



Biological Resource Evaluation

April 2024

Cantua Creek Infiltration Basin Project

Fresno County, CA

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Executive Summary

Westlands Water District proposes to divert up to 5000 acre-feet of flows annually from Cantua Creek (an ephemeral stream) during high flow events and store the water in the aquifer system via three basins approximately 4 miles south of the town of Cantua Creek in Fresno County, California (the Project). The purpose of this Project is to enhance natural groundwater recharge, promote groundwater sustainability, and provide flood protection for landowners adjacent to the proposed percolation basins.

To evaluate whether the Project may affect biological resources under California Environmental Quality Act (CEQA) purview, we (1) obtained lists of special-status species from the United States Fish and Wildlife Service, the California Department of Fish and Wildlife, and the California Native Plant Society; (2) reviewed other relevant background information such as satellite imagery and topographic maps; and (3) conducted a field reconnaissance survey at the Project site.

This biological resource evaluation summarizes (1) existing biological conditions on the Project site, (2) the potential for special-status species and regulated habitats to occur on or near the Project site, (3) the potential impacts of the proposed Project on biological resources and regulated habitats, and (4) measures to reduce those potential impacts to less-than-significant levels under CEQA.

We concluded the Project will affect one regulated habitat (Cantua Creek) and could affect two special-status species, both California Species of Special Concern—burrowing owl (*Athene cunicularia*) and loggerhead shrike (*Lanius ludoivicianus*)—as well as nesting migratory birds. However, effects can be reduced to less-than-significant levels with mitigation.



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Abbreviations

Abbreviation	Definition
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
FE	Federally listed as Endangered
FESA	Federal Endangered Species Act
FP	State Fully Protected
FT	Federally listed as Threatened
MBTA	Migratory Bird Treaty Act
NRCS	Natural Resources Conservation Science
SE	State listed as Endangered
SSSC	State Species of Special Concern
ST	State listed as Threatened
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey



1.0 Introduction

1.1 Background

Westlands Water District proposes to divert up to 5000 acre-feet of flows annually from Cantua Creek during high flow events and store the water in the aquifer system via three basins (Cell-1, Cell-2, and Cell-3), approximately 4 miles south of the town of Cantua Creek in Fresno County, California (the Project). The purpose of this Project is to enhance natural groundwater recharge, promote groundwater sustainability, and provide flood protection for landowners adjacent to the proposed percolation basins.

The purpose of this biological resource evaluation is to assess whether the Project will affect protected biological resources pursuant to California Environmental Quality Act (CEQA) guidelines. Such resources include species of plants or animals listed or proposed for listing under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA) as well as those covered under the Migratory Bird Treaty Act (MBTA), the California Native Plant Protection Act, and various other sections of California Fish and Game Code (CFGC). This biological resource evaluation also addresses Project-related impacts to regulated aquatic habitats, which are those under the jurisdiction of the United States Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), or California Department of Fish and Wildlife (CDFW).

1.2 Project Description

This Project will involve diverting up to 5000 acre-feet of flows annually from Cantua Creek into three percolation basins (Cell-1, Cell-2, and Cell-3) on the northern 42.5 acres of an 81-acre property at the terminus of Cantua Creek. Another basin may be constructed on the southern portion of the property to further enhance groundwater recharge.

1.3 Project Location

The Project site consists of an 81-acre parcel south of West Harlan Avenue at the terminus of Cantua Creek. The Project site is immediately west of the California Aqueduct (San Luis Canal) and approximately 4 miles south of the community of Cantua Creek in southwestern Fresno County, California (Figures 1 and 2).



Figure 1. Project site vicinity map.

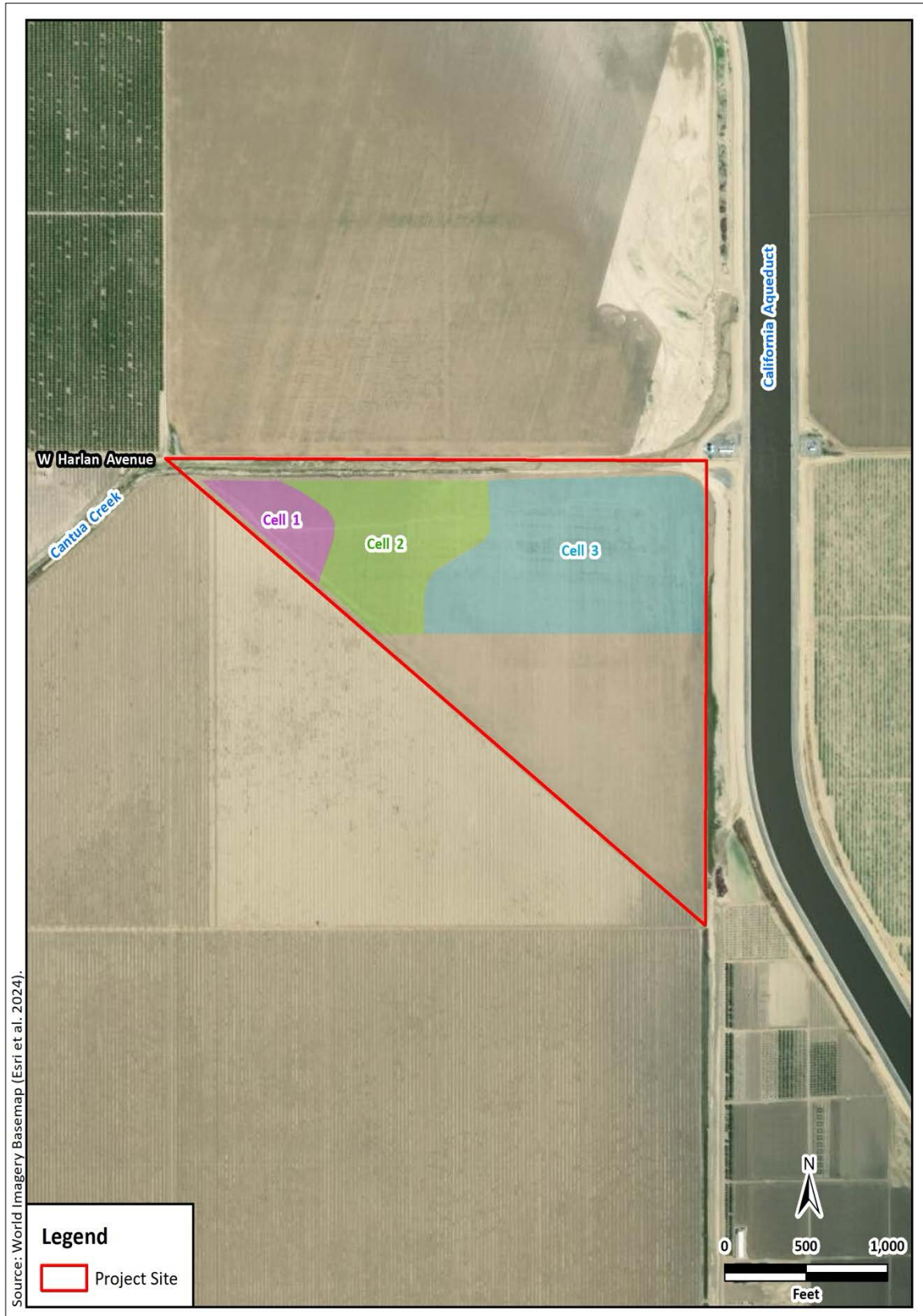


Figure 2. Project site map.



1.4 Regulatory Framework

The relevant regulatory requirements and policies that guide the impact analysis of the Project are summarized below.

1.4.1 State Requirements

California Department of Fish and Wildlife Jurisdiction. The CDFW has regulatory jurisdiction over lakes and streams in California. Activities that divert or obstruct the natural flow of a stream; substantially change its bed, channel, or bank; or use any materials (including vegetation) from the streambed may require that the project applicant enter into a Lake and Streambed Alteration Agreement with the CDFW in accordance with California Fish and Game Code [CFGC] Section 1602.

