



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

408 Permission Section

PUBLIC NOTICE

**REQUEST FOR PERMISSION TO ALTER A U.S. ARMY CORPS OF ENGINEERS PROJECT
UNDER SECTION 408**

TITLE: Packer Ranch Fish Screen and Pump Station Upgrade (19328).

PUBLIC NOTICE COMMENT PERIOD:

Begins: January 8, 2019

Ends: February 7, 2019

REQUESTER: In compliance with U.S.C. Title 33, Chapter 9, Subchapter 1, Section 408, the Cachil dehe Band of Wintun Indians, Colusa Indian Community Council (requester) has requested permission through the Central Valley Flood Protection Board (non-federal sponsor of the federally authorized project) from the U.S. Army Corps of Engineers (USACE) to alter the Sacramento River Flood Control Project, an existing federal flood risk management project, authorized by the Flood Control Act of 1917.

LOCATION: The proposed alteration is located on the right (west) bank levee of the Sacramento River, approximately 9 miles east of Interstate 5 and 8 miles north of the town of Colusa in Colusa County, California (Attachment 1).

REQUESTER'S PROPOSED ACTION: The proposed project is to remove an existing unscreened diversion platform, walkway, pumps, pipes, and piles, and replace them with upgraded facilities (Attachment 2). These upgraded facilities would include a self-cleaning, retractable cylindrical fish screen and retrieval system, ten 8-inch diameter pipe piles to support a new manifold and rail system, twenty 6-inch diameter piles to support three new pumps and a 20-foot by 20-foot platform and associated walkway. The existing piles would be cut a few inches below the bank surface and the buried portion of the piles would remain in place. Construction would occur on the waterside of the Sacramento River levee. Trees would be trimmed on each side of the construction corridor for access.

ENVIRONMENTAL IMPACTS OF PROPOSED ACTION: The proposed action would take place on the waterside of the Sacramento River west levee, within a narrow strip of cottonwood riparian forest bordering the river (Attachment 3). The area surrounding the proposed project consists primarily of agricultural land. The proposed action would require clearing and grubbing of both native and non-native vegetation and minor trimming of trees to allow crane access; all effects to riparian vegetation and habitat are expected to be minor.

Project construction could have temporary adverse effects on water quality in the Sacramento River; however, the requester would implement a number of measures, including turbidity monitoring and implementation of spill prevent measures, to minimize effects to water quality.

The project area provides suitable habitat for several species listed as threatened or endangered under the federal Endangered Species Act (Attachment 4). Federally listed species that may occur within the project area are the federally threatened California Central Valley steelhead

(*Oncorhynchus mykiss*), Central Valley spring-run Chinook salmon (*O. tshawytscha*), southern distinct population segment (DPS) of North American green sturgeon (*Acipenser medirostris*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and western DPS of yellow-billed cuckoo (*Coccyzus americanus*), and the federally endangered Sacramento River winter-run Chinook salmon (*O. tshawytscha*). The requester would implement a number of measures to avoid and minimize potential effects to federally listed species. These measures include fencing of elderberry shrubs, biological resources awareness training for all project personnel, preconstruction surveys for nesting birds prior to any construction during the breeding season, among other measures. Installation of the self-cleaning fish screen is expected to have long-term beneficial effects on fish species.

AUTHORITY: The authority to grant permission for temporary or permanent use, occupation or alteration of any USACE civil works project is contained in Section 14 of the Rivers and Harbors Act of 1899, as amended, codified at 33 U.S.C. 408 ("Section 408"). Section 408 authorizes the Secretary of the Army, on the recommendation of the Chief of Engineers, to grant permission for the alteration or occupation or use of a USACE project if the Secretary determines that the activity will not be injurious to the public interest and will not impair the usefulness of the project. The Secretary of Army's authority under Section 408 has been delegated to the USACE, Chief of Engineers. The USACE Chief of Engineers has further delegated the authority to the USACE, Directorate of Civil Works and Division and District Engineers, depending upon the nature of the activity.

LIMITS OF SECTION 408 AUTHORITY: A requester has the responsibility to acquire all other permissions or authorizations required by federal, state, and local laws or regulations, including any required permits from the USACE Regulatory Program under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), Section 404 of the Clean Water Act (33 U.S.C. Section 1344), and/or Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413). In addition, an approval under Section 408 does not grant any property rights or exclusive privileges nor does it authorize any injury to the property or rights of others.

EVALUATION FACTORS: The decision whether to grant the requested permission for project alteration under Section 408 will be based on several factors. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. Review of requests for alteration will be reviewed by a USACE technical review team considering the following factors:

1) Impair the Usefulness of the Project Determination. The review team will determine if the proposed alteration would limit the ability of the USACE project to function as authorized, or would compromise or change any authorized project conditions, purposes or outputs. In order for an alteration to be approved, the requester must demonstrate that the alteration does not impair the usefulness of the federally authorized project.

2) Injurious to the Public Interest Determination. Proposed alterations will be reviewed to determine the probable impacts, including cumulative impacts, on the public interest. Factors that may be relevant to the public interest evaluation depend upon the type of USACE project being altered and the nature of the proposed alteration and may include, but are not limited to, such things as conservation, economic development, historic properties, cultural resources, environmental impacts, water supply, water quality, flood hazards, floodplains, residual risk, induced damages, navigation, shore erosion or accretion, and recreation. This evaluation will consider information received from the interested parties, including tribes, agencies, and the public. The benefits that reasonably may be expected to accrue from the proposal must be compared against its reasonably foreseeable detriments. The decision whether to approve an

alteration will be determined by the consideration of whether benefits are commensurate with risks and by the net impact of the alteration on the public interest using the public interest factors.

