

BIOLOGICAL RESOURCES ASSESSMENT

ANDERSON, CALIFORNIA

SHASTA COUNTY APNs 090-150-001 & 090-160-010



Prepared for

Mossback Land Company, LLC

Prepared by



VESTRA Resources Inc.
5300 Aviation Drive
Redding, California 96002

JULY 2024

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1.0 INTRODUCTION

This Biological Resources Assessment report describes biological resources present on Shasta County Assessor's Parcel Numbers (APNs) 090-150-001 and APN 090-160-010, the proposed project location for the development of an industrial facility operated by Mossback Land Company, LLC, in Shasta County, California. The site location is shown on Figure 1. This report includes a project description incorporating proposed conservation measures, study methods, regulatory framework, description of the affected environment, and description of impacts on sensitive resources.

1.1 Project Description

The proposed project includes the development of a 12.4-acre site owned by Mossback Land Company, LLC. The proposed project includes the development of an industrial facility on a historically industrial property. The facility will include a 5-acre outdoor storage area, installation of a 10,080-square-foot shop building, a vehicle/equipment wash station, a 10,000-gallon diesel tank fuel containment area, and a 1,000-square-foot office space.

The existing rocked access road is located at the southwest corner of the parcel off of Kimberly Road. The project proposes to regrade a portion of the parcel for a mobile chipper to be brought onsite for operations. Native vegetation will be planted along Kimberly Road where the access road enters the property. The proposed site plan is shown on Figure 2.

1.2 Site Description

The subject property consists of two parcels: APN 090-150-001 and APN 090-160-010. The proposed facility would occupy the entirety of APN 090-160-010 and the southwestern portion of APN 090-150-001. The northern parcel (090-150-001) abuts Hawes Road and is 9.4 acres; the more southerly parcel (090-160-010) abuts Kimberly Road and is 3.0 acres. The project parcel is zoned *General Industrial* (M). The Shasta County General Plan (2004) designates the project area for industrial land use.

These parcels have a history of industrial activity dating back to 1970. Based on historical aerial photographs, the site was originally used as pastureland (APN 090-150-001) and as a single-family residence (APN 090-160-010). Historic photographs show that both parcels appear to have been leveled to be used as pasture and irrigation canals were installed onsite. The irrigation canals were abandoned, and the site was rezoned for industrial use in 1970. The site was used for the storage of chips and wood pulp to supply the adjacent paper mill from approximately 1985 to 1998. Historical aerial photographs are included in Appendix A.

Currently, the site supports limited annual grasses and forbs that have established on the graded lot. Dirt roads that traverse the site are barren and void of vegetation. The former Shasta Paper Company mill facility is located to the northwest of the site. Undeveloped land occurs to the east and south of the site across Kimberly Road. Rural residential, commercial, and industrial facilities occur to the north of the site across Hawes Road.

2.0 AFFECTED ENVIRONMENT

2.1 General Setting

The topography of the study area is generally flat and occurs at elevations between approximately 440 and 460 feet above sea level. Precipitation falls primarily as rain, with an average annual rainfall of approximately 34.2 inches (Western Regional Climate Center 2006). Air temperatures range between an average January high of 55 degrees Fahrenheit (°F) and an average July high of 98°F. The year-round average high is approximately 75°F (Western Regional Climate Center 2006).

2.2 Soils

Soils within the project area were determined through consultation with the National Resources Conservation Service (NRCS) Web Soil Survey. Soils within the project area are Perkins gravelly loam, Moda loam, and gravelly clay loam, 0 to 3 percent slopes, moist. The typical profile of this soil series has a depth to restrictive feature of more than 80 inches, with a duripan not present in Anderson soils. The soil resource report is included as Appendix B.

2.3 Vegetation Communities

Vegetation communities within the project area were identified during a field survey and according to California Department of Fish and Wildlife (CDFW) Vegetation Classification and Mapping Program (VegCAMP) data, which identify vegetation communities on a small scale using definitions published in *A Manual of California Vegetation* (Sawyer et al. 2009). Vegetation communities present within the project area are shown on Figure 3. These vegetation communities include barren, annual grassland, and freshwater emergent wetland, and are described in this section.

Adjacent areas to the project site include further industrial development to the west and east, agricultural development to the north and south, and intermittent wetlands and floodplains scattered within the landscape.

2.3.1 Barren

Barren habitat is defined by the absence of vegetation. Any habitat with <2 percent total vegetation cover by herbaceous, desert, or non-wildland species and <10 percent cover by tree or shrub species is defined as barren habitat. Structure and composition of the substrate is largely determined by the region of the state and surrounding environment. Urban settings covered in pavement and buildings may be classified as barren as long as vegetation, including non-native landscaping, does not reach the percent cover thresholds for vegetated habitats.

The western portion of the project area includes an existing access road and an industrial area that are classified as a barren habitat.

2.3.2 Disturbed Annual Grassland

Annual grassland habitats are open grasslands composed primarily of annual plant species. Structure in annual grassland depends largely on weather patterns and livestock grazing. Dramatic differences in physiognomy, both between seasons and between years, are characteristic of this

habitat. Fall rains cause germination of annual plant seeds. Plants grow slowly during the cool winter months, remaining low in stature until spring, when temperatures increase and stimulate more rapid growth. Large amounts of standing dead plant material can be found during summer in years of abundant rainfall and light to moderate grazing pressure. Heavy spring grazing favors the growth of summer-annual forbs, such as tarweed (*Madia* sp.), and reduces the amount of standing dead material.

Introduced annual grasses are typically the dominant plant species in this habitat. These include wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), riggut brome (*Bromus diandrus*), red brome (*Bromus rubens*), wild barley (*Hordeum murinum*), and foxtail fescue (*Vulpia myuros*). Common forbs include broadleaf filaree (*Erodium* sp.), true clover (*Trifolium* spp.), popcorn flower (*Plagiobothrys* sp. and *Cryptantha* spp.), and many others.

The California Native Plant Society (CNPS) species associations identified within the project area consist of the upland mustards (*Brassica nigra*) and star-thistle (*Centaurea solstitialis* and *Centaurea melitensis*) field Herbaceous Semi-Natural Alliance.

The proposed project area is composed of disturbed and compacted annual grassland habitat with a history of human-caused disturbance. The species composition also includes an herbaceous layer dominated by medusahead grass (*Taeniatherum caput-medusae*), Foothill plantain (*Plantago erecta*), and soft chess (*Bromus hordeaceus*). The presence of non-native, invasive annual grass species is likely due to introduction from nearby industrial activity. Soil depth throughout the site ranges from 0 to 20 inches.

Vehicle tracking, although not severe, is present in various locations on the parcel. Vehicle tracks have historically disturbed ground throughout the remainder of the site and these areas have naturally revegetated over time.

2.3.3 Freshwater Emergent Wetland

Fresh emergent wetlands are characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots (Cheatham and Haller 1975). All emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment (Gosselink and Turner 1978). The vegetation may vary in size from small clumps to vast areas that cover several kilometers. On the upper margins of fresh emergent wetlands, saturated or periodically flooded soils support several moist soil plant species including big leaf sedge, baltic rush, redroot nutgrass and, on more alkaline sites, saltgrass. On wetter sites, common cattail, tule bulrush, river bulrush, and arrowhead are potential dominant species. Fresh emergent wetland habitats often occur in association with other terrestrial habitats or aquatic habitats. Fresh emergent wetlands are among the most productive wildlife habitats in California. They provide food, cover, and water for many species of birds, mammals, reptiles, and amphibians.

The CNPS species associations identified adjacent to the project area consist of Cattail Marshes (*Typha* spp.) Herbaceous Alliance and the Fremont Cottonwood Forest and Woodland (*Populus fremontii* - *Fraxinus velutina* - *Salix gooddingii*) Alliance. The cattail marshes are located in the emergent wetland feature found in the southeast portion of APN 090-160-010 and the center of the wetland feature in the northeast portion of APN 090-150-001. The cattail marsh in the northeast portion of APN 090-150-001 is surrounded by the Fremont Cottonwood Forest and Woodland Alliance.

2.4 Special-Status Species

2.4.1 Special-Status Plants

Special-status plant species include plants that are (1) designated as rare by CDFW or the U.S. Fish and Wildlife Service (USFWS) or are listed as threatened or endangered under the California Endangered Species Act (CESA) or federal ESA; (2) proposed for designation as rare or listing as threatened or endangered; (3) designated as state or federal candidate species for listing as threatened or endangered; and/or (4) ranked as California Rare Plant Rank (RPR) 1A, 1B, 2A, or 2B.

A list of regionally occurring special-status plant species was compiled based on a review of pertinent literature, the results of the field surveys, a review of the USFWS species list and California Natural Diversity Database (CNDDDB), and a nine-quad search (Whiskeytown, Shasta Dam, Project City, Igo, Redding, Enterprise, Ono, Olinda, Cottonwood) of CNPS database records. California Rare Plant Rank (CRPR) query results are included as Appendix C.