California Endangered Species Act. The CESA of 1970 (CFGC Section 2050 et seq. and California Code of Regulations (CCR) Title 14, Subsection 670.2, 670.51) prohibits the take of species listed under CESA (14 CCR Subsection 670.2, 670.5). Take is defined as hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill. Under CESA, state agencies are required to consult with the CDFW when preparing CEQA documents. Consultation ensures that proposed projects or actions do not adversely affect state listed species. During consultation, CDFW determines whether take would occur and identifies “reasonable and prudent alternatives” for the project and conservation of special-status species. CDFW can authorize take of state listed species under Sections 2080.1 and 2081(b) of the CFGC in those cases where it is demonstrated the impacts are minimized and mitigated. Take authorized under section 2081(b) must be minimized and fully mitigated. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Under CESA, CDFW is responsible for maintaining a list of threatened and endangered species designated under state law (CFGC Section 2070). CDFW also maintains lists of species of special concern, which serve as “watch lists.” Pursuant to the requirements of CESA, a state or local agency reviewing a proposed project within its jurisdiction must determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation. Impacts to species of concern or fully protected species would be considered significant under certain circumstances.



California Environmental Quality Act. The CEQA of 1970 (Subsections 21000–21178) requires that CDFW be consulted during the CEQA review process regarding impacts of proposed projects on special-status species. Special-status species are defined under CEQA Guidelines subsection 15380(b) and (d) as those listed under FESA and CESA and species that are not currently protected by statute or regulation but would be considered rare, threatened, or endangered under these criteria or by the scientific community. Therefore, species considered rare or endangered are addressed in this biological resource evaluation regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species according to rarity (CNPS 2024). Plants with Rare Plant Ranks 1A, 1B, 2A, or 2B are considered special-status species under CEQA.

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the section of the CFGC dealing with rare and endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the United States Fish and Wildlife Service (USFWS) or CDFW (i.e., candidate species) would occur. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agency has an opportunity to designate the species as protected, if warranted.

California Native Plant Protection Act. The California Native Plant Protection Act of 1977 (CFGC Sections 1900–1913) requires all state agencies to use their authority to carry out programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require the project proponent to notify CDFW at least 10 days in advance of any change in land use, which allows CDFW to salvage listed plants that would otherwise be destroyed.

Nesting birds. CFGC Sections 3503, 3503.5, and 3800 prohibit the possession, incidental take, or needless destruction of birds, their nests, and eggs. CFGC Section 3511 lists birds that are “Fully Protected” as those that may not be taken or possessed except under specific permit.



Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (California Water Code *Section 13000 et. sec.*) was established in 1969 and entrusts the SWRCB and nine Regional Water Quality Control Boards (collectively Water Boards) with the responsibility to preserve and enhance all beneficial uses of California’s diverse waters. The Act grants the Water Boards authority to establish water quality objectives and regulate point- and nonpoint-source pollution discharge to the state’s surface and ground waters. Under the auspices of the United States Environmental Protection Agency, the Water Boards are responsible for certifying, under Section 401 of the federal Clean Water Act, that activities affecting waters of the United States comply with California water quality standards. The Porter-Cologne Water Quality Control Act addresses all “waters of the State,” which are more broadly defined than waters of the United States. Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state. They include artificial as well as natural water bodies and federally jurisdictional and federally non-jurisdictional waters. The Water Boards may issue a Waste Discharge Requirement permit for projects that will affect only federally non-jurisdictional waters of the State.

1.4.2 Federal Requirements

Federal Endangered Species Act. The USFWS and the National Oceanographic and Atmospheric Administration’s National Marine Fisheries Service enforce the provisions stipulated in the FESA of 1973 (FESA, 16 United States Code [USC] Section 1531 et seq.). Threatened and endangered species on the federal list (50 Code of Federal Regulations [CFR] 17.11 and 17.12) are protected from take unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct. Pursuant to the requirements of the FESA, an agency reviewing a proposed action within its jurisdiction must determine whether any federally listed species may be present in the proposed action area and determine whether the proposed action may affect such species. Under the FESA, habitat loss is considered an effect to a species. In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species that is listed or proposed for listing under the FESA (16 USC Section 1536[3], [4]). Therefore, proposed action-related effects to these species or their habitats would be considered significant and would require mitigation.



Migratory Bird Treaty Act. The federal MBTA (16 USC Section 703, Supp. I, 1989) prohibits killing, possessing, trading, or other forms of take of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. “Take” is defined as the pursuing, hunting, shooting, capturing, collecting, or killing of birds, their nests, eggs, or young (16 USC Section 703 and Section 715n). This act encompasses whole birds, parts of birds, and bird nests and eggs. The MBTA specifically protects migratory bird nests from possession, sale, purchase, barter transport, import, and export, and take. For nests, the definition of take per 50 CFR 10.12 is to collect. The MBTA does not include a definition of an “active nest.” However, the “Migratory Bird Permit Memorandum” issued by the USFWS in 2003 and updated in 2018 clarifies the MBTA in that regard and states that the removal of nests, without eggs or birds, is legal under the MBTA, provided no possession (which is interpreted as holding the nest with the intent of retaining it) occurs during the destruction (USFWS 2018).

United States Army Corps of Engineers Jurisdiction. Areas meeting the regulatory definition of “waters of the United States” (jurisdictional waters) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, the territorial seas, all interstate waters, all impoundments of waters otherwise defined as waters of the United States, tributaries of waters otherwise defined as waters of the United States that are relatively permanent, standing, or continuously flowing bodies of water, and relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to waters of the United States (33 CFR part 328.3). Waters of the United States do not include prior converted cropland, waste treatment systems, ditches, artificially irrigated areas, artificial lakes or ponds, artificial reflecting pools or swimming pools, waterfilled depressions, and swales and erosional features. Under the 2006 Supreme Court ruling *Rapanos v. United States*, waters of the United States include non-navigable tributaries of traditional navigable waters that are relatively permanent. The 2023 Supreme Court ruling *Sackett v. Environmental Protection Agency* removed the significant nexus standard for tributaries and adjacent waters of the United States and requires tributaries and adjacent waters to have a continuous surface connection to a water of the United States. Wetlands on non-agricultural lands are identified using the *Corps of Engineers Wetlands Delineation Manual and related Regional Supplement* (USACE 1987 and 2008). Construction activities, including direct removal, filling, hydrologic disruption, or other means in jurisdictional waters are regulated by the USACE. The placement of dredged or fill material into such waters must comply



with permit requirements of the USACE. No USACE permit will be effective in the absence of state water quality certification pursuant to Section 401 of the Clean Water Act. The State Water Resources Control Board is the state agency, together with the Regional Water Quality Control Boards, charged with implementing water quality certification in California.



2.0 Methods

2.1 Desktop Review

As a framework for the evaluation and reconnaissance survey, we obtained a USFWS species list for the Project (USFWS 2024a, Appendix A). In addition, we searched the California Natural Diversity Data Base (CNDDDB, CDFW 2024, Appendix B) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2024, Appendix C) for records of special-status plant and animal species from the vicinity of the Project site. Regional lists of special-status species were compiled using CNDDDB and CNPS database searches confined to the Tres Picos Farms 7.5-minute United States Geological Survey (USGS) topographic quadrangle, which encompasses the Project site, and the eight surrounding quadrangles (Domengine Ranch, Harris Ranch, Westside, San Joaquin, Cantua Creek, Levis, Lillis Ranch, and Joaquin Rocks). A local list of special-status species was compiled using CNDDDB records from within 5 miles of the Project site. Species that lacked a CEQA-recognized special-status designation by state or federal regulatory agencies or public interest groups were omitted from the final list. Species for which the Project site does not provide habitat were eliminated from further consideration. We also reviewed satellite imagery from Google Earth (Google 2024) and other sources, USGS topographic maps, the Web Soil Survey (NRCS 2024), the National Wetlands Inventory (USFWS 2024b), and relevant literature.