3) Environmental Compliance. A decision on a Section 408 request is a federal action, and therefore subject to the National Environmental Policy Act (NEPA) and other environmental compliance requirements. While USACE is responsible for ensuring environmental compliance, the requester is responsible for providing all information that the district identifies as necessary to satisfy all applicable federal laws, executive orders, regulations, policies, and procedures. NEPA and other analysis completed to comply with other environmental statutes (e.g., Endangered Species Act) should be commensurate with the scale and potential effects of the activity that would alter the USACE project. The district will work with the requester to determine the requirements, which will be scaled to the likely impacts of the proposed alteration and should convey the relevant considerations and impacts in a concise and effective manner.

PUBLIC INVOLVEMENT: The purpose of this notice is to solicit comments from the public; federal, state, and local agencies and officials; tribes; and other interested parties regarding the Packer Ranch Fish Screen and Pump Station Upgrade Project, a proposed alteration to an existing federally authorized project. Comments received within 30 days of publication of this notice will be used in the evaluation of potential impacts of the proposed action on important resources and in the evaluation of whether the proposed alteration would be injurious to the public interest and/or would impair the usefulness of the authorized project. Only the specific activities that have the potential to occupy, use or alter the Sacramento River Flood Control Project will be evaluated. Please limit comments to the area of the alteration and those adjacent areas that would be directly or indirectly affected by the alteration to the Sacramento River Flood Control Project.

SUBMITTING COMMENTS: Written comments, referencing Identification Number 19328 must be submitted to the office listed below on or before February 1, 2019.

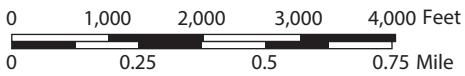
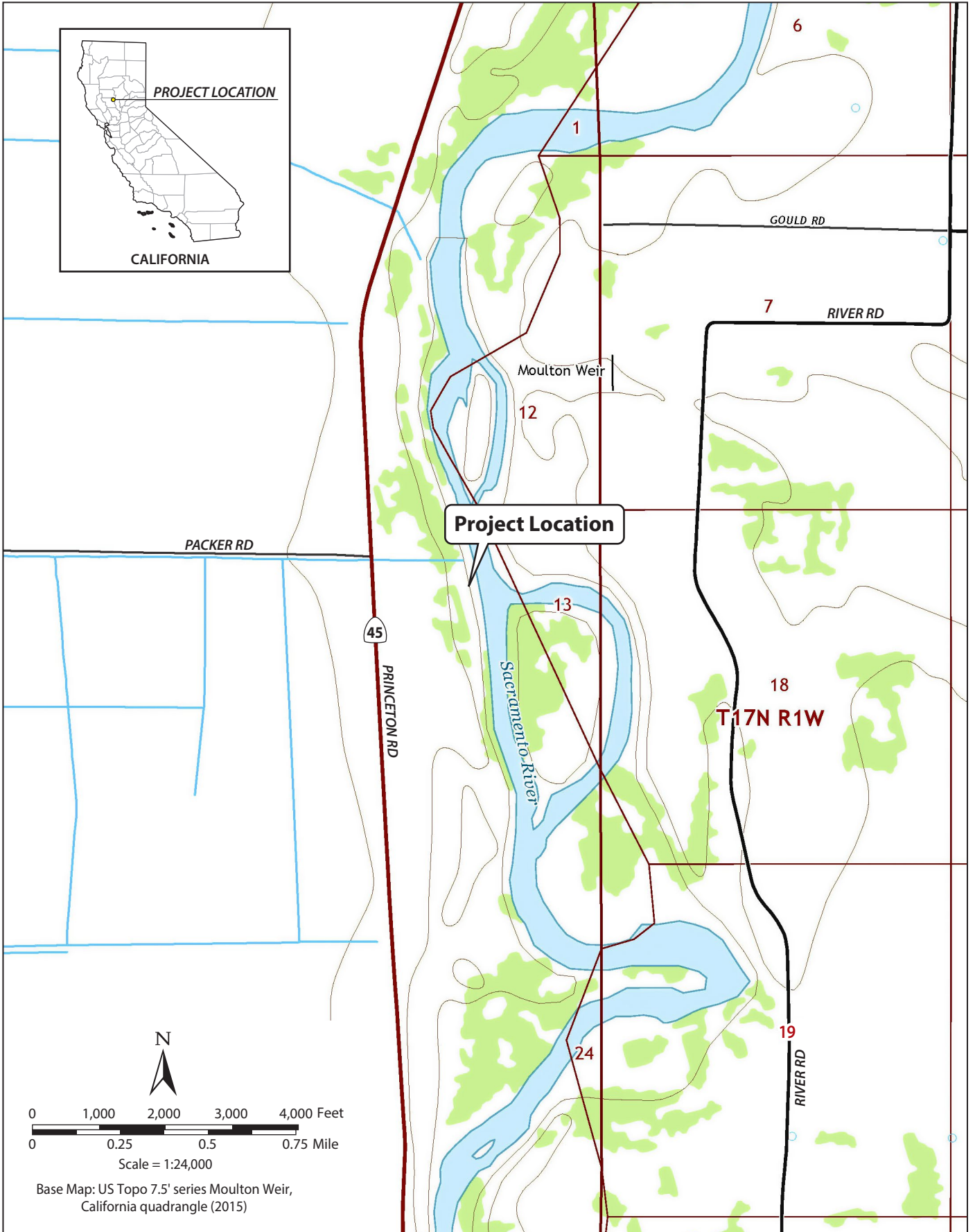
Kaleigh Maze, Biologist
US Army Corps of Engineers, Sacramento District
1325 J Street, Room 1460
Sacramento, California 95814-2922

