

Memo



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To: Meegan Nagy, Deputy Manager, Sacramento River West Side Levee District

From: Pam Brillante, Project Biologist, Ascent Environmental

Subject: **Biological Resources Technical Memorandum for the UCIP DS ID: 20416 Pipe Removal Project, Sacramento River West Side Levee District, Colusa County, California**

Introduction

This memorandum presents the results of a biological resources technical assessment for the Sacramento River West Side Levee District (SRWSLD) Utility Crossing Inventory Program Desk Study ID 20416 (UCIP DS ID: 20416) Pipe Removal Project in Colusa County, California. The project site is located within the Sacramento River West Side Levee prism along Wilson Bend Road approximately 4.25 miles southeast of Grimes, CA (Figure 1). The purpose of this memo is to describe the existing biological resources within the project site, evaluate the potential for special-status species occurrence, and identify potential impacts to sensitive biological resources that could result from project implementation and constitute an exception to a categorical exemption from CEQA.

Survey Methods

Biological resources were evaluated by an Ascent biologist during a reconnaissance survey conducted on November 23, 2020. The project site consists of a 0.12-acre excavation area and a 0.46-acre staging area/temporary disturbance area (Figure 2). The potential for nesting birds and raptors was assessed within a 50-foot and 500-foot buffer, respectively, of the project site. Therefore, the study area for this biological resources evaluation consists of the project site and the 500-foot nesting raptor buffer. Information on sensitive biological resources previously recorded near the project site was collected through a search of the California Natural Diversity Database (CNDDDB) and other existing documentation pertaining to biological resources in the region as listed below:

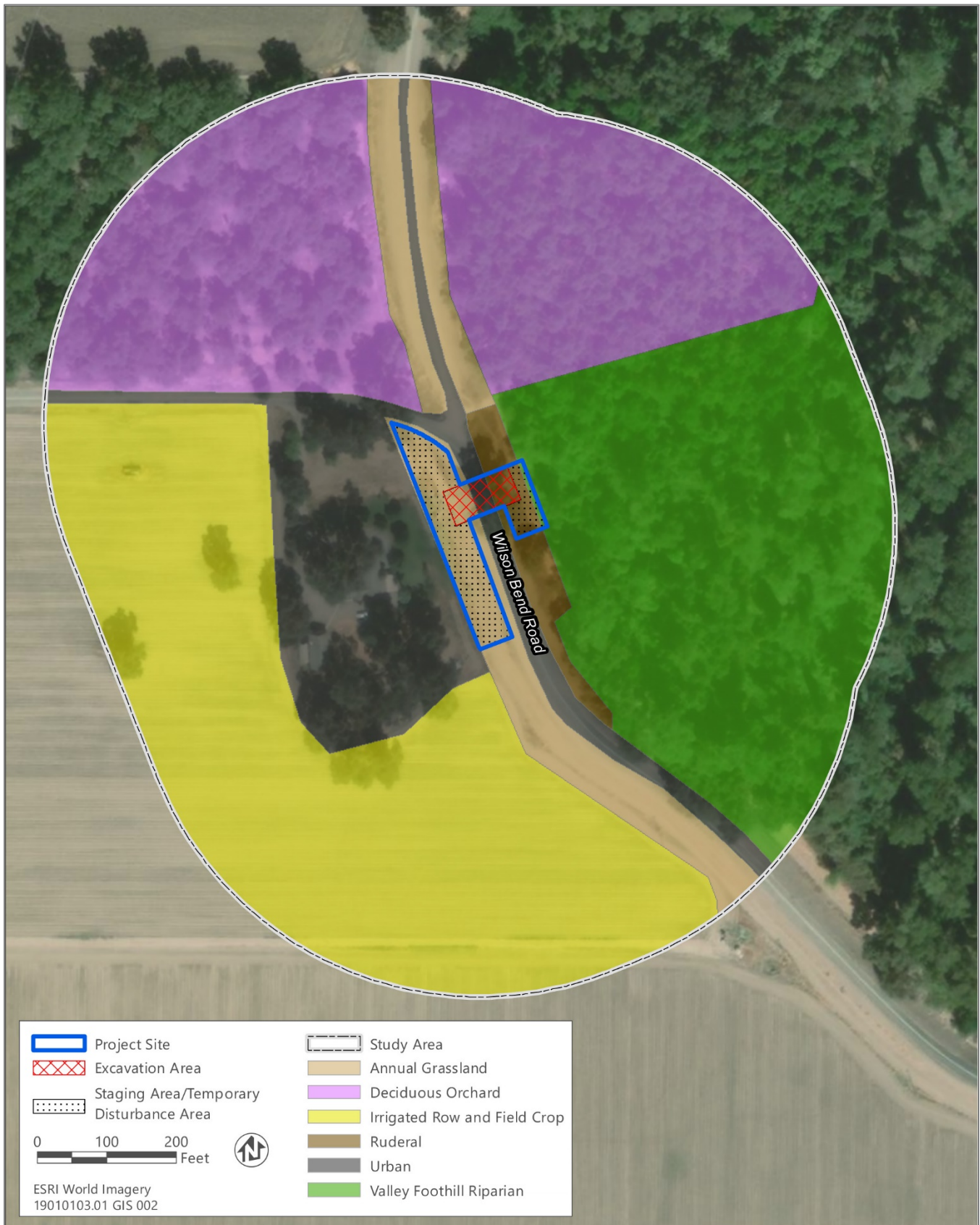
- ▶ CNDDDB record search of the Tisdale Weir, Grimes, Meridian, Sutter Buttes, Sutter, Gilsizer Slough, Sutter Causeway, Kirkville, and Dunnigan U.S. Geological Service 7.5-minute quadrangles (CNDDDB 2020);
- ▶ eBird database search within Colusa County, California (eBird 2020);
- ▶ California Native Plant Society (CNPS), Inventory of Rare and Endangered Plants of the Tisdale Weir, Grimes, Meridian, Sutter Buttes, Sutter, Gilsizer Slough, Sutter Causeway, Kirkville, and Dunnigan U.S. Geological Service 7.5-minute quadrangles (CNPS 2020); and
- ▶ U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation project planning tool (USFWS 2020).

