

APPENDIX E

Special-Status Species with Potential to Occur

**TABLE E-1
POTENTIAL OCCURRENCE OF SPECIAL-STATUS SPECIES WITHIN THE COLLECTING CANAL MAINTENANCE PROJECT NO. 6 PROJECT AREA**

Scientific Name/Common Name	Status (Federal/State/ CRPR)	Habitat Description/ Flowering Period	Potential to Occur in the Collecting Canal Maintenance Project No. 6 Project Area
Fish			
<i>Archoplites interruptus</i> Sacramento perch	--/SSC/--	Found in sloughs, slow-moving rivers, and lakes of the Central Valley. Emergent vegetation necessary for nurseries. Found only in reservoirs and ponds without other centrarchid fishes.	Unlikely. Extirpated from its native range. Special concern status for the Clear Lake population only, Watch List for populations outside native range. Suitable habitat for this species does not occur in the Project area.
<i>Acipenser medirostris</i> Southern DPS North American green sturgeon	FT/--/--	Spawns in the Klamath River and Sacramento River watersheds. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	Unlikely. No suitable habitat is in the Project area. The Project area is outside the Sacramento River.
<i>Hypomesus transpacificus</i> Delta smelt	FT/SE/--	Found in open surface waters in the Sacramento–San Joaquin Delta. Occurs seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay. Found in Delta estuaries with dense aquatic vegetation and few predators.	Unlikely. The Project area is outside the species' known range. No suitable habitat is in the Project area.
<i>Oncorhynchus mykiss</i> Central Valley steelhead DPS	FT/--/--	Requires cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, tributaries, and Delta.	Unlikely. Habitat for this species is not likely to occur in the Project area. The collecting canals are not usually accessible to this migratory species, water can fluctuate in level and dry out, and water quality (temperature) is not suitable.
<i>Oncorhynchus tshawytscha</i> Central Valley spring-run Chinook salmon ESU	FT/ST/--	Requires cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, tributaries, and Delta.	Unlikely. Habitat for this species is not likely to occur in the Project area. The collecting canals are not usually accessible to this migratory species, water can fluctuate in level and dry out, and water quality (temperature) is not suitable.
<i>Oncorhynchus tshawytscha</i> Sacramento River winter-run Chinook salmon ESU	FE/SE/--	Requires cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, tributaries, and Delta.	Unlikely. Habitat for this species is not likely to occur in the Project area. The collecting canals are not usually accessible to this migratory species, water can fluctuate in level and dry out, and water quality (temperature) is not suitable.
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	--/SSC/--	Endemic to the Central Valley. Spawns in freshwater in areas with submerged vegetation. Tolerant of moderate salinities, adults are found primarily in the Delta and Suisun Bay and Marsh but have been found as far upstream as Red Bluff Diversion Dam on the Sacramento River.	Unlikely. Habitat for this species is not likely to occur in the Project area. The collecting canals are not usually accessible to this migratory species.

TABLE E-1 (Continued)
POTENTIAL OCCURRENCE OF SPECIAL-STATUS SPECIES WITHIN THE COLLECTING CANAL MAINTENANCE PROJECT NO. 6 PROJECT AREA

