500 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
41.	**Jones' Bush-mallow** *Malacothamnus jonesii*	None/None G4/S4 4.3	May - July	Open chaparral in foothill woodland. 250-830 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
42.	**Carmel Valley Bush-mallow** *Malacothamnus palmeri* var. *involucratus*	None/None G3T2Q/S2 1B.2	April - October	Chaparral, cismontane woodland, coastal scrub. 30-1100 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
43.	**Santa Lucia Bush-mallow** *Malacothamnus palmeri* var. *palmeri*	None/None G3T2Q/S2 1B.2	May - July	Interior valleys foothills; 30-800 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
44.	**Oregon Meconella** *Meconella oregana*	None/None G2G3/S2 1B.1	March - May	Shaded canyons; <1000 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
45.	**Palmer's Monardella** *Monardella palmeri*	None/None G2/S2 1B.2	June - August	Chaparral, forest, on serpentine. 200-800 m.	No. Serpentine soil is not present in the Study Area.	No	No Effect
46.	**Woodland Woollythreads** *Monolopia gracilens*	None/None G3/S3 1B.2	March - July	Chaparral, serpentine grassland, cismontane woodland, sandy to rocky soils. 100-1200 m.	No. Serpentine soil is not present in the Study Area.	No	No Effect
47.	**Spreading Navarretia** *Navarretia fossalis*	Threatened/None G2/S2 1B.1	April - June	Chenopod scrub, marshes and swamps, playas, and vernal pools; 30-1300 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
48.	**Shining Navarretia** *Navarretia nigelliformis* subsp. *radians*	None/None G4T2/S2 1B.2	May - July	Vernal pools, clay depressions, dry grasslands. 150-1000 m.	High. Suitable habitat is present in grassland habitat in the Study Area. There are known occurrences within 0.5 mile of the Study Area.	No	No Effect
49.	**Large-flowered Nemacladus** *Nemacladus secundiflorus* var. *secundiflorus*	None/None G3T3?/S3? 4.3	April - May	Chaparral, Valley and foothill grassland; dry, gravelly slopes. 200-2000 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
50.	**Hooked Popcornflower** *Plagiobothrys uncinatus*	None/None G2/S2 1B.2	April - May	Canyon sides, chaparral, rocky outcrops, ± fire follower; on sandstone. 300-600 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
51.	**San Gabriel Ragwort** *Senecio astephanus*	None/None G3/S3 4.3	April - June	Steep rocky slopes in chaparral/coastal-sage scrub and oak woodland. 400-1500 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
52.	**Cuesta Pass Checkerbloom** *Sidalcea hickmanii* subsp. *anomala*	None/Rare G3T1/S1 1B.2	May - June	Closed-cone-conifer forest, generally serpentine; SLO Co. 600-800 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
53.	**Most Beautiful Jewelflower** *Streptanthus albidus* subsp. *peramoenus*	None/None G2T2/S2 1B.2	April - September	Chaparral, Valley grassland, foothill woodland; strong affinity to serpentine soil. 150-800 m.	No. Suitable serpentine soil is not present in the Study Area.	No	No Effect

State/Rank Abbreviations:

FE: Federally Endangered
FT: Federally Threatened
PE: Proposed Federally Endangered
PT: Proposed Federally Threatened
CE: California Endangered
CR: California Rare
CT: California Threatened
Cand. CE: Candidate for California Endangered
Cand. CT: Candidate for California Threatened

California Rare Plant Ranks (CRPR):

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California, but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 4: Plants of limited distribution - a watch list

CRPR Threat Ranks:

0.1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

APPENDIX C. SPECIAL STATUS ANIMALS REPORTED FROM THE REGION

The 21 special status animals known or reported from the region are listed below. There are eight special status animals that could potentially occur within the Study Area based on review of preferred habitat types. No special status animals were detected in the Study Area.

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
1.	**Tricolored Blackbird** *Agelaius tricolor*	None/Candidate Endangered G2G3/S1S2 SSC (Nesting)	March 15 - August 15	Requires open water, protected nesting substrate, & foraging area with insect prey near nesting colony.	No. Suitable nesting habitat is not present in the Study Area.	No	No Effect
2.	**Grasshopper Sparrow** *Ammodramus savannarum*	None/None G5/S3 SSC (Nesting)	March 15 - August 15	Nests in grassland habitats on mountain slopes, foothills, and valleys. May nest colonially.	No. Appropriate nesting habitat is not present in the Study Area.	No	No Effect
3.	**Northern California Legless Lizard** *Anniella pulchra*	None/None G3/S3 SSC	Early Spring – July	Chaparral, coastal dunes, coastal scrub; sandy or loose loamy soils under sparse vegetation.	Low. Potentially suitable habitat is present and there are known occurrences within 1.5 miles of the Study Area.	No	No Effect
4.	**Pallid Bat** *Antrozous pallidus*	None/None G5/S3 SSC	Spring - Summer	Rock crevices, caves, tree hollows, mines, old buildings, and bridges.	Low. Potentially suitable roosting habitat is present in buildings and large trees in the Study Area.	No	Potential Adverse Effect Can Be Mitigated
5.	**Golden Eagle** *Aquila chrysaetos*	None/None G5/S3 WL/FP	March 15 - August 15	Nests in large, prominent trees in valley and foothill woodland. Requires adjacent food source.	No. Seasonal foraging habitat is present in the Study Area. Nesting potential is not likely.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
6.	**Great Blue Heron** *Ardea herodias*	None/None G5/S4 SA	March 15 through August 15	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes.	No. Appropriate nesting habitat is not present in the Study Area.	No	No Effect
7.	**Lesser Slender Salamander** *Batrachoseps minor*	None/None G1/S1 SSC	Unknown; Terrestrial Reproduction	Broadleaved upland forest; South Santa Lucia Mountains in tanbark oak, coast live oak, blue oak, sycamore & laurel.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
8.	**Obscure Bumble Bee** *Bombus caliginosus*	None/None G4?/S1S2 SA	Spring	Grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Open coastal grasslands and meadows.	Low. Marginal habitat is present in the Study Area.	No	Negligible Effect
9.	**Crotch Bumble Bee** *Bombus crotchii*	None/None G3G4/S1S2 SA	Spring	Coastal California east to the Sierra-Cascade crest and south into Mexico. Open grassland and scrub habitats. Nests underground.	Low. Appropriate habitat is present in the Study Area.	No	Negligible Effect
10.	**Vernal Pool Fairy Shrimp** *Branchinecta lynchi*	Threatened/None G3/S3 SA	Rainy Season	Clear water sandstone depression pools, grassed swale, earth slump, or basalt flow depression pools.	Moderate. Some marginal quality aquatic features are present in the Study Area.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
11.	**Ferruginous Hawk** *Buteo regalis*	None/None G4/S3S4 WL (Wintering)	(Wintering) October - April	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Winters locally in open grassland or savannah habitats. More common in interior SLO County than coast.	Low. Appropriate wintering habitat is present in the Study Area.	No	Potential Adverse Effect Can Be Mitigated
12.	**Townsend's Big-eared Bat** *Corynorhinus townsendii*	None/None G3G4/S2 SSC	Spring - Summer	Caves, buildings, and mine tunnels. Cave like attics as day roosts. On coast roosts are normally within 100 m. of creeks.	Low. Potentially suitable structures are present for roosting.	No	Potential Adverse Effect Can Be Mitigated
13.	**White-tailed Kite** *Elanus leucurus*	None/None G5/S3S4 FP	March 15 through August 15	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland.	No. Appropriate nesting habitat is not present in the Study Area.	No	No Effect
14.	**Western Pond Turtle** *Emys marmorata*	None/None G3G4/S3 SSC	April - August	Permanent or semi-permanent streams, ponds, lakes.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
15.	**California Linderiella** *Linderiella occidentalis*	None/None G2G3/S2S3 SA	Rainy season	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.	Low. One stockpond in the Study Area is potentially suitable for this species.	No	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
16.	**Monterey Dusky-footed Woodrat** *Neotoma macrotis luciana*	None/None G5T3/S3 SSC	N/A	Variety of habitats with moderate to dense understory vegetation	No. Appropriate habitat is not present in the Study Area.	No	No Effect
17.	**Salinas Pocket Mouse** *Perognathus inornatus psammophilus*	None/None G4T2?/S1 SSC	N/A	Annual grassland and desert shrub in Salinas Valley, with friable soils	No. Appropriate habitat is not present in the Study Area.	No	No Effect
18.	**Atascadero June beetle** *Polyphylla nubila*	None/None G1/S1 SA	Summer	Known only from inland sand dunes in San Luis Obispo County.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
19.	**Purple Martin** *Progne subis*	None/None G5/S3 SSC (Nesting)	March 15 - August 15	In San Luis Obispo County prefers nesting in Sycamore trees along riparian corridors.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
20.	**Foothill Yellow-legged Frog** *Rana boylii*	None/Candidate Threatened G3/S3 SSC	March - September	Partly shaded, shallow streams and riffles with rocky substrate. Min. 15 weeks for larval development.	No. Appropriate habitat is not present in the Study Area	No	No Effect
21.	**California Red-legged Frog** *Rana draytonii*	Threatened/None G2G3/S2S3 SSC	January - September	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks for larval development.	No. Appropriate aquatic habitat is not present in the Study Area.	No	No Effect
22.	**Western Spadefoot** *Spea hammondii*	None/None G3/S3 SSC	January - August	Vernal pools in grassland and woodland habitats.	High. Appropriate habitat is present in the Study Area.	Detected in 2004 on site.	No Effect

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected in the Study Area?	Effect of Proposed Activity
23.	**Coast Range Newt** *Taricha torosa*	None/None G4/S4 SSC	December - May	Slow moving streams, ponds, and lakes with surrounding evergreen/oak forests along coast.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
24.	**American Badger** *Taxidea taxus*	None/None G5/S3 SSC	February -May	Needs friable soils in open ground with abundant food source such as California ground squirrels.	Moderate. Appropriate habitat is present in the Study Area.	No	Potential Adverse Effect Can Be Mitigated
25.	**Lompoc Grasshopper** *Trimerotropis occulens*	None/None G1G2/S1S2 SA	n/a	Unknown. Known only from Santa Barbara and San Luis Obispo Counties	Unlikely. Thought to be extirpated from the area. Only source of info is a 1909 collection.	No	No Effect
26.	**Least Bell's Vireo** *Vireo bellii pusillus*	Endangered/ Endangered G5T2/S2 None	March 15 - August 15	Riparian habitat, near water or dry streambed, <2000 ft. Nests in willows, mesquite, Baccharis.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
27.	**San Joaquin Kit Fox** *Vulpes macrotis mutica*	Endangered/ Threatened G4T2/S2 None	December - July	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose textured sandy soil and prey base.	Low. Appropriate habitat is present in the Study Area but with no recent records of the species are known in the Paso region	No	Potential Adverse Effect Can Be Mitigated

Habitat characteristics are from the Jepson Manual and the CDNNB.

Abbreviations:

FE: Federally Endangered CE: California Endangered SSC: CDFW Species of Special Concern
FT: Federally Threatened CT: California Threatened FP: CDFW Fully-Protected

APPENDIX D. ARBORIST REPORT

Arborist Report

for

Olsen-Chandler Ranch

Paso Robles, California

Prepared for

Olsen Ranch 212, LLC
445 South D Street
Perris, CA 9530

by

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES
1602 Spring Street
Paso Robles, CA 93446
(805) 237-9626

December 2018

1154.05

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Certified Arborist Signature

Cory Meyer, ISA Certification No. WE7678-A
Althouse and Meade, Inc.
1602 Spring Street
Paso Robles, CA 93446
(805) 237-9626

As the certified arborist assigned to this project, I evaluated trees, reviewed, and approve the contents of this report.

Cory Meyer 1/8/2019

Signature *Date*

Cover Page: View of a valley oak, the largest documented tree in the Arborist Report (Tree number 20), located in the southwestern portion of the Olsen property. This tree's health was rated 4. Taken October 3rd, 2018

1 INTRODUCTION

1.1 Summary

This report presents results of the tree assessment for the Olsen-Chandler Ranch, a 352.08-acre development located in Paso Robles, California, in advance of a residential development project (Project). All native trees were assessed, and a summary of tree health and management recommendations are presented. A total of 198 trees were assessed, including 193 trees on the property and five trees on adjacent properties where trees may be affected by proposed development.

1.2 City of Paso Robles Oak Tree Ordinance

This report provides relevant information for the planning and development process relative to the City of El Paso de Robles Oak Tree Ordinance (835 that amended municipal code amendment 2001-001-Oak Trees). The purpose of the oak tree ordinance is to preserve oak trees and maintain the heritage and character of "The Pass of the Oaks" as well as preserve the beauty and identity of the community. Preservation of existing oak trees in good health is the focus of this report.

1.3 Setting

1.3.1 Location

Olsen-Chandler Ranch is in Paso Robles, San Luis Obispo County, California. The Olsen Ranch, a 237.9-acre property, is bordered to the north by Linne Road, to the east by Hanson Road, to the west by residential development, and to the south by undeveloped agricultural land. The Chandler Ranch is a 105.7-acre property consisting of the southern Chandler Ranch parcel. The Project is located within the Templeton United States Geological Survey (USGS) 7.5-minute quadrangle and is comprised of six parcels (009-795-001, 009-795-002, 009-795-003, 009-795-004, 009-795-005, and 009-795-006). Approximate coordinates for the center of the property are 35.605891°N, -120.636460°W (WGS 84).