Email: Kaleigh.Maze@usace.army.mil

Attachments:

- 1) Vicinity map
- 2) Site map
- 3) Site photographs
- 4) Special status species list

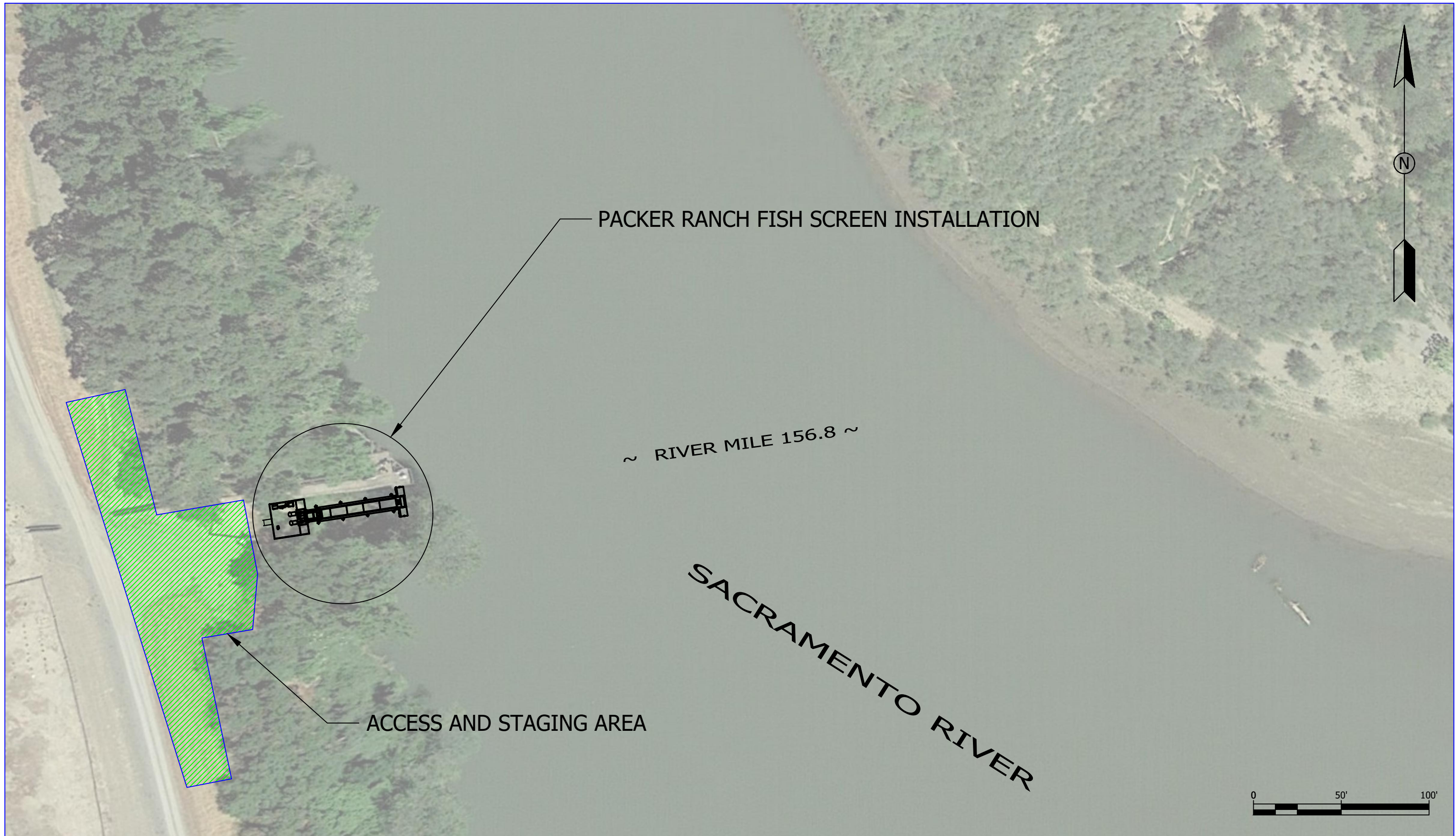
Attachment 1 – Vicinity Map



Scale = 1:24,000

Base Map: US Topo 7.5' series Moulton Weir, California quadrangle (2015)

Attachment 2 – Site Map

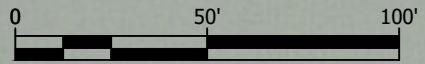



PACKER RANCH FISH SCREEN INSTALLATION

~ RIVER MILE 156.8 ~

SACRAMENTO RIVER

ACCESS AND STAGING AREA



ALL DIMENSIONS IN INCHES UNLESS NOTED				 <p>www.intakescreensinc.com CA C.L. 796197 8417 River Road - Sacramento, California 95832 (916) 665-2727 (916) 665-2729 FAX</p>	DATE	9/4/18	PROJECT	PACKER RANCH	DESCRIPTION	MAP OVERVIEW	DRAWING NUMBER	PACKER RANCH_100	SHEET NUMBER	3 OF 10
<rev>	<rev_description>	<rev_date>	APPROVED		APP'D BY	R.BERRY	MATERIAL		N/A	MASS	N/A			
REV	DESCRIPTION	DATE	APPROVED	DRAWN BY	MAR	"B" SHEET SCALE	1" = 50'							
Designs are property of INTAKE SCREENS INC; and are subject to change without notice.				STANDARD TOLERANCES Fractional Dimensions ± 1/32 Decimal Dimensions ± 0.005										