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Invertebrates			
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT/--/--	Lifecycle restricted to large, deep, cool-water vernal pools with moderately turbid water.	Unlikely. No vernal pools occur in the Project area.
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT/--/--	Breeds in and forages exclusively on elderberry shrubs associated with riparian forest, elderberry savannas, and other Central Valley habitats. Occurs only in the Central Valley of California.	Moderate. Mature elderberry shrubs are present in limited areas at the south end of the Project area, along the channels.
<i>Lepidurus packardii</i> Vernal pool tadpole shrimp	FE/--/--	Found in vernal pools and swales.	Unlikely. No vernal pools occur in the Project area.
Amphibians			
<i>Ambystoma californiense</i> California tiger salamander	FT/ST/--	Found in annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Needs underground refuges and vernal pools or other seasonal water sources.	Unlikely. No suitable habitat is present, and the Project area is located outside the species' known range.
<i>Rana draytonii</i> California red-legged frog	FT/SSC/--	Found in perennial or nearly perennial lakes, ponds, reservoirs, slow-moving streams, marshes, bogs, and swamps in lowlands and foothills.	Unlikely. No suitable habitat is present, and the Project area is located outside the species' known range.
Reptiles			
<i>Actinemys marmorata</i> Western pond turtle	--/SSC/--	Found in slow-moving rivers, streams, lakes, ponds, wetlands, reservoirs, and brackish estuarine waters with deep pools and rocks, logs, and other exposed surfaces for basking.	Moderate. Waterways in the Project area provide suitable habitat and known from the Sutter Bypass.
<i>Thamnophis gigas</i> Giant garter snake	FT/ST/--	Found in marshes, sloughs, drainage canals, irrigation ditches, rice fields, and slow-moving creeks.	Present. Suitable habitat for giant garter snake is present throughout the Project area in channels, sloughs, and collecting canals with adjacent upland habitat.
Birds			
<i>Agelaius tricolor</i> Tricolored blackbird	--/CT/--	Nesting habitat includes emergent vegetation, such as cattail and tule, and nonnative vegetation, including Himalayan blackberry, giant reed, mustards, thistles, tamarisk, and grain crops, usually triticale.	High. Suitable foraging habitat is provided by irrigated pastures and fallow fields adjacent to the Project area, but rice is not preferred for foraging. Potentially suitable nesting habitat is present in dense stands of Himalayan blackberries along canals and in emergent and riparian channel vegetation in the Project area.

TABLE E-1 (Continued)
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Birds (cont.)			
<i>Athene cunicularia</i> Burrowing owl	--/SSC/--	Found in grasslands and ruderal habitat supporting short vegetation structure and with abundant small-mammal burrows for nesting. California ground squirrel burrows are usually preferred.	High. Suitable habitat is present in the Project area, along the land and channel sides of levees where mammal burrows are abundant.
<i>Buteo swainsoni</i> Swainson's hawk	--/ST/--	Found in cottonwood riparian forest and isolated trees in open grasslands adjacent to streams and agricultural crops for foraging.	High. Suitable nesting habitat is present in the Project area in mature riparian trees. Adjacent agricultural fields in annual crops and irrigated pasture provide suitable forage habitat, although rice is not preferred.
<i>Circus cyaneus</i> Northern harrier	--/SSC/--	Forages in grasslands and freshwater marshes; nests in agricultural fields and other open habitat with vegetative cover suitable for concealing nests.	High. Abundant foraging habitat is present in the Project area. Suitable nesting habitat for this species also is present.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FT/SE/--	Found in cottonwood-willow forest and willow scrub along rivers and streams. May use narrow bands of riparian vegetation adjacent to orchards along the Sacramento River.	Low. Cuckoos typically breed in large patches (>50 acres) of riparian woodlands with dense canopy cover; this habitat is not present in the Project area. However, calling birds have been observed locally on the west side of the Sutter Bypass in smaller riparian stands; therefore, the species could occur in similar habitats in the Project area.
<i>Elanus leucurus</i> White-tailed kite	--/FP/--	Nesting habitat includes oak woodlands and isolated trees along marsh edges. Foraging habitat includes grasslands, meadows, and agricultural fields.	High. Limited nesting and abundant foraging habitat for this species occurs in the Project area.
<i>Grus canadensis tabida</i> Greater sandhill crane	--/ST/FP	Roosting occurs in shallow bodies of water, including flooded postharvest rice fields or cornfields. Foraging and loafing occurs in grasslands, irrigated pastures, and rice and other agricultural fields.	Low to Moderate. Cranes do not breed in or near the Project area; however, suitable winter foraging habitat is present in the rice fields in and surrounding the Project area.
<i>Lanius ludovicianus</i> Loggerhead shrike	--/SSC/--	Found in shrubs and low, scattered trees amid grasslands and agricultural fields.	Moderate to High. Suitable breeding and foraging habitat for this species occurs in the Project area.
<i>Laterallus jamaicensis leucopareia</i> California black rail	--/ST/--	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays.	Moderate. Occurrences have been recorded in Sutter County in 2001 and 2005 near Oswald Road (CNDDB 2015). Suitable breeding and foraging habitat occurs along the wetland margins of the Project area.
<i>Riparia riparia</i> Bank swallow	--/ST/--	Found along riverbanks, ocean bluffs, and similar vertical friable cliffs.	Low. Limited suitable habitat (vertical canal banks) is located in the Project area.