1.3.2 General Physical Characteristics

The Project area is comprised of rolling hills dominated by annual grassland. Some parcels are actively farmed or grazed while others lie fallow. Scattered oak trees occur in the southwest corner and in a band across the northern portion of the Olsen Ranch. Whereas most of the trees occur along an ephemeral stream in the northern part of Olsen Ranch where farmhouses and residences are located.

The Chandler Ranch parcel was historically farmed and is currently a regularly disked grassland habitat. Between a development known as "Our Town" and Linne Road, two young valley oak trees grow in a 3-foot deep stormwater ditch that conveys water diagonally toward the intersection of Airport Road and Linne Road. This ditch is primarily occupied with patches of coyote brush.

1.4 Responsible Parties

TABLE 1. RESPONSIBLE PARTIES

Applicant, certified arborist, engineer, and lead agency are provided.

Project Contact	ISA Certified Arborist and Biological Consultant
Olsen Ranch 212, LLC c/o Mike Naggar and Associates Inc. 445 S. D St. Perris, CA 92570 (915) 437-4329	**Cory Meyer, ISA Certification No. WE7678-A** **Jessica Griffiths, Senior Biologist** **Althouse and Meade, Inc.** 1602 Spring Street Paso Robles, CA 93446 (805) 237-9626 c/o Jessica Griffiths; JessicaG@alt-me.com
Project Engineer/Surveyors	**Lead Agency**
Byron Glenn, P.E. **Senior Civil Engineer** **Wallace Group** 612 Clarion Ct San Luis Obispo, CA 93401 (805) 544-4011 ByronG@wallacegroup.us	**Darren Nash** **City of Paso Robles** 1000 Spring Street Paso Robles, CA 93446 (805) 237-3970 DNash@prcity.com

2 METHODS

2.1 Field Tree Inventory and Evaluation

Surveys were conducted by certified arborist, Cory Meyer, and botanist, Kyle Nessen, on October 1, 3, 4, and 16, 2018 on the Olsen Ranch, and on December 13, 2018 on the Chandler Ranch parcel by LynneDee Althouse. Each tree was tagged in the field with a numbered aluminum tag and GPS points were taken. Tree height, canopy width, and diameter at breast height (dbh) were recorded and the overall condition of the tree was visually rated. The rating system defined in Table 2 consists of a scale from one to ten based on the structure and health of each tree. Any signs of pests, disease, or structural weakness were noted. Trees were inspected from the ground only; tree canopies were not accessed, and no below-ground inspection took place. Trees were also mapped by a licensed surveyor from the Wallace Group. Trees 4-inches dbh and under not recorded for this report were mapped up by the Wallace Group survey team.

TABLE 2. TREE HEALTH RATING SYSTEM

Rating	Condition
0	Deceased
1	Evidence of massive past failures, extreme disease and is in severe decline
2	May be saved with attention to pruning, insect/pest eradication and future monitoring
3	Some past failures, some pests or structural defects that may be mitigated with pruning
4	May have had minor past failures, excessive deadwood or minor structural defects that can be mitigated with pruning
5	Relatively healthy tree with little visual structural and or pest defects
6	Healthy tree that probably can be left in its natural state
7, 8, 9	Have had proper arboricultural pruning and attention or have no apparent structural defects
10	Specimen tree with perfect shape, structure and foliage in a natural or protected setting

3 RESULTS

3.1 Tree Quantities

A total of 198 trees were assessed, including 193 on the Project and another five trees immediately adjacent to the Project which could be impacted by Project development. Tree species tagged were valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), red willow (*Salix laevigata*), Fremont's cottonwood (*Populus fremontii*) and foothill pine (*Pinus sabiniana*). Several oaks were identified as "valley x blue oak" hybrids. See Table 3 for a summary of tree species and numbers. See Appendix A for a map showing tree locations. See Appendix B for a table showing individual tree data including dbh, height, width, and health rating.

TABLE 3. NUMBER AND SPECIES OF TREES ASSESSED

Species	Number
Valley oak	107
Blue oak	60
Valley x blue oak hybrid	10
Fremont's cottonwood	13
Red willow	6
Foothill pine	2
Total	**198**

3.2 Tree Health Discussion

Of the 193 trees assessed on the Project, five were dead, 19 were in poor condition (rated 1 or 2), 120 were in moderate condition (rated 3 or 4), and 49 were in good condition (rated 5, 6, or 7). No trees were recorded with a rating higher than 7 because of structure defects or damage observed during the inventory. Section 5 provides representative photographs that illustrate tree condition during the inventory. See Appendix B for a table of individual trees and their health ratings.

Many of the oak trees had an abundance of oak galls resulting from cynipid wasps. In general, most gall wasps on oak trees do not affect the trees' health. While leaves may drop prematurely or become distorted, gall wasps are usually only a cosmetic problem. A variety of galls, including urchin, red cone, potato, and hedgehog, were observed. These galls are caused by the wasp larvae affecting the leaf and twig tissue causing a reaction that develops the gall as a means of protection and a food source for the larvae as it metamorphosizes into a tiny wasp.

Valley oaks are often noted for the "oak apples", galls that look like tiny apples, formed by a gall wasp with the scientific name *Adricus californicus.* Another gall that looks like a "Hershey Kiss" is formed by the tiny gall wasp called *Adricus kingi* (Russo 2006).

Fungal conks, the fruiting part of a fungus that is typically underground or under the bark of trees, were observed on some trees, evidence that there is possible decay beneath the bark at these locations on the trees. Decay fungus was also noted on some of the dead trees standing. The presence of fungi responsible for decay such as heartrot, generally indicates elevated tree failure rate (Glaeser and Smith 2010).Trees with the presence of fungus or decay were given a relatively low health rating.

Pests noted included aphid infestations (resulting in sooty mold on some of the oak trees), whitefly, and current and old bark beetle (borer) activity.

Several willow and cottonwood trees appear to have been impacted by the prolonged drought, showing signs of water stress.

With the exception of the northeast portion of the property, oak regeneration was not observed due to farming and grazing.

4 MANAGEMENT RECOMMEDATIONS

The proposed Project may result in impacts to native trees. Avoidance and minimization measures to protect trees in place are listed below.

- **Arborist Monitoring.** An arborist shall be present for any activities that may result in impacts to trees. The monitoring does not have to be continuous but observational at times during these activities. It is the responsibility of the owner or their designee to inform the arborist prior to the work so he/she can be present.
- **Fencing**. All trees to remain within 50 feet of construction or grading activities shall be marked for protection (e.g., with flagging) and their root zone fenced prior to any grading. Grading, utility trenching, compaction of soil (including vehicle parking), or placement of fill shall be avoided within these fenced areas.
- **Trenching Within Drip Line.** Where trenching or digging within the dripline is specifically permitted, the work shall be conducted in a manner that minimizes root damage, as directed by the arborist. All roots larger than 1 inch in diameter that cannot be saved shall be cut clean with sharp pruning tools and not left ragged. Excavating or boring around roots is desirable if necessary, for utility installation of sewer, water, gas, or electric lines.
- **Grading Within the Drip Line.** Grading should not encroach within the drip line unless authorized.
- **Exposed Roots.** Any exposed roots shall be re-covered the same day they were exposed if possible. If they cannot, they must be covered with burlap or another suitable material and wetted down 2 times per day until reburied.
- **Existing Surfaces.** The existing ground surface within the drip line of all native trees shown on the plan shall not be cut, filled, or compacted unless shown on the grading plans and approved by the arborist.
- **Construction Materials and Waste.** No liquid or solid construction waste shall be dumped on the ground within the drip line of any native tree. The drip line areas are not for storage of materials.

5 PHOTOGRAPHS

Photo 1. **Health Rating 7:** Representative valley oak, tag number 169, looking north. October 4, 2018.

Photo 2. **Health Rating 6:** Representative blue oaks, tag numbers 11 and 12, looking east. October 3, 2018.

Photo 3. **Health Rating 5:** Representative blue oak, tag number 34, looking northeast. October 3, 2018.

Photo 4. **Health Rating 4:** Representative valley oak, tag number 87, looking northeast. October 4, 2018.

Photo 5. **Health Rating 3:** Representative blue oak, tag number 10, looking southwest. October 3, 2018.

Photo 6. **Health Rating 2:** Representative blue oak, tag number 24, looking southeast. October 3, 2018.

Photo 7. **Health Rating 1:** Representative blue oak, tag number 23, looking southeast. October 3, 2018.

Photo 8. **Health Rating 0:** Representative valley oak, tag number 167, looking east. October 4, 2018.

Photo 9. Red cone galls on valley oak leaves. September 7, 2018.

Photo 10. View of oak savanna with no regeneration, looking northeast. September 7, 2018.

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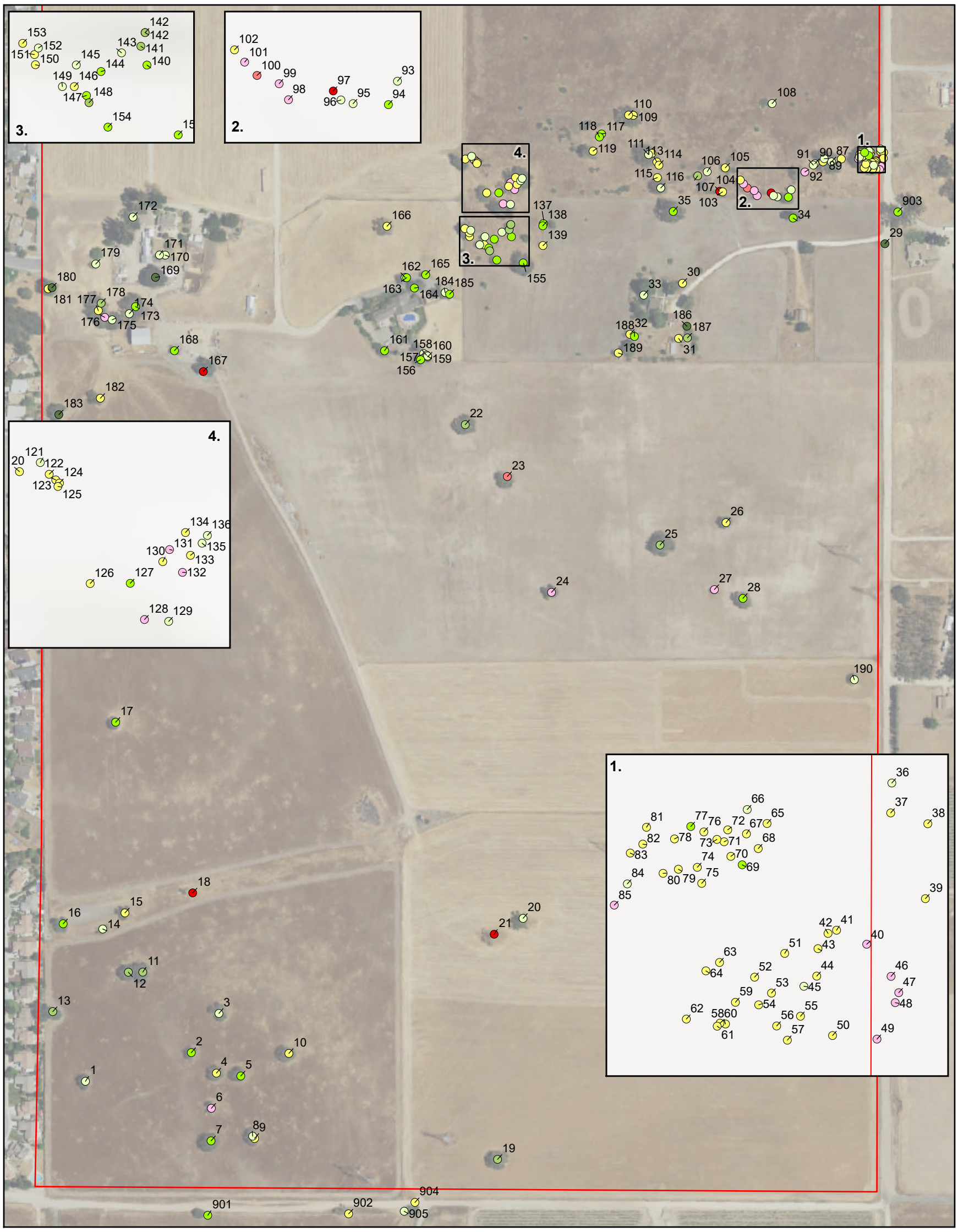
Wallace Group. 2018. Topographic survey of portion of lots 55-57, 65-66 in the city of Paso Robles, County of San Luis Obispo, CA. Review draft

Appendix A-1. Olsen Ranch Tree Inventory



Legend

Tree Health Rating

0 1 2 3 4 5 6 7

Olsen Ranch Boundary

N

0 500 1,000 Feet

Health Rating 0 - 2: Remove
Health Rating 3: Remove if Near Development
Health Rating 4 - 7: Preserve
Health Rating 8-10: No Trees Present