Attachment 3 – Site Photographs





Attachment 4 – Special Status Species List

Table 3.4-1. Special-Status Plants with Potential to Occur in the Vicinity of the Study Area

Common and Scientific Name	Legal Status ^a Federal/ State/CNPS	Geographic Distribution	Habitat Requirements ^b	Identification Period	Potential for Occurrence in Study Area
Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i>	-/-/1B.1	Historical range included the Central Valley from Butte County to Solano County but currently only occurs in Butte, Glenn, Colusa, Sutter, and Yolo Counties.	Seasonally wet areas in meadows and seeps, subalkaline flats in valley and foothill grassland; 2–75 meters.	Apr–May	No suitable habitat present in study area. Nearest recorded occurrence is ~8.8 miles southwest of the study area.
Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	-/-/1B.2	Western Central Valley and valleys of adjacent foothills.	Saline or alkaline area in chenopod scrub, meadows and seeps, sandy soils in valley and foothill grassland; below 560 meters.	Apr–Oct	No suitable habitat present in study area. Nearest recorded occurrence is ~7.5 miles northwest of the study area.
Brittlescale <i>Atriplex depressa</i>	-/-/1B.2	Western and eastern Central Valley and adjacent foothills on west side of Central Valley.	Alkaline or clay soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools; below 320 meters.	Apr–Oct	No suitable habitat present in study area. Nearest recorded occurrence is ~7.8 miles northwest of the study area.
Vernal pool smallscale <i>Atriplex persistens</i>	-/-/1B.2	Central Valley, from Glenn County to Tulare County.	Dry beds of vernal pools on alkaline soils; 10–115 meters.	Jun–Oct	No suitable habitat present in study area. Nearest recorded occurrence is ~9 miles northwest of the study area.
Watershield <i>Brasenia schreberi</i>	-/-/2B.3	Scattered occurrences in north and central California; widespread across U.S.	Freshwater marshes; 30–2,200 meters.	Jun–Sep	No marsh habitat or floating aquatic vegetation present along the river in study area. Nearest recorded occurrence is ~7.5 miles southeast of the study area.
Palmate-bracted bird's-beak <i>Chloropyron palmatum</i>	E/E/1B.1	Livermore Valley and scattered locations in the Central Valley from Colusa to Fresno Counties.	Alkaline grassland, alkali meadow, chenopod scrub 15–500 meters.	May–Oct	No suitable habitat present in study area. Nearest recorded occurrence is ~3 miles southwest of the study area.

Common and Scientific Name	Legal Status ^a Federal/ State/CNPS	Geographic Distribution	Habitat Requirements ^b	Identification Period	Potential for Occurrence in Study Area
Peruvian dodder <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	-/-/2B.2	Not seen since 1948; occurrences in Butte, Los Angeles, Merced, Sacramento?, San Bernardino*, and Sonoma Counties; Baja California and elsewhere.	Freshwater marshes and swamps; 15–280 meters.	Jul–Oct	No marsh habitat present along the river in study area. Nearest recorded occurrence is ~7.5 miles southeast of the study area.
Hoover’s spurge <i>Euphorbia hooveri</i>	T/-/1B.2	Central Valley from Butte County to Tulare County.	Below the high-water mark of large northern hardpan and volcanic vernal pools; 25–250 meters.	Jul–Sep (Oct)	No suitable habitat present in study area. Nearest recorded occurrence is ~9.4 miles northwest of the study area.
San Joaquin spearscale <i>Extriplex joaquiniana</i>	-/-/1B.2	Western edge of the Central Valley from Glenn to Tulare Counties.	Alkaline soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland; below 830 meters.	Apr–Oct	No suitable habitat present in study area. Nearest recorded occurrence is ~7.8 miles northwest of the study area.
Water star-grass <i>Heteranthera dubia</i>	-/-/2B.2	All occurrences are historical and some are possibly extirpated; Butte, Colusa, Lassen, Mendocino, Modoc, Marin, San Francisco, Shasta, San Mateo Counties; also many states across the U.S.	Alkaline, still or slow-moving water of marshes and swamps; requires a pH of 7 or higher, usually in slightly eutrophic waters 30–1,495 meters.	Jul–Oct	No suitable habitat present in study area. Nearest recorded occurrence is ~6.5 miles east of the study area.
Woolly rose-mallow <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	-/-/1B.2	Central and southern Sacramento Valley, deltaic Central Valley, and elsewhere in the U.S.	Freshwater marsh along rivers and sloughs, often in riprap on sides of levees; below 120 meters.	Jun–Sep	No marsh habitat present along the river in study area; bank is steep and shaded with no vegetation on mudflats. Nearest recorded occurrence is ~6.5 miles east of the study area.