The CNDDDB is a statewide database, managed by the California Department of Fish and Wildlife (CDFW) that is continually updated with the location and condition of the state's rare and declining species. Although the CNDDDB is the most current and reliable tool available for tracking occurrences of special-status species, it contains only those records that have been reported to CDFW. Therefore, it is possible that a rare plant or animal could be present on the property but not documented in the CNDDDB.



Source: Adapted by Ascent Environmental in 2020

Figure 1 Project Location



Source: Adapted by Ascent Environmental in 2020

Figure 2 Land Cover

Sensitive Biological Resources

Special-Status Species

Special-status species are plants and animals in the following categories:

- ▶ listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) or candidates for possible future listing;
- ▶ listed or candidates for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA);
- ▶ listed as rare under the California Native Plant Protection Act;
- ▶ listed as Fully Protected under the California Fish and Game Code;
- ▶ identified by CDFW as species of special concern;
- ▶ taxa considered by CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR). The CDFW system includes six rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:
 - CRPR 1A - Plants presumed to be extinct in California;
 - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
 - CRPR 2A - Plants that are presumed extirpated in California, but more common elsewhere;
 - CRPR 2B - Plants that are rare threatened, or endangered in California, but more common elsewhere.
 - CRPR 3 - Plants about which more information is needed (a review list); and
 - CRPR 4 - Plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW’s CNDDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, and 2B may qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380. CDFW recommends that potential impacts to CRPR 1 and 2 species be evaluated in CEQA documents. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Guidelines Section 15380. However, these species may be evaluated by the lead agency on a case-by-case basis. For this analysis, CRPR 3 and 4 species are not included.

- ▶ considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA Section 15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G); or
- ▶ otherwise meets the definition of rare or endangered under CEQA Section 15380 (b) and (d).

Sensitive Natural Communities and Habitats

CDFW maintains a list of plant communities that are native to California. Sensitive natural communities are those native plant communities defined by CDFW as having limited distribution statewide or within a county or region and that are often vulnerable to environmental effects of projects (CDFW 2018). These communities may or may not contain special-status species or their habitat. Sensitive natural communities are ranked by CDFW from S1 to S3, where S1 is critically imperiled, S2 is imperiled, and S3 is vulnerable. In addition to habitats officially identified by CDFW as sensitive natural communities, other sensitive habitats consist of those of special concern to resource agencies because of their rarity (e.g., fens) and/or value as wildlife habitat (e.g., late seral forest), wetlands and other waters of the United States that are afforded specific consideration under Section 404 of the Clean Water Act, wetlands and waters protected pursuant to the state’s Porter-Cologne Water Quality Control Act, and aquatic and riparian habitats subject to regulation by CDFW under Section 1602 of the California Fish and Game Code.