2.2 Reconnaissance Survey

Colibri Staff Scientist Ruby Rebensdorf conducted a field reconnaissance survey of the Project site on 20 March 2024. The Project site and a 50-foot buffer surrounding the Project site (Figure 3) were walked and thoroughly inspected to evaluate and document the potential for the area to support state or federally protected resources. All plants except those under cultivation or planted for landscaping and all vertebrate wildlife species observed within the survey area were identified and documented. The survey area was evaluated for the presence of regulated habitats, including lakes, streams, and other waters as defined by the USACE, CDFW (<https://www.wildlife.ca.gov/conservation/lisa>), and under the Porter-Cologne Water Quality Control Act. An additional buffer of 0.5 miles around the Project site was inspected for potential nesting habitat for special-status raptors. The 0.5-mile buffer was surveyed by driving public roads and identifying the presence of large trees or other potentially suitable substrates for nesting raptors as well as open areas that could provide foraging habitat.

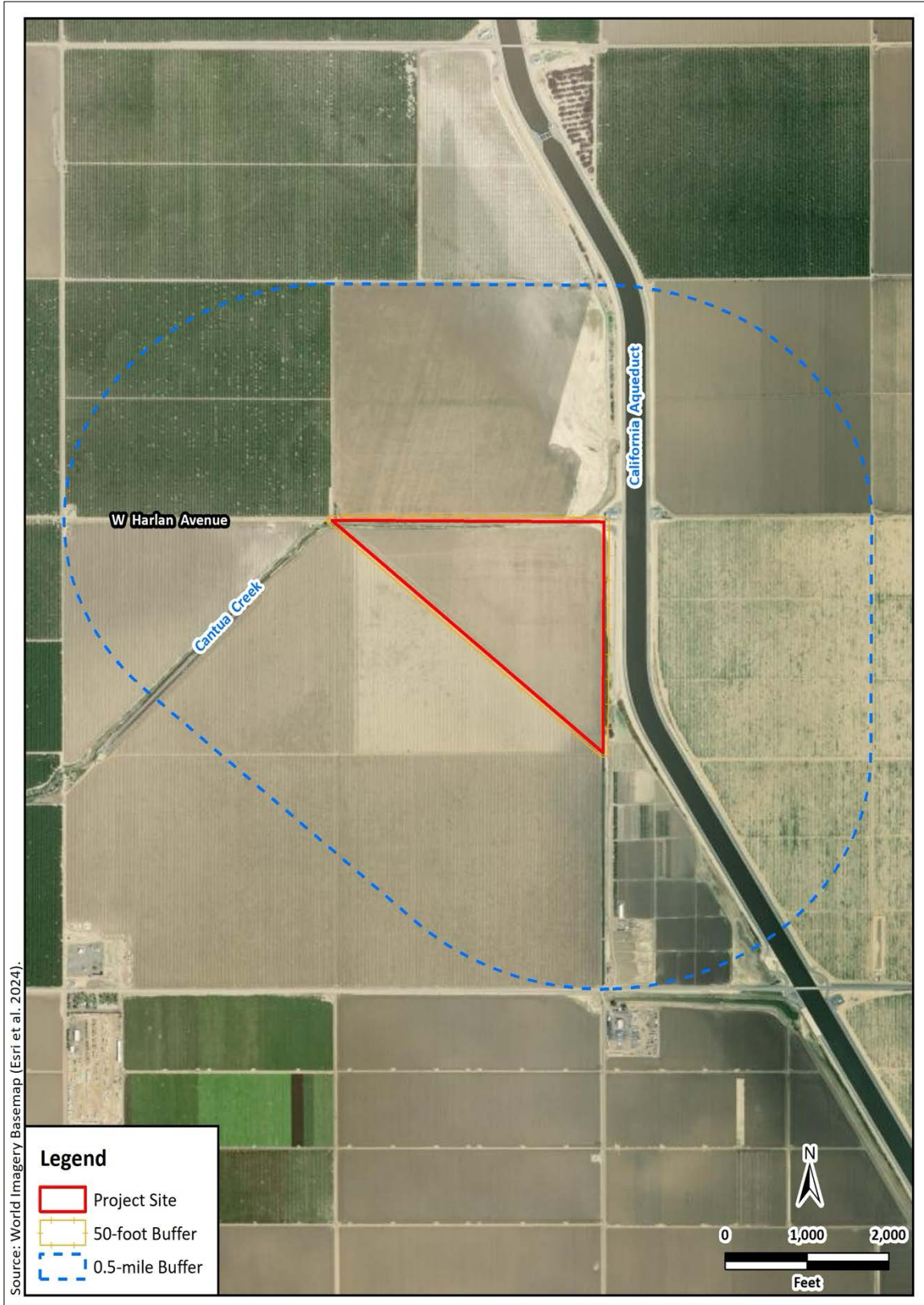


Figure 3. Survey area map.



2.3 Significance Criteria

CEQA defines “significant effect on the environment” as “a substantial, or potentially substantial, adverse change in the environment” (California Public Resource Code § 21068). Under CEQA Guidelines Section 15065, a Project’s effects on biological resources are deemed significant where the Project would do the following:

- a) Substantially reduce the habitat of a fish or wildlife species,
- b) Cause a fish or wildlife population to drop below self-sustaining levels,
- c) Threaten to eliminate a plant or animal community, or
- d) Substantially reduce the number or restrict the range of a rare or endangered plant or animal.

In addition to the Section 15065 criteria, Appendix G within the CEQA Guidelines includes six additional impacts to consider when analyzing the effects of a project. Under Appendix G, a project’s effects on biological resources are deemed significant where the project would do any of the following:

- e) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- f) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;
- g) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- h) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;



-
- i) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

 - j) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These criteria were used to determine whether the potential effects of the Project on biological resources qualify as significant.



3.0 Results

3.1 Desktop Review

The USFWS species list for the Project included 11 species listed as threatened or endangered under the FESA (USFWS 2024a, Table 1, Appendix A). None of those species could occur on or near the Project site due to either (1) the lack of habitat, (2) the Project site being outside the current range of the species, or (3) the presence of development that would otherwise preclude occurrence (Table 1). As identified in the species list, the Project site does not occur in USFWS-designated or proposed critical habitat for any species (USFWS 2024a, Appendix A).

Searching the CNDDDB for records of special-status species from the Tres Picos Farms 7.5-minute USGS topographic quadrangle and the eight surrounding quadrangles produced 132 records of 40 species (Table 1, Appendix B). Of those 40 species, eight were not considered further because they are not CEQA-recognized as special-status species by state or federal regulatory agencies or public interest groups or are considered extirpated in California (Appendix B). Of the remaining 32 species, six are known from within 5 miles of the Project site (Table 1, Figure 4). Of those species, only one—burrowing owl (*Athene cunicularia*), a California Species of Special Concern—could occur on or near the Project site (Table 1).

Searching the CNPS Inventory of Rare and Endangered Plants of California yielded 12 species (CNPS 2024, Appendix C) that have a California Rare Plant Rank of 1 or 2 (Table 1). None of those species are expected to occur on or near the Project site due to the lack of habitat (Table 1).

The Project site is underlain by Excelsior sandy substratum-westhaven association, flooded, 0 to 2 percent slopes; Ciervo clay, 0 to 2 percent slopes; and Cerini sandy loam, 0 to 2 percent slopes (NRCS 2024). The Project site is at an elevation of 327–335 feet above mean sea level (Google 2024).

**Table 1.** Special-status species, their listing status, habitats, and potential to occur on or near the Project site.

Species	Status ¹	Habitat	Potential to Occur ²
Federally and State Listed Endangered or Threatened Species			
San Joaquin woollythreads ³ (<i>Monolopia congdonii</i>)	FE, 1B.2	Sandy soils in shadscale scrub and valley grassland at 295–2300 feet elevation.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Crotch bumble bee (<i>Bombus crotchii</i>)	SCE	Grassland and scrub with underground refugia such as rodent burrows for nesting and abundant flowering plants for foraging.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Monarch California overwintering population (<i>Danaus plexippus</i>)	FC	Groves of trees within 1.5 miles of the ocean that produce suitable micro-climates for overwintering such as high humidity, dappled sunlight, access to water and nectar, and protection from wind.	None. Habitat lacking; the Project site is not within 1.5 miles of the ocean.
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT	Vernal pools; some artificial depressions, stock ponds, vernal swales, ephemeral drainages, and seasonal wetlands.	None. Habitat lacking; no vernal pools or other potentially suitable aquatic features were found in the survey area.
Foothill yellow-legged frog (<i>Rana boylei</i>)	FT, SE	Perennial rocky streams in a variety of land cover types.	None. Habitat lacking; the survey area lacked perennial streams.