Common and Scientific Name	Legal Status ^a Federal/ State/CNPS	Geographic Distribution	Habitat Requirements ^b	Identification Period	Potential for Occurrence in Study Area
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>Coulteri</i>	-/-/1B.1	Scattered locations in southern California from San Luis Obispo County to San Diego County, in the outer South Coast Ranges, south coast, northern Channel Islands, Peninsular Ranges, western Mojave Desert, also in Yolo and Tehama Counties.	Coastal salt marshes and swamps, grasslands, vernal pools, alkali sinks, playas, in alkaline soils; 1–1,220 meters.	Feb–Jun	No suitable habitat present in study area. Nearest recorded occurrence is ~8.8 miles southwest of the study area.
Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i>	-/-/1B.2	Southern Sacramento Valley.	Alkaline flats in valley and foothill grassland; 10–200 meters.	Mar–May	No suitable habitat present in study area. Nearest recorded occurrence is ~7.5 miles northwest of the study area.
Little mousetail <i>Myosurus minimus</i> ssp. <i>Apus</i>	-/-/3.1	Central Valley and South Coast from Butte County south to San Diego County; Baja California, Oregon.	Valley and foothill grassland, alkaline vernal pools; 20–640 meters.	Mar–Jun	No suitable habitat present in study area. Nearest recorded occurrence is more than 10 miles outside of the study area.
Colusa grass <i>Neostapfia colusana</i>	T/E/1B.1	Central Valley: Colusa*, Glenn, Merced, Solano, Stanislaus, and Yolo Counties.	Adobe soils of vernal pools; 5–200 meters.	May–Aug	No suitable habitat present in study area. Nearest recorded occurrence is ~5 miles north of the study area.
Hairy Orcutt grass <i>Orcuttia pilosa</i>	E/E/1B.1	Scattered locations along east edge of the Central Valley and adjacent foothills from Tehama to Merced Counties.	Vernal pools; 46–200 meters.	May–Sep	No suitable habitat present in study area. Nearest recorded occurrence is ~9.4 miles northwest of the study area.
California alkali grass <i>Puccinellia simplex</i>	-/-/1B.2	Scattered locations in the Central Valley, San Francisco Bay Area, inner north coast ranges, southern Sierra Nevada foothills, and Mojave Desert; Utah	Chenopod scrub, meadows and seeps, valley and foothill grassland, alkaline vernal pools; sinks, flats, and lake margins; 2–930 meters.	Mar–May	No suitable habitat present in study area. Nearest recorded occurrence is more than 10 miles outside of the study area.

Common and Scientific Name	Legal Status ^a Federal/ State/CNPS	Geographic Distribution	Habitat Requirements ^b	Identification Period	Potential for Occurrence in Study Area
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	-/-/2B.1	Scattered locations in the Central Valley and Southern Coast; Texas.	On alkaline soils in floodplains, meadows and seeps, marshes and swamps, riparian forest, vernal pools; 5-430 meters.	May-Sep	No suitable microhabitat (alkaline soils) is present in the riparian forest. Nearest recorded occurrence is more than 10 miles outside of the study area.
Greene's tuctoria <i>Tuctoria greenei</i>	E/R/1B.1	Scattered distribution along eastern Central Valley and foothills from Shasta County to Tulare County.	Dry vernal pools; 30-1,070 meters.	May-Jul (Sep)	No suitable habitat present in study area. Nearest recorded occurrence is more than 10 miles outside of the study area.
Brazilian watermeal <i>Wolffia brasiliensis</i>	-/-/2B.3	Known in California from a few occurrences along the Sacramento River in Butte, Glenn, Sutter, and Yuba Counties; widespread elsewhere in the U.S.	Shallow freshwater in marshes and swamps; 20-100 meters.	Apr-Dec	No marsh habitat present along the river in study area. Nearest recorded occurrence is ~10 miles east of the study area.

Sources: California Native Plant Society 2018; California Department of Fish and Game 2018.

? = Uncertainty about distribution or identity

* = Extirpated

^a Status explanations:

Federal

E = listed as endangered under the federal Endangered Species Act.

- = no listing.

State

E = listed as endangered under the California Endangered Species Act.

R = listed as rare under the California Endangered Species Act. This category is no longer used for newly listed plants, but some plants previously listed as rare retain this designation.

- = no listing.

CNPS California Rare Plant Rank

1B = List 1B species: rare, threatened, or endangered in California and elsewhere.

2B = List 2B species: rare, threatened, or endangered in California but more common elsewhere.

3 = List 3 species: more information is needed about this plant.

0.1 = seriously endangered in California.

0.2 = fairly endangered in California.

^b Elevations in the study area vary from approximately 55 to 70 feet (17 to 21 meters) AMSL.

Table 3.4-2. Special-Status Wildlife with Potential to Occur in the Vicinity of the Study Area

Common and Scientific Names	Status ^a Federal/ State/Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Biological Study Area
Invertebrates				
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/-/-	Streamside habitats below 3,000 feet (915 meters) throughout the Central Valley.	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.	High—known occurrences within 1 mile of the project boundary. Twelve elderberry shrubs (host plant) are present within 10–50 feet (3–15 meters) of the study area.
Conservancy fairy shrimp <i>Branchinecta conservation</i>	E/-/-	Disjunct occurrences in Solano, Merced, Tehama, Ventura, Butte, and Glenn Counties.	Large, deep vernal pools in annual grasslands.	None—no suitable habitat present in the study area.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T/-/-	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County.	Common in vernal pools; also found in sandstone rock outcrop pools.	None—no suitable habitat present in the study area.
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	E/-/-	Shasta County south to Merced County.	Vernal pools and ephemeral stock ponds.	None—no suitable habitat present in the study area.
Amphibians				
California red-legged frog <i>Rana draytonii</i>	T/SSC/-	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County.	Permanent and semi-permanent aquatic habitats, such as creeks and coldwater ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.	None—no suitable habitat present. Species considered extirpated from the valley floor (U.S. Fish and Wildlife Service 2002).
Reptiles				
Western pond turtle <i>Emys marmorata</i>	-/SSC/-	Occurs from the Oregon border of Del Norte and Siskiyou Counties south along the coast to San Francisco Bay, inland through the Sacramento Valley, and on the western slope of Sierra Nevada.	Ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests.	Moderate—suitable aquatic habitat present in the Sacramento River.