Results

Land Cover Types

The 0.58-acre project site is roughly 50 feet in elevation and is mainly composed of paved roadway (Wilson Bend Road), and ruderal vegetation and annual grassland on the levee slopes (Figure 2). At the time of the survey on November 23, 2020, the waterside levee slope was mostly barren with approximately 5 percent ruderal vegetative cover. This area was disturbed, and signs of a recent burn were observed. Plant species observed include jimsonweed (*Datura stramonium*), poison oak (*Toxicodendron diversilobum*) and Himalayan blackberry (*Rubus armeniacus*) seedlings, sharp point fluellin (*Kickxia elatine*), curly dock (*Rumex crispus*), black mustard (*Brassica nigra*), cocklebur (*Xanthium strumarium*), verbena (*Verbena lasiostachys*), wild oat (*Avena* sp.), and Bermuda grass (*Cynodon dactylon*). The landside levee slope was composed of annual grassland habitat dominated by Bermuda grass. Other plant species in this area include wild oat, black mustard, ripgut brome (*Bromus diandrus*), turkey mullein (*Croton setiger*), and telegraph weed (*Heterotheca grandiflora*).

Within the 500-foot study area, valley foothill riparian habitat occurs immediately east of the project site on the waterside of the levee and deciduous orchard habitat occurs north of the project site on the landside and waterside of the levee. A private residence with ornamental and orchard trees and lawn grass surrounded by irrigated row and field crops occurs west of the project site on the landside of the levee (Figure 2).

CDFW ranks several riparian vegetation communities as S3, including valley oak forest and woodland alliance and Fremont cottonwood forest and woodland. The riparian habitat adjacent to the project site contains both of these sensitive natural communities.

Common Wildlife Species

The project site and vicinity contain suitable habitat for many common wildlife species, and some of these species were observed during the November 23, 2020 survey. All wildlife observed within the project site and vicinity are listed in Table 1.

Table 1 Wildlife Observed in the Project Site and Vicinity During Site Survey on November 23, 2020

Common Name	Scientific Name
Birds	
Snow goose (fly over)	<i>Anser caerulescens</i>
California scrub-jay	<i>Aphelocoma californica</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Turkey vulture	<i>Cathartes aura</i>
Rooster	<i>Gallus gallus domesticus</i>
Wild turkey	<i>Meleagris gallopavo</i>
California towhee	<i>Melospiza crissalis</i>
Band-tailed pigeon	<i>Patagioenas fasciata</i>
Spotted towhee	<i>Pipilo maculatus</i>
Black phoebe	<i>Sayornis nigricans</i>
American robin	<i>Turdus migratorius</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>

Special-Status Species

Lists of special-status plant and wildlife species were compiled from the database queries and are presented in Table 2 and Table 3. The tables include common and scientific names, legal status, habitat requirements, and a brief assessment of the likelihood that the species could occur in the project site.

A total of 14 special-status plant species and 26 special-status wildlife species have potential to occur within the study area (CNDDB 2020, CNPS 2020, USFWS 2020, Table 2 and 3).

Special-Status Plant Species

Of the 14 special-status plants identified during the review of existing data, 12 special-status species are not expected to occur based on lack of suitable microhabitat (including suitable soils) or because the project site is outside of the elevation range of the species (Table 2). The remaining two special status plant species identified during the review of existing data, Parry's rough tarplant and woolly rose mallow, may occur in the project site.

Table 2 Special-Status Plant Species Known to Occur in the Region and their Potential for Occurrence in the Study Area