Western spadefoot (<i>Spea hammondi</i>)	FPT, SSSC	Open areas with sandy or gravelly soil that allow rain pools to gather for breeding.	None. Habitat lacking; no rain pools were present in the survey area.
Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	FE, SE, FP	Upland scrub and sparsely vegetated grassland with small mammal burrows.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Northwestern pond turtle (<i>Actinemys marmorata</i>)	FPT, SSSC	Ponds, rivers, marshes, streams, and irrigation ditches, usually with aquatic vegetation. Basking sites and suitable upland areas for egg laying.	None. Habitat lacking; the Project site and surrounding areas lacked the aquatic habitat this species requires.
California condor (<i>Gymnogyps californianus</i>)	FE, SE, FP	Shallow caves or cliffs or large tree cavities with minimal disturbance for nesting; vast expanses of open savannah, grasslands, and foothill chaparral in foothills or mountains for foraging.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture and is outside the local range of this species.
Swainson's hawk ³ (<i>Buteo swainsoni</i>)	ST	Large trees for nesting with adjacent grasslands, alfalfa fields, or grain fields for foraging.	None. No potential nest trees were present within the 0.5-mile survey area, and no individuals were observed during the reconnaissance survey.
Tricolored blackbird ³ (<i>Agelaius tricolor</i>)	ST	Vast, open areas with flooded, thorny, or spiny vegetation for nesting; grasslands, seasonal wetlands, cattle feedlots, or dairies for foraging.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.



Giant kangaroo rat (<i>Dipodomys ingens</i>)	FE	Arid grasslands and upland scrub, generally with few or no shrubs on flats or gentle slopes.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture and is outside the local range of this species.
Fresno kangaroo rat (<i>Dipodomys nitratooides exilis</i>)	FE, SE	Sandy, alkaline, saline, and clay-based soils in upland scrub and grassland.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture and is outside the current known range of this species.
San Joaquin antelope squirrel (<i>Ammospermophilus nelsoni</i>)	ST	Arid grasslands and upland scrub with sandy loam soils, widely spaced shrubs, and dry washes.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture and is outside the current known local range of this species.
San Joaquin kit fox ³ (<i>Vulpes macrotis mutica</i>)	FE, ST	Grasslands and upland scrub and fallowed agricultural lands adjacent to natural grasslands or upland scrub.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture and lacked adjacent natural lands.
State Species of Special Concern			
California glossy snake (<i>Arizona elegans occidentalis</i>)	SSSC	Open arid scrub, rocky washes, grasslands, and chaparral.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Coast horned lizard (<i>Phrynosoma blainvillii</i>)	SSSC	Open, generally sandy areas, washes, and flood plains in a variety of natural plant communities.	None. Habitat lacking; Cantua Creek includes a sandy wash; however, it is highly disturbed and surrounded by agricultural development.



Northern California legless lizard (<i>Anniella pulchra</i>)	SSSC	Moist, warm, loose soil with plant cover in beach dunes, chaparral, pine-oak woodlands, sandy areas, and stream terraces.	None. Habitat lacking; the Project site lacked moist, warm, loose soil in beach dunes, chaparral, pine-oak woodlands, sandy areas, and stream terraces.
San Joaquin coachwhip (<i>Coluber flagellum ruddocki</i>)	SSSC	Grasslands and upland scrub with small mammal burrows for cover and reproduction.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Burrowing owl ³ (<i>Athene cunicularia</i>)	SSSC	Grasslands and upland scrub with friable soil; some agricultural or other developed and disturbed areas with ground squirrel burrows.	Low. Ground squirrel burrows were present at multiple locations across the Project site during the 20 March 2024 reconnaissance survey; however, no burrowing owls or sign of burrowing owl use was observed at any burrow.
Short-eared owl (<i>Asio flammeus</i>)	SSSC	Open areas with low vegetation including prairie and coastal grasslands, heathlands, meadows, shrubsteppe, savanna, tundra, marshes, and dunes.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Mountain plover (<i>Charadrius montanus</i>)	SSSC	Open, flat, and arid habitats with low, sparse vegetation.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture with dense, tall herbaceous cover.
Yellow-headed blackbird (<i>Xanthocephalus xanthocephalus</i>)	SSSC	Marshes with tall emergent vegetation for nesting; marshes, grasslands, feed lots,	None. Habitat lacking; the Project site lacked marshes with tall vegetation for nesting.



		and mountain meadows for foraging.	
American badger (<i>Taxidea taxus</i>)	SSSC	Open, dry areas with friable soils and small mammal populations in grassland, conifer forest, and desert.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Tulare grasshopper mouse (<i>Onychomys torridus tularensis</i>)	SSSC	Upland scrub and arid grasslands with scattered shrubs.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
California Rare Plants			
Chaparral ragwort (<i>Senecio aphanactis</i>)	2B.2	Alkaline flats and dry, open, rocky areas in northern coastal scrub, coastal sage scrub, and foothill woodland below 1800 feet elevation.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Hall's tarplant (<i>Deinandra halliana</i>)	1B.1	Upland scrub, grasslands, and foothill woodland with clay soils.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Indian Valley bush-mallow ³ (<i>Malacothamnus aboriginum</i>)	1B.2	Open, rocky slopes and burned areas in foothill woodland and chaparral at 490–2300 feet elevation.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture and is below the elevation range of this species.
Lost Hills crownscale (<i>Atriplex coronata</i> var. <i>vallicola</i>)	1B.2	Chenopod scrub and valley and foothill grassland at 150–2000 feet elevation.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.
Munz's tidy tips (<i>Layia munzii</i>)	1B.2	Alkaline clay soils in chenopod scrub and valley and foothill	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.



		grassland at 300–2100 feet elevation.	
Pale-yellow layia (<i>Layia heterotricha</i>)	1B.1	Foothill and valley woodland, pinyon-juniper woodland, and wetland-riparian woodland with clay and sandy soils at 660–5900 feet elevation.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture and is below the elevation range of this species.
Panoche navarretia (<i>Navarretia nigelliformis</i> ssp. <i>radians</i>)	1B.2	Vernal pools and clay depressions at 215–3280 feet elevation.	None. Habitat lacking; the Project site lacked vernal pools or clay depressions.
Panoche pepper-grass (<i>Lepidium jaredii</i> ssp. <i>album</i>)	1B.2	Grasslands with washes, steep slopes, and clay soils.	None. Habitat lacking; the Project site lacked clay soils and consisted of bare soil and inactive agriculture.
Prostrate vernal pool navarretia (<i>Navarretia prostrata</i>)	1B.2	Alkaline floodplains and vernal pools below 2297 feet elevation	None. Habitat lacking; the Project site lacked alkaline floodplains and vernal pools.
Recurved larkspur (<i>Delphinium recurvatum</i>)	1B.2	Grasslands and upland scrub with poorly drained, fine, alkaline soils at 98–1969 feet elevation.	None. Habitat lacking; the Project site lacked alkaline soils and consisted of bare soil and inactive agriculture.
Showy golden madia (<i>Madia radiata</i>)	1B.1	Grasslands with open slopes below 3940 feet elevation.	None. Habitat lacking; the Project site consisted of bare soil and inactive agriculture.

CDFW (2024), CNPS (2024), USFWS (2024a).