Common and Scientific Names	Status ^a Federal/ State/Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Biological Study Area
Giant garter snake <i>Thamnophis gigas</i>	T/T/-	Central Valley from the vicinity of Burrel in Fresno County north to near Chico in Butte County; has been extirpated from areas south of Fresno.	Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter.	None—no suitable aquatic habitat within the study area due to the high velocity flows of the Sacramento River. No associated suitable upland habitat present within the study area. CNDDDB occurrences within 2 miles of the study area.
Birds				
Swainson's hawk <i>Buteo swainsoni</i>	-/T/-	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County.	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields.	High—suitable nesting and foraging habitat; seven occurrences within 5 miles of the study area.
Northern harrier <i>Circus cyaneus</i>	-/SSC/-	Occurs throughout lowland California. Has been recorded in fall at high elevations.	Nests and forages in grasslands, meadows, marshes, and seasonal and agricultural wetlands.	Moderate—suitable foraging habitat adjacent to the study area; limited suitable nesting habitat.
White-tailed kite <i>Elanus leucurus</i>	-/FP/-	Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border.	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging.	Moderate—suitable nesting and foraging habitat in the vicinity of the study area.
Bald eagle <i>Haliaeetus leucocephalus</i>	-/E, FP/-	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin. Reintroduced into central coast. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County.	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean.	High—suitable nesting and foraging habitat along Sacramento River; one CNDDDB occurrence within 1 mile and one individual observed within 0.25 mile of the study area.

Common and Scientific Names	Status ^a Federal/ State/Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Biological Study Area
California black rail <i>Laterallus jamaicensis coturniculus</i>	-/FP,T/-	Permanent resident in the San Francisco Bay and eastward through the Delta into Sacramento and San Joaquin Counties; small populations in Marin, Santa Cruz, San Luis Obispo, Orange, Riverside, and Imperial Counties.	Tidal salt marshes associated with heavy growth of pickleweed; also occurs in brackish marshes or freshwater marshes at low elevations.	None—no suitable nesting substrate in the study area.
Greater sandhill crane <i>Grus canadensis tabida</i>	-/FP,T/-	Breeds in Siskiyou, Modoc, Lassen, Plumas, and Sierra Counties. Winters in the Central Valley, southern Imperial County, Lake Havasu National Wildlife Refuge, and the Colorado River Indian Reserve.	Summers in open terrain near shallow lakes or freshwater marshes. Winters in plains and valleys near bodies of fresh water.	Low—limited suitable wintering habitat in the vicinity of the study area.
Western yellow-billed cuckoo <i>Coccyzus americanus</i>	T/E/-	Nests along the upper Sacramento, lower Feather, south fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers.	Wide, dense riparian forests with a thick understory of willows for nesting; Large patch sizes (20–40 hectares [49–99 acres], with a minimum width of 100 meters [328 feet]), are typically required for cuckoo occupancy (Laymon 1998; Riparian Habitat Joint Venture 2004). Sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley-oak riparian habitats where scrub jays are abundant.	High—suitable habitat within and adjacent to the study area and six occurrences within 5 miles of the study area. The Sacramento River is designated as proposed critical habitat (74 FR 52345 starting 5 mi (8 km) southeast of the city of Red Bluff in Tehama County, California, to the downstream boundary of the Colusa-Sacramento River State Recreation Area next to the town of Colusa in Colusa County, California.
Northern spotted owl <i>Strix occidentalis caurina</i>	T/T/-	Widely distributed in forested regions from southern British Columbia through Washington, Oregon, and northwestern California.	Nests in mature coniferous forests with dense canopy cover at low and moderate elevations.	None—no suitable habitat in the study area.

Common and Scientific Names	Status ^a Federal/ State/Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Biological Study Area
Bank swallow <i>Riparia</i>	-/T/-	Occurs along the Sacramento River from Tehama County to Sacramento County, along the Feather and lower American Rivers, in the Owens Valley, and in the plains east of the Cascade Range in Modoc, Lassen, and northern Siskiyou Counties. Small populations near the coast from San Francisco County to Monterey County.	Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam.	Low—CNDDDB occurrences within 1 mile of study area; however, no suitable nesting habitat in the study area due to dense vegetation on banks.
Song sparrow ("Modesto" population) <i>Melospiza melodia</i>	-/SSC/-	Year-round range includes the Delta east of Suisun Marsh, the Sacramento Valley, and the northern San Joaquin Valley.	Nests and forages primarily in emergent marsh, riparian scrub, and early successional riparian forest habitats, and infrequently in mature riparian forest and sparsely vegetated ditches and levees.	High—suitable nesting and foraging habitat in riparian and emergent vegetation in and adjacent to the study area; no occurrences within 5 miles of the study area.
Tricolored blackbird <i>Agelaius tricolor</i>	-/CE/-	Permanent resident in the Central Valley from Butte County to Kern County; breeds at scattered coastal locations from Marin County south to San Diego County and at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in Siskiyou, Modoc, and Lassen Counties.	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grain fields; habitat must be large enough to support 50 pairs; probably requires water at or near the nesting colony.	Low—CNDDDB occurrences within 2.5 miles of study area. No suitable nesting habitat present in the study area.