Species	Listing Status ¹			Habitat	Potential for Occurrence ²
	Federal	State	CRPR		
Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i>			1B.1	Wetland. Meadows and seeps, valley and foothill grassland. Subalkaline flats on overflow land in the Central Valley; usually seen in dry, adobe soil. 16 to 246 feet in elevation. Blooms April–May.	Not expected to occur. The study area contains grassland habitat; however, suitable microhabitat (subalkaline flats) is not present in the study area. The nearest known occurrence is over 8.5 miles west of the study area.
Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>			1B.2	Chenopod scrub, valley and foothill grassland, meadows and seeps. Alkaline flats and scalds in the Central Valley, sandy soils. 10 to 902 feet in elevation. Blooms April–October.	Not expected to occur. The study area contains grassland habitat; however, suitable microhabitat (alkaline flats or sandy soil) is not present in the study area. The nearest known occurrence is approximately 9.3 miles northwest of the study area.
Parry's rough tarplant <i>Centromadia parryi</i> ssp. <i>rudis</i>			4.2	Wetland. Valley and foothill grasslands, vernal pools. Alkaline, vernal mesic seeps; sometimes roadsides. 0 to 328 feet in elevation. Blooms May–October.	May occur. The study area contains suitable grassland habitat for this species. The nearest known occurrence is approximately 12 miles west of the study area.
Palmate-bracted salty bird's-beak <i>Chloropyron palmatum</i>	FE	SE	1B.1	Alkaline flats, meadow and seep, wetland. Usually on Pescadero silty clay which is alkaline, with <i>Distichlis</i> , <i>Frankenia</i> , etc. 16 to 509 feet in elevation. Blooms May–October.	Not expected to occur. The study area does not contain suitable soils for this species. The nearest known occurrence of this species is a possibly extirpated population approximately 8.8 miles southwest of the study area.
Recurved larkspur <i>Delphinium recurvatum</i>			1B.2	Chenopod scrub, valley and foothill grassland, cismontane woodland. On alkaline soils; often in valley saltbush or valley chenopod scrub. 10 to 2592 feet in elevation. Blooms March–June.	Not expected to occur. The study area does not contain suitable soils for this species. The nearest known occurrence of this species is an extirpated population approximately 13 miles northeast of the study area.
San Joaquin spearscale <i>Extriplex joaquinana</i>			1B.2	Alkali playa. Chenopod scrub, alkali meadow, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> , etc. 3 to 2740 feet in elevation. Blooms April–October.	Not expected to occur. The study area does not contain suitable alkali microhabitat for this species. The nearest known occurrence of this species is approximately 12 miles southwest of the study area.
Woolly rose-mallow <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>			1B.2	Wetland. Marshes and swamps (freshwater). Moist, freshwater-soaked riverbanks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0 to 509 feet in elevation. Blooms June–September.	May occur. Suitable levee habitat is present in the project site. The nearest known occurrence of this species is approximately 3 miles northeast of the study area.

Species	Listing Status ¹			Habitat	Potential for Occurrence ²
	Federal	State	CRPR		
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>			1B.1	Alkali playa, wetland. Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 3 to 4511 feet in elevation. Blooms February–June.	Not expected to occur. The study area does not contain suitable alkali microhabitat for this species. The nearest known occurrence of this species is a possibly extirpated population approximately 12 miles southwest of the study area.
Colusa layia <i>Layia septentrionalis</i>			1B.2	Ultramafic. Chaparral, cismontane woodland, valley and foothill grassland. Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 49 to 3609 feet in elevation. Blooms April–May.	Not expected to occur. The study area does not contain suitable soils for this species. The nearest known occurrence of this species is approximately 9 miles southwest of the study area.
Veiny monardella <i>Monardella venosa</i>			1B.1	Valley and foothill grassland, cismontane woodland. In heavy clay; mostly with grassland associates. Rediscovered in 1992. 98 to 1329 feet in elevation. Blooms May–July.	Not expected to occur. The study area does not contain suitable microhabitat for this species. The nearest known occurrence of this species is a possibly extirpated population approximately 9 miles southwest of the study area.
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>			1B.1	Wetland. Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils. 16 to 5709 feet in elevation. Blooms April–July.	Not expected to occur. The study area does not contain suitable microhabitat for this species. The nearest known occurrence is approximately 9 miles southwest of the study area.
Adobe navarretia <i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>			4.2	Ultramafic. Valley and foothill grassland, vernal pools. Clay soils; sometimes on serpentine. 328 to 3281 feet in elevation. Blooms April–June.	Not expected to occur. The study area does not contain suitable microhabitat for this species. There are no known occurrences within the 9 quad search area.
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	FE	SE	1B.1	Valley and foothill grassland, cismontane woodland. Shallow, well-drained, medium- textured soils. Predominantly on the northern slopes of knolls, but also along shady creeks or near vernal pools. 197 to 558 feet in elevation. Blooms March–April.	Not expected to occur. The study area contains suitable grassland habitat for this species. However, the study area is outside of the elevation range for this species and does not contain suitable microhabitat for this species. The nearest known occurrence is an extirpated population approximately 10 miles northeast of the study area.
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>			2B.1	Wetland. Marshes and swamps, riparian forest, meadows and seeps, vernal pools. Mud flats of vernal lakes, drying riverbeds, alkali meadows. 16 to 1427 feet in elevation. Blooms May–September.	Not expected to occur. The study area does not contain suitable alkaline microhabitat for this species. The nearest known occurrence is approximately 4 miles southwest of the study area.