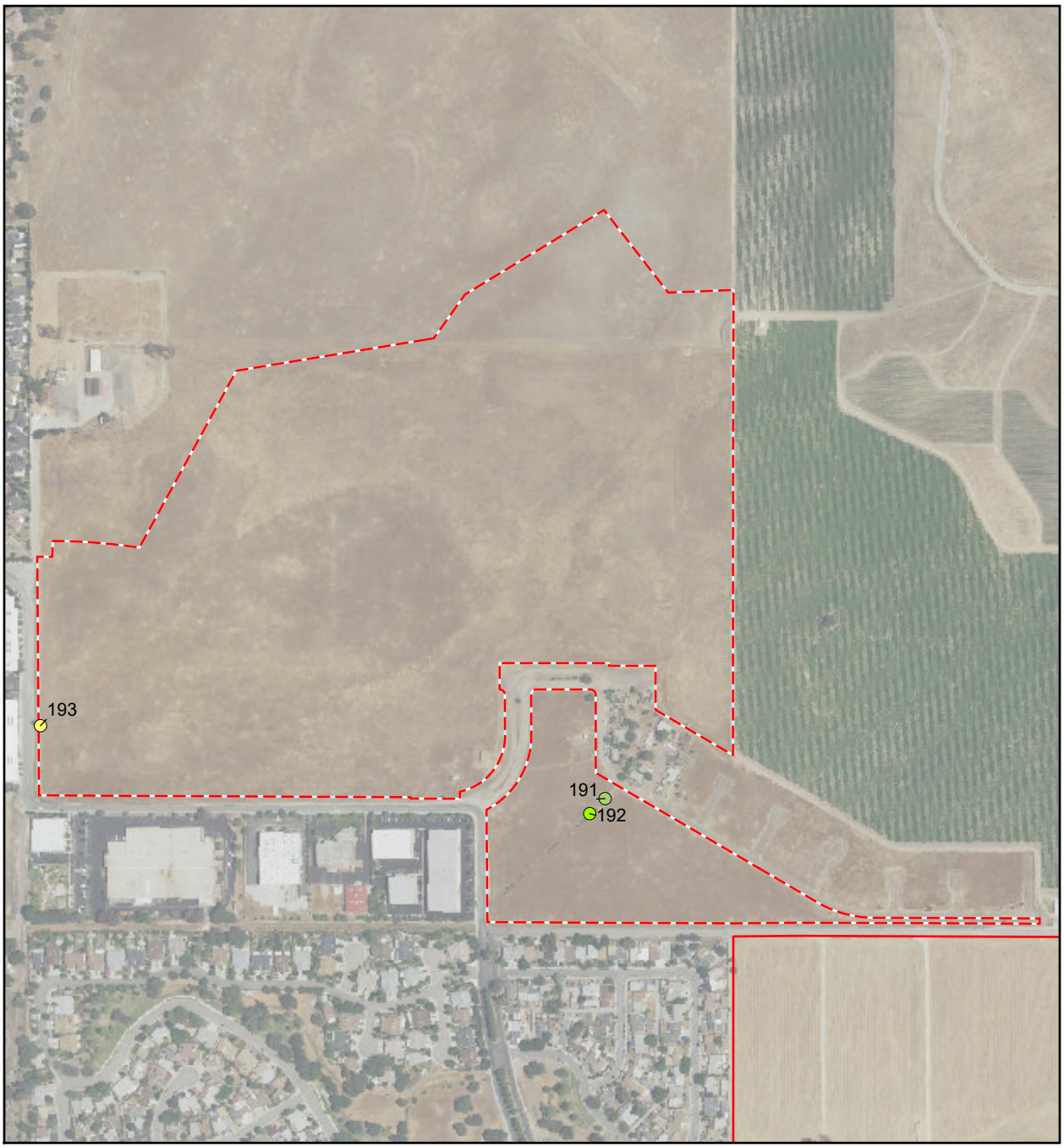
Olsen Chandler Ranch
Map Center: 120.63651°W 35.60607°N
Paso Robles, San Luis Obispo County

Imagery Date: 09/28/2016

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
January 04, 2019 09:59 AM by MMP

Appendix A-2. Chandler Ranch Tree Inventory



Legend

Tree Health Rating

- 3
- 5
- 6

Chandler Ranch Boundary

Olsen Ranch Boundary

N

0 500 1,000 Feet

Health Rating 0 - 2: No Trees Present
Health Rating 3: Remove if Near Development
Health Rating 4 - 7: Preserve
Health Rating 8-10: No Trees Present

Olsen Chandler Ranch
Map Center: 120.64372°W 35.61566°N
Paso Robles, San Luis Obispo County

Imagery Date: 09/28/2016

APPENDIX B. TREE INFORMATION MATRIX

Tag #	Species	# of Trunks	Total DBH (in)	Height (ft)	Width (ft)	Health Rating	Notes
1	Blue oak	2	36	30	48	4	Recommend pruning. Hollow large branch
2	Blue oak	1	25	33	42	5	
3	Blue oak	1	40	41	45	4	
4	Blue oak	1	35	39	51	3	Significant rot
5	Blue oak	1	31	36	51	5	Damaged trunk borers, active beehive
6	Blue oak	2	40	39	45	2	
7	Blue oak	1	43	56	72	5	
8	Blue oak	1	33	38	54	4	
9	Blue oak	1	19	26	21	3	Poor structure, heavy on right side
10	Blue oak	1	48	48	63	3	
11	Blue oak	1	38	43	72	6	
12	Blue oak	1	28	39	57	6	
13	Blue oak	1	32	46	36	6	
14	Red willow	2	35	18	39	4	
15	Red willow	3	57	26	51	3	
16	Red willow	6	72	33	63	5	
17	Blue oak	1	32	35	45	5	
18	Red willow	3	34	16	30	0	Dead
19	Oak hybrid	1	48	45	72	6	
20	Valley oak	1	56	50	69	4	
21	Valley oak	1	34	47	32	0	Dead
22	Blue oak	1	36	47	66	6	
23	Blue oak	1	33	32	66	1	Severe decline
24	Blue oak	1	38	27	33	2	1/2 tree failed
25	Blue oak	1	40	63	81	6	Large limb broken
26	Blue oak	1	30	29	45	3	

Tag #	Species	# of Trunks	Total DBH (in)	Height (ft)	Width (ft)	Health Rating	Notes
27	Blue oak	2	49	22	24	2	
28	Blue oak	1	38	44	75	5	
29	Valley oak	1	4	14	8	7	
30	Valley oak	1	14	36	33	3	Possible power lines
31	Fremont cottonwood	1	12	25	18	3	
32	Fremont cottonwood	1	10	23	30	3	
33	Valley oak	1	11	38	33	4	
34	Blue oak	1	48	45	60	5	Large branch failure
35	Valley oak	1	48	64	66	5	
36	Valley oak	1	8	20	16	4	Under power lines
37	Valley oak	1	9	21	15	3	Topped under power lines
38	Valley oak	5	19	23	21	3	Topped under power lines
39	Valley oak	1	14	25	24	3	Topped under power lines
40	Valley oak	1	8	15	6	2	Topped under power lines
41	Valley oak	1	5	18	10	3	Thinning benefits remaining trees
42	Valley oak	1	8	24	16	3	Thinning benefits remaining trees
43	Valley oak	1	6	25	5	3	Thinning benefits remaining trees
44	Valley oak	1	10	45	15	3	Thinning benefits remaining trees
45	Valley oak	1	12	47	24	4	
46	Valley oak	1	8	18	10	2	Topped under power lines
47	Valley oak	1	7	20	8	2	Topped under power lines
48	Valley oak	1	9	18	18	2	Topped under power lines
49	Valley oak	2	19	23	21	2	Topped under power lines
50	Valley oak	1	6	30	16	3	Thinning benefits remaining trees
51	Valley oak	1	7	33	15	3	Thinning benefits remaining trees
52	Valley oak	1	4	26	6	3	Thinning benefits remaining trees
53	Valley oak	1	8	40	16	3	Thinning benefits remaining trees

Tag #	Species	# of Trunks	Total DBH (in)	Height (ft)	Width (ft)	Health Rating	Notes
54	Valley oak	1	7	40	12	3	Thinning benefits remaining trees
55	Valley oak	1	8	44	20	3	Thinning benefits remaining trees
56	Valley oak	1	7	39	16	3	Thinning benefits remaining trees
57	Valley oak	1	10	42	24	3	Thinning benefits remaining trees
58	Valley oak	1	9	40	21	3	Thinning benefits remaining trees
59	Valley oak	1	4	26	18	3	Thinning benefits remaining trees
60	Valley oak	1	10	42	23	3	Thinning benefits remaining trees
61	Valley oak	1	6	32	16	3	Thinning benefits remaining trees
62	Valley oak	1	13	24	18	3	Thinning benefits remaining trees
63	Valley oak	1	10	40	8	3	Thinning benefits remaining trees
64	Valley oak	1	7	38	18	3	Thinning benefits remaining trees
65	Valley oak	1	5	32	18	3	Thinning benefits remaining trees
66	Valley oak	1	8	38	18	4	
67	Valley oak	1	5	35	12	3	Thinning benefits remaining trees
68	Valley oak	1	6	30	21	3	Thinning benefits remaining trees
69	Valley oak	2	14	42	21	5	
70	Valley oak	1	6	35	24	3	Thinning benefits remaining trees
71	Valley oak	1	5	34	9	3	Thinning benefits remaining trees
72	Valley oak	1	6	36	21	3	Thinning benefits remaining trees
73	Valley oak	1	5	30	9	3	Thinning benefits remaining trees
74	Valley oak	1	4	20	6	3	Thinning benefits remaining trees
75	Valley oak	1	4	28	12	3	Thinning benefits remaining trees
76	Valley oak	1	6	35	21	3	Thinning benefits remaining trees
77	Valley oak	4	27	50	21	5	
78	Valley oak	1	9	45	30	3	Thinning benefits remaining trees
79	Valley oak	1	4	25	12	3	Thinning benefits remaining trees
80	Valley oak	2	9	28	25	3	Thinning benefits remaining trees

Tag #	Species	# of Trunks	Total DBH (in)	Height (ft)	Width (ft)	Health Rating	Notes
81	Valley oak	1	5	25	9	3	Thinning benefits remaining trees
82	Valley oak	1	6	26	12	3	Thinning benefits remaining trees
83	Valley oak	1	5	20	9	3	Thinning benefits remaining trees
84	Valley oak	1	13	48	30	4	
85	Valley oak	1	42	42	45	2	
86	Valley oak	1	7	22	9	3	Thinning benefits remaining trees
87	Valley oak	2	47	63	72	4	
88	Valley oak	1	10	35	12	3	
89	Valley oak	3	36	53	45	4	
90	Valley oak	1	5	18	12	4	
91	Valley oak	1	6	18	15	4	
92	Fremont cottonwood	2	26	47	63	2	
93	Valley oak	1	9	40	21	4	
94	Valley oak	1	24	47	42	5	
95	Valley oak	1	10	32	24	4	
96	Valley oak	1	5	17	9	4	
97	Fremont cottonwood	1	16	54	30	0	Dead
98	Fremont cottonwood	4	28	39	42	2	
99	Red willow	4	37	15	27	2	
100	Fremont cottonwood	1	14	36	30	1	Sprouting at base. Mostly dead
101	Fremont cottonwood	1	14	28	21	2	
102	Fremont cottonwood	2	12	18	15	3	
103	Fremont cottonwood	1	6	15	12	3	Drought Impacts
104	Fremont cottonwood	1	10	18	12	0	Dead
105	Red willow	3	33	17	24	3	
106	Valley oak	1	7	25	12	4	

Tag #	Species	# of Trunks	Total DBH (in)	Height (ft)	Width (ft)	Health Rating	Notes
107	Valley oak	1	11	32	12	6	
108	Valley oak	1	11	28	21	4	
109	Valley oak	1	35	67	75	3	
110	Valley oak	1	26	59	23	3	
111	Valley oak	1	40	75	84	4	Mistletoe. Large Nest
112	Valley oak	1	14	32	18	3	Co-dominate, included bark
113	Valley oak	1	5	23	12	3	Poor branching, dead wood
114	Valley oak	1	7	24	9	3	Needs trimming
115	Valley oak	1	5	18	9	3	
116	Valley oak	2	32	58	55	4	Co-dominate
117	Valley oak	1	8	28	18	5	
118	Valley oak	1	7	25	15	5	
119	Fremont cottonwood	2	46	47	66	3	
120	Valley oak	2	50	35	45	3	Topped under power lines
121	Valley oak	1	9	33	18	4	Co-dominate, thinning
122	Valley oak	2	10	20	9	3	
123	Valley oak	2	12	30	18	3	Thinning
124	Valley oak	1	5	23	12	3	
125	Valley oak	1	6	27	9	3	
126	Oak hybrid	1	27	37	60	3	Poorly structured tree
127	Blue oak	1	6	22	18	5	
128	Valley oak	1	39	61	60	2	Large branch failures
129	Blue oak	3	26	27	30	4	
130	Valley oak	2	26	49	36	3	Co-dominant, dead wood in canopy
131	Oak hybrid	2	11	21	12	2	
132	Valley oak	1	20	56	54	2	
133	Oak hybrid	2	24	39	48	3	

Tag #	Species	# of Trunks	Total DBH (in)	Height (ft)	Width (ft)	Health Rating	Notes
134	Valley oak	1	19	60	45	3	Poorly structured
135	Valley oak	2	36	65	60	4	
136	Valley oak	5	67	32	58	4	
137	Oak hybrid	1	6	18	12	5	
138	Oak hybrid	1	6	18	9	5	
139	Valley oak	1	6	22	15	3	Poor structure
140	Oak hybrid	1	4	16	15	5	
141	Oak hybrid	1	7	27	15	6	
142	Oak hybrid	1	4	18	6	6	
143	Blue oak	2	8	14	15	4	
144	Blue oak	1	4	18	12	5	
145	Blue oak	7	20	21	27	4	Included bark in trunk, needs trimming
146	Valley oak	1	19	38	36	3	Co-dominate leaders, poor branch attachments
147	Blue oak	2	10	18	12	5	
148	Blue oak	1	6	14	9	6	
149	Blue oak	1	6	22	12	4	
150	Oak hybrid	1	15	25	18	3	Poor structure
151	Valley oak	2	10	25	12	3	Co-dominate trunk
152	Valley oak	1	7	24	15	4	
153	Blue oak	1	16	28	45	3	Under power lines
154	Blue oak	4	40	26	30	5	
155	Blue oak	1	49	44	72	5	
156	Blue oak	2	25	60	30	5	Sooty mold, wet wood
157	Blue oak	1	7	24	18	4	
158	Blue oak	1	8	30	18	4	
159	Blue oak	2	17	30	24	4	
160	Blue oak	2	19	29	24	3	