For each special-status plant species, habitat and other ecological requirements were evaluated and compared to the habitats in the study area and immediate vicinity to assess the presence of potential habitat. The habitat assessment is provided in Table 1 (see Section 5.1).

2.4.2 Special-Status Animals

Special-status animal species include species that are (1) listed as threatened or endangered under the CESA or the ESA; (2) proposed for federal listing as threatened or endangered; (3) identified as state or federal candidates for listing as threatened or endangered; and/or (4) identified by the CDFW as Species of Special Concern or California Fully Protected Species.

A list of regionally occurring special-status wildlife species was compiled based on a review of pertinent literature and consultations with the USFWS Information for Planning and Consultation (iPAC) database and CNDDDB records, and a query of the CWHR system. CNDDDB occurrences are depicted on Figure 4.

For each special-status wildlife species, habitat and other ecological requirements were evaluated and compared to the habitats in the study area and immediate vicinity to assess the presence of potential habitat. The habitat assessment is provided in Table 1 (see Section 5.1).

3.0 REGULATORY FRAMEWORK FOR BIOLOGICAL RESOURCES

This section describes the federal and state regulation of special-status species, waters of the United States, and other sensitive biological resources.

3.1 Federal Regulations

3.1.1 Federal Endangered Species Act

Section 9 of the federal Endangered Species Act of 1973 (ESA) prohibits acts that result in the “take” of threatened or endangered species. As defined by the federal ESA, “endangered” refers to any species that is in danger of extinction throughout all or a significant portion of its current range. The term “threatened” is applied to any species likely to become endangered within the foreseeable future throughout all or a significant portion of its current range. “Take” is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” Sections 7 and 10 of the federal ESA provide methods for permitting otherwise lawful actions that may result in “incidental take” of a federally listed species. Incidental take refers to take of a listed species that is incidental to, but not the primary purpose of, an otherwise lawful activity. Incidental take is permitted under Section 7 for projects on federal land or involving a federal action; Section 10 provides a process for non-federal actions. The act is administered by the USFWS for terrestrial species.

3.1.2 Clean Water Act

The objective of the Clean Water Act (1977, as amended) is to restore and maintain the chemical, physical, and biological integrity of the nation’s waters. Discharge of dredged or fill material into Waters of the United States, including jurisdictional wetlands, is regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (33 USC 1251-1376) via a permitting process. Applicants for Section 404 permits are also required to obtain water quality certification or waiver through the local Regional Water Quality Control Board (RWQCB) under Section 401 of the Clean Water Act (33 USC 1341).

Corps regulations implementing Section 404 define Waters of the United States as intrastate waters, including lakes, rivers, streams, wetlands, and natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3; 40 CFR 230.3). To comply with the Corps policy of “no net loss of wetlands,” discharge into wetlands must be avoided and minimized to the extent practicable. For unavoidable impacts, compensatory mitigation is typically required to replace the loss of wetland functions in the watershed.

3.1.3 Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as

allowed by implementing regulations (50 CFR 21). Mitigation measures can be identified to avoid or minimize adverse effects on migratory birds.

3.2 State Regulatory Requirements

3.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) lists species of plants and animals as threatened or endangered. Projects that may have adverse effects on state-listed species require formal consultation with CDFW. “Take” of protected species incidental to otherwise lawful activities may be authorized under Section 2081 of the California Fish and Game Code. Authorization from the CDFW is in the form of an incidental take permit, and measures can be identified to minimize take. CDFW Species of Special Concern are considered under the CESA.

3.2.2 Birds of Prey

Under Section 3503.5 of the California Fish and Game Code, it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird, except as otherwise provided by this code or any regulation adopted pursuant thereto.

3.2.3 Migratory Birds

Per California Fish and Game Code Section 3513, it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

3.2.4 Fully Protected Species

California statutes also accord “fully protected” status to a number of specifically identified birds, mammals, reptiles, amphibians, and fish. These species cannot be “taken,” even with an incidental take permit (California Fish and Game Code, Sections 3505, 3511, 4700, 5050, and 5515).

4.0 BIOLOGICAL SITE SURVEY

4.1 Pre-Survey Review

Special-status plant and animal species and sensitive habitats that have the potential to occur within the project area were determined, in part, by reviewing agency databases, literature, and other relevant sources. The following information sources were reviewed to aid this determination:

- Anderson, California, USGS 7.5-minute quadrangle;
- Current and historical Google Earth aerial photography of the project area and vicinity;
- The U.S. Fish and Wildlife Service (USFWS) official list of endangered and threatened species that may occur, or be affected by projects, as provided by the Sacramento Fish and Wildlife Office (Consultation Code 2022-0021768), included as Appendix C;
- The California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (California Department of Fish and Wildlife 2024a) records for the Redding, California USGS 7.5-minute quadrangle and the eight surrounding quadrangles, included as Figure 4;
- The California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants (California Native Plant Society 2024) records for the Redding, California USGS 7.5-minute quadrangle and the eight surrounding quadrangles;
- California Wildlife Habitat Relationships (CWHR) System (CDFW 2021);
- GIS shapefiles of designated critical habitat from the USFWS Critical Habitat Portal website;
- CDFW publications including State and Federally Listed Endangered, Threatened and Rare Plants of California (CDFW 2024b); State and Federally Listed and Threatened Animals of California (CDFW 2024c); and Special Animals List (CDFW 2024d); and
- Pertinent biological literature including Bird Species of Special Concern in California (Shuford and Gardali 2008).

4.2 Survey Methods

A pedestrian survey was conducted throughout the project area on March 17, 2022, to determine the vegetation communities onsite and identify any habitat that may support special-status plants or wildlife. A Trimble Geo XT Explorer 6000, Nikon P530 camera, and binoculars were used during the survey to observe and document site characteristics and species presence. Updated site review was completed on July 3, 2024.

An aquatic resources delineation was completed onsite following the biological assessment survey. The aquatic resource delineation was performed in accordance with the methodology contained in the *1987 Corps of Engineers Wetlands Delineation Manual: Arid West*. Vegetation, soils, and hydrology were investigated to determine the boundary of any wetland features. Data was recorded in the field using a handheld Trimble GeoExplorer 6000 series global positioning system (GPS).

4.3 Survey Results

Site conditions during the survey were typical of a sunny, spring day. Weather was clear with no precipitation. The ambient temperature was 65°F during the survey.

Flora and fauna observed during the survey were documented and survey findings are summarized below. No special-status wildlife species were observed during the survey. The following wildlife species were observed within the project area:

- Canada goose (*Branta canadensis*)
- Anna's hummingbird (*Calypte anna*)
- Western fence lizard (*Sceloporus occidentalis*)
- Black-tailed deer (*Odocoileus hemionus columbianus*)
- Turkey vulture (*Cathartes aura*)
- Ground squirrel (*Otospermophilus beecheyi*)
- Coyote (*Canis latrans*)

No special-status plant species were observed during the survey. The following plant species were observed within the project area:

- Blow-wives (*Achryachaena mollis*)
- California wild oat (*Avena fatua*)
- Soft chess (*Bromus hordeaceus*)
- Red brome (*Bromus rubens*)
- Yellow star thistle (*Centaurea solstitialis*)
- Milk thistle (*Silybum marianum*)
- Filaree (*Erodium* spp.)
- Annual fescue (*Festuca octoflora*)
- Gold fields (*Lasthenia fremontii*)
- Shiny peppergrass (*Lepidium nitidum*)
- Cottontop (*Micropus californicus*)
- Pincushion (*Navarretia tagentina*)
- Austin's popcorn flower (*Plagiobothrys austiniae*)
- Popcorn flower (*Plagiobothrys stipitatus stipitatus*)
- Foothill plantain (*Plantago erecta*)
- Ribwort (*Plantago lanceolata*)
- Medusahead (*Taeniatherum caput medusae*)
- Dandelion (*Taraxicum officinale*)
- Rose clover (*Trifolium hirtum*)

5.0 POTENTIAL IMPACTS TO BIOLOGICAL RESOURCES

5.1 Special-Status Species

The regionally occurring species identified during the pre-survey consultation were assessed based on the potential for their habitat to occur within the project area. The habitat of each species and determination of whether the species is likely to occur in the project area are summarized in Table 1. Species that were determined to not have habitat within the project area and, therefore, have no potential to occur, will not be discussed further. Species that were determined to potentially occur in the project area were included in the scope of the biological resources survey. Potential project-related impacts to these species are discussed below.

The potential impacts that may result from the proposed project activities were assessed for species determined to have potentially occurring habitat onsite. The direct and indirect potential project impacts to the following species are discussed below:

- Osprey (*Pandion Haliaeetus*)
- Tricolored blackbird (*Agelaius tricolor*)
- Western pond turtle (*Emys marmorata*)
- Western red bat (*Lasiurus blossevillii*)

5.1.1 Osprey (*Pandion Haliaeetus*)

In North America, osprey nest along the coasts, large inland lakes, and rivers. This species preys mostly on fish but also birds, reptiles, amphibians, and invertebrates. Osprey nest usually within close proximity to fish-producing water, on platform of sticks at the top of large snags, dead-topped trees, on cliffs, or on human made structures. Osprey individuals need tall trees nearby for landing before approaching the nest and for use by young for flight practice. This species is highly adaptable and have become increasingly abundant in urban landscapes (Shuford and Gardali 2008).