Notes: CRPR = California Rare Plant Rank

¹ Legal Status Definitions**Federal:**

FE Endangered (legally protected by ESA)

FT Threatened (legally protected by ESA)

State:

SE Endangered (legally protected by CESA)

ST Threatened (legally protected by CESA)

California Rare Plant Ranks:

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

3 plant species about which we need more information—a review list.

4 plants of limited distribution—a watch list.

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 (<20% of occurrences are threatened and/or have low degree and immediacy of threat or no current threats known).

² Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available at the project site; however, there are little to no other indicators that the species might be present.

Likely to occur: The species, or evidence of its presence, was observed at the project site during reconnaissance surveys, or was reported by others.

Sources: CNDDDB 2020; CNPS 2020

Special-Status Wildlife Species

Of the 26 special-status wildlife species identified during review of existing data, 10 species may occur in the study area (Table 3). Several of the bird species with potential to occur in the project site are not expected to nest or overwinter within the project site due to a lack of suitable nesting or wintering habitat. However, several bird species could nest adjacent to the project site in the riparian habitat within the study area. Similarly, pallid bat and western red bat may occur in the project site but are not expected to roost within the project site due to a lack of suitable roosting habitat. These bat species may roost adjacent to the project site in the riparian habitat within the study area (Table 3).

Table 3 Special-Status Animal Species Known to Occur in the Region and their Potential for Occurrence in the Study Area

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Reptiles				
Western pond turtle <i>Emys marmorata</i>		SSC	Aquatic, artificial flowing waters, marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters. A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not expected to occur. The study area does not contain aquatic habitat, but suitable aquatic habitat is present in the vicinity (Sacramento River). The grassland habitat within the study area is unlikely to provide suitable upland egg-laying habitat due to the high level of disturbance. The nearest known occurrence is approximately 5 miles northeast of the study area.
Giant garter snake <i>Thamnophis gigas</i>	FT	ST	Marsh and swamp, riparian scrub, wetland. Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not expected to occur. The study area does not contain aquatic habitat or suitable upland habitat for this species. The nearest known occurrence is approximately 1 mile southeast of the study area.
Amphibians				
California tiger salamander <i>Ambystoma californiense</i>	FE	ST	Cismontane woodland, meadow and seep, riparian woodland, valley and foothill grassland, vernal pool, and wetlands. Sonoma county DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not expected to occur. The study area does not contain aquatic habitat or suitable upland habitat for this species. The nearest known occurrence is an extirpated site approximately 12 miles southwest of the study area.
Foothill yellow-legged frog <i>Rana boylei</i>		SE, SSC	Aquatic, chaparral, cismontane woodland, coastal scrub, Klamath/north coast flowing waters, lower montane coniferous forest, meadow and seep, riparian forest, riparian woodland, and Sacramento/San Joaquin flowing waters. Partly-	Not expected to occur. The study area does not contain aquatic habitat or suitable upland habitat for this species. The nearest known occurrence is an extirpated site approximately 12.5 miles northeast of the study area.

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
			shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	
California red-legged frog <i>Rana draytonii</i>	FT	SSC	Aquatic, Artificial flowing waters, Artificial standing waters, Freshwater marsh, Marsh & swamp, Riparian forest, Riparian scrub, Riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters. Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. must have access to estivation habitat.	Not expected to occur. This species' historical range included the Central Valley, but California red-legged frog is no longer found on the valley floor and no suitable habitat is present for this species in the study area. There are no known occurrences within the nine-quad search area.