Tag #	Species	# of Trunks	Total DBH (in)	Height (ft)	Width (ft)	Health Rating	Notes
161	Blue oak	3	34	22	36	5	
162	Blue oak	3	27	38	27	4	
163	Blue oak	2	23	38	18	5	
164	Blue oak	1	17	32	39	5	
165	Blue oak	1	18	30	24	5	
166	Blue oak	1	38	42	60	3	Badly wounded trunk
167	Valley oak	1	63	40	15	0	Dead
168	Blue oak	3	26	25	30	5	
169	Blue oak	1	50	47	90	7	Fungal conks on trunk
170	Valley oak	1	7	35	18	4	
171	Blue oak	1	10	30	21	4	
172	Valley oak	1	26	53	60	4	
173	Blue oak	1	36	55	66	5	
174	Valley oak	1	29	52	57	4	
175	Blue oak	1	27	52	72	4	
176	Blue oak	1	41	52	66	2	Cavity into trunk, 1/3 dead. Cavity
177	Blue oak	1	28	58	72	3	In grove near barns
178	Valley oak	1	34	71	75	6	
179	Valley oak	3	19	38	30	4	
180	Valley oak	1	27	70	66	7	
181	Blue oak	1	8	16	24	3	Cavity in trunk
182	Valley oak	1	39	40	27	3	Broken branch hollow into trunk. Wood pecker cavities
183	Blue oak	1	48	43	69	7	
184	Blue oak	1	13	28	30	4	
185	Blue oak	1	12	26	33	5	
186	Foothill pine	1	8	28	18	7	
187	Foothill pine	1	6	24	15	6	

Tag #	Species	# of Trunks	Total DBH (in)	Height (ft)	Width (ft)	Health Rating	Notes
188	Blue oak	2	8	21	12	5	
189	Blue oak	1	17	25	24	3	Co-dominate, included bark
190	Blue oak	1	25	38	33	4	Post failures, east side of tree. Wood pecker cavities
191	Valley oak	1	8	20	12	7	In ditch
192	Valley oak	1	6	20	8	7	In ditch
193	Valley oak	5	34	35	20	3	West side of fence along Fontana Road; abundant galls
901	Blue oak	2	34	23	35	5	Outside Study Area
902	Blue oak	2	26	26	36	3	Outside Study Area. Some branch failures
903	Valley oak	1	38	55	60	5	Outside Study Area
904	Fremont cottonwood	2	16	20	18	3	Outside Study Area. Some borer activity and decay
905	Fremont cottonwood	1	17	24	20	4	Outside Study Area

Special Status Invertebrate Wet Season Survey

NINETY-DAY REPORT

USFWS TAKE PERMIT # TE-102310-3

SURVEY FOR THE OLSEN RANCH

IN PASO ROBLES, SAN LUIS OBISPO COUNTY, CALIFORNIA

Prepared By:

MITCHELL C. DALLAS

Branchiopod Surveyor
USFWS Take Permit #TE-102310-3
(805) 459-2907

7-1-19

DATE

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Introduction

This report is required under United States Fish and Wildlife Service ESA §10(a)(1)(A) permit # TE-102310-3. The current permit expired on 9/7/18 and is currently in the renewal process following a successful renewal exam with the United States Fish and Wildlife Service Carlsbad Field Office. The current permit remains valid during the renewal process.

This report is submitted in fulfillment of conditions in the Permit, the Special Terms and Conditions for Mitchell C. Dallas and the U.S. Fish and Wildlife Service Interim Survey Guidance to Permittees of 11/7/2017 that is attached to that permit. A full WET SEASON protocol level survey was achieved. Wet season sampling was conducted to determine the presence or absence of federally listed Vernal Pool Branchiopods either within the project footprint or that may be affected by the project.

Permission to conduct the survey was granted by email from Chris Kofron and Juile Vanderwier of the U.S. Fish and Wildlife Service Ventura Office on 12/3/18. The following authorized surveyor conducted surveys during the wet season: Mitchell C. Dallas.

The wet season survey was conducted at the request of Althouse and Meade Inc. The action area was surveyed following rain events that occurred in order to determine if any features (pools) held water. In total, six features held water for sufficient time to be considered potential habitat requiring surveys. See attached photos and data sheets.

A reproduction of a U. S. Geological Survey topographic Templeton quadrangle map is attached showing the location surveyed. The coordinates for the pool are located in the Required Information Section of this report and on the attached survey field data sheets.

The information presented below is presented in the same order and with the same numbering system used in the guidance.

Project Description: The proposed project will build new homes in the Paso Robles area.

Required Information

1. The project site can be located on the attached U. S. Geological Survey Templeton, California, 7.5 minute topographic quadrangle map (Appendix 1). The location of the specific sites sampled is Township M27S Range 12E Section 11 35°36’11.79”N 120°38’26.53”W NAD 83

The action area is a combination of grazed and ungrazed fields and hay crops with an adjacent roads and infrastructure including track homes and large un or minimally developed parcels.

Olsen Habitat Feature Location		
USGS Templeton Quadrangle M27S 12E 11		
Feature #	Latitude	Longitude
1	35°36’11.79”N	120°38’26.53”W
2	35°36’13.55”N	120°38’19.93”W
3	35°36’33.37”N	120°38’18.48”W
4	35°36’34.31”N	120°38’17.52”W
5	35°36’36.30”N	120°38’12.80”W
6	35°36’04.00”N	120°38’27.50”W

2. A color aerial photo of the project location is included in the attached Appendix 2.
3. The estimated number of crustaceans observed in Pool #1 is listed in the attached data sheets. Estimates for the pool are as follows:

Species	Pool#1	#2	#3	#4	#5	#6
Branchinecta lynchi	N	N	N	N	N	N
Branchinecta conservatio	N	N	N	N	N	N
Branchinecta longiantenna	N	N	N	N	N	N
Lepidurus packardi	N	N	N	N	N	N
Streptocephalus Woottoni	N	N	N	N	N	N

Estimates are as per the guidance: none (N), few (F) (< 50) and many (M) (>50). Details are available in the attached data sheets.

4. Federally listed Vernal Pool Branchiopods were not found, none were preserved.
5. Qualitative description of the vernal pool community: The action area is located in San Luis Obispo County within the City of Paso Robles. The action area has a few homes and farm buildings within and it is bordered by roads, track homes and adjacent divided undeveloped parcels. There is rolling topography with swales and ponding water features. See attached data sheets for more details.

6. Data collected during the field visits can be found on the attached wet season data sheets in Appendix 3. Listed vernal pool branchiopods were not observed during the surveys.

7. Additional water quality data: none.

8. The survey methodology used was that described in guidance attached to Permit # TE-102310-3 to determine the presence or absence of federally listed Vernal Pool Branchiopods either within the project footprint or that may be affected by the project. During the survey effort there was a slight modification to the survey intervals with one survey occurring at a 13 day interval and another survey occurring at a 15 day interval. The variation in survey intervals was deemed negligible and approved by Juile Vanderwier of the U.S. Fish and Wildlife Service Ventura Office.

Conclusion

Federally listed Vernal Pool Branchiopods were not found in the potential habitat features within the project action area during this Wet Season protocol level survey. The survey did meet the criteria to establish a full wet season protocol level survey.

Contact: If you have any questions or require more information about this project or the invertebrate survey, please contact Mitchell Dallas, Authorized Surveyor, TE-102310-3 at (805) 459-2907 or email **mitchdallas@hotmail.com**.

Appendices

Appendix 1.

USGS original scale map showing the area surveyed.

Appendix 2.

Aerial photo of the feature locations.

Appendix 3.