Potential habitat for osprey includes telephone poles or tall trees located adjacent to the project area. One occurrence on CNDDB from 2003 shows an osprey nest less than half a mile northwest of the project area along Deschutes Road. Several ponds in the area are the likely foraging areas for this osprey, along with the Sacramento River located 1.5 miles northeast. Due to the nest location, this individual is likely accustomed to traffic and industrial noise. The project area itself is unlikely to support any nesting or foraging due to the lack of adequate nest or perch structures. Impacts to osprey and other nesting birds would be avoided through implementation of conservations measures in section 6.2. Therefore, impacts to osprey (*Pandion Haliaeetus*) would be less than significant.

5.1.2 Tricolored Blackbird (*Agelaius tricolor*)

The tricolored blackbird is a passerine bird of the family Icteridae. Its range is limited to the coastal areas of the Pacific coast of North America, from Northern California in the United States (with occasional strays into Oregon) to upper Baja California in Mexico. It is a highly social and gregarious bird, and forms the largest colonies of any North American landbird, with a single breeding colony often consisting of tens of thousands of birds.

**Table 1
POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES**

Common Name	Scientific Name	Conservation Status (state/federal)	Habitat Description	Potential to Occur in Project Area?	Project Impact Potential
Birds					
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Bald and Golden Eagle Protection Act, State Endangered, Federal Delisted	Requires large mature trees or snags in remote, mixed stands near open bodies of water	No; no suitable habitat present.	No impact
Osprey	<i>Pandion haliaeetus</i>	CDFW Watch List	Mature mixed stands with snags near open bodies of water	Yes; isolated individual nests within ½ mile of the site; no open water or nesting trees onsite.	Less-than-significant impact; individual is accustomed to traffic and mill noise
Tricolored Blackbird	<i>Agelaius tricolor</i>	State Threatened, CDFW Species of Special Concern	Freshwater wetlands, streams, and lakes	Yes; known to occur on surrounding properties. Potential to nest, forage in wetland areas onsite.	Less than significant impact; habitat would be avoided by wetland buffer and nesting bird surveys
Bank Swallow	<i>Riparia riparia</i>	State Threatened	Vertical cliffs with loose soil	No; no habitat present.	No impact
Amphibians					
Western Spadefoot	<i>Spea hammondi</i>	CDFW Species of Special Concern; Federal Proposed Threatened	Vernal pools within grasslands and valley foothill hardwood woodlands. Rarely found on the surface, present in friable soil burrows up to 1 meter deep, usually in grasslands.	No; vernal pools in grassland have inadequate depth, hydrology to support breeding cycle. Soils in disturbed upland mustard/ star thistle fields unlikely to support burrows due to compacted, shallow soils and sparse vegetation. Nearest CNDDDB occurrences are 2.7 miles north & 7 miles south.	No impact
California Red-Legged Frog	<i>Rana draytonii</i>	Federal threatened	Perennial streams and ponds	No; nearest known occurrence is 30 miles away. No extant populations known in Shasta County.	No impact
Reptiles					
Western Pond Turtle	<i>Emys marmorata</i>	CDFW Species of Special Concern; Federal Proposed Threatened	Perennial streams and ponds; may deposit eggs in upland locations near aquatic habitat	Yes; potential to occur in pond or wetlands. Upland dispersal and nesting potential in grasslands w/ adequate substrate. Adequate substrate surrounds wetland but will be	No impact; pond and wetland habitat to be avoided. Portion of upland dispersal and nesting habitat avoided by wetland buffer. Additionally,

**Table 1
POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES**

Common Name	Scientific Name	Conservation Status (state/federal)	Habitat Description	Potential to Occur in Project Area?	Project Impact Potential
				avoided by wetland buffer. Areas >100 feet from wetland unlikely to support nests due to compacted, shallow soils and sparse vegetation.	preconstruction surveys prior to initial ground disturbance within 100-feet of wetland will ensure avoidance of nests.
Fish					
Steelhead-California Central Valley DPS	<i>Oncorhynchus mykiss irideus pop. 11</i>	Federal threatened	Anadromous life history; known to occur in Sacramento River	No; no riverine habitat onsite. Fish passage to wetland obstructed by downstream barrier (culvert, bridges).	No impact
Chinook Salmon-Sacramento River Winter Run ESU	<i>Oncorhynchus tshawytscha</i>	Federal Endangered; State Endangered	Anadromous life history, known to occur in Sacramento River	No; no riverine habitat onsite. Fish passage to wetland obstructed by downstream barrier (culvert, bridges).	No impact
Green Sturgeon-Southern DPS	<i>Acipenser medirostris</i>	Federal Threatened	Anadromous life history, known to occur in Sacramento River	No; no riverine habitat onsite. Fish passage to wetland obstructed by downstream barrier (culvert, bridges).	No impact
Delta Smelt	<i>Hypomesus transpacificus</i>	Federal Threatened	Brackish water dwelling; known to only occur in the San Francisco estuary	No; no riverine habitat onsite. Fish passage to wetland obstructed by downstream barrier (culvert, bridges).	No impact
Invertebrates					
Valley Elderberry Longhorn Beetle	<i>Desmocerus californicus dimorphus</i>	Federal Threatened	Closely associated with elderberry shrubs (<i>Sambucus</i> sp.)	No; no elderberry present.	No impact
Vernal Pool Tadpole Shrimp	<i>Lepidurus packardii</i>	Federal Endangered	Northern hardpan vernal pools	No; wetlands have inadequate depth, hydrology to support life cycle	No impact
Vernal Pool Fairy Shrimp	<i>Branchinecta lynchi</i>	Federal Threatened	Northern hardpan vernal pools	No; wetlands have inadequate depth, hydrology to support life cycle	No impact
Conservancy Fairy Shrimp	<i>Branchinecta conservatio</i>	Federal Endangered	Northern hardpan vernal pools	No; wetlands have inadequate depth, hydrology to support life cycle	No impact
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate for Federal Listing	Riparian and prairie, areas containing milkweeds	No; no milkweed plants onsite	No impact

**Table 1
POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES**

Common Name	Scientific Name	Conservation Status (state/federal)	Habitat Description	Potential to Occur in Project Area?	Project Impact Potential
Crotch's bumble bee	<i>Bombus crotchii</i>	State Candidate Endangered	Open grassland and scrub habitats with abundant floral resources such as <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Phacelia</i> , <i>Sabia</i> . Nests often underground in abandoned rodent dens or aboveground in tufts of grass or cavities in dead trees.	No; according to IUCN, <i>Bombus crotchii</i> is possibly extinct north of Sacramento. The nearest known historical occurrence on CNDDDB is 17 miles south near Red Bluff. Additionally, the site has limited nectar resources in terms of abundance or diversity.	No impact
Mammals					
Western Red Bat	<i>Lasiurus blossevillii</i>	CDFW Species of Special Concern	Riparian areas dominated by oaks, willows, and cottonwoods for roosting.	Yes; potential foraging but trees within project area lack diameter, structure for roosting habitat.	No impact
Ringtail	<i>Bassariscus astutus</i>	CDFW Fully Protected	Rocky areas required in riparian, forest, woodland, and shrub habitats. Usually found within 0.6 mile of a permanent water source. Nocturnally active.	No; potential to occur around adjacent emergent wetlands but unlikely in project area. No suitable den, dispersal, or foraging habitat observed in project area. Will not be active in adjacent wetlands during daytime operations.	No Impact
Plants					
Slender Orcutt Grass	<i>Orcuttia tenuis</i>	State Endangered; Federal Threatened	Annual grass-like herb occurring in vernal pools within foothill woodland, freshwater wetland, valley grassland, and other riparian habitats between 200-1100 meters elevation. Typically occurs in playa pools on Red Bluff Formation. Flowers May to October.	No; based on the wetland delineation and historical google earth images, wetlands in project area have inadequate depth and hydrology to support species. Not present during wetland delineation plant inventory. Site lacks Red Bluff Formation (Vollmar 2023). Final Critical Habitat exists app. 2.8 miles north, 2.6 miles east and 7 miles southeast, east of Sacramento River.	No impact