Birds

tricolored blackbird <i>Agelaius tricolor</i> (nesting)		ST SSC	Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	May occur but not expected to nest in the project site. Suitable nesting habitat is not present in the project site, but tricolored blackbird could forage in the grassland habitat in the study area. The nearest known nesting colony of tricolored blackbird is approximately 7 miles west of the study area.
Greater sandhill crane <i>Antigone canadensis tabida</i> (wintering)		ST, FP	Marsh and swamp, meadow and seep, wetland. Nests in wetland habitats in northeastern California; winters in the Central Valley. Prefers grain fields within 4-mile of a shallow body of water used as a communal roost site; irrigated pasture used as loafing sites.	Not expected to occur. Suitable wintering habitat is not present in the project site; however, this species could use the adjacent agricultural fields for foraging. The nearest known occurrence is approximately 0.5 mile northwest of the study area (eBird 2020).
Swainson's hawk <i>Buteo swainsoni</i> (nesting)		ST	Great Basin grassland, riparian forest, riparian woodland, valley and foothill grassland. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	May occur. The project site contains limited suitable nesting habitat. However, suitable nesting trees occur adjacent to the project site in the riparian habitat in the study area and the grassland habitat provides suitable foraging habitat. The nearest known Swainson's hawk nesting occurrence is approximately 0.2 mile east of the study area.
Mountain plover <i>Charadrius montanus</i> (wintering)		SSC	Chenopod scrub, valley and foothill grassland. Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground and flat topography. Prefers grazed areas and areas with burrowing rodents.	Not expected to occur. Grassland habitat is present in the study area; however, the topography is not suitable. The nearest known occurrence of mountain plover is approximately 3 miles northeast of the study area (eBird 2020).
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i> (nesting)	FT	SE	Riparian forest. Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	May occur but not expected to nest in the project site. The project site does not contain suitable riparian nesting habitat. Riparian habitat occurs adjacent to the project site and could support nonbreeding individuals but is unlikely to support breeding western yellow-billed cuckoo. Western yellow-billed cuckoo is most commonly associated with cottonwood-willow dominated vegetation and nest almost exclusively in riparian woodlands

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
				that are 50 acres or more in extent and in California they are most likely to be found in riparian habitat greater than 200 acres (Haltermann et. al. 2015). The riparian patch adjacent to the project site is approximately 50 acres and the habitat is dominated by valley oak and cottonwood trees. The nearest known occurrence is approximately 12 miles northwest of the study area.
White-tailed kite <i>Elanus leucurus</i> (nesting)		FP	Cismontane woodland, marsh and swamp, riparian woodland, valley and foothill grassland, and wetlands. Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	May occur. The project site contains limited suitable nesting habitat. However, suitable nesting trees occur adjacent to the project site in the riparian habitat in the study area and the grassland habitat provides suitable foraging habitat. The nearest documented occurrence is approximately 0.5 mile southeast of the study area (eBird 2020).
Bald eagle <i>Haliaeetus leucocephalus</i> (nesting and wintering)		SE, FP	Use ocean shorelines, lake margins, and river courses for both nesting and wintering. Most nests are within 1 mile of water, in large trees with open branches. Roost communally in winter.	May occur but not expected to nest in the project site. The project site does not contain suitable nesting habitat because there are no trees large enough to support a nest onsite. However, suitable nesting trees occur adjacent to the project site in the riparian habitat in the study area. Bald eagle could forage incidentally within the project site. The nearest documented occurrence is approximately 2 miles southwest of the study area (eBird 2020).
Yellow-breasted chat <i>Icteria virens</i> (nesting)		SSC	Riparian forest, riparian scrub, riparian woodland. Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	May occur but not expected to nest in the project site. The project site does not contain suitable riparian nesting habitat. However, suitable nesting habitat occurs adjacent to the project site in the riparian habitat in the study area. The nearest known occurrence is approximately 5 miles northeast of the study area (eBird 2020).
California black rail <i>Laterallus jamaicensis coturniculus</i> (nesting)		ST FP	Brackish marsh, freshwater marsh, marsh and swamp, salt marsh, wetland. Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not expected to occur. The study area does not contain suitable marsh nesting habitat. The nearest known occurrence is approximately 6 miles northeast of the study area.
Song sparrow ("Modesto" population) <i>Melospiza melodia</i> (nesting)		SSC	Marsh and swamp, wetlands. Emergent freshwater marshes, riparian willow thickets, riparian forests of valley oak (<i>Quercus lobata</i>), and vegetated irrigation canals and levees.	May occur but not expected to nest in the project site. The project site does not contain suitable nesting habitat. However, potentially suitable nesting habitat occurs adjacent to the project site in the riparian habitat in the study area. The nearest known occurrence is approximately 15 miles northwest of the study area.
Bank swallow <i>Riparia riparia</i> (nesting)		ST	Riparian scrub, riparian woodland. Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils	Not expected to occur. The study area does not contain suitable nesting habitat. However, suitable nesting habitat occurs in the project vicinity along the banks of the Sacramento River.