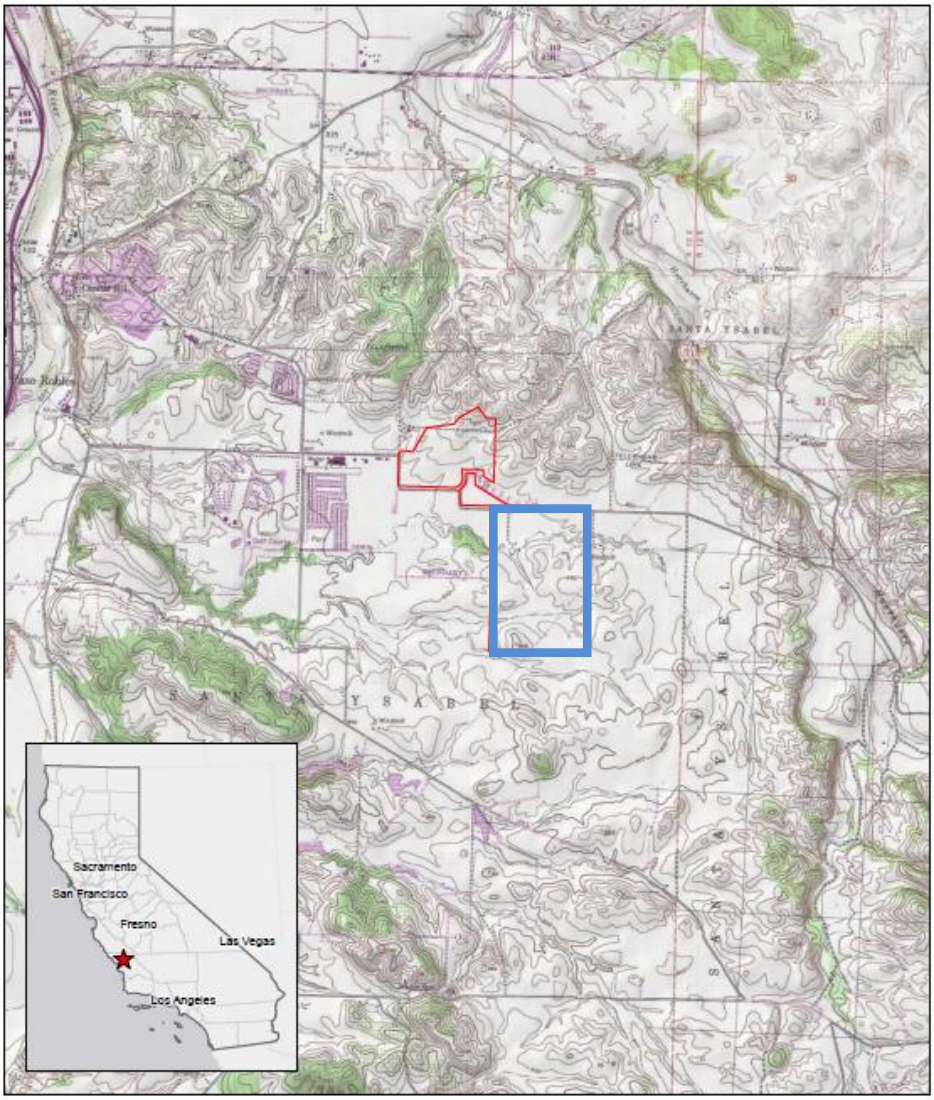
Wet Season Data Sheets and Photos

Appendix 1

USGS Paso Robles Quadrangle

San Luis Obispo California

United States Geological Survey Topographic Map



Legend

Study Area

N

0 0.25 0.5 1 Mile

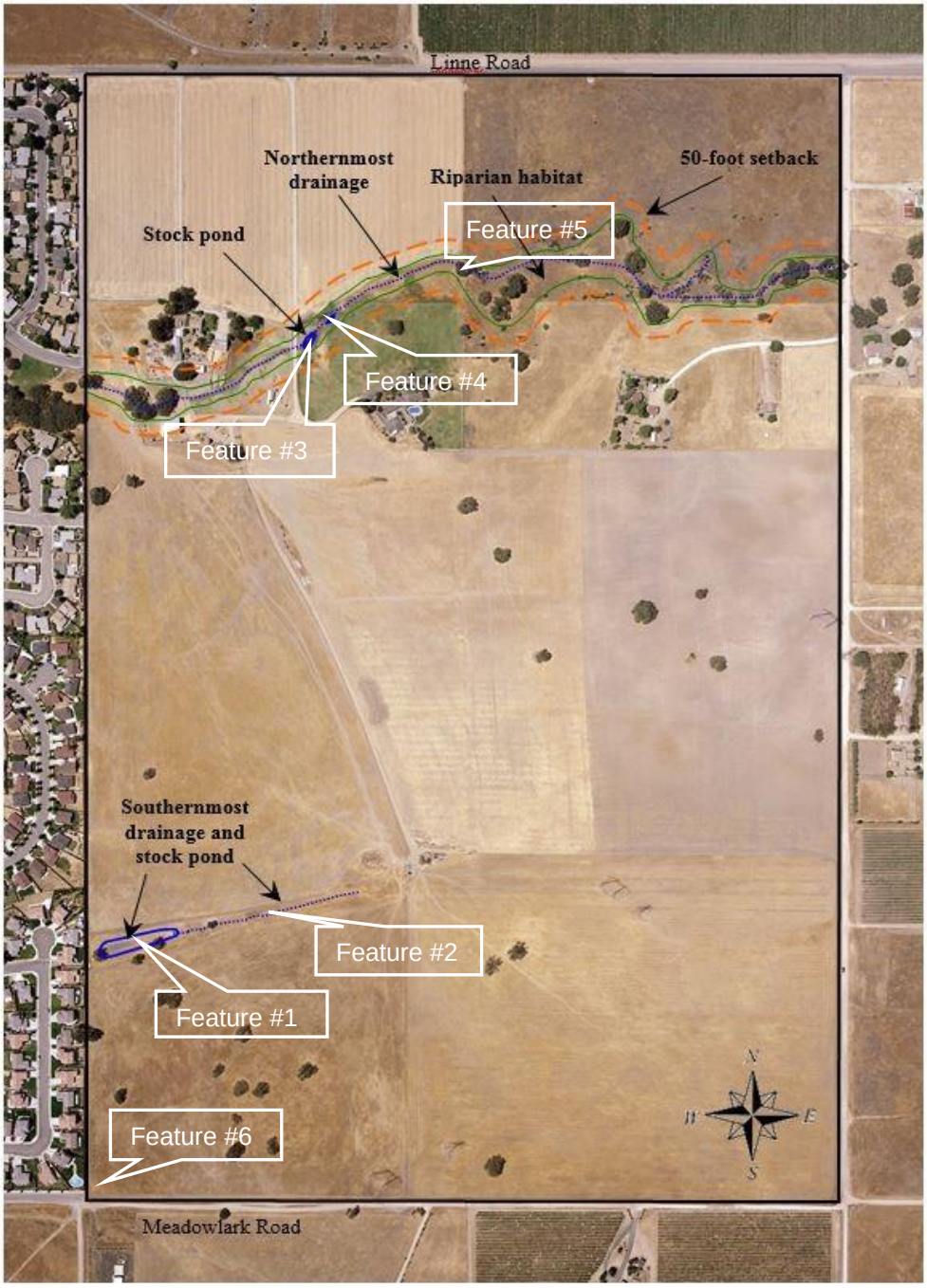
Olsen-Chandler Ranch
Map Center: 120.6435°W 35.60867°N
Paso Robles, San Luis Obispo County

USGS Quadrangle: Templeton

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
October 26, 2018 11:24 AM by JBB

Appendix 2


Linne Road
Northernmost drainage
Riparian habitat
50-foot setback
Stock pond
Feature #5
Feature #4
Feature #3
Southernmost drainage and stock pond
Feature #2
Feature #1
Feature #6
Meadowlark Road
N
W
E
S

Appendix 3

Wet Season Survey

Photos and Data Sheets

1/20/19 Feature #1 looking west

1/20/19 Feature #1 looking north

1/20/19 Feature #2 looking east

1/20/19 Feature #2 looking west

1/201/19 Feature #3 looking east

1/20/19 Feature #3 looking west

1/20/19 Feature #4 looking east

1/201/9 Feature #4 looking west

1/20/19 Feature #5 looking east

1/20/19 Feature #6 looking west

2/4/19 Feature #1 looking west

2/4/19 Feature #1 looking east

2/4/19 Feature #2 looking east

2/4/19 Feature #3 looking east

2/4/19 Feature #3 & 4 connected looking east

2/4/19 Feature #5 looking east

2/4/19 Feature #6 looking east

2/4/19 Feature #6 looking south

2/17/19 Feature #1 looking west

2/17/19 Feature #1 looking east

2/17/19 Feature #2 looking west

2/17/19 Feature #3 looking east

2/17/19 Feature #4 looking northeast

2/17/19 Feature #5 looking north

2/17/19 Feature #6 looking south

2/17/19 Feature #6 looking south

3/2/19 Feature #1 looking west

3/2/19 Feature #2 looking west

3/2/19 Feature #2 looking east

3/2/19 Feature #3 looking east

3/2/19 Feature #3 looking west

3/2/19 Feature #4 looking west

3/2/19 Feature #5 looking east

3/2/19 Feature #5 looking west

3/2/19 Feature #6 looking south

3/2/19 Feature #6 looking north

3/17/19 Feature #1 looking west

3/17/19 Feature #1 looking east

3/17/19 Feature #2 looking west

3/17/19 Feature #2 dry

3/17/19 Feature #3 looking west

3/17/19 Feature #4 looking east

3/17/19 Feature #4 looking west

3/17/19 Feature #5 looking east

3/17/19 Feature #5 looking west

3/31/19 Feature #1 looking west

3/31/19 Feature #1 looking east

3/31/19 Feature #3 looking east

3/31/19 Feature #3 looking west

3/31/19 Feature #4 looking east

3/31/19 Feature #5 looking east

3/31/19 Feature #5 looking west

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 1/20/19 Time: 12:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 1

Township: M27S Range: 12E Section: 11 35°36'11.79"N 120°38'26.53"W lat. long.

Temperature: Water: 54°F ~~°C~~ Air: 57°F ~~°C~~

Pool Depth:
at time of sampling: 36" cm
estimated maximum: 48" cm

Surface Area:
at time of sampling: 1000 m^2 x ____ m
estimated maximum: 1299 m^2 x ____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed:) tire tracks (garbage) discing/plowing
- ungrazed (grazed:) (cattle) horses sheep other____
  (light) moderate heavy
- land use of habitat: Stockpond

(Optional) Water Chemistry Data None

Alkalinity (total):____ppm or mg/l Conductivity:____uMHO

Dissolved NH_4:____ppt or ppm Dissolved Oxygen:____ppm or mg/l

pH:____ Turbidity: (secchi disc depth)____cm or: clear to bottom ____

Salinity :____ppt or ppm Total Dissolved Solids (TDS):____ppm

Notes: Waterboatmen
Turbid water w/ lots of sticks
No VPBs Barking Dog

(USF&WS rev. 4/96)

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	yes (no)	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 1/20/19 Time: 1:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 2

Township: M27S Range: 12E Section: 11 35°36'13.55"N 120°38'19.93"W lat. long.

Temperature: Water: 54°F °C Air: 57°F °C

Pool Depth:
at time of sampling: 4" cm
estimated maximum: 12" cm

Surface Area:
at time of sampling: 8 m² x ____ m
estimated maximum: 12 m² x ____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed: tire tracks garbage discing/plowing)
- ungrazed (grazed: cattle horses sheep other____ light moderate heavy)
- land use of habitat: Pasture

(Optional) Water Chemistry Data

Alkalinity (total):____ppm or mg/l Conductivity:____uMHO

Dissolved NH_4:____ppt or ppm Dissolved Oxygen:____ppm or mg/l

pH:____ Turbidity: (secchi disc depth)____cm or: clear to bottom X

Salinity :____ppt or ppm Total Dissolved Solids (TDS):____ppm

Notes: clear water

No VPB's or any life

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	yes (no)	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	yes (no)
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 1/2019 Time: 9:45 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE 102310-3

Site/Project Name: Olsen Pool #: 3

Township: M27S Range: 12E Section: 11 35°36'33.37"N 120°38'18.48"W lat. long.

Temperature: Water: 46°F ~~°C~~ Air: 52°F ~~°C~~

Pool Depth:
at time of sampling: 14" ~~cm~~
estimated maximum: 24" ~~cm~~

Surface Area:
at time of sampling: 300 m^2 x ____ ~~m~~
estimated maximum: 340 m^2 x ____ ~~m~~

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed:) tire tracks garbage (discing/plowing)
- ungrazed (grazed:) cattle horses (sheep) other____
  light moderate (heavy)
- land use of habitat: Sheep Pasture

(Optional) Water Chemistry Data None

Alkalinity (total):____ppm or mg/l Conductivity:____uMHO

Dissolved NH_4:____ppt or ppm Dissolved Oxygen:____ppm or mg/l

pH:____ Turbidity: (secchi disc depth)____cm or: clear to bottom X

Salinity :____ppt or ppm Total Dissolved Solids (TDS):____ppm

Notes: Clear water Lots of Veg
Waterboatmen
No VPB's

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	yes (no)	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no __X__ yes

Required color slides and/or photographs for the project site are included: ____ no __X__ yes

Date: 1/20/19 Time: 10:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE-102310-3

Site/Project Name: Olsen Pool #: 4

Township: 27S Range: 12E Section: 11 35°36'34.3"N 120°38'12.52"W lat. long.

Temperature: Water: 46°F ~~°C~~ Air: 52°F ~~°C~~

Pool Depth:
at time of sampling: 12" ~~cm~~
estimated maximum: 16" ~~cm~~

Surface Area:
at time of sampling: 20 m^2 x ____ ~~m~~
estimated maximum: 25 m^2 x ____ ~~m~~

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed:) tire tracks garbage (discing/plowing)
- ungrazed (grazed:) cattle horses (sheep) other____
  light moderate (heavy)
- land use of habitat: Sheep pasture

(Optional) Water Chemistry Data None

Alkalinity (total):____ppm or mg/l Conductivity:____uMHO

Dissolved NH_4:____ppt or ppm Dissolved Oxygen:____ppm or mg/l

pH:____ Turbidity: (secchi disc depth)____cm or: clear to bottom __X__

Salinity :____ppt or ppm Total Dissolved Solids (TDS):____ppm

Notes:
No VPB's Clear water No life
Broken concrete Rip Rap

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	yes (no)	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	yes (no)
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 1/1/2019 Time: 11:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 5

Township: M27S Range: 12E Section: 11 35°36'36.30"N 120°38'12.80"W lat. long.

Temperature: Water: 55°F ~~°C~~ Air: 57°F ~~°C~~

Pool Depth:
at time of sampling: 18" ~~cm~~
estimated maximum: 40" ~~cm~~

Surface Area:
at time of sampling: 800 m^2 x ____ m
estimated maximum: 1290 m^2 x ____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other____
  light moderate heavy
- land use of habitat: Hay crop

(Optional) Water Chemistry Data

Alkalinity (total):____ppm or mg/l Conductivity:____uMHO

Dissolved NH_4:____ppt or ppm Dissolved Oxygen:____ppm or mg/l

pH:____ Turbidity: (secchi disc depth)____cm or: clear to bottom NO

Salinity :____ppt or ppm Total Dissolved Solids (TDS):____ppm

Notes: Turbid water - New Feature -
few waterboatmen

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes no	Insects: (adult or larvae)	
Conchostracans:	yes no	Anisoptera:	yes no
Copepods:	yes no	Zygoptera:	yes no
Ostracods	yes no	Hydrophilidae:	yes no
Fish	yes no	Dytiscidae:	yes no
Frogs	yes no	Corixidae:	yes no
Salamanders	yes no	Notonectidae:	yes no
Waterfowl	yes no	Belostomatidae:	yes no
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 2/4/19 Time: 9:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 1

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 53°F ~~°C~~ Air: 48°F ~~°C~~

Pool Depth:
at time of sampling: 48" cm
estimated maximum: 48" cm

Surface Area:
at time of sampling: 1300 m^2 x _____ ~~m~~
estimated maximum: 1300 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed:) tire tracks (garbage) discing/plowing

- ungrazed (grazed:) (cattle) horses sheep other_____
(light) moderate heavy

- land use of habitat: STOCK Pond

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom NO

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Waterboatmen NO VPBs
Pond Full Tadpoles Beetles overflowing
Rainstorm during Survey

(USF&WS rev. 4/96)

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	yes (no)	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	(yes) no
Frogs	(yes) no Tads	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no __X__ yes

Required color slides and/or photographs for the project site are included: ____ no __X__ yes

Date: 2/4/19 Time: 10:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 2

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 53°F ~~°C~~ Air: 48°F ~~°C~~

Pool Depth:
at time of sampling: 12" ~~cm~~
estimated maximum: 12" ~~cm~~

Surface Area:
at time of sampling: 12 m^2 x _____ m
estimated maximum: 12 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing

- ungrazed grazed: cattle horses sheep other_____
light moderate heavy

- land use of habitat: Pasture

(Optional) Water Chemistry Data

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Water flowing quick - Rain storm during Survey

No life

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes no	Insects: (adult or larvae)	
Conchostracans:	yes no	Anisoptera:	yes no
Copepods:	yes no	Zygoptera:	yes no
Ostracods	yes no	Hydrophilidae:	yes no
Fish	yes no	Dytiscidae:	yes no
Frogs	yes no	Corixidae:	yes no
Salamanders	yes no	Notonectidae:	yes no
Waterfowl	yes no	Belostomatidae:	yes no
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 2/4/19 Time: 10:45 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE 02310-3

Site/Project Name: Olsen Pool #: 3

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 53 °F °C Air: 48°F °C

Pool Depth:
at time of sampling: 24" ~~cm~~
estimated maximum: 24" ~~cm~~

Surface Area:
at time of sampling: 340 m^2 x _____ m
estimated maximum: 340 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed:) tire tracks garbage (discing/plowing)
- ungrazed (grazed:) cattle horses (sheep) other_____
  light moderate (heavy)
- land use of habitat: Sheep Pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Heavy Rain - water everywhere
Ducks Turbid water, Flowing No VPBS
Few waterboatmen

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	yes (no)	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	(yes) no	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no __X__ yes

Required color slides and/or photographs for the project site are included: ____ no __X__ yes

Date: 2/4/19 Time: 11:15 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 4

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 48°F ~~°C~~ Air: 51°F ~~°C~~

Pool Depth:
at time of sampling: 16" ~~cm~~
estimated maximum: 16" ~~cm~~

Surface Area:
at time of sampling: 25 m^2 x _____ m
estimated maximum: 25 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed: tire tracks garbage discing/plowing)
- ungrazed (grazed: cattle horses sheep other_____ light moderate heavy)
- land use of habitat: Sheep Pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Heavy Rain No VPBS
Ducks Flowing water