Status ¹	Potential to Occur ²
FC = Federal Candidate for Listing	None: Species or sign not observed; conditions unsuitable for occurrence.
FE = Federally listed as Endangered	Low: Neither species nor sign observed; conditions marginal for occurrence.
FT = Federally listed as Threatened	Moderate: Neither species nor sign observed; conditions suitable for occurrence.
FP = State Fully Protected	High: Neither species nor sign observed; conditions highly suitable for occurrence.
SCE = State Candidate for Listing as Endangered	Present: Species or sign observed; conditions suitable for occurrence.
SE = State listed as Endangered	
ST = State listed as Threatened	
SSSC = State Species of Special Concern	

CNPS California Rare Plant Rank ¹ :	Threat Ranks ¹ :
1B – plants rare, threatened, or endangered in California and elsewhere.	0.1 – seriously threatened in California (> 80% of occurrences).
2B – plants rare, threatened, or endangered in California but more common elsewhere.	0.2 – moderately threatened in California (20-80% of occurrences).
3 – plants about which more information is needed.	0.3 – not very threatened in California (<20% of occurrences).
4 – plants have limited distribution in California.	

³Record from within 5 miles of the Project site.

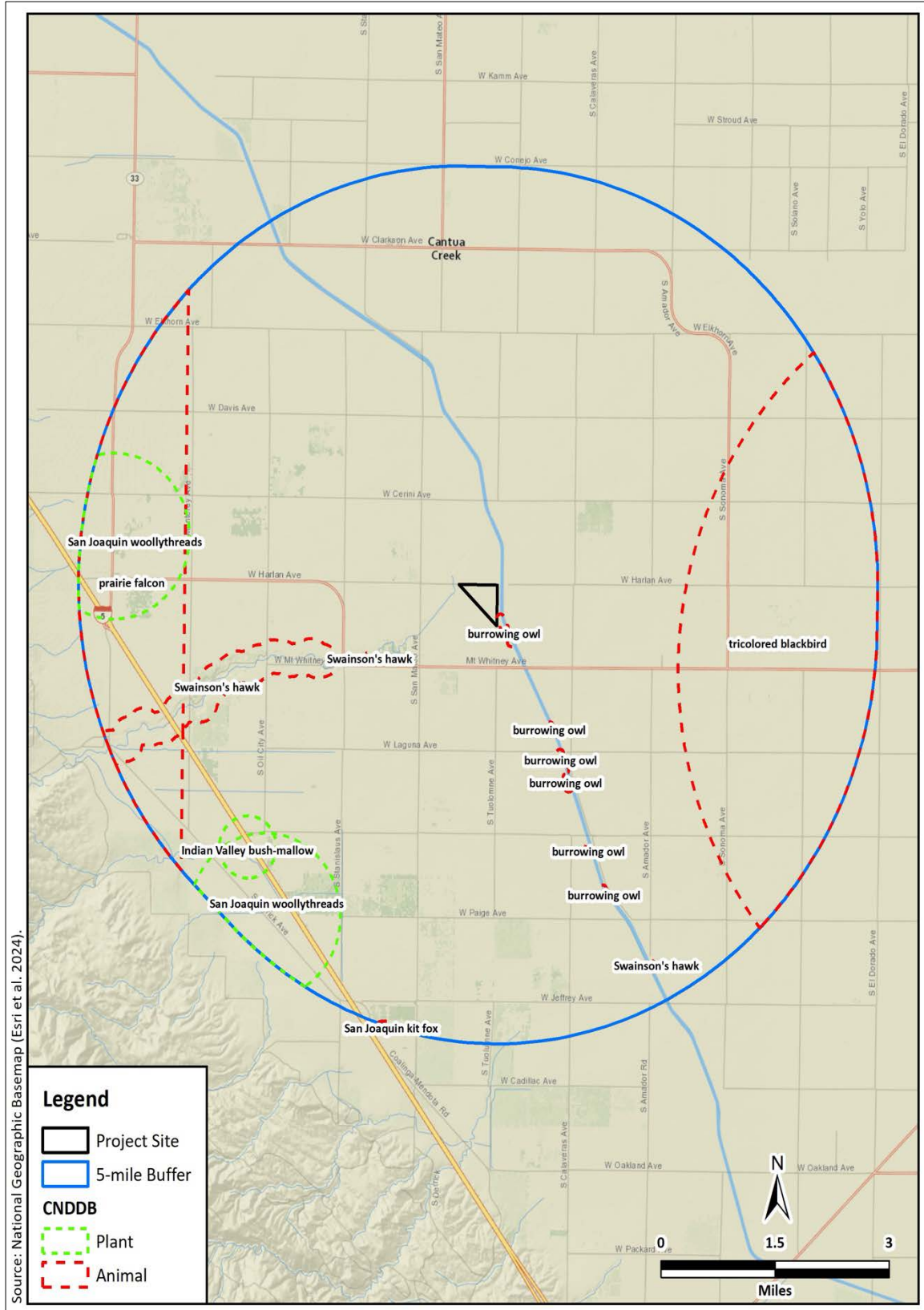


Figure 4. CNDDB occurrence map.



3.2 Reconnaissance Survey

3.2.1 Land Use and Habitats

The Project site consisted of the three basins to the north and inactive agriculture dominated by ruderal grasses and forbs to the south (Figures 5–11). The parcel was bordered by the California Aqueduct (San Luis Canal) to the east (Figure 5), orchards to the south and west (Figure 6), and a wash (Cantua Creek) and inactive agriculture to the north (Figure 7). Cells-1 and 2 were devoid of vegetation except along the perimeter, and parts of the basins were saturated (Figures 8 and 9). Cell-3 contained ruderal grasses and forbs with some barren and saturated areas (Figure 10). The roughly 38.5-acre inactive agricultural area south of the basins was dominated by cheeseweed (*Malva parviflora*) and common fiddleneck (*Amsinckia intermedia*) (Figure 11).



Figure 5. Photograph of the Project site perimeter, looking north, showing the California Aqueduct to the east (right).



Figure 6. Photograph of the western perimeter of the Project site, looking southeast, showing Cell-1 (left) and an orchard to the west (right).



Figure 7. Photograph of the northern perimeter of the Project site, looking west, showing Cantua Creek to the north (right).



Figure 8. Photograph of the Project site, looking east, showing Cell-1.



Figure 9. Photograph of the Project site, looking southwest, showing Cell-2.



Figure 10. Photograph of the Project site, looking northeast, showing Cell-3.



Figure 11. Photograph of the Project site, looking northwest, showing inactive agriculture with ruderal vegetation south of the three basins.



3.2.2 Plant and Animal Species Observed

A total of 23 plant species (eight native and 15 nonnative), 12 bird species, and two mammal species were observed during the survey (Table 2).

Table 2. Plant and animal species observed during the reconnaissance survey.

Common Name	Scientific Name	Status
Plants		
Family Asteraceae		
Common groundsel	<i>Senecio vulgaris</i>	Nonnative
Common monolopia	<i>Monolopia lanceolata</i>	Native
Common sow thistle	<i>Sonchus oleraceus</i>	Native
Common sunflower	<i>Helianthus annuus</i>	Native
Pineapple weed	<i>Matricaria discoidea</i>	Native
Prickly lettuce	<i>Lactuca serriola</i>	Nonnative
Family Boraginaceae		
Common fiddleneck	<i>Amsinckia intermedia</i>	Native
Family Brassicaceae		
Black mustard	<i>Brassica nigra</i>	Nonnative
London rocket	<i>Sisymbrium irio</i>	Nonnative
Shepherd's purse	<i>Capsella bursa-pastoris</i>	Nonnative
Family Chenopodiaceae		
Russian thistle	<i>Salsola tragus</i>	Nonnative
Family Fabaceae		
Arroyo lupine	<i>Lupinus succulentus</i>	Native
California burclover	<i>Medicago polymorpha</i>	Nonnative
Family Geraniaceae		
Redstem stork's bill	<i>Erodium cicutarium</i>	Nonnative
Family Hydrophyllaceae		
Lacy phacelia	<i>Phacelia tanacetifolia</i>	Native
Family Malvaceae		