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
			near streams, rivers, lakes, ocean to dig nesting hole.	The nearest known occurrence is approximately .2 mile southwest of the study area.
Fish				
Delta smelt <i>Hypomesus transpacificus</i>	FT	SE	Aquatic, estuary. Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt. Most often at salinities < 2ppt.	Not expected to occur. The study area does not contain aquatic habitat. The Sacramento River in the project vicinity provides suitable habitat for this species.
steelhead - California Central Valley DPS <i>Oncorhynchus mykiss irideus</i> pop. 11	FT		Sacramento/San Joaquin flowing waters. Populations in the Sacramento and San Joaquin rivers and their tributaries.	Not expected to occur. The study area does not contain aquatic habitat. The Sacramento River in the project vicinity provides suitable habitat for this species.
chinook salmon - Central Valley spring-run ESU <i>Oncorhynchus tshawytscha</i> pop. 6	FT	ST	Aquatic. Sacramento/San Joaquin flowing waters. Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 C are lethal to adults. Federal listing refers to populations spawning in Sacramento River and tributaries.	Not expected to occur. The study area does not contain aquatic habitat. The Sacramento River in the project vicinity provides suitable habitat for this species.
Invertebrates				
Crotch bumble bee <i>Bombus crotchii</i>		SC	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Not expected to occur. The study area could contain suitable food plant genera such as <i>Clarkia</i> and <i>Eschscholzia</i> . However, vegetation is limited on the waterside levee slope and dominated by Bermuda grass on the landside levee slope and unlikely to support the abundance of floral resources necessary to support Crotch bumble bee. In addition, the levee slopes are subject to high disturbance (mowing, burning) that would likely exclude this species from nesting or overwintering. The nearest known occurrence is from 2007 approximately 2 miles southwest of the study area.
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT		Valley and foothill grassland, vernal pool, wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not expected to occur. The study area does not contain suitable vernal pool habitat for this species. The nearest known occurrence is approximately 13 miles northwest of the study area.
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT		Riparian scrub. Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus nigra</i> ssp. <i>caerulea</i>). Prefers to lay eggs in elderberry plant stems 2-8 inches in diameter; some preference shown for "stressed" elderberry plants.	May occur. Elderberry shrubs are not present in the project site. However, an elderberry shrub is present in the study area approximately 65 feet north of the project site in riparian habitat. Therefore, the study area is assumed to be occupied by valley elderberry longhorn beetle based on the protocol for determining occupancy of valley elderberry longhorn beetle as detailed in the USFWS <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)</i> (USFWS 2017). The nearest known occurrence of valley elderberry longhorn beetle is approximately 5 miles northwest of the study area.

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE		Valley and foothill grassland, vernal pool, wetland. Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Not expected to occur. The study area does not contain suitable vernal pool habitat for this species. The nearest known occurrence is approximately 12 miles northwest of the study area.

Mammals

pallid bat <i>Antrozous pallidus</i>		SSC	Chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grassland. Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures and include crevices in rocky outcrops, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), human structures such as bridges, barns, porches, buildings, and occasionally on or near the ground under burlap sacks, stone piles, rags, and baseboards. Very sensitive to disturbance of roosting sites.	May occur but not expected to roost in the project site. Pallid bat may forage in the project site. The project site does not contain suitable roost habitat, but Pallid bat may roost in trees in the riparian habitat in the study area. The nearest known pallid bat occurrence is approximately 13 miles northeast of the study area.
Marysville California kangaroo rat <i>Dipodomys californicus eximius</i>		SSC	Chaparral, valley and foothill grassland. Known only from the Sutter Buttes area. Friable soil, grass-forb stages of chaparral.	Not expected to occur. The study area contains grassland habitat, but this species is only known from the Sutter Buttes, approximately 11 miles north of the study area.
western red bat <i>Lasiurus blossevillei</i>		SSC	Cismontane woodland, lower montane coniferous forest, riparian forest, riparian woodland. Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	May occur but not expected to roost in the project site. The project site contains limited suitable tree roost habitat. However, western red bat may roost in the trees within the riparian habitat in the study area and may forage in the project site. The nearest known occurrence is approximately 12 miles northwest of the study area.

Note: CNDDDB = California Natural Diversity Database

¹ Legal Status Definitions**Federal:**

FE Endangered (legally protected)

FT Threatened (legally protected)

FC Candidate

State:

FP Fully protected (legally protected)

SSC Species of special concern (no formal protection other than CEQA consideration)

SE Endangered (legally protected)

ST Threatened (legally protected)

SC Candidate

² Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present in the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available in the project site; however, there are little to no other indicators that the species might be present.

Likely to occur: The species, or evidence of its presence, was observed in the project site during reconnaissance surveys, or was reported by others.