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	yes (no)	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	yes (no)
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 2/4/19 Time: 12:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 5

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 53°F ~~°C~~ Air: 48°F ~~°C~~

Pool Depth:
at time of sampling: 40" ~~cm~~
estimated maximum: 40" ~~cm~~

Surface Area:
at time of sampling: 1290 m^2 x _____ m
estimated maximum: 1290 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other_____ light moderate heavy
- land use of habitat: Hay Crop

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes:
Flowing water - Swale like feature - No VPBS
Several recent rain events few waterboatmen

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans:
(note reproductive status) 0

Notostracans:
(note reproductive status) 0

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	yes (no)	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 2/17/19 Time: 10:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 1

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 51°F ~~°C~~ Air: 52°F ~~°C~~

Pool Depth:
at time of sampling: 48" cm
estimated maximum: 48" cm

Surface Area:
at time of sampling: 1300 m^2 x _____ m
estimated maximum: 1300 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed: tire tracks garbage discing/plowing)
- ungrazed (grazed: cattle horses sheep other_____ light moderate heavy)
- land use of habitat: Stock Pond

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom No

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Millions of seedshrimp - NO VPBS
Tads - Duck
waterboatmen
- Showers/Rain last few days

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	(yes) no	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	(yes) no	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 2/17/19 Time: 11:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 2

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 51°F ~~°C~~ Air: 52°F ~~°C~~

Pool Depth:
at time of sampling: 14" ~~cm~~
estimated maximum: 14" ~~cm~~

Surface Area:
at time of sampling: 12 m^2 x _____ m
estimated maximum: 12 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing

- ungrazed grazed: cattle horses sheep other_____
light moderate heavy

- land use of habitat: Pastured

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Flowing water - questionable habitat

No VPBS - No seed shrimp No life

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes	no	Insects: (adult or larvae)		
Conchostracans:	yes	no	Anisoptera:	yes	no
Copepods:	yes	no	Zygoptera:	yes	no
Ostracods	yes	no	Hydrophilidae:	yes	no
Fish	yes	no	Dytiscidae:	yes	no
Frogs	yes	no	Corixidae:	yes	no
Salamanders	yes	no	Notonectidae:	yes	no
Waterfowl	yes	no	Belostomatidae:	yes	no
Other (specify) _____			Other (specify) _____		

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 2/17/19 Time: 12:15 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 3

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 48°F ~~°C~~ Air: 51°F ~~°C~~

Pool Depth:
at time of sampling: 20" cm
estimated maximum: 24" cm

Surface Area:
at time of sampling: 340 m^2 x _____ m
estimated maximum: 340 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other_____
  light moderate heavy
- land use of habitat: Sheep pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom X

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: clear water gental flow Showers/rain
Seed shrimp
No VPBS

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes no	Insects: (adult or larvae)	
Conchostracans:	yes no	Anisoptera:	yes no
Copepods:	yes no	Zygoptera:	yes no
Ostracods	yes no	Hydrophilidae:	yes no
Fish	yes no	Dytiscidae:	yes no
Frogs	yes no	Corixidae:	yes no
Salamanders	yes no	Notonectidae:	yes no
Waterfowl	yes no	Belostomatidae:	yes no
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 2/17/19 Time: 12:45 County: SCO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 4

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 48°F ~~°C~~ Air: 51°F ~~°C~~

Pool Depth:
at time of sampling: 16" ~~cm~~
estimated maximum: 16" ~~cm~~

Surface Area:
at time of sampling: 25 m^2 x _____ m
estimated maximum: 25 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed — disturbed: tire tracks garbage discing/plowing
- ungrazed — grazed: cattle horses sheep other_____ (light moderate heavy)
- land use of habitat: Pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom X

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Clearwater gental flow
Seed shrimp
No VPBs

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	yes (no)
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no __X__ yes

Required color slides and/or photographs for the project site are included: ____ no __X__ yes

Date: 2/17/19 Time: 1:15 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 5

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 51°F ~~°C~~ Air: 51°F ~~°C~~

Pool Depth:
at time of sampling: 40" ~~cm~~
estimated maximum: 40" ~~cm~~

Surface Area:
at time of sampling: 1290 m^2 x _____ m
estimated maximum: 1290 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other_____ light moderate heavy
- land use of habitat: Hay crop

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom No

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Darkwater NO VPBS Seasonal flow
Raining Seedshrimp Docks(8)

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	yes (no)
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	(yes) no	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 2/17/19 Time: 2:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102360-3

Site/Project Name: Olsen Pool #: 6

Township: M27S Range: 12E Section: 11 35°36'04.00"N 120°38'27.50"W lat. long.

Temperature: Water: 53°F ~~°C~~ Air: 51°F ~~°C~~

Pool Depth:
at time of sampling: 7" ~~cm~~
estimated maximum: 10" ~~cm~~

Surface Area:
at time of sampling: 580 m^2 x ____ m
estimated maximum: 580 m^2 x ____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other____
  light moderate heavy
- land use of habitat: Pasture

(Optional) Water Chemistry Data

Alkalinity (total):____ppm or mg/l Conductivity:____uMHO

Dissolved NH_4:____ppt or ppm Dissolved Oxygen:____ppm or mg/l

pH:____ Turbidity: (secchi disc depth)____cm or: clear to bottom NO

Salinity :____ppt or ppm Total Dissolved Solids (TDS):____ppm

Notes: Dark/Blackwater - NO life
New feature - start survey

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes no	Insects: (adult or larvae)	
Conchostracans:	yes no	Anisoptera:	yes no
Copepods:	yes no	Zygoptera:	yes no
Ostracods	yes no	Hydrophilidae:	yes no
Fish	yes no	Dytiscidae:	yes no
Frogs	yes no	Corixidae:	yes no
Salamanders	yes no	Notonectidae:	yes no
Waterfowl	yes no	Belostomatidae:	yes no
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3/2/19 Time: 10:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102360-3

Site/Project Name: Olsen Pool #: 1

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 57°F °C Air: 58°F ~~°C~~

Pool Depth:
at time of sampling: 33" ~~cm~~
estimated maximum: 48" ~~cm~~

Surface Area:
at time of sampling: 1100 m^2 x _____ ~~m~~
estimated maximum: 1300 m^2 x _____ ~~m~~

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other_____
  light moderate heavy
- land use of habitat: STOCK Pond

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom NO

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Rain
Tads waterboatmen Seedshrimp

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	(yes) no	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3/2/19 Time: 10:55 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 2

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 56°F ~~°C~~ Air: 58°F ~~°C~~

Pool Depth:
at time of sampling: 14" cm
estimated maximum: 14" cm

Surface Area:
at time of sampling: 12 m^2 x _____ m
estimated maximum: 12 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other_____
  light moderate heavy
- land use of habitat: Pasture-

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Flowing water Rain
- No VFBS - No life

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes	no	Insects: (adult or larvae)		
Conchostracans:	yes	no	Anisoptera:	yes	no
Copepods:	yes	no	Zygoptera:	yes	no
Ostracods	yes	no	Hydrophilidae:	yes	no
Fish	yes	no	Dytiscidae:	yes	no
Frogs	yes	no	Corixidae:	yes	no
Salamanders	yes	no	Notonectidae:	yes	no
Waterfowl	yes	no	Belostomatidae:	yes	no
Other (specify) _____			Other (specify) _____		

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no __X__ yes

Required color slides and/or photographs for the project site are included: ____ no __X__ yes

Date: 3/2/19 Time: 11:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 3

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 58°F °C Air: 58°F °C

Pool Depth:
at time of sampling: 18" cm
estimated maximum: 24" cm

Surface Area:
at time of sampling: 300 m x _____ m
estimated maximum: 340 m x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed: tire tracks garbage (discing/plowing)

- ungrazed (grazed: cattle horses (sheep other_____
light moderate (heavy)

- land use of habitat: Sheep pasture

(Optional) Water Chemistry Data

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom X

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Ducks clear water waterboatmen
No VPBS Seedshrimp Train

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes no	Insects: (adult or larvae)	
Conchostracans:	yes no	Anisoptera:	yes no
Copepods:	yes no	Zygoptera:	yes no
Ostracods	yes no	Hydrophilidae:	yes no
Fish	yes no	Dytiscidae:	yes no
Frogs	yes no	Corixidae:	yes no
Salamanders	yes no	Notonectidae:	yes no
Waterfowl	yes no	Belostomatidae:	yes no
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3/2/19 Time: 12:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE 102310-3

Site/Project Name: Olsen Pool #: 4

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 58° F ~~°C~~ Air: 58° F °C

Pool Depth:
at time of sampling: 10" ~~cm~~
estimated maximum: 16" ~~cm~~

Surface Area:
at time of sampling: 22 m^2 x _____ m
estimated maximum: 25 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed: tire tracks garbage discing/plowing)
- ungrazed (grazed: cattle horses sheep other_____ light moderate heavy)
- land use of habitat: Pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom X

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Clear water Rain
Seed shrimp
No VPBS -

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	yes (no)
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3/2/19 Time: 12:45 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102360-3

Site/Project Name: Olsen Pool #: 5

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 57°F ~~°C~~ Air: 58° ~~°C~~

Pool Depth:
at time of sampling: 28" ~~cm~~
estimated maximum: 40" cm

Surface Area:
at time of sampling: 1000 m² x _____ m
estimated maximum: 1290 m² x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed: tire tracks garbage discing/plowing)
- (ungrazed) grazed: cattle horses sheep other_____ light moderate heavy
- land use of habitat: Hay crop

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom No

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Rain Turbid water No VPBs
Docks seed shrimp water boatmen

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	(yes) no	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3/2/19 Time: 2:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102360-3

Site/Project Name: Olsen Pool #: 6

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 59°F ~~°C~~ Air: 58°F ~~°C~~

Pool Depth:
at time of sampling: 2" ~~cm~~
estimated maximum: 10" ~~cm~~

Surface Area:
at time of sampling: 150 m^2 x _____ m
estimated maximum: 580 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing

- ungrazed grazed: cattle horses sheep other_____
light moderate heavy

- land use of habitat: Pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom NO

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: almost Dry
No life - very dark/blackwater

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	yes (no)	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	yes (no)	Corixidae:	yes (no)
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3 / 17 / 19 Time: 9:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE-102360-3

Site/Project Name: Olsen Pool #: 1

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 51°F ~~°C~~ Air: 46°F ~~°C~~

Pool Depth:
at time of sampling: 48" cm
estimated maximum: 48" cm

Surface Area:
at time of sampling: 1200 m^2 x _____ m
estimated maximum: 1300 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed: tire tracks garbage discing/plowing)
- ungrazed (grazed: cattle horses sheep other_____)
  (light moderate heavy)
- land use of habitat: STOCK Pond

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Clam Shrimp
Seed Shrimp
Tads Waterboatmen
No VPBS listed

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	(yes) no	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	(yes) no	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no __X__ yes

Required color slides and/or photographs for the project site are included: ____ no __X__ yes

Date: 3/17/19 Time: 10:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102360-3

Site/Project Name: Olsen Pool #: 2

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: Dry °C Air: 46° ~~°C~~

Pool Depth:
at time of sampling: Ø cm
estimated maximum: _____cm

Surface Area:
at time of sampling: Ø m x _____m
estimated maximum: _____m x _____m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other_____ light moderate heavy
- land use of habitat: Pasture

(Optional) Water Chemistry Data

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Dry - Mainly Swift Flow

No life

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes	no	Insects: (adult or larvae)		
Conchostracans:	yes	no	Anisoptera:	yes	no
Copepods:	yes	no	Zygoptera:	yes	no
Ostracods	yes	no	Hydrophilidae:	yes	no
Fish	yes	no	Dytiscidae:	yes	no
Frogs	yes	no	Corixidae:	yes	no
Salamanders	yes	no	Notonectidae:	yes	no
Waterfowl	yes	no	Belostomatidae:	yes	no
Other (specify) _____			Other (specify) _____		

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no __X__ yes

Required color slides and/or photographs for the project site are included: ____ no __X__ yes

Date: 3/17/19 Time: 10:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE 102310-3

Site/Project Name: Olsen Pool #: 3

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 56°F ~~°C~~ Air: 46°F ~~°C~~

Pool Depth:
at time of sampling: 18" cm
estimated maximum: 24" cm

Surface Area:
at time of sampling: 300 m^2 x _____ m
estimated maximum: 340 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed: tire tracks garbage discing/plowing)
- ungrazed (grazed: cattle horses sheep other_____ light moderate heavy)
- land use of habitat: Sheep pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom X

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Clearwater
Tads seedshrimp waterboatmen
No VPBS

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes no	Insects: (adult or larvae)	
Conchostracans:	yes no	Anisoptera:	yes no
Copepods:	yes no	Zygoptera:	yes no
Ostracods	yes no	Hydrophilidae:	yes no
Fish	yes no	Dytiscidae:	yes no
Frogs	yes no	Corixidae:	yes no
Salamanders	yes no	Notonectidae:	yes no
Waterfowl	yes no	Belostomatidae:	yes no
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no __X__ yes

Required color slides and/or photographs for the project site are included: ____ no __X__ yes

Date: 3/17/19 Time: 11:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE 602310-3

Site/Project Name: Olsen Pool #: 4

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 56° F ~~°C~~ Air: 46° F ~~°C~~