**Table 1
POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES**

Common Name	Scientific Name	Conservation Status (state/federal)	Habitat Description	Potential to Occur in Project Area?	Project Impact Potential
Brazilian Watermeal	<i>Wolffia brasiliensis</i>	CNPS 2B.3	Perennial herb occurring in ponded water within wetland and riparian habitats at elevations less than 100 meters; flowers late spring to early fall.	No; there is potential to occur within the ponded water on the northeastern portion of the property, but this is outside of project area and avoided a wetland buffer. Species were not present during wetland delineation plant inventory.	No impact
Ahart's paronychia	<i>Paronychia abartii</i>	CNPS 1B.1	Annual herb occurring in well drained, rocky outcrops, vernal pool edges, and volcanic uplands within freshwater wetland, foothill woodland, and valley grassland habitats at elevations less than 500 meter; flowers in spring.	No; based on information from the wetland delineation and historical google earth images, the wetlands within the project area have inadequate depth and hydrology to support species. Species were not present during wetland delineation plant inventory. The site also lacks suitable volcanic soils.	No impact
Henderson's bent grass	<i>Agrostis hendersonii</i>	CNPS 3.2	Annual grass-like herb occurring in vernal pools within freshwater wetland, valley grassland, and other riparian habitats at elevations less than 300 meters; flowers May to July.	No; based on information from the wetland delineation and historical google earth images, the wetlands within the project area have inadequate depth and hydrology to support species. Species were not present during wetland delineation plant inventory.	No impact
Legenere	<i>Legenere limosa</i>	CNPS 1B.1	Annual herb occurring in wet areas, vernal pools, and ponds within freshwater wetland, valley grassland, and other riparian habitats at elevations less than 950 meters. Typically occurs in playa pools on Red Bluff Formation. Flowers May to June.	No; potential to occur within the emergent wetlands on the northeastern and southeastern portions of property, but they are outside of project area and will be avoided via wetland buffer. Species not present during wetland delineation	No impact

**Table 1
POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES**

Common Name	Scientific Name	Conservation Status (state/federal)	Habitat Description	Potential to Occur in Project Area?	Project Impact Potential
				plant inventory. Site also lacks Red Bluff Formation.	
Red Bluff dwarf rush	<i>Juncus leiospermus</i> var. <i>leiospermus</i>	CNPS 1B.1	Annual grass-like herb occurring in vernal pool margins within freshwater wetland, valley grassland, and other riparian habitats or in wet places within chaparral or foothill woodland habitats between 280-500 meters elevation; flowers April to June. Requires high terrace, thin, reddish soils on Red Bluff Formation (Vollmar et. al 2023).	No; based on information from the wetland delineation and historical google earth images, the wetlands within the project area have inadequate depth and hydrology to support species. Additionally, the site lacks suitable soils within the Red Bluff Formation (Vollmar 2023).	No impact
Silky cryptantha	<i>Cryptantha crinita</i>	CNPS 1B.2	Annual herb occurring in rocky volcanic flats, gravelly streambanks, gravel bars within yellow pine forest, foothill woodland, and valley grassland habitats at elevations between 90-1120 meters; flowers March to June.	No; site lacks volcanic soils and gravelly streambanks.	No impact
Watershield	<i>Brasenia schreberi</i>	CNPS 2B.3	A perennial aquatic herb occurring in ponds or slow streams at elevations less than 2200 meters; flowers April to October.	No; there is potential to occur within the ponded water on the northeastern portion of the property, but this is outside of project area and avoided a wetland buffer. Species were not present during wetland delineation plant inventory.	No impact

Key: 1B = Rare, threatened, or endangered in California and elsewhere; 2B= Rare, threatened, or endangered in California, but more common elsewhere; Threat Ranks: .1 = Seriously endangered in California (over 80% of occurrences threatened-high degree and immediacy of threat); .2 = Endangered in California (20-80% occurrences threatened); .3 = Not very threatened in California (<20% of occurrences threatened / low degree of threat or no current threats known).

Nesting colonies prefer marshes, cattails, or bullrushes, sometimes in willows at the water's edge or in tall grasses or grain fields, but will also nest in Himalayan blackberry brambles. This species feeds on insects and seeds.

No tricolored blackbirds were observed onsite; however, multiple locations are documented within one mile of the site. The cattail marsh located onsite may not be large enough to support a breeding colony, but does provide nesting and foraging habitat. Conservation measures listed in section 6.1 ensure the wetland habitat will be protected with a minimum 50-foot buffer. Additionally, conservation measures in section 6.2 would identify and avoid any nesting tricolored blackbirds during nesting bird season. Therefore, impacts to tricolored blackbird (*Agelaius tricolor*) would be less than significant.

5.1.3 Western Pond Turtle (*Emys marmorata*)

Western pond turtles (WPT) are habitat generalists and can occupy a wide range of aquatic habitats; thus, the most limiting factor of habitat suitability is the presence of water. In addition to the presence of deep pools and slow-moving water, the following general characteristics are associated with pond turtle habitat: 1) basking sites, 2) aquatic refugia, 3) streamside/bank refugia, and 4) upland nesting habitat. WPT egg deposition typically occurs on sandy banks or grasslands near water. Upland migration has been documented during nesting season at certain sites (between May and August) when individuals seek out sites for egg deposition as far as a few hundred feet from water.

No western pond turtles were observed during the site survey. The nearest documented occurrence of this species is in the Sacramento River, approximately 2.5 miles northeast of the project site. The adjacent wetlands and pond could provide year-round habitat for WPT. Within the project area, upland dispersal and nesting have the potential to occur in grasslands with adequate substrate. Adequate substrate surrounds each wetland where grassland occurs. A minimum of 50 feet will be avoided by wetland buffer outline in Section 6.1. Areas greater than 100-feet from wetland are unlikely to support nests due to compacted, shallow soils and sparse vegetation that has resulted from past grading and compaction from industrial use of the site. Conservation measures listed in section 6.4 ensure that the potential nesting habitat areas within 100 feet of the wetland features, that are not protected by a wetland buffer, will be surveyed prior to construction during nesting season. Therefore, there will be no impact to the Western pond turtle (*Emys marmorata*).

5.1.4 Western Red Bat (*Lasiurus blossevillii*)

The western red bat is typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores). Roost sites are generally hidden from view from all directions except below; lack obstruction beneath, allowing the bat to drop downward for flight; lack lower perches that would allow visibility by predators; have dark ground cover to minimize solar reflection; have nearby vegetation to reduce wind and dust; and are generally located on the south or southwest side of a tree.

Red bats generally begin to forage one to two hours after sunset. Although some may forage all night, most typically have an initial foraging period corresponding to the early period of nocturnal insect activity, and a minor secondary activity period corresponding to insects that become active several hours before sunrise. Red bats mate in late summer or early fall. Females become pregnant in spring and have a pregnancy that lasts 80 to 90 days. Females may have litters of up to five pups per year. This species is considered to be highly migratory. Although generally solitary, red bats appear to migrate in groups and forage in close association with one another in summer. The timing of migration and the summer ranges of males and females seem to be different. Winter behavior of this species is poorly understood.

There is potential day roost habitat for individual bats in the willow and cottonwood trees within wetlands outside of the proposed disturbance area, as well as the propagated eucalyptus grove that is on the adjacent property. Trees that may be removed within project area lack adequate diameter as they are less 8 inches in diameter at breast height (DBH) and lack crevices or other structures that could be used for roosting habitat. Therefore, no direct impacts will occur to any roost structures.

Operational impacts to bats could occur from increases in noise and light levels onsite. Impacts from light would be reduced to less than significant with implementation of the measures in Section 6.3. Noise impacts may influence bat roost selection such that bats select roost habitat that is farther away from the project area. The eucalyptus grove on the adjacent property offers edge habitat that is adjacent to wetlands along its northern, western, and southern boundaries. The project would increase noise level exposure at the northern boundary (adjacent to the project area). Noise impacts would likely be buffered by the trees such that the remainder of the eucalyptus grove (southern and western boundaries) would continue to provide roost habitat; therefore, impacts to the species from noise would be less than significant.

Both direct and indirect impacts to the western red bat (*Lasiurus blossevillei*) would be less than significant.

5.1.5 Nesting Birds

Migratory birds and other passerines (songbirds) may nest in the few trees located within or in the immediate vicinity of the project area. Raptors and migratory birds, including common species and their nests, are protected from “take” under California Fish and Game Code Section 3503 and 3503.5, and federal Migratory Bird Treaty Act. Large trees onsite and in the surrounding forest provide potential nesting habitat for raptors and migratory birds.

Direct impacts that could occur to nesting bird species include disturbance of nesting birds or bird nest structures from onsite construction, ground disturbance, or vegetation removal. Bird nest abandonment can occur as a result of continued exposure to increased noise or vibrations that can result from construction activities. Removal of trees and understory within the project area have the potential to disturb bird nests that are protected by the MBTA.

Direct impacts to nesting birds would be avoided through implementation of measures in Section 6.2 which identify and avoid any active nests during nesting bird season. Therefore, direct impacts to nesting birds would be less than significant.

Indirect impacts that could occur to nesting birds from the proposed project activities include loss of available or future nesting or foraging habitat due to tree removal. Few small trees will be removed, and native vegetation will be planted along Kimberly Road where the access road enters the property. The addition of native vegetation will provide for future nesting and foraging habitat. Additionally, all of the high-quality nesting habitat located in the adjacent cattail marshes and cottonwood forests would be protected by the wetland buffer outlined in Section 6.1. Therefore, indirect impacts to the nesting birds will be less than significant and may be beneficial.

5.1.6 Special-Status Plants

Direct impacts to potentially occurring special-status plants include the removal of individual plants during ground-disturbing activities. Indirect impacts could occur as a result of a change in hydrology or soil compaction. As there is no potential for special-status plants to occur within the project area, no impacts are anticipated.