Common Name	Scientific Name	Status
Cheeseweed mallow	<i>Malva parviflora</i>	Nonnative
Family Poaceae		
Common wheat	<i>Triticum aestivum</i>	Nonnative
Rattail sixweeks grass	<i>Festuca myuros</i>	Nonnative
Wall barley	<i>Hordeum murinum</i>	Nonnative
Family Polygonaceae		
Curly dock	<i>Rumex crispus</i>	Nonnative
Family Salicaceae		
Fremont cottonwood	<i>Populus fremontii</i>	Native
Family Solanaceae		
Black nightshade	<i>Solanum nigrum</i>	Nonnative
Tree tobacco	<i>Nicotiana glauca</i>	Nonnative
Birds		
Family Accipitridae		
Red-tailed hawk	<i>Buteo jamaicensis</i>	MBTA, CFGC
Family Anatidae		
Mallard	<i>Anas platyrhynchos</i>	MBTA, CFGC
Family Charadriidae		
Killdeer	<i>Charadrius vociferus</i>	MBTA, CFGC
Family Columbidae		
Mourning dove	<i>Zenaida macroura</i>	MBTA, CFGC
Family Corvidae		
American crow	<i>Corvus brachyrhynchos</i>	MBTA, CFGC
Family Emberizidae		
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	MBTA, CFGC
Family Fringillidae		
House finch	<i>Haemorhous mexicanus</i>	MBTA, CFGC
Family Hirundinidae		



Common Name	Scientific Name	Status
Barn swallow	<i>Hirundo rustica</i>	MBTA, CFGC
Family Icteridae		
Red-winged blackbird	<i>Agelaius phoeniceus</i>	MBTA, CFGC
Western meadowlark	<i>Sturnella neglecta</i>	MBTA, CFGC
Family Mimidae		
Northern mockingbird	<i>Mimus polyglottos</i>	MBTA, CFGC
Family Trochilidae		
Anna's hummingbird	<i>Calypte anna</i>	MBTA, CFGC
Mammals		
Family Leporidae		
Desert cottontail	<i>Sylvilagus audubonii</i>	--
Family Sciuridae		
California ground squirrel	<i>Otospermophilus beecheyi</i>	--

MBTA = Protected under the MBTA (16 USC § 703 et seq.); CFGC = Protected under CFGC §§ 3503 and 3513.

3.2.3 Nesting Birds

Migratory birds could nest on or near the Project site. Bird species that may nest on or near the property include, but are not limited to, mourning dove (*Zenaida macroura*), red-winged blackbird (*Agelaius phoeniceus*), and western meadowlark (*Sturnella neglecta*).

3.2.4 Regulated Habitats

The only potentially regulated habitat in the survey area was Cantua Creek. It originates in the Diablo Range in eastern San Benito County and terminates at the northern edge of the Project site (Figure 2). It is classified by the National Wetlands Inventory as R4SBCx, which means riverine, intermittent, streambed, seasonally flooded, excavated (USFWS 2024b). It lacked water during the 20 March 2024 reconnaissance survey (Figure 12). As a stream in California, it is likely regulated by the CDFW, and as a surface water in California it is likely regulated by the SWRCB. As it lacks relatively permanent flows and is not a tributary to a water of the United States (Google 2024), it is not likely under the regulatory jurisdiction of the USACE. No other aquatic resources were found in the survey area.



Figure 12. Photograph of Cantua Creek at the northwestern corner of the Project site, near the proposed point of diversion, looking northwest.

3.3 Special-Status Species

The following special-status species could occur on or near the Project site based on the presence of habitat:

3.3.1 Burrowing Owl

Burrowing owl is a member of the family Strigidae recognized as a species of special concern by the CDFW (2023). Burrowing owl occurs primarily in grassland but can persist and even thrive in agricultural or other developed and disturbed areas (Shuford and Gardali 2008, Rosenberg and Haley 2004). Burrowing owl depends on burrow systems excavated by other species such as California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*) (Poulin et al. 2020). Burrowing owl uses burrows for protection from predators, weather, as roosting sites, and dwellings to raise young (Poulin et al. 2020). It commonly perches outside burrows on mounds of soil or nearby fence posts. Prey types include insects, especially grasshoppers and crickets, small mammals, frogs, toads, and lizards (Poulin et al. 2020). The nesting season



begins in March, and incubation lasts 28–30 days. The female incubates the eggs while the male forages and delivers food items to the burrow-nest; young then fledge between 44 and 53 days after hatching (Poulin et al. 2020). Adults can live up to 8 years in the wild.

There are four CNDDDB occurrence records of burrowing owl from within 5 miles of the Project site (CDFW 2024). An additional seven CNDDDB occurrence records were found in the nine-quad search (CDFW 2024). The nearest CNDDDB occurrence record of burrowing owl overlaps the southeast corner of the Project site. Ground squirrel burrows that could support this species were present throughout the Project site, and the Project site provides foraging habitat. However, the habitat is routinely disturbed by disking and other agricultural activities (Google 2024), and no sign of burrowing owl was detected during the 20 March 2024 reconnaissance survey. Therefore, the potential for this species to occur on the Project site is low.

3.3.2 Loggerhead Shrike

Loggerhead shrike is a California Species of Special Concern (breeding season only). It breeds in non-forested areas throughout most of California, beginning as early as January and extending into July (Humple 2008). Individuals from northern migratory populations join resident populations in winter, when some birds occupy areas where the species does not breed. It breeds and forages mainly in shrublands and open woodlands with ample grass cover and bare ground. It uses trees and tall shrubs for nesting and trees, tall shrubs, fences, and utility lines and poles as hunting perches. It preys on insects, spiders, and small vertebrates and sometimes impales them on thorny plants, the barbs on barbed-wire fences, and other sharp objects to manipulate them for immediate consumption or store them for later consumption (Yosef 2000).

There are no CNDDDB occurrence records of loggerhead shrike from within 5 miles of the Project site. However, the species could use trees and tall shrubs along Cantua Creek for nesting and the open areas of the Project site for foraging. Yet anthropogenic disturbance in the area associated with agricultural operations limits habitat quality. Therefore, the species has a low potential to occur on or near the Project site.



4.0 Environmental Impacts

4.1 Significance Determinations

This Project will not: (1) substantially reduce the habitat of a fish or wildlife species (criterion a) as no such essential habitat is present on the Project site; (2) cause a fish or wildlife population to drop below self-sustaining levels (criterion b) as no such potentially vulnerable population is known from the area; (3) threaten to eliminate a plant or animal community (criterion c) as no such potentially vulnerable communities are known from the area; (4) substantially reduce the number or restrict the range of a rare or endangered plant or animal (criterion d) as no such potentially vulnerable species are known from the area; (5) have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (criterion g) as no impacts to wetlands will occur; (6) conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (criterion i) as no such policy or ordinance is pertinent to the Project; and (7), conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan (criterion j) as no such plan has been adopted. Thus, these significance criteria are not analyzed further.

The remaining statutorily defined criteria provided the framework for Criteria BIO1–BIO3 below. These criteria are used to assess the impacts to biological resources stemming from the Project and provide the basis for determinations of significance:

- Criterion BIO1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (significance criterion e).
- Criterion BIO2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS (criterion f).
- Criterion BIO3: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (significance criterion h).



4.1.1 Direct and Indirect Effects

4.1.1.1 Potential Effect #1: Have a Substantial Effect on Any Special-Status Species (Criterion BIO1)

The Project could adversely affect, either directly or through habitat modifications, two special-status animals that occur or may occur on or near the Project site. Construction activities such as excavating, trenching, or using other heavy equipment that disturbs or harms a special-status species or substantially modifies its habitat could constitute a significant impact. We recommend that Mitigation Measures BIO1–BIO3 (below) be included in the conditions of approval to reduce the potential impacts to less-than-significant levels.

Mitigation Measure BIO1. Protect burrowing owl.

1. Conduct focused burrowing owl surveys to assess the presence/absence of burrowing owl in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) and *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1997). These involve conducting four pre-construction survey visits.
2. If a burrowing owl or sign of burrowing owl use (e.g., feathers, guano, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would disrupt the owl(s), a construction-free buffer, limited operating period, or passive relocation shall be implemented in consultation with the CDFW.

Mitigation Measure BIO2. Protect nesting loggerhead shrikes.