Common and Scientific Names	Status ^a Federal/ State/Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Biological Study Area
Mammals				
Pallid bat <i>Antrozous pallidus</i>	-/SSC/ WBWG: High priority	Occurs throughout California, except the high Sierra, from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations.	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Day and night roosts occur in cavities and crevices in rock outcrops, caves, mines, bridges and other human-made structures and trees.	Moderate—suitable roosting and foraging habitat; no occurrences have been recorded within 5 miles of the study area (possibly due to the lack of bat surveys in this area).
Silver-haired bat <i>Lasionycteris noctivagans</i>	-/-/WBWG: Moderate priority	Found from the Oregon border south along the coast to San Francisco Bay and along the Sierra Nevada and Great Basin region to Inyo County. Also occurs in southern California from Ventura and San Bernardino Counties south to Mexico. Has been recorded in Sacramento, Stanislaus, Monterey, and Yolo Counties.	During spring and fall migrations, may be found anywhere in California. Summer habitats include coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark.	Moderate—suitable roosting and foraging habitat in study area; no occurrences have been recorded within 5 miles of the study area (possibly due to the lack of bat surveys in this area).
Western red bat <i>Lasiurus blossevillii</i>	-/SSC/ WBWG: High priority	Scattered throughout much of California at lower elevations.	Found primarily in riparian and wooded habitats. Occurs at least seasonally in urban areas. Day roosts in trees in the foliage. Found in fruit orchards and sycamore riparian habitats in the Central Valley.	Moderate—suitable roosting and foraging habitat within and adjacent to the study area; no occurrences have been recorded within 5 miles of the study area (possibly due to the lack of bat surveys in this area).

Common and Scientific Names	Status ^a Federal/ State/Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Biological Study Area
Hoary bat <i>Lasiurus cinereus</i>	-/-/ WBWG: Moderate priority	Occurs throughout California from sea level to 13,200 feet.	Found primarily in forested habitats. Also found in riparian areas and in park and garden settings in urban areas. Day roosts in foliage of trees.	Moderate—suitable roosting and foraging habitat in study area; no occurrences have been recorded within 5 miles of the study area (possibly due to the lack of bat surveys in this area).
Western small-footed myotis <i>Myotis ciliolabrum</i>	-/-/ WBWG: Moderate priority	Occurs through much of California, except the northwest and coastal areas.	Particularly associated with coniferous forests and rocky xeric habitats. Typically roosts in rock crevices in mines, caves and occasionally in buildings, bridges and other human structures. Forages over a variety of habitats.	Moderate—Suitable foraging habitat within and adjacent to the study area.
San Joaquin pocket mouse <i>Perognathus inornatus</i>	-/ SSC /-	Year-round range spans the San Joaquin Valley, Delta, Sacramento Valley through Colusa County, and portions of the southern Coast Ranges.	Inhabits grassland and scrub habitats with friable soils.	Low—Limited suitable habitat in the vicinity of the study area.
American badger <i>Taxidea taxus</i>	-/ SSC /-	Year-round range spans all of California except the Humboldt and Del Norte coasts	Drier open shrub, forest, and herbaceous habitats with friable soils.	Low—Limited suitable habitat in the vicinity of the study area.

Common and Scientific Names	Status ^a Federal/ State/Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Biological Study Area
<p>^a Status explanations:</p> <p>Federal</p> <p>E = listed as endangered under the federal Endangered Species Act. T = listed as threatened under the federal Endangered Species Act. C = candidate species for which U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded. - = no listing.</p> <p>State</p> <p>E = listed as endangered under the California Endangered Species Act. T = listed as threatened under the California Endangered Species Act. FP = fully protected under the California Fish and Game Code. SSC = species of special concern in California. C = A state candidate species is one that the Fish and Game Commission (FGC) has formally declared a candidate species for listing.- = no listing.</p> <p>Other</p> <p>WBWG = Western Bat Working Group 2007. Available: http://www.wbwg.org/spp_matrix.html. Moderate priority = species status is unclear because of a lack of data; this designation indicates a level of concern that should warrant (1) closer evaluation and more research of the species and possible threats and (2) conservation actions benefiting the species. High priority = species are imperiled or at high risk of imperilment.</p>				

Table 3.4-3. Special-Status Fish with Potential to Occur in the Vicinity of the Study Area