Source: CNDDDB 2020, eBird 2020

Discussion

The proposed project would avoid the riparian habitat, including the elderberry shrub, that occurs adjacent to the project site. Because riparian habitat would be avoided, suitable bat roost habitat that could occur in the riparian habitat and support special-status bat roosts would be avoided. In addition, the proposed project would implement several environmental protection measures detailed below, including fencing or flagging along the riparian habitat, preconstruction surveys during the appropriate bloom period for Parry's rough tarplant and woolly rose mallow, preconstruction nesting raptor surveys during the nesting season, and fencing or flagging around the elderberry shrub located within 165 feet of the project site that would ensure there are no impacts to special-status plant and wildlife species that have potential to occur in the study area. Therefore, no direct or indirect impacts to the riparian habitat, tricolored blackbird, Swainson's hawk, western yellow-billed cuckoo, white-tailed kite, bald eagle, yellow-breasted chat, song sparrow ("Modesto" population), valley elderberry longhorn beetle, pallid bat, or western red bat would occur.

Environmental Protection Measures

Environmentally Sensitive Areas (ESAs)

Prior to the start of construction, a qualified biologist will clearly delineate the riparian habitat immediately adjacent to the east boundary of the east staging area/temporary disturbance area as an environmentally sensitive area. The ESA will be fenced with high-visibility construction fencing or flagging that clearly delineates the riparian habitat boundary. Fencing or flagging will be identified and depicted on the project plans and will remain in place throughout the duration of the project, while construction activities are ongoing, and will prevent construction equipment/personnel from entering the riparian habitat.

Special-status Plant Species

Because the project site consists mostly of constructed features, i.e., levee and road, rare plants are not expected to be present. Nonetheless, because habitat may be suitable for Parry's rough tarplant and woolly rose mallow, a rare plant survey using the CDFW recommended methods in *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018) will be conducted in the project site during the appropriate blooming period for these two species. The survey may be conducted between June and September to encompass all the blooming periods. However, depending on the weather conditions during the survey year and the blooming status of these survey species in the region during the survey year, additional surveys may be required to confirm absence.

- ▶ If special-status plants are not observed in the study area, no additional measures will be required.
- ▶ If special-status plant species are found, they will be avoided during construction.

NOTE: If special-status plant species cannot be avoided, SRWSLD will consult with CDFW to determine the appropriate measures to address direct and indirect impacts that could occur as a result of project construction. SRWSLD will implement the agreed-upon measures to achieve no-net loss of occupied habitat or individuals. If construction activity has the potential to result in significant effects to special-status plants, this would constitute an exception to a categorical exemption and environmental review will be required under CEQA prior to initiation of construction.

Swainson's Hawk, White-tailed Kite, Bald Eagle, and Other Nesting Raptors

- ▶ Avoidance of adverse impacts related to the potential for nesting raptors will be achieved through preconstruction surveys and, if needed, implementation of avoidance measures.
- ▶ For project activities that begin between February 1 and September 15, a qualified biologist will conduct preconstruction surveys for Swainson's hawk, white-tailed kite, and other nesting raptors to identify active nests on and within 0.25 mile of the project footprint for Swainson's hawk and on or within 500 feet of the project footprint for other raptors. The survey for Swainson's hawks will be conducted before the beginning of any

construction activities between March 1 and September 15. Surveys outside of the project area will be conducted from publicly accessible areas such as roadways..

- ▶ If active nests are found, a qualified biologist will establish appropriate no-disturbance buffers around the active nest sites identified during preconstruction raptor surveys until the nest is no longer active to protect active nests from project-related disturbances that could lead to nest abandonment or disruption of normal nesting activities. No project activity will commence within the buffer areas until a qualified biologist has determined the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.25-mile buffer for Swainson's hawk and 500-feet for other raptors, but the size of the buffer may be adjusted if a qualified biologist, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest.

NOTE: If construction activity has the potential to adversely affect a nesting raptor, monitoring of the nest by a qualified biologist during and after construction activities will be required. If potentially significant effects may occur, this would constitute an exception to a categorical exemption and environmental review under CEQA would be required prior to the initiation of any construction activities.

Valley Elderberry Longhorn Beetle

- ▶ Avoidance of adverse impacts related to the potential for disturbance of valley elderberry longhorn beetle will be achieved through pre-construction surveys and, if needed, implementation of avoidance measures.
- ▶ The elderberry shrub located approximately 65 feet north of the project site will be avoided and fenced or flagged as close to construction limits as feasible.
- ▶ A qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of valley elderberry longhorn beetle, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for noncompliance.
- ▶ All activities that could occur within 50 meters (165 feet) of an elderberry shrub, will be conducted outside of the flight season of valley elderberry longhorn beetle (March - July).

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