1. To the extent practicable, construction shall be scheduled to avoid the loggerhead shrike nesting season, which extends from January through July.
2. If it is not possible to schedule construction between August and December, a pre-construction survey for nesting loggerhead shrikes shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found



close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

4.1.1.2 Potential Effect #2: Have a Substantial Effect on Riparian Habitat (Criterion BIO2)

Widening or otherwise modifying the channel of Cantua Creek and installing check dams could substantially impact riparian habitat and therefore constitute a significant impact. We recommend that Mitigation Measure BIO5 (below) be included in the conditions of approval to reduce the potential impact to a less-than-significant level.

Mitigation Measure BIO3. Mitigate impacts to riparian vegetation.

1. To the extent practical, avoid impacting riparian vegetation.
2. If impacts to riparian trees or shrubs are unavoidable, the Project applicant shall implement the tree replacement and maintenance requirements detailed in the Streambed Alteration Agreement issued by the CDFW for the Project. Those requirements are likely to involve replacing trees or shrubs that are damaged or removed by replanting native species at a 3:1 ratio (replaced to lost) and ensuring a performance criterion of 70 percent survival of plantings for a minimum period of five consecutive years, including up to three years with supplemental irrigation and a minimum of two years without such assistance.

4.1.1.3 Potential Effect #3: Interfere Substantially with Native Wildlife Movements, Corridors, or Nursery Sites (Criterion BIO3)

The Project has the potential to impede the use of nursery sites for native birds protected under the MBTA and CFGC. Migratory birds are expected to nest on and near the Project site. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered take under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any



activities resulting in nest abandonment, could constitute a significant effect if the species is particularly rare in the region. Construction activities such as excavating, trenching, and grading that disturb a nesting bird in the Project site or immediately adjacent to the construction zone could constitute a significant effect. We recommend that the mitigation measure BIO6 (below) be included in the conditions of approval to reduce the potential effect to a less-than-significant level.

Mitigation Measure BIO4. Protect nesting birds.

1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August.
2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.



5.0 Literature Cited

California Department of Fish and Wildlife (CDFW). 2024. California Natural Diversity Database (CNDDDB) RareFind 5. <https://apps.wildlife.ca.gov>. Accessed 18 March 2024.

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation, State of California Natural Resources Agency, Department of Fish and Game. 36 pp.

----- . 2012. Staff Report on Burrowing Owl Mitigation, State of California Natural Resources Agency, Department of Fish and Game. 36 pp.

California Native Plant Society, Rare Plant Program (CNPS). 2024. Inventory of Rare and Endangered Plants (online edition, v9.5). California Native Plant Society, Sacramento, CA. <http://www.rareplants.cnps.org>. Accessed 18 March 2024.

Google. 2024. Google Earth Pro. Version 7.3.6.9750 (<https://www.google.com/earth/download/gep/agree.html>). Accessed 18 March 2024.

Humple, D. 2008. Loggerhead shrike (*Lanius ludovicianus*), mainland populations. In Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. *Studies of Western Birds* 1:271–277.

Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture. 2023. Web Soil Survey, National Cooperative Soil Survey: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed 18 March 2024.

Poulin, R. G., L. D. Todd, E. A. Haug, B. A. Millsap, and M. S. Martell. 2020. Burrowing Owl (*Athene cunicularia*), version 1.0. In *Birds of the World* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.buowl.01>.

Rosenberg, D. K., and Haley, K. L. 2004. The ecology of Burrowing Owls in the agroecosystem of the Imperial Valley, California. *Studies Avian Biol.* 27:120–135.



Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

United States Fish and Wildlife Service (USFWS). 2018. Migratory Bird Permit Memorandum: Destruction and Relocation of Migratory Bird Nest Contents. FWS/DMBM/AMB/068029, 4 pages.

_____. 2024a. IPaC: Information for Planning and Conservation. <https://ecos.fws.gov/ipac/>. Accessed 18 March 2024.

_____. 2024b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. <http://www.fws.gov/wetlands/>. Accessed 18 March 2024.

Yosef, R. 2020. Loggerhead Shrike (*Lanius ludovicianus*), version 1.0. In Birds of the World (A. F. Poole and F. B. Gill, editors). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.logshr.01>



Appendix A. USFWS list of threatened and endangered species.

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Fresno County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
<p>Fresno Kangaroo Rat <i>Dipodomys nitratoides exilis</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5150</p>	Endangered
<p>Giant Kangaroo Rat <i>Dipodomys ingens</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6051</p>	Endangered
<p>San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873</p>	Endangered

Birds

NAME	STATUS
<p>California Condor <i>Gymnogyps californianus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193</p>	Endangered

Reptiles

NAME	STATUS
<p>Blunt-nosed Leopard Lizard <i>Gambelia silus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/625</p>	Endangered

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

Amphibians

NAME	STATUS
Foothill Yellow-legged Frog <i>Rana boylei</i>	Threatened
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5133	
Western Spadefoot <i>Spea hammondi</i>	Proposed Threatened
Wherever found	
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5425	

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i>	Candidate
Wherever found	
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i>	Threatened
Wherever found	
There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	

Flowering Plants

NAME	STATUS
San Joaquin Woolly-threads <i>Monolopia (=Lembertia) congdonii</i>	Endangered
Wherever found	
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3746	

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\)](#) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Belding's Savannah Sparrow <i>Passerculus sandwichensis beldingi</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read

["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

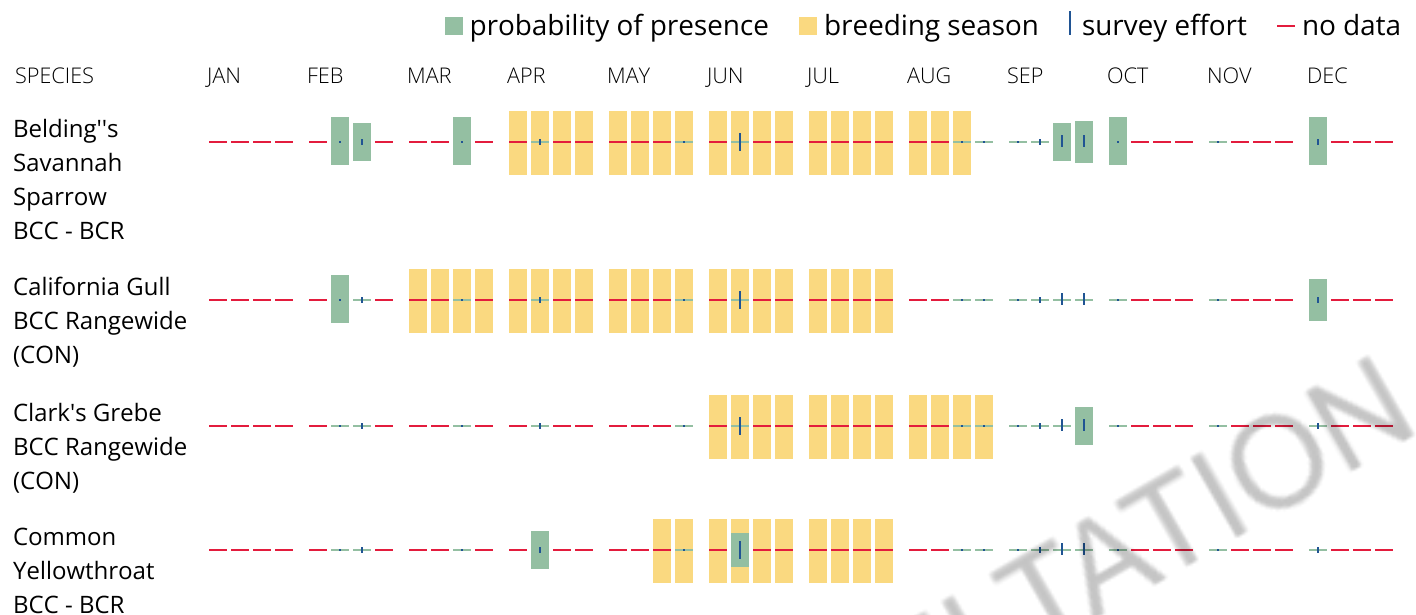
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact

[Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should

seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION



Appendix B. CNDDDB occurrence records.