5.2 Rare Natural Communities and Sensitive Habitats

In addition to inventorying reported occurrences of special-status species, the CNDDDB serves to inventory the locations of rare natural communities. Communities respond to environmental changes and can be thought of as an indicator of the overall health of an ecosystem and its component species. Rare natural communities are those communities that are of highly limited distribution. They may or may not contain rare, threatened, or endangered species. The CNDDDB ranks natural communities according to their rarity and endangerment in California.

According to CNDDDB, three sensitive habitats occur within five miles of the project area: Great Valley Cottonwood Riparian Forest, Great Valley Oak Riparian Forest, and Great Valley Mixed Riparian Forest. These three habitat types are considered under CEQA as a CDFW Species of Special Concern (CNDDDB 1986). According to the CNDDDB, these habitat types occur along the Sacramento River corridor. The vegetation present in the northern end of the property meets the definition of the Great Valley Mixed Riparian Forest. No disturbance to this habitat will occur because it is outside of the proposed project area. No impact.

5.3 Wetlands

The presence of watercourses was determined through consultation with the National Wetlands Inventory (NWI) database and a formal wetland delineation of the project area. Wetland features were mapped by VESTRA and Army Corps of Engineers staff according to the *United States Army Corps of Engineers Wetlands Delineation Manual* (1987); the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (2008). Final jurisdictional determinations were made by the Army Corps of Engineers and the RWQCB on February 6, 2024.

Two wetland features have been delineated within the project area, totaling 887 square feet. Both features are man-made depression or excavations. The creation of these depressions cannot be traced back to a specific date due to the site being heavily disturbed from the 1960s to present. The habitat within the depression resembles vernal pool habitat based on few facultative wetland species present, although the features lack adequate depth and hydrology to support many of the species typically associated with healthy vernal pools (Table 1). The removal of these features has been approved by RWQCB and compensatory mitigation has been provided. As these features

are unable to support species associated with their habitat, their removal will not result in the loss of vernal pool habitat at a significant level. Additionally, the project area is surrounded by emergent wetland features that provide much higher quality habitat for local wetland species.

Additional impacts to wetlands will be avoided or mitigated for in accordance with conservation measures outlined in Section 6.1. With the implementation of these measures, impacts to wetlands will be less than significant.

6.0 RECOMMENDED CONSERVATION MEASURES

The following conservation measures, Best Management Practices (BMPs), and project features will be incorporated into the project to avoid and minimize the potential environmental impacts from construction and long-term operation of the proposed facility:

6.1 Wetlands

- A minimum 50-foot buffer shall be placed around all wetland features. The buffer should be measured from the outside edge of any evidence of wetland vegetation. High-visibility fencing, flagging, or markers will be installed as the buffer. If avoidance is not possible, the appropriate mitigation for loss of wetlands will be completed in accordance with the project Mitigation Plan.
- All activities will comply with all applicable permits and project stormwater Best Management Practices (BMPs) to ensure water quality is not impacted.

6.2 Nesting Birds

- Vegetation removal should occur between September 1 and January 31, when birds are not anticipated to be nesting; or
- If vegetation removal occurs during the nesting season (February 1 through August 31), a qualified biologist should conduct a preconstruction survey no more than one week prior to the initiation of construction to identify active nests in and adjacent to the project area. If construction activities are delayed or suspended for more than one week after the preconstruction nesting bird survey, the site should be resurveyed. Surveys should begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey should consider acoustic impacts and line of sight Project disturbances to determine a sufficient survey radius to maximize observations of nesting birds. A nesting bird survey report should be prepared and, at a minimum, the report should include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, presence of predators).
- If an active nest is located during pre-construction surveys, a non-disturbance buffer should be established around the nest by a qualified biologist in consultation with CDFW and USFWS to comply with Fish and Game Code Sections 3503 and 3503.5 and the MBTA. Avoidance and minimization measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified during the survey, as well as ongoing monitoring by biologists.
- If an active raptor nest is found during surveys, no construction activities shall occur within 250 feet of the nest unless a different buffer zone is approved by CDFW. Construction may resume once the young have left the nest or as approved by the qualified biologist.

6.3 General Wildlife

- CDFW recommends that new perimeter fencing should be designed and implemented to alleviate potential hazards to wildlife based on A Landowners Guide to Wildlife Friendly Fences. This guide can be found online here:
<https://protect.checkpoint.com/v2/https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=161708.YzJ1OnNoYXN0YWNvdW50eTpjOm86MThkNmEwMTc5YjcxNmM3OGMzYWUxYjViMWRiZjJmZA6NjplMzE0OjhhMTUxN2I5MDM2MjU1YjY5MjAzNzk5ZDE3ZmI1ZTNIYTZjMjZkNzAyNThiOGEzZmE0MjQ0ZmM2NDZmZGIwNjY6aDpU>
- To minimize adverse effects of artificial light on wildlife, CDFW recommends that lighting fixtures associated with the Project be downward facing, fully shielded, and designed and installed to minimize light-pollution and spillover of light onto adjacent wildlife habitat. Additionally, it is best to use lower-intensity, warmer colored lighting that may also be lower on the light spectrum (lower Kelvin values with fewer short wavelength blue light emissions).
- Equipment should be visually inspected regularly for the presence of wildlife to prevent injury or harm to an animal.

6.4 Western Pond Turtle

- If initial ground disturbance occurs during western pond turtle breeding or nesting season (between May and August) then potential nesting habitat within 100 feet of wetlands will be surveyed by a qualified Biologist no more than one week prior to the initiation of construction for the presence of turtles or their nests. If nesting turtles or their nests are found, then a 100-foot buffer shall be installed around the nest where no activities, equipment access, or foot traffic shall occur until the end of WPT nesting season. The avoidance area shall be inspected regularly by the biologist to ensure no disturbance to the area occurs.
- If adult turtles are ever found within the operations areas where it is in harm's way, then vehicles/equipment shall pause to allow the turtle to leave the site unharmed.

7.0 SUMMARY STATEMENT

With implementation of the measures listed in Section 6.0, the project would avoid or reduce potential project impacts to potentially occurring special-status species, nesting birds, raptors, common wildlife, and wetlands to a less than significant level. No impact will occur to special status botanical species, sensitive natural communities, or sensitive habitats.

8.0 REFERENCES

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Figures

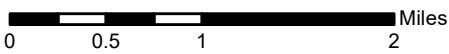
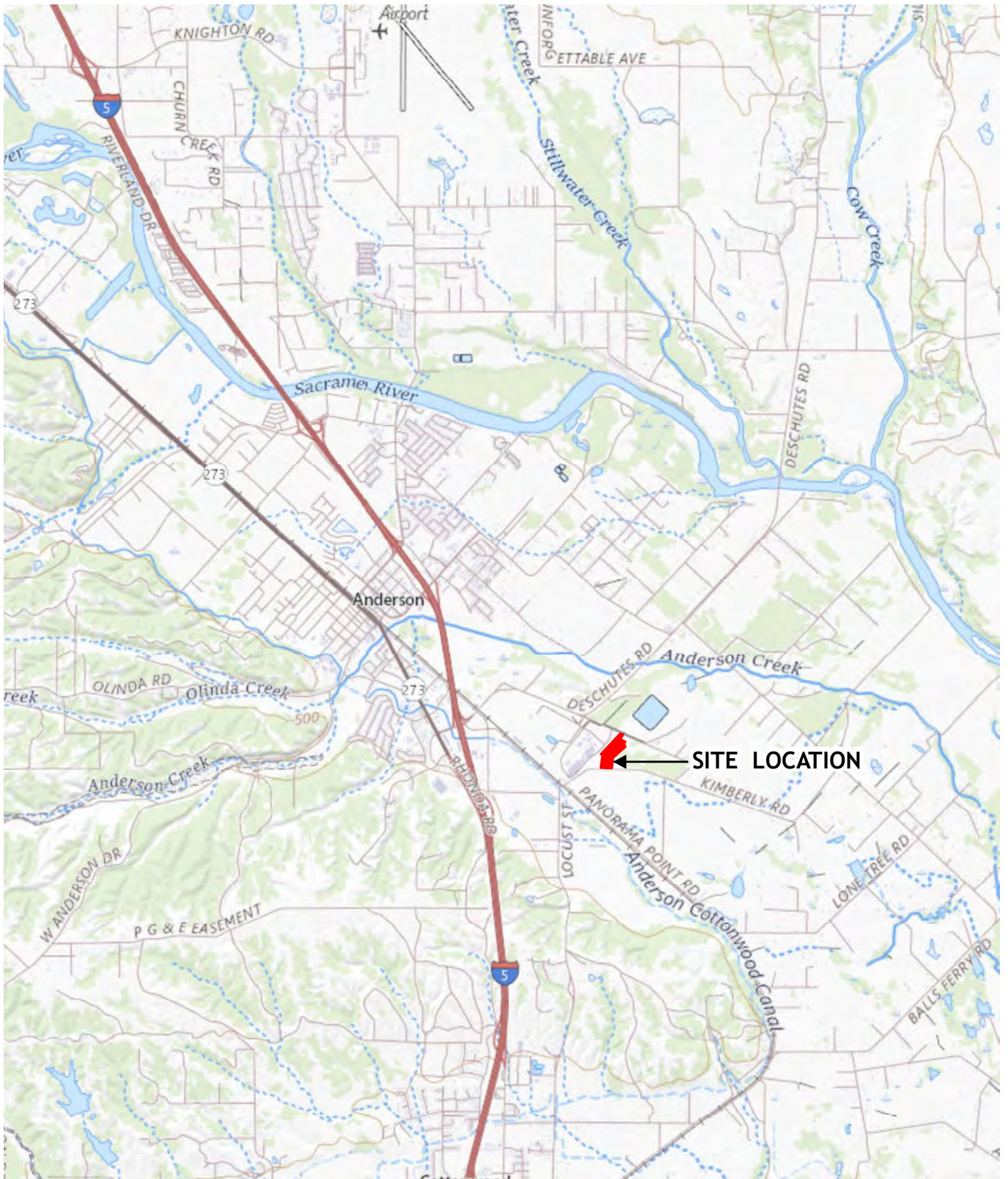
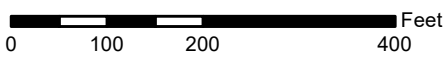