Pool Depth:
at time of sampling: 9" cm
estimated maximum: 16" ~~cm~~

Surface Area:
at time of sampling: 16 m x _____ m
estimated maximum: 25 m x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed — disturbed: tire tracks garbage discing/plowing
- ungrazed — grazed: cattle horses sheep other_____ (light moderate heavy)
- land use of habitat: Pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom __X__

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Clearwater
Few Tads Seed shrimp No VPBS

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	(yes) no	Corixidae:	yes (no)
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3/12/19 Time: 11:30 County: SLO Quad: TE102360-3

Collector(s): M. Dallas Permit #: TE102360-3

Site/Project Name: Olsen Pool #: 5

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 56°F ~~°C~~ Air: 48°F ~~°C~~

Pool Depth:
at time of sampling: 26" ~~cm~~
estimated maximum: 40" cm

Surface Area:
at time of sampling: 800 m^2 x _____ m
estimated maximum: 1290 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed — (disturbed: tire tracks garbage (discing/plowing))
- (ungrazed) — grazed: cattle horses sheep other_____ light moderate heavy
- land use of habitat: Hay Crop

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Toads seedshrimp Tads
egg mass waterboatmen
NO VPTS Pool getting smaller

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	(yes) no	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3 / 17 / 19 Time: 12:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE 02310-3

Site/Project Name: Olsen Pool #: 6

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: ~~0~~ Dry °C Air: 46°F ~~°C~~

Pool Depth: at time of sampling: ~~0~~ cm estimated maximum: 10" cm

Surface Area: at time of sampling: ~~0~~ m x _____ m estimated maximum: 581 m x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other_____ light moderate heavy
- land use of habitat: Pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Dry

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans:
(note reproductive status) N/A

Notostracans:
(note reproductive status) N/A

(Optional) Species Observations:

Cladocerans:	yes	no
Conchostracans:	yes	no
Copepods:	yes	no
Ostracods	yes	no
Fish	yes	no
Frogs	yes	no
Salamanders	yes	no
Waterfowl	yes	no
Other (specify) _____		

Insects: (adult or larvae)

Anisoptera:	yes	no
Zygoptera:	yes	no
Hydrophilidae:	yes	no
Dytiscidae:	yes	no
Corixidae:	yes	no
Notonectidae:	yes	no
Belostomatidae:	yes	no
Other (specify) _____		

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3/31/19 Time: 11:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 1

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 58°F ~~°C~~ Air: 66°F ~~°C~~

Pool Depth:
at time of sampling: 45" ~~cm~~
estimated maximum: 48" ~~cm~~

Surface Area:
at time of sampling: 1200 m^2 x _____ m
estimated maximum: 1300 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing

- ungrazed grazed: cattle horses sheep other_____
light moderate heavy

- land use of habitat: STOCK Pond

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Semi clear water Ducks
TAds Clam shrimp Seed shrimp
No listed VPB's

(USF&WS rev. 4/96)

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	(yes) no	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	(yes) no	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	(yes) no	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3/31/19 Time: 9:00 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102360-3

Site/Project Name: Olsen Pool #: 3

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 61°F ~~°C~~ Air: 64°F ~~°C~~

Pool Depth:
at time of sampling: 14" ~~cm~~
estimated maximum: 24" ~~cm~~

Surface Area:
at time of sampling: 220 m^2 x _____ m
estimated maximum: 340 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed: tire tracks garbage discing/plowing)
- ungrazed (grazed: cattle horses sheep other_____ light moderate heavy)
- land use of habitat: Sheep pasture

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom X

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Clear water
Numerous seed shrimp & waterboatmen
Tads No VPBS

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	(yes) no	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no X yes

Required color slides and/or photographs for the project site are included: ____ no X yes

Date: 3/31/19 Time: 9:45 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 4

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 61° °C Air: 66°F °C

Pool Depth:
at time of sampling: 6" cm
estimated maximum: 16" cm

Surface Area:
at time of sampling: 8 m^2 x _____ m
estimated maximum: 25 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other_____
  light moderate heavy
- land use of habitat: Pasture

(Optional) Water Chemistry Data

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom X

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes: Clear water
waterboatmen seedshrimp TADS
No VPBS

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: 0
(note reproductive status)

Notostracans: 0
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes no	Insects: (adult or larvae)	
Conchostracans:	yes no	Anisoptera:	yes no
Copepods:	yes no	Zygoptera:	yes no
Ostracods	yes no	Hydrophilidae:	yes no
Fish	yes no	Dytiscidae:	yes no
Frogs	yes no	Corixidae:	yes no
Salamanders	yes no	Notonectidae:	yes no
Waterfowl	yes no	Belostomatidae:	yes no
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no __X__ yes

Required color slides and/or photographs for the project site are included: ____ no __X__ yes

Date: 3/31/19 Time: 10:30 County: SLO Quad: Templeton

Collector(s): M. Dallas Permit #: TE102310-3

Site/Project Name: Olsen Pool #: 5

Township: _____ Range: _____ Section: _____ _____lat._____long.

Temperature: Water: 59°F °C Air: 64°F °C

Pool Depth:
at time of sampling: 16" ~~cm~~
estimated maximum: 40" ~~cm~~

Surface Area:
at time of sampling: 350 m^2 x _____ m
estimated maximum: 1290 m^2 x _____ m

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed:) tire tracks garbage (discing/plowing)

(- ungrazed) grazed: cattle horses sheep other_____
light moderate heavy

- land use of habitat: Hay crop

(Optional) Water Chemistry Data None

Alkalinity (total):_____ppm or mg/l Conductivity:_____uMHO

Dissolved NH_4:_____ppt or ppm Dissolved Oxygen:_____ppm or mg/l

pH:_____ Turbidity: (secchi disc depth)_____cm or: clear to bottom _____

Salinity :_____ppt or ppm Total Dissolved Solids (TDS):_____ppm

Notes:
Numerous Seed shrimp TADs waterboatmen
No VPBs

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: Ø
(note reproductive status)

Notostracans: Ø
(note reproductive status)

(Optional) Species Observations:

Cladocerans:	yes (no)	Insects: (adult or larvae)	
Conchostracans:	yes (no)	Anisoptera:	yes (no)
Copepods:	yes (no)	Zygoptera:	yes (no)
Ostracods	(yes) no	Hydrophilidae:	yes (no)
Fish	yes (no)	Dytiscidae:	yes (no)
Frogs	(yes) no	Corixidae:	(yes) no
Salamanders	yes (no)	Notonectidae:	yes (no)
Waterfowl	yes (no)	Belostomatidae:	yes (no)
Other (specify) _____		Other (specify) _____	

Voucher Specimens N/A

Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species	# Individuals	Accession/Catalog #	Pool #

Special Status Invertebrate Dry Season Survey

NINETY-DAY REPORT

USFWS TAKE PERMIT # TE-102310-4

SURVEY FOR THE OLSEN RANCH

IN PASO ROBLES, SAN LUIS OBISPO COUNTY, CALIFORNIA

Prepared By:

M C. Dallas

8/28/19

MITCHELL C. DALLAS

DATE

Branchiopod Surveyor
USFWS Take Permit #TE-102310-4
(805) 459-2907

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Introduction

This report is required under United States Fish and Wildlife Service ESA §10(a)(1)(A) permit # TE-102310-4. The current permit expires on 7/23/24.

This report is submitted in fulfillment of conditions in the Permit, the Special Terms and Conditions for Mitchell C. Dallas and the U.S. Fish and Wildlife Service Interim Survey Guidance to Permittees of 11/7/2017 that is attached to that permit. A full DRY SEASON protocol level survey was achieved. Dry season soil sampling and analysis was conducted to determine the presence or absence of federally listed Vernal Pool Branchiopods either within the project footprint or that may be affected by the project.

Permission to conduct the survey was granted by email from Chris Kofron and Juile Vanderwier of the U.S. Fish and Wildlife Service Ventura Office on 7/2/19. The following authorized surveyor conducted surveys during the wet season: Mitchell C. Dallas. Protocol level wet season surveys of the potential habitat features were conducted during the 2018/2019 wet season with negative (absent) results. This dry season survey was conducted as a follow up to the 2018/2019 wet season survey.

The dry season survey was conducted at the request of Althouse and Meade Inc. Soil samples were collected on 6/22/19. In total, five features were surveyed (feature #'s 2-6). Feature #1 was dry season sampled in 2018 to make a determination in advance of this survey effort in order to help facilitate design elements of the proposed project. See attached data sheets.

A reproduction of a U. S. Geological Survey topographic Paso Robles quadrangle map is attached showing the location surveyed. The coordinates for the pool are located in the Required Information Section of this report and on the attached survey field data sheets.

The information presented below is presented in the same order and with the same numbering system used in the guidance.

Project Description: The proposed project will build new homes in the Paso Robles area.

Required Information

1. The project site can be located on the attached U. S. Geological Survey Templeton, California, 7.5 minute topographic quadrangle map (Appendix 1). The location of the specific sites sampled is Township M27S Range 12E Section 11 35°36'11.79"N 120°38'26.53"W NAD 83

The action area is both grazed and ungrazed, in crop production with areas of historic grazing that is somewhat undisturbed with an adjacent roads and infrastructure.

Olsen Habitat Feature Location USGS Templeton Quadrangle M27S 12E 11				
Feature #	Size Square Meters	# of Samples	Latitude	Longitude
2	7	10	35°36’13.55”N	120°38’19.93”W
3	342	50	35°36’33.37”N	120°38’18.48”W
4	24	10	35°36’34.31”N	120°38’17.52”W
5	1289	50	35°36’36.30”N	120°38’12.80”W
6	580	50	35°36’04.00”N	120°38’27.50”W

2. A color aerial photo of the project location is included in the attached Appendix 2.
3. The estimated number of crustaceans observed in Pool #1 is listed in the attached data sheets. Estimates for the pool are as follows:

Species	Pool#	#2	#3	#4	#5	#6
Branchinecta lynchi		N	N	N	N	N
Branchinecta conservatio		N	N	N	N	N
Branchinecta longiantenna		N	N	N	N	N
Lepidurus packardi		N	N	N	N	N
Streptocephalus Woottoni		N	N	N	N	N

Estimates are as per the guidance: none (N), few (F) (< 50) and many (M) (>50). Details are available in the attached data sheets.

4. Federally listed Vernal Pool Branchiopod resting eggs were not found, none were preserved.
5. Qualitative description of the vernal pool community: The action area is located in San Luis Obispo County within the City of Paso Robles. The action area has a few homes and farm buildings within and it is bordered by roads, track homes and adjacent

divided undeveloped parcels. There is rolling topography with stock ponds swales and ponding water features. See attached data sheets for more details.

6. Data collected during the field visits can be found on the attached dry season data sheets in Appendix 3. Listed vernal pool branchiopod resting eggs were not observed during the surveys.

7. Additional data: none.

8. The survey methodology used was that described in guidance attached to Permit # TE-102310-4 to determine the presence or absence of federally listed Vernal Pool Branchiopods either within the project footprint or that may be affected by the project.

Conclusion

Federally listed Vernal Pool Branchiopod resting eggs were not found in the potential habitat features within the project action area during this Dry Season protocol level survey. The survey did meet the criteria to establish a full dry season protocol level survey.

Contact: If you have any questions or require more information about this project or the invertebrate survey, please contact Mitchell Dallas, Authorized Surveyor, TE-102310-4 at (805) 459-2907 or email **mitchdallas@hotmail.com**.

Appendices

Appendix 1.

USGS original scale map showing the area surveyed.

Appendix 2.

Aerial photo of the potential habitat feature locations.

Appendix 3.