Common and Scientific Name	Legal Status ^a Federal/ State	Geographic Distribution	Habitat Requirements	Potential for Occurrence in Study Area
Sacramento River winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	E/E	Spawning adults occur in the main-stem Sacramento River from Keswick Dam to Red Bluff Diversion Dam. Juveniles occur from the Upper Sacramento River through the Delta and the San Francisco Estuary.	Occurs in well-oxygenated, cool, riverine habitat with water temperatures from 8.0–12.5°C. Habitat types are riffles, runs, and pools (Moyle 2002).	High—during adult migration and juvenile rearing/migration. No suitable spawning habitat is present in the study area. Sacramento River is designated as critical habitat (58 FR 33212) and EFH for Pacific salmon.
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	T/T	The Sacramento River, Feather River, Yuba River, Butte Creek, Mill Creek, Deer Creek, Antelope Creek, Battle Creek, Clear Creek, and Beegum Creek tributary to Cottonwood Creek.	Occurs in tributaries of the Sacramento River that maintain well-oxygenated, cool, riverine habitat with water temperatures from 8.0–12.5°C. Habitat types are riffles, runs, and pools (Moyle 2002).	High—during adult migration and juvenile rearing/migration. No suitable spawning habitat is present in the study area. The Sacramento River is designated as critical habitat (70 FR 52596–52597, September 2, 2005) and EFH for Pacific salmon.
Central Valley fall-/late fall-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	SSC/-	The main stem Sacramento River and tributaries. The San Joaquin River tributaries.	Occurs in streams and rivers within the Sacramento and San Joaquin River drainage that are well-oxygenated, cool, riverine habitat with water temperatures from 8.0–12.5°C. Habitat types are riffles, runs, and pools (Moyle 2002).	High—during adult migration into Sacramento River and tributaries and juvenile rearing/migration. No suitable spawning habitat is present in the study area. Critical habitat has not been designated; however, the Sacramento River is considered EFH for Pacific salmon.
Central Valley steelhead <i>Oncorhynchus mykiss</i>	T/-	Riverine and stream habitat within the Sacramento-San Joaquin River drainages that contain suitable habitat needed for steelhead survival.	Occurs in streams and rivers within the Sacramento River drainage that are well-oxygenated, cool, riverine habitat with water temperatures from 7.8–18°C (Moyle 2002). Habitat types are riffles, runs, and pools.	High—during adult migration and juvenile rearing/migration. No suitable spawning habitat is present in the study area. The Sacramento River is designated as critical habitat (70 FR 52611–52612).

Common and Scientific Name	Legal Status ^a Federal/ State	Geographic Distribution	Habitat Requirements	Potential for Occurrence in Study Area
North American green sturgeon (Southern DPS) <i>Acipenser medirostris</i>	T/SSC	The Sacramento River, the Yolo and Sutter bypasses, the lower Feather River, and the lower Yuba River. The lower San Joaquin River and the Delta. SF Estuary and coastal waters.	Habitat that is free of migratory obstructions, with water quantity and quality that support migratory movements, enhance juvenile growth and provide cover. Need well-oxygenated water, with temperatures from 8.0–14°C (Moyle 2002).	High—during adult migration and juvenile rearing/migration. No suitable spawning habitat is present in the study area. The Sacramento River is designated as critical habitat (74 FR 52345).
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	-/SSC	The Sacramento river, sloughs, backwaters and oxbow lakes to Red Bluff Diversion Dam.	Estuarine waters with freshwater habitat for spawning and early rearing. Require rising hydrograph for upstream migration and flooded vegetation for spawning. Can tolerate salinities of 0–29 ppt, and temperatures from 5–33°C (Moyle 2002; Moyle et al. 2015).	High—during adult migration and juvenile rearing/migration. Study area may support suitable spawning habitat. Critical habitat has not been designated.
Pacific lamprey <i>Entosphenus tridentata</i>	-/SSC	The Sacramento and San Joaquin Rivers and their tributaries, upstream to large impassable dams; the Delta and San Francisco Bay and tributaries (Moyle 2002; Moyle et al. 2015).	Cold, clear water with suitable gravels for spawning and egg incubation. Ammocoetes (larvae) require soft sediments in which to burrow during rearing (Moyle 2002; Moyle et al. 2015).	High—during adult migration and juvenile earing/migration. Spawning adults have been observed in Deer Creek (Tehama County) upstream of the study area (Moyle 2002). No suitable spawning habitat is present in the study area; however, study area may support suitable rearing habitat for young juveniles (ammocoetes). Critical habitat has not been designated.

Common and Scientific Name	Legal Status ^a Federal/ State	Geographic Distribution	Habitat Requirements	Potential for Occurrence in Study Area
Western river lamprey <i>Lampetra ayresi</i>	-/SSC	Sacramento, San Joaquin, and Napa Rivers; tributaries of San Francisco Bay (Moyle 2002; Moyle et al. 2015).	Habitat requirements are presumably similar to other lampreys, and include clean, gravelly riffles for spawning and sandy or silty backwaters or stream edges for young juveniles (ammocoetes) (Moyle et al. 2015)	High—during adult migration and juvenile rearing/migration. No suitable spawning habitat is present in the study area; however, study area may support suitable year-round rearing habitat for young juveniles (ammocoetes). Critical habitat has not been designated.
Hardhead <i>Mylopharodon conocephalus</i>	-/SSC	Widely distributed in streams at low- to mid-elevations in the Sacramento-San Joaquin and Russian River drainages (Moyle 2002; Moyle et al. 2015).	Typically occur in undisturbed, low- to mid-elevation streams and main stem Sacramento River and tributaries (Moyle 2002; Moyle et al. 2015).	High—adult residency/migration and juvenile rearing. Study area may support suitable spawning habitat. Critical habitat has not been designated.

DPS = distinct population segment; °C = degrees Celsius; ppt = parts per thousand; EFH = essential fish habitat.

^a Status explanations:

Federal

- E = listed as endangered under the federal Endangered Species Act.
- T = listed as threatened under the federal Endangered Species Act.
- C = candidate for listing as threatened or endangered under the federal Endangered Species Act.
- = no listing.

State

- E = listed as endangered under the California Endangered Species Act.
- T = listed as threatened under the California Endangered Species Act.
- FP = fully protected under the California Fish and Game Code.
- SSC = species of special concern in California.
- = no listing.