FIGURE 1
GENERAL SITE LOCATION
 MOSSBACK LAND COMPANY LLC
 ANDERSON, CALIFORNIA

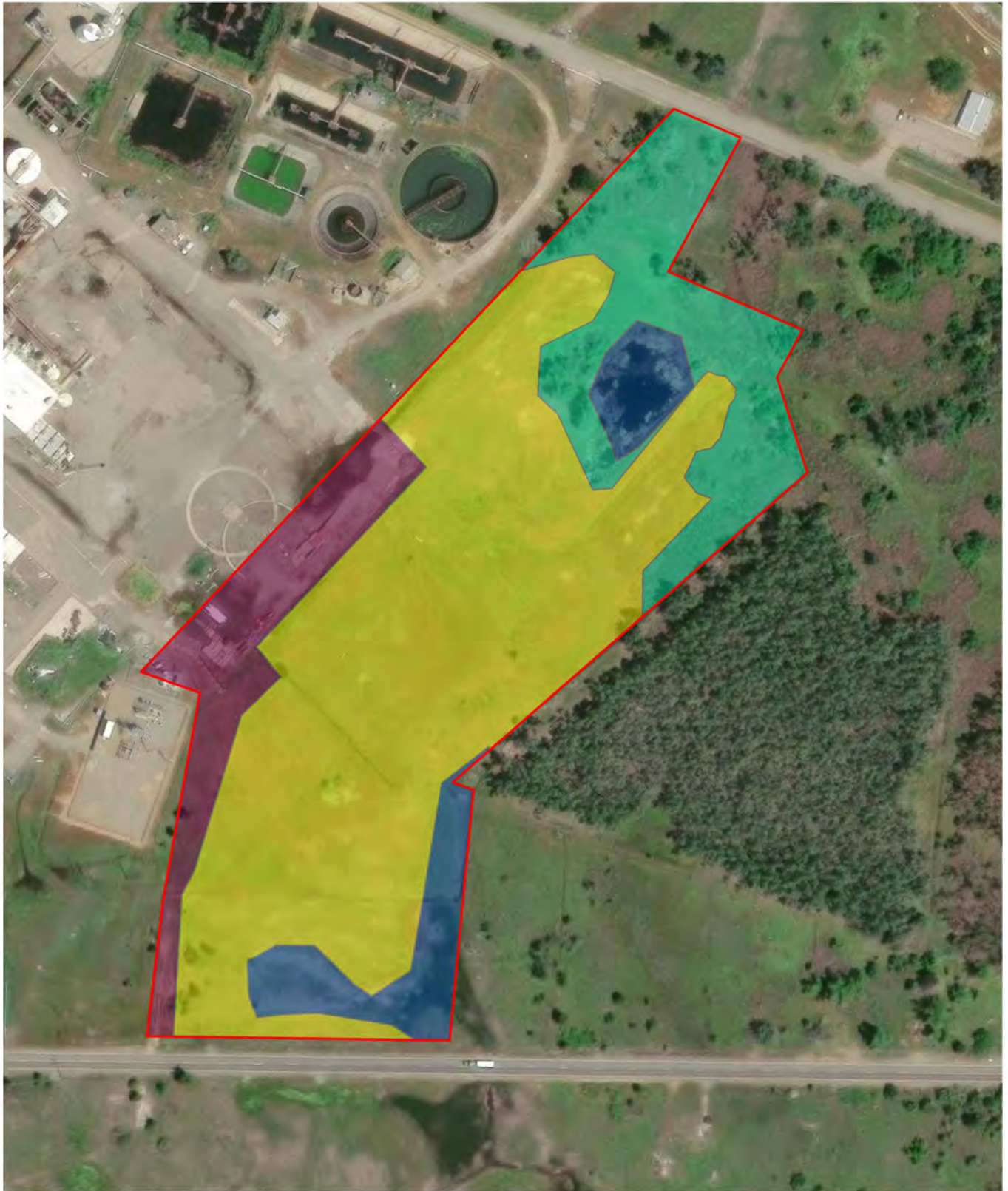


- Approximate Property Boundary
- Work Area - Approximately 6.5 acres
- Proposed Access Road - 0.2 acres
- Historical Pond Area (Characterized and Removed) - 2.7 acres
- Structure



SOURCE: MAXAR 2021 AERIAL PHOTOGRAPH

FIGURE 2
PROPOSED SITE PLAN
 MOSSBACK LAND COMPANY LLC
 ANDERSON, CALIFORNIA



- Barren
- Cattail Marsh
- Fremont Cottonwood Forest and Woodland
- Upland Mustards or Star Thistle Fields

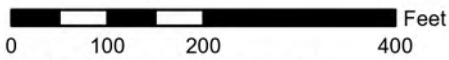
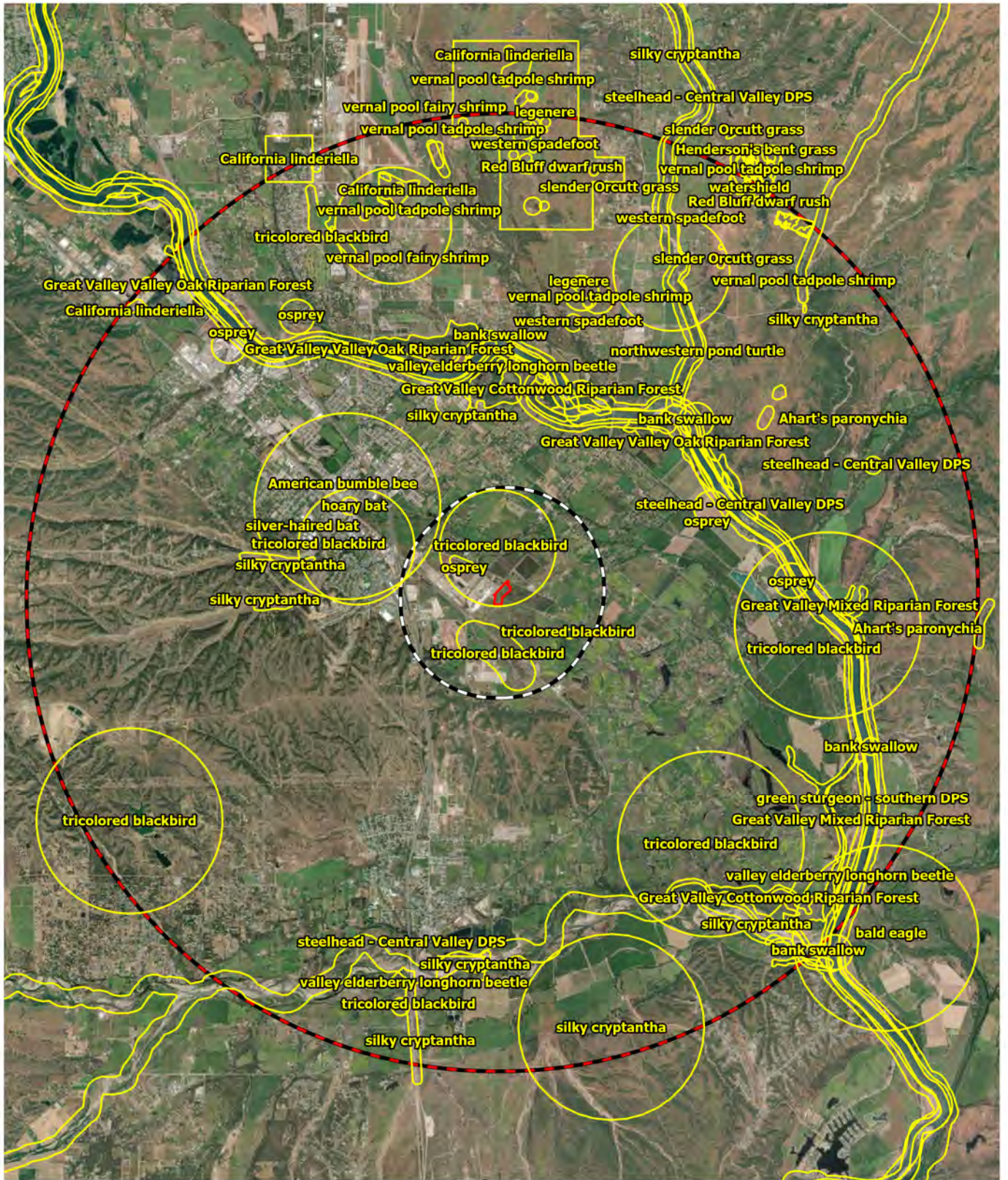