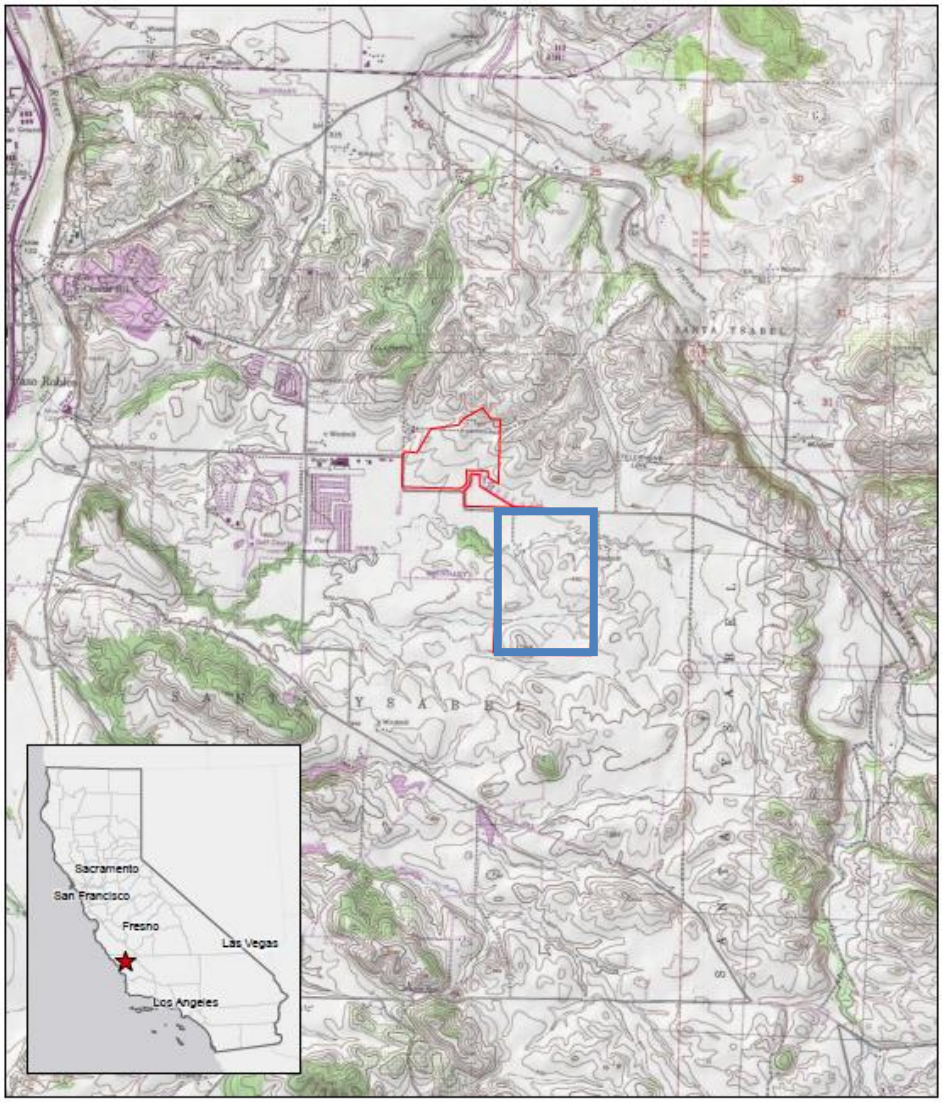
Dry Season Data Sheets

Appendix 1

USGS Paso Robles Quadrangle

San Luis Obispo California

United States Geological Survey Topographic Map



Legend

Study Area

N

0 0.25 0.5 1 Mile

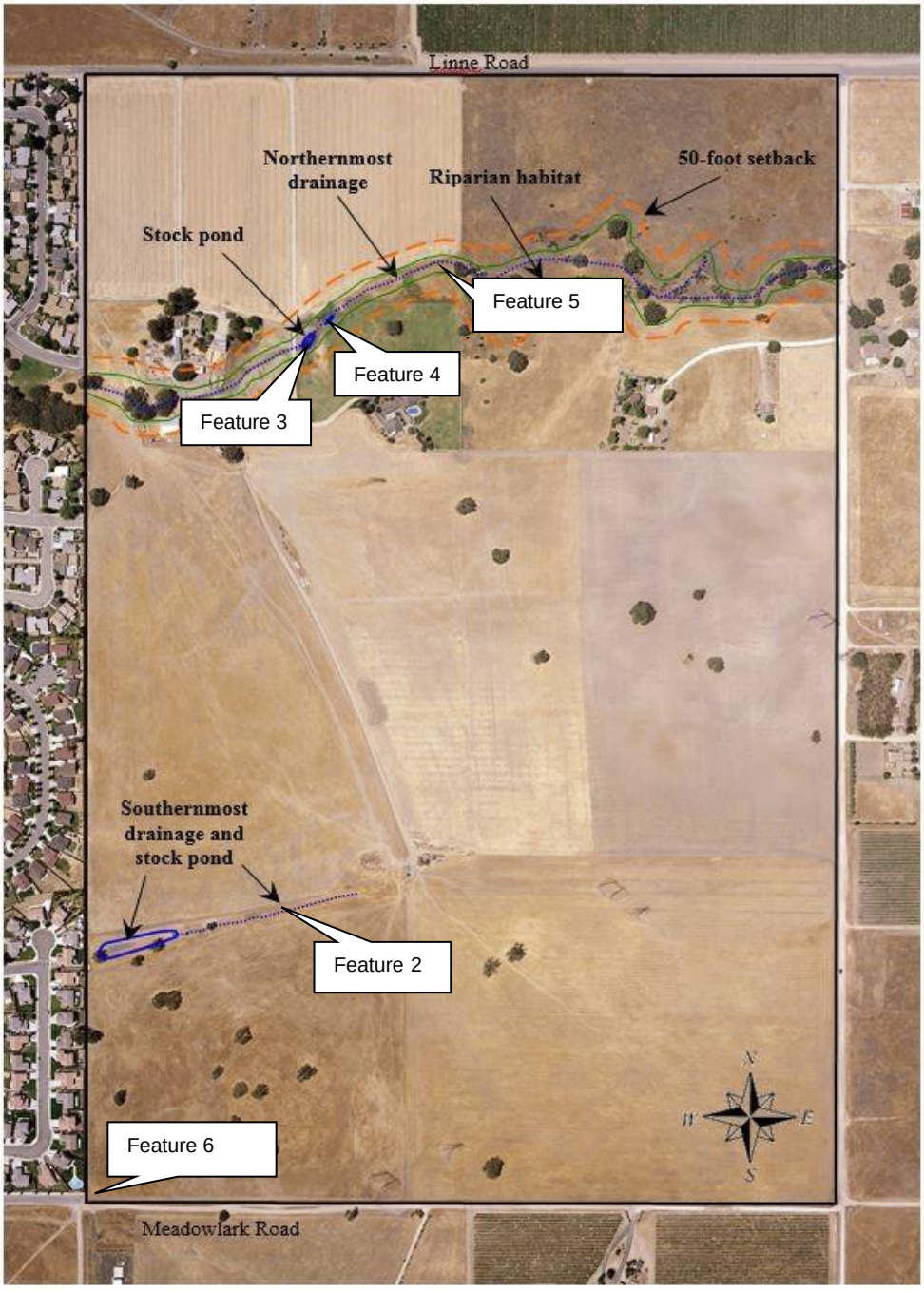
Olsen-Chandler Ranch
Map Center: 120.6435°W 35.60867°N
Paso Robles, San Luis Obispo County

USGS Quadrangle: Templeton

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
October 26, 2018 11:24 AM by JBB

Appendix 2


Linne Road
Northernmost drainage
Riparian habitat
50-foot setback
Stock pond
Feature 5
Feature 4
Feature 3
Southernmost drainage and stock pond
Feature 2
Feature 6
Meadowlark Road
N
W
E
S

Appendix 3

Dry Season Survey

Data Sheets

Appendix 2. U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: Olsen
USFWS Project Number:
County: San Luis Obispo
Lat: 35°36'13.55"N
Long: 120°38'19.93"W
Quad: Templeton
Township: 27S
Range: 12E
Section: 11
Page 1 of 1

Biologist Information

Name of Person(2) Who Conducted the Following Tasks and Permit Number(s):

Soil Collection: Mitch Dallas
Soil Processing: Mitch Dallas
Soil Analysis/Cysts ID: Mitch Dallas
Soil Collection Date: 6/22/19

2 Pool/ Habitat/ Basin No.	Invertbrates Present (X)															Other Species	LBC = Large Branchiopod Cysts Comments
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	Number of Large Branchiopod Cysts = LBC						Hydracarina Live	Nematoda	Collembola		
						Branchinecta sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*					
2-1																No LBC
2-2																No LBC
2-3																No LBC
2-4																No LBC
2-5																No LBC
2-6																No LBC
2-7																No LBC
2-8																No LBC
2-9																No LBC
2-10																No LBC
																No LBC
																No LBC
																No LBC
																No LBC

Appendix 2. U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information		Biologist Information	
Project Name: Olsen	Quad: Templeton	Name of Person(2) Who Conducted the Following Tasks and Permit Number(s):	
USFWS Project Number:	Township: M27S	Soil Collection: Mitch Dallas	TE 102310-3
County: SLO	Range: 12E	Soil Processing: Mitch Dallas	"
Lat: 35°36'33.37"N	Section: 11	Soil Analysis/Cysts ID: Mitch Dallas	"
Long: 120°38'19.48"W	Page 1 of 2	Soil Collection Date: 6/22/19	

3 Pool/ Habitat/ Basin No.	Invertbrates Present (X)															Other Species	Comments
						Number of Large Branchiopod Cysts = LBC											
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	*Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola		
3-1	X			X													No LBC
3-2	X			X													"
3-3	X			X													"
3-4	X			X													"
3-5	X			X													"
3-6	X			X													"
3-7	X			X													"
3-8	X			X													"
3-9	X			X													"
3-10	X			X													"
3-11	X			X													"
3-12	X			X													"
3-13	X			X													"
3-14	X			X													"
3-15	X			X													"
3-16	X			X													"
3-17	X			X													"
3 18	X			X													"
3-19	X			X													"
320	X			X													"
321	X			X													"
322	X			X													"
323	X			X													"
324	X			X													"
325	X			X													"
326	X			X													"
327	X			X													"
328	X			X													"
329	X			X													"
330	X			X													"
331	X			X													"
332	X			X													"
333	X			X													"
334	X			X													"
335	X			X													"
336	X			X													"
337	X			X													"
338	X			X													"
339	X			X													"
340	X			X													"
341	X			X													"
342	X			X													"

Appendix 2. U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: Olsen
USFWS Project Number:
County: SLO
Lat: 35°36'33.37"N
Long: 120° 38' 18.48"W

Quad: Templeton
Township: 27S
Range: 12E
Section: 4
Page 2 of 2

Biologist Information

Name of Person(2) Who Conducted the Following Tasks and Permit Number(s):

Soil Collection: M. Dallas TE 1023103
Soil Processing: "
Soil Analysis/Cysts ID: "
Soil Collection Date: 6/22/19

3 Pool/ Habitat/ Basin No.	Invertbrates Present (X)															Comments
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	Number of Large Branchiopod Cysts = LBC						Hydracarina Live	Nematoda	Collembola	Other Species	
						Branchinecta sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*					
3-43																NO LBC
3-44																"
3-45																"
3-46																"
3-47																"
3-48																"
3-49																"
3-50																"

Appendix 2. U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information		Biologist Information	
Project Name: Olsen	Quad: Templeton	Name of Person(2) Who Conducted the Following Tasks and Permit Number(s):	
USFWS Project Number:	Township: N27S	Soil Collection: Mitch Dallas	TE 102310-3
County: San Luis Obispo	Range: 12E	Soil Processing: Mitch Dallas	
Lat: 35°36'34.31"N	Section: 11	Soil Analysis/Cysts ID: Mitch Dallas	
Long: 120°38'17.52"W	Page 1-1	Soil Collection Date: 6/22/19	

Pool/ Habitat/ Basin No. (4)	Invertbrates Present (X)															Comments
						Number of Large Branchiopod Cysts = LBC										
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	*Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola	Other Species	
4-1																NO LBC
4-2																NO LBC
4-3																NO LBC
4-4																NO LBC
4-5																NO LBC
4-6																NO LBC
4-7																NO LBC
4-8																NO LBC
4-9																NO LBC
4-10																NO LBC

Appendix 2. U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information		Biologist Information	
Project Name: Olsen	Quad: Templeton	Name of Person(2) Who Conducted the Following Tasks and Permit Number(s):	
USFWS Project Number:	Township: M27S	Soil Collection: Mitch Dallas	TE-102310-3
County: San Luis Obispo	Range: 12E	Soil Processing: Mitch Dallas	"
Lat: 35°36'36.3"N	Section: 11	Soil Analysis/Cysts ID: Mitch Dallas	"
Long: 120°38'12.8"W	Page 1 of 2	Soil Collection Date: 6/22/19	

5 Pool/ Habitat/ Basin No.	Invertbrates Present (X)															Other Species	Comments
						Number of Large Branchiopod Cysts = LBC											
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	*Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola		
5-1																	NO LBC
5-2																	"
5-3																	"
5-4																	"
5-6>55																	" "
5-7																	"
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5-9																	"
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Appendix 2. U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: Olsen
USFWS Project Number:
County: San Luis Obispo
Lat: 35° 36' 36.3" N
Long: 120° 38' 12.8" W
Quad: Templeton
Township: 27S
Range: 12E
Section: "
Page 2 of 2

Biologist Information

Name of Person(2) Who Conducted the Following Tasks and Permit Number(s):
Soil Collection: Mitch Dallas TE-102310-3
Soil Processing: "
Soil Analysis/Cysts ID: "
Soil Collection Date: 6/22/19

Pool/ Habitat/ Basin No.	Invertbrates Present (X)															Comments
						Number of Large Branchiopod Cysts = LBC									Other Species	
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	*Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola		
5																
5.44																No LBC
5.45																"
5.46																"
5.47																"
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Appendix 2. U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: Olsen
USFWS Project Number:
County: San Luis Obispo
Lat: 35° 36' 04.0" N
Long: 120° 38' 27.5" W
Quad: Templeton
Township: 27S
Range: 12E
Section: 11
Page 1 of 2

Biologist Information

Name of Person(2) Who Conducted the Following Tasks and Permit Number(s):
Soil Collection: Mitch Dallas TE 102310-3
Soil Processing: Mitch Dallas
Soil Analysis/Cysts ID: Mitch Dallas
Soil Collection Date: 6/22/19

6 Pool/ Habitat/ Basin No.	Invertebrates Present (X)																Comments
						Number of Large Branchiopod Cysts = LBC									Other Species		
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	*Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola		
6-1																	NO LBC
6-2																	"
6-3																	"
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Appendix 2. U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: Olsen
USFWS Project Number:
County: SLO
Lat: 35° 36' 04.0" N
Long: 120° 38' 27.5" W
Quad: Templeton
Township: 27S
Range: 12E
Section: 11
Page 2 of 2

Biologist Information

Name of Person(2) Who Conducted the Following Tasks and Permit Number(s):
Soil Collection: Mitch Dallas TE102310-3
Soil Processing: "
Soil Analysis/Cysts ID: "
Soil Collection Date: 6/22/19

6 Pool/ Habitat/ Basin No.	Invertbrates Present (X)															Comments
						Number of Large Branchiopod Cysts = LBC									Other Species	
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	*Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola		
643																No LBC
644																"
645																"
646																"
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649																"
650																"