TABLE E-1 (Continued)
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Mammals			
<i>Antrozous pallidus</i> Pallid bat	--/SSC/--	Roosts in crevices in rocky outcrops; caves; mines; trees (including bole cavities of oaks, exfoliating ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards); and various human structures, such as bridges, barns, and vacant buildings.	Low. The small bridges spanning the collecting canals may provide limited habitat for day and night roosts, but they lack the appropriate structures necessary for maternity roosts.
Plants			
<i>Astragalus tener</i> var. <i>ferrisiae</i> Ferris's milk-vetch	--/--/1B.1	Annual herb. Occurs in vernal mesic meadow and seeps and in subalkaline flats in valley and foothill grasslands. April–May.	Low. Although the species is not likely to occur in the Project area, limited suitable habitat may be present in isolated locations, and its potential to occur cannot be entirely dismissed because focused field surveys for the species have not been completed.
<i>Atriplex cordulata</i> var. <i>cordulata</i> Heartscale	--/--/1B.2	Occurs in chenopod scrub, alkaline seasonal wetlands, and grasslands. Often found in the sandy soils of alkaline flats and scalds in the Central Valley. April–October.	Unlikely. Although the species is not likely to occur in the Project area, limited suitable habitat may be present in isolated locations, and its potential to occur cannot be entirely dismissed because focused field surveys for the species have not been completed.
<i>Atriplex minuscula</i> Lesser saltscale	--/--/1B.1	Occurs in chenopod scrub, playas, and valley foothill grasslands on alkaline and sandy soils. May–October.	Unlikely. Although the species is not likely to occur in the Project area, limited suitable habitat may be present in isolated locations, and its potential to occur cannot be entirely dismissed because focused field surveys for the species have not been completed.
<i>Atriplex subtilis</i> Subtle orache	--/--/1B.2	Occurs in valley and foothill grasslands (alkaline). June–October.	Unlikely. Although the species is not likely to occur in the Project area, limited suitable habitat may be present in isolated locations, and its potential to occur cannot be entirely dismissed because focused field surveys for the species have not been completed.
<i>Brasenia schreberi</i> Watershield	--/--/2B.3	Aquatic. Occurs in freshwater marshes and swamps; known from both natural and artificial water bodies in California. June–September.	Low. Limited suitable habitat is located in the Project area.
<i>Centromadia parryi</i> var. <i>parryi</i> Pappose tarplant	--/--/1B.2	Found in chaparral, coastal prairies, meadows and seeps, coastal salt marshes and swamps, and valley and foothill grasslands (vernally mesic). Usually grows on alkaline soils. May–November.	Unlikely. Although the species is not likely to occur in the Project area, limited suitable habitat may be present in isolated locations, and its potential to occur cannot be entirely dismissed because focused field surveys for the species have not been completed.