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Tres Picos Farms (3612043) OR Domengine Ranch (3612033) OR Harris Ranch (3612032) OR Westside (3612042) OR San Joaquin (3612052) OR Cantua Creek (3612053) OR Levis (3612054) OR Lillis Ranch (3612044) OR Joaquin Rocks (3612034))

Table with 7 columns: Species, Element Code, Federal Status, State Status, Global Rank, State Rank, Rare Plant Rank/CDFW SSC or FP. Rows include American badger, blunt-nosed leopard lizard, burrowing owl, California glossy snake, California horned lark, chaparral ragwort, coast horned lizard, Crotch's bumble bee, Fresno kangaroo rat, giant kangaroo rat, Hall's tarplant, Hurd's metapogon robberfly, Indian Valley bush-mallow, Lost Hills crownscale, molestan blister beetle, Monvero Residual Dunes, mountain plover, and Munz's tidy-tips.



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Nelson's (=San Joaquin) antelope squirrel <i>Ammospermophilus nelsoni</i>	AMAFB04040	None	Threatened	G2G3	S3	
Northern California legless lizard <i>Anniella pulchra</i>	ARACC01020	None	None	G3	S2S3	SSC
pale-yellow layia <i>Layia heterotricha</i>	PDAST5N070	None	None	G2	S2	1B.1
Panoche navarretia <i>Navarretia panochensis</i>	PDPLM0C220	None	None	G3	S3	1B.3
Panoche pepper-grass <i>Lepidium jaredii</i> ssp. <i>album</i>	PDBRA1M0G2	None	None	G2G3T2T3	S2S3	1B.2
prairie falcon <i>Falco mexicanus</i>	ABNKD06090	None	None	G5	S4	WL
prostrate vernal pool navarretia <i>Navarretia prostrata</i>	PDPLM0C0Q0	None	None	G2	S2	1B.2
recurved larkspur <i>Delphinium recurvatum</i>	PDRAN0B1J0	None	None	G2?	S2?	1B.2
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	ARADB21021	None	None	G5T2T3	S3	SSC
San Joaquin dune beetle <i>Coelus gracilis</i>	IICOL4A020	None	None	G1	S1	
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	AMAJA03041	Endangered	Threatened	G4T2	S3	
San Joaquin pocket mouse <i>Perognathus inornatus</i>	AMAFD01060	None	None	G2G3	S2S3	
San Joaquin woollythreads <i>Monolopia congdonii</i>	PDASTA8010	Endangered	None	G2	S2	1B.2
short-eared owl <i>Asio flammeus</i>	ABNSB13040	None	None	G5	S2	SSC
showy golden madia <i>Madia radiata</i>	PDAST650E0	None	None	G3	S3	1B.1
stinkbells <i>Fritillaria agrestis</i>	PMLIL0V010	None	None	G3	S3	4.2
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S4	
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	AMAFF06021	None	None	G5T1T2	S1S2	SSC
western pond turtle <i>Emys marmorata</i>	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
western spadefoot <i>Spea hammondi</i>	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 40



Appendix C. CNPS plant list.











CNPS Rare Plant Inventory



Search Results

27 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [3612052:3612032:3612042:3612033:3612044:3612043:3612034:3612054:3612053]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE RANK	CA ENDEMIC	DATE ADDED	PHOTO
<u><i>Acanthomintha obovata</i> ssp. <i>obovata</i></u>	San Benito thorn-mint	Lamiaceae	annual herb	Apr-Jul	None	None	G4T3T4	S3S4	4.2	Yes	1974-01-01	 © 2013 Chris Winchell
<u><i>Amsinckia furcata</i></u>	forked fiddleneck	Boraginaceae	annual herb	Feb-May	None	None	G4	S4	4.2	Yes	1974-01-01	 © 2017 Keir Morse
<u><i>Androsace elongata</i> ssp. <i>acuta</i></u>	California androsace	Primulaceae	annual herb	Mar-Jun	None	None	G5?T3T4	S3S4	4.2		1994-01-01	 © 2008 Aaron Schusteff
<u><i>Atriplex coronata</i> var. <i>coronata</i></u>	crownscale	Chenopodiaceae	annual herb	Mar-Oct	None	None	G4T3	S3	4.2	Yes	1994-01-01	 © 1994 Robert E. Preston, Ph.D.
<u><i>Atriplex coronata</i> var. <i>vallicola</i></u>	Lost Hills crownscale	Chenopodiaceae	annual herb	Apr-Sep	None	None	G4T3	S3	1B.2	Yes	1974-01-01	No Photo Available
<u><i>Benitoa occidentalis</i></u>	western lessingia	Asteraceae	annual herb	May-Nov	None	None	G3G4	S3S4	4.3	Yes	1974-01-01	No Photo Available
<u><i>Clarkia breweri</i></u>	Brewer's clarkia	Onagraceae	annual herb	Apr-Jun	None	None	G4	S4	4.2	Yes	1974-01-01	No Photo Available

<u><i>Deinandra halliana</i></u>	Hall's tarplant	Asteraceae	annual herb	(Mar)Apr-May	None	None	G3	S3	1B.1	Yes	1974-01-01	No Photo Available
<u><i>Delphinium recurvatum</i></u>	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2?	1B.2	Yes	1988-01-01	No Photo Available
<u><i>Eriastrum sparsiflorum</i></u>	few-flowered eriastrum	Polemoniaceae	annual herb	May-Sep	None	None	G5	S4	4.3		2012-09-04	No Photo Available
<u><i>Eriogonum gossypinum</i></u>	cottony buckwheat	Polygonaceae	annual herb	Mar-Sep	None	None	G3G4	S3S4	4.2	Yes	1974-01-01	No Photo Available
<u><i>Eriogonum nudum var. indictum</i></u>	protruding buckwheat	Polygonaceae	perennial herb	(Apr)May-Oct(Dec)	None	None	G5T4	S4	4.2	Yes	1994-01-01	No Photo Available
<u><i>Eriogonum vestitum</i></u>	Idria buckwheat	Polygonaceae	annual herb	Apr-Aug	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
<u><i>Eschscholzia hypocoides</i></u>	San Benito poppy	Papaveraceae	annual herb	Mar-Jun	None	None	G4	S4	4.3	Yes	1974-01-01	No Photo Available
<u><i>Fritillaria agrestis</i></u>	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	Yes	1980-01-01	 © 2016 Aaron Schusteff
<u><i>Layia heterotricha</i></u>	pale-yellow layia	Asteraceae	annual herb	Mar-Jun	None	None	G2	S2	1B.1	Yes	1994-01-01	 © 2003 Christopher L. Christie
<u><i>Layia munzii</i></u>	Munz's tidy-tips	Asteraceae	annual herb	Mar-Apr	None	None	G2	S2	1B.2	Yes	1988-01-01	 © 2017 Neal Kramer
<u><i>Lepidium jaredii</i> ssp. album</u>	Panoche pepper-grass	Brassicaceae	annual herb	Feb-Jun	None	None	G2G3T2T3	S2S3	1B.2	Yes	1994-01-01	 © 2015 Debra L. Cook
<u><i>Madia radiata</i></u>	showy golden madia	Asteraceae	annual herb	Mar-May	None	None	G3	S3	1B.1	Yes	1988-01-01	No Photo Available

<u><i>Malacothamnus aboriginum</i></u>	Indian Valley bush-mallow	Malvaceae	perennial deciduous shrub	Apr-Oct	None	None	G3	S3	1B.2	Yes	1974-01-01	
												© 2009 Keir Morse
<u><i>Microseris sylvatica</i></u>	sylvan microseris	Asteraceae	perennial herb	Mar-Jun	None	None	G4	S4	4.2	Yes	2001-01-01	No Photo Available
<u><i>Monardella antonina ssp. benitensis</i></u>	San Benito monardella	Lamiaceae	perennial rhizomatous herb	Jun-Jul	None	None	G4T3	S3	4.3	Yes	1974