FIGURE 3
VEGETATION TYPES
 MOSSBACK LAND COMPANY LLC
 ANDERSON, CALIFORNIA

SOURCE: MAXAR 2023 AERIAL PHOTOGRAPH, VEGCAMP FIELD DATA



- Property Boundary
- 1-Mile Buffer Around Property Boundary
- CNDDDB Occurrence
- 5-Mile Buffer Around Property Boundary

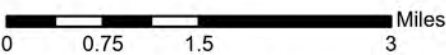


FIGURE 4
CNDDDB OCCURRENCES
MOSSBACK LAND COMPANY LLC
ANDERSON, CALIFORNIA



SOURCE: MAXAR 2023 AERIAL PHOTOGRAPH, CNDDDB JULY 2024

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**AJD STUDY AREA
AQUATIC RESOURCES FEATURES
WETLANDS**

Emergent Wetland	
Feature ID	Acreage
WF-5	0.011
WF-A	0.006
	0.017

Pond	
Feature ID	Acreage
WF-11	0.308
	0.308

Other Waters	
Feature ID	Acreage
WF-B	0.003
	0.003

Total 0.328

**AJD Study Area
Aquatic Resources 0.328 acre
Total:**

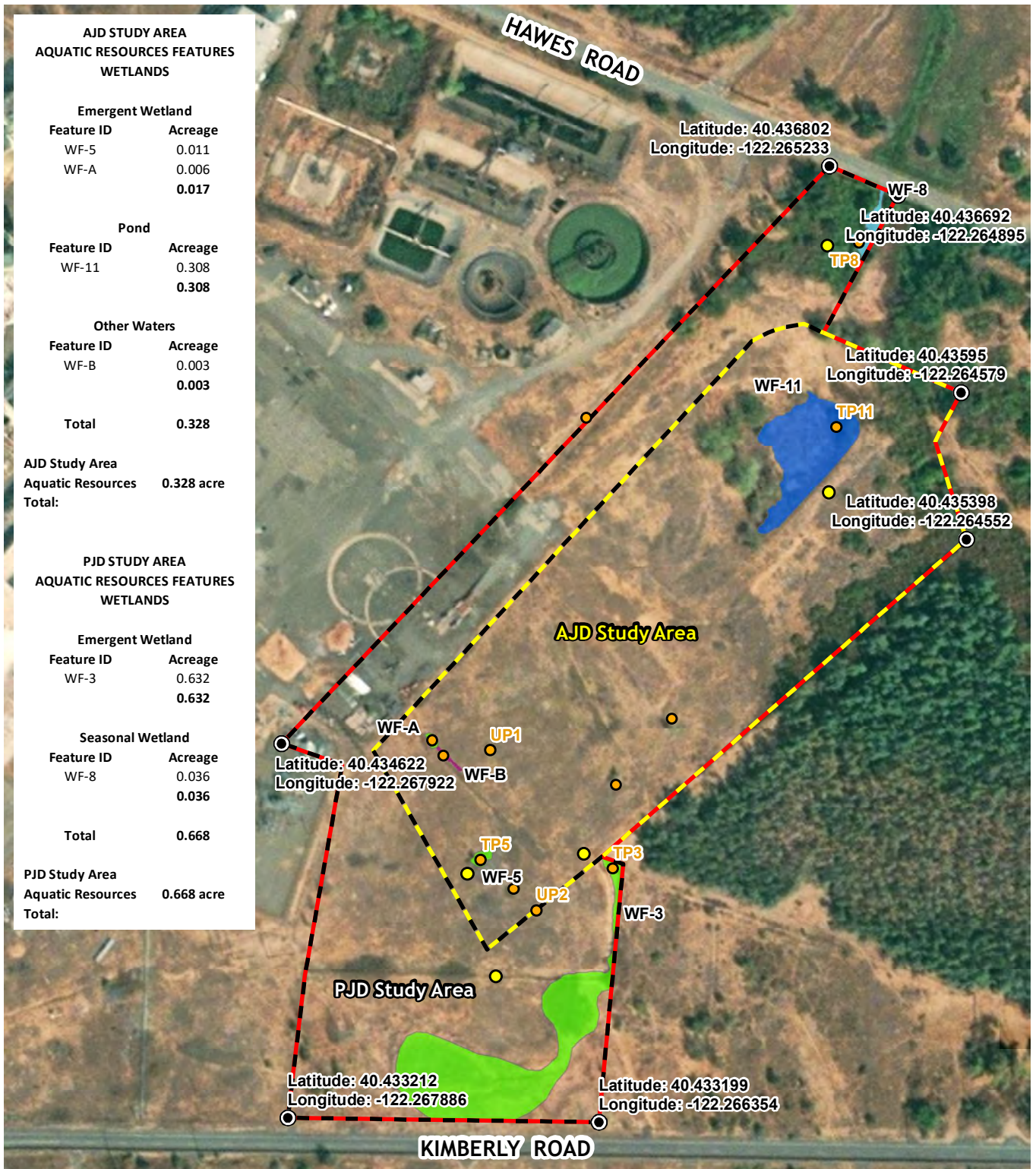
**PJD STUDY AREA
AQUATIC RESOURCES FEATURES
WETLANDS**

Emergent Wetland	
Feature ID	Acreage
WF-3	0.632
	0.632

Seasonal Wetland	
Feature ID	Acreage
WF-8	0.036
	0.036

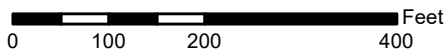
Total 0.668

**PJD Study Area
Aquatic Resources 0.668 acre
Total:**



- Data Point
- Photo Point
- ⊙ Control Point
- AJD Study Area
- PJD Study Area
- ▭ Property Boundary
- ▭ Emergent Wetland
- ▭ Other Water
- ▭ Pond
- ▭ Seasonal Wetland

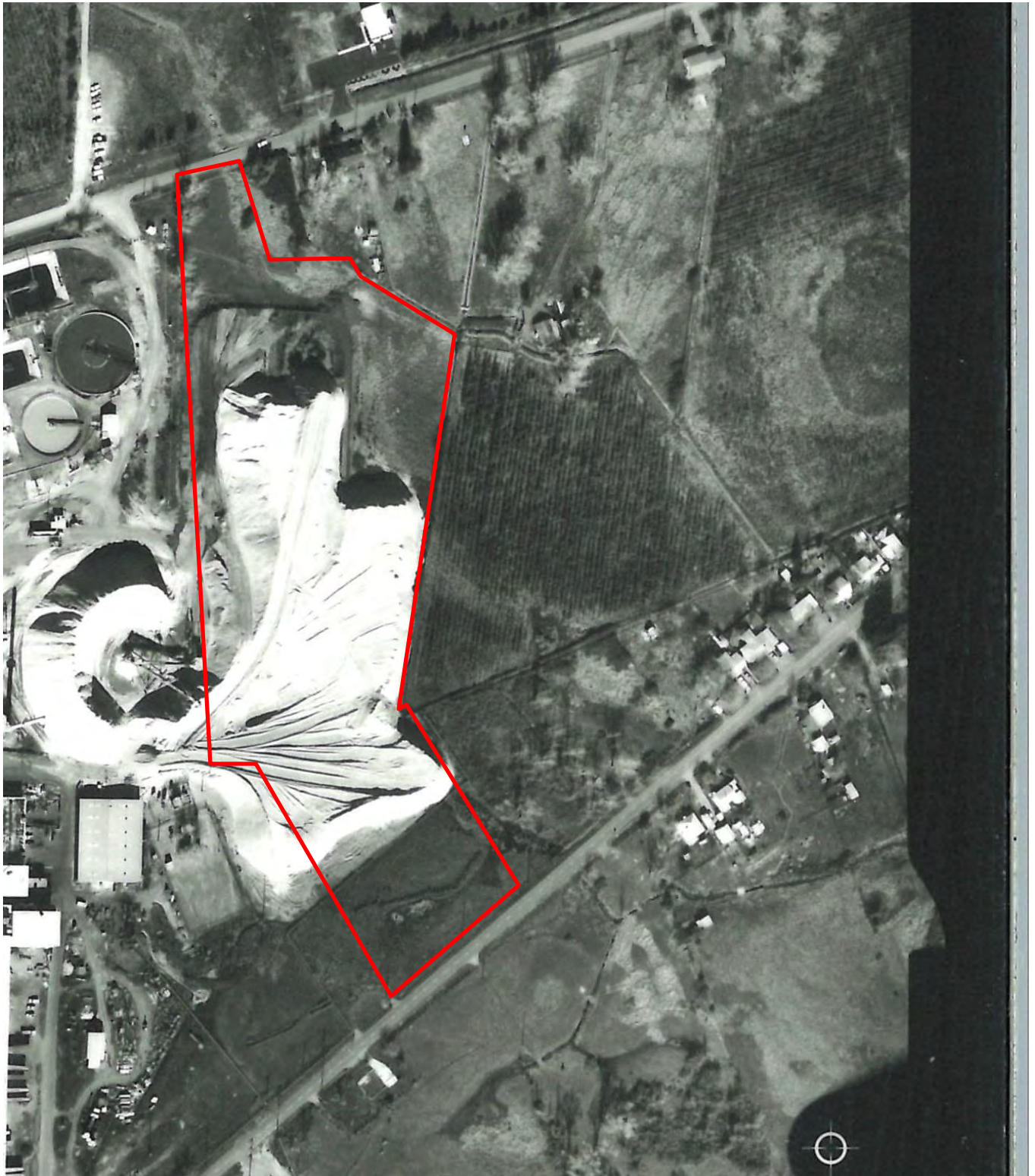
Date prepared: April 20, 2022
 Revised: August 18, 2022
 Prepared by: J. Williams,
 VESTRA Resources, Inc.