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Plants (cont.)			
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> Peruvian dodder	--/--/2B.2	Occurs in freshwater marshes and swamps. Holoparasitic on <i>Alternanthera</i> , <i>Dalea</i> , <i>Lythrum</i> , <i>Polygonum</i> , and <i>Xanthium</i> . July–October.	Unlikely. Although the species is not likely to occur in the Project area, limited suitable habitat may be present in isolated locations, and its potential to occur cannot be entirely dismissed because focused field surveys for the species have not been completed.
<i>Extriplex joaquinana</i> San Joaquin spearscale	--/--/1B.2	Occurs in chenopod scrub, alkaline meadows, playas, and valley and foothill grasslands. Also occurs in seasonal alkaline wetlands or alkaline sink scrub. April–October.	Unlikely. Limited suitable habitat is located in the Project area.
<i>Heteranthera dubia</i> Water star-grass	--/--/2B.2	Occurs in alkaline still or slow-moving water (pH of 7 or greater), marshes, and swamps; usually in slightly eutrophic waters. July–October.	Unlikely. Although the species is not likely to occur in the Project area, limited suitable habitat may be present in isolated locations, and its potential to occur cannot be entirely dismissed because focused field surveys for the species have not been completed.
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i> Woolly rose-mallow	--/--/1B.2	Occurs in freshwater marshes and swamps and often in riprap on the sides of levees. June–September.	Present. May occur along drainages in and adjacent to the Project area. Many occurrences have been recorded in the Project area (CNDDDB 2015).
<i>Sagittaria sanfordii</i> Sanford's arrowhead	--/--/1B.2	Found in assorted freshwater habitats including marshes, swamps, and seasonal drainages. May–October.	Moderate. Habitat is present in drainages in the Project area.
<i>Pseudobahia bahiifolia</i> Hartweg's golden sunburst	FE/SE/1B.1	Generally found on acidic clay soils in cismontane woodlands and valley and foothill grasslands. March–April.	Unlikely. Limited suitable habitat is located in the Project area, but the type locality in the vicinity of the Project area was presumed extirpated by 1990.
<i>Silene verecunda</i> ssp. <i>verecunda</i> San Francisco campion	--/--/1B.2	Occurs on sandy soils in coastal bluff scrub, chaparral, coastal prairies, coastal scrub, and valley and foothill grasslands. March–August.	Unlikely. Limited suitable habitat is located in the Project area, but the species is limited to the Sutter Buttes in the Sacramento Valley.
<i>Trichocoronis wrightii</i> var. <i>wrightii</i> Wright's trichocoronis	--/--/2B.1	Generally occurs on alkaline soils in meadows and seeps, marshes and swamps, riparian forest, drying riverbeds, and vernal pools. March–September.	Unlikely. Limited suitable habitat is located in the Project area, but the species is presumed extirpated from Sutter County.
<i>Wolffia brasiliensis</i> Brazilian watermeal	--/--/2B.3	Occurs in shallow freshwater ponds, marshes and swamps, and drainage ditches. April–December.	Unlikely. Although the species is not likely to occur in the Project area, limited suitable habitat may be present in isolated locations, and its potential to occur cannot be entirely dismissed because focused field surveys for the species have not been completed.

TABLE E-1 (Continued)
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Critical Habitat/Essential Fish Habitat			
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo		Critical habitat designation includes riparian woodlands with mixed cottonwood-willow vegetation in the Sutter Bypass.	Critical habitat is present adjacent to, but not in, the Project area.
<i>Oncorhynchus mykiss</i> Central Valley steelhead DPS		Critical habitat designation includes accessible waters providing suitable habitat elements.	Critical habitat is not present in the Project area.
<i>Oncorhynchus tshawytscha</i> Central Valley spring-run Chinook salmon ESU		Critical habitat designation includes accessible waters providing suitable habitat elements.	Critical habitat is not present in the Project area.
<i>Oncorhynchus tshawytscha</i> Winter-run Chinook salmon ESU		Critical habitat designation includes accessible waters providing suitable habitat elements.	Critical habitat is not present in the Project area.

NOTES

Sources: *CNDDDB 2015; CNPS 2015; USFWS 2015*

Key: CRPR = California Rare Plant Rank; DPS = Distinct Population Segment; ESU = Evolutionarily Significant Unit.

Federal Designation

FT = Federally listed as threatened
 FE = Federally listed as endangered
 CT = Candidate threatened species
 C = Candidate for State listing
 R = Rare

State Designation

ST = State-listed as threatened
 SE = State-listed as endangered
 SSC = California species of special concern
 FP = California fully protected species
 CT = Candidate threatened species

California Rare Plant Ranks

Rank1B plants are rare, threatened, or endangered in California and elsewhere.

Rank 2B plants are rare, threatened, or endangered in California but more common elsewhere.

.1 = Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat).

.2 = Moderately threatened in California (20–80% occurrences threatened/moderate degree and immediacy of threat).

.3 = Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

Potential to occur definitions:

Present: Suitable habitat is present and species presence has been documented or can be assumed based on known distribution.

Unlikely: Suitable habitat is generally not present and/or very low quality.

Low: Only marginally suitable habitat is present, generally low quality.

Moderate: Some but not all suitable habitat elements are present.

High: Several suitable habitat elements are present and high quality, and site is located with known species distribution.