1 inch = 200 feet

**FIGURE 5
AQUATIC RESOURCES DELINEATION
MOSSBACK LAND COMPANY LLC
ANDERSON, CALIFORNIA**

Appendix A
Historical Aerial Photographs



Approximate Property Boundary

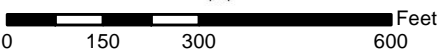


SOURCE: 3-2-1988 AERIAL PHOTOGRAPH

1988 AERIAL PHOTOGRAPH
MOSSBACK LAND COMPANY LLC
ANDERSON, CALIFORNIA



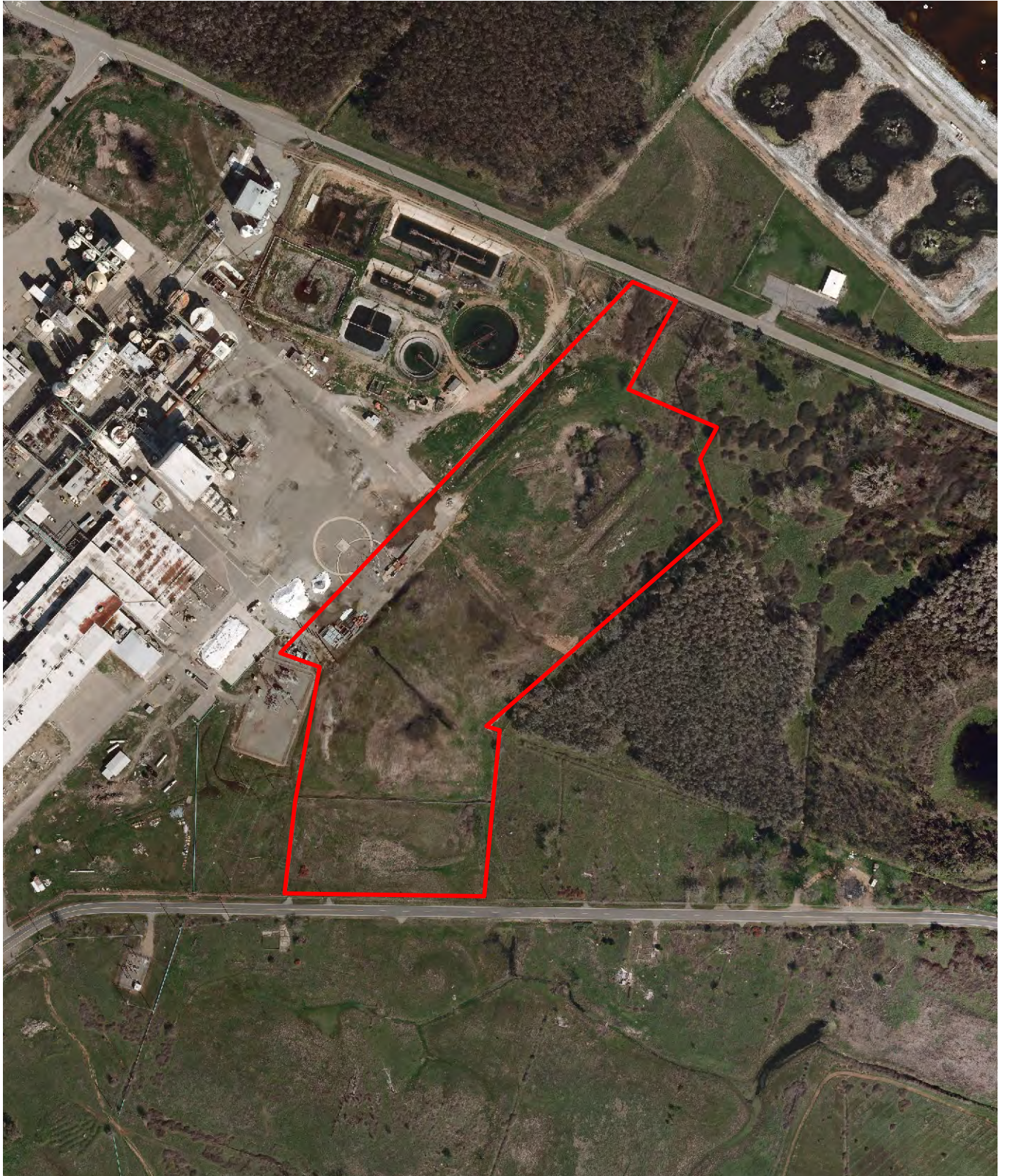
 Approximate Property Boundary



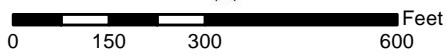
2005 AERIAL PHOTOGRAPH
MOSSBACK LAND COMPANY LLC
ANDERSON, CALIFORNIA

SOURCE: 2005 USDA NAIP AERIAL PHOTOGRAPH

P:\GIS\72210\HistoricalAerials\72210_2005Aerial.mxd



 Approximate Property Boundary



SOURCE: 2010 USDA NAIP AERIAL PHOTOGRAPH

2010 AERIAL PHOTOGRAPH
MOSSBACK LAND COMPANY LLC
ANDERSON, CALIFORNIA

P:\GIS\72210\HistoricalAerials\72210_2010Aerial.mxd



Approximate Property Boundary



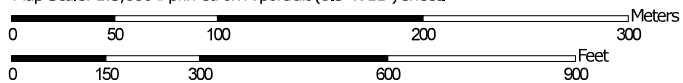
SOURCE: 8-23-2013 GOOGLE EARTH AERIAL PHOTOGRAPH

2013 AERIAL PHOTOGRAPH
MOSSBACK LAND COMPANY LLC
ANDERSON, CALIFORNIA

Custom Soil Resource Report Soil Map




Map Scale: 1:3,680 if printed on a portrait (8.5" x 11") sheet.




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 1:20,000.

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: Shasta County Area, California
 Survey Area Data: Version 16, Sep 6, 2021

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

Date(s) aerial images were photographed: May 8, 2019—Jun 21, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background 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
MgA	Moda loam, 0 to 3 percent slopes, MLRA 17	10.6	16.3%
MhA	Moda loam, seeped, 0 to 3 percent slopes	8.5	13.1%
MkB	Moda loam, shallow, 0 to 5 percent slopes	0.4	0.7%
PIA	Perkins loam, moist, 0 to 3 percent slopes, MLRA 17	3.5	5.4%
PmA	Perkins gravelly loam, gravelly clay loam substratum, 0 to 3 percent slopes, MLRA 17	20.3	31.3%
PmB	Perkins gravelly loam, 3 to 8 percent slopes	1.1	1.7%
PoA	Perkins gravelly loam, moderately deep, 0 to 3 percent slopes	19.5	29.9%
PoB	Perkins gravelly loam, moderately deep, 3 to 8 percent slopes	1.0	1.6%
Totals for Area of Interest		65.0	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



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Project Code: 2022-0021768
Project Name: Zane, Anderson CA

07/03/2024 18:24:41 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see [Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service \(fws.gov\)](https://www.fws.gov/partner/council-conservation-migratory-birds).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

PROJECT SUMMARY

Project Code: 2022-0021768
Project Name: Zane, Anderson CA
Project Type: Acquisition of Lands
Project Description: Biological Assessment
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.4356298,-122.26576270694702,14z>



Counties: Shasta County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

REPTILES

NAME	STATUS
Northwestern Pond Turtle <i>Actinemys marmorata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
Western Spadefoot <i>Spea hammondi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

FLOWERING PLANTS

NAME	STATUS
Slender Orcutt Grass <i>Orcuttia tenuis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: VESTRA Resources, Inc.

Name: Anna Prang

Address: 5300 Aviation Drive

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State: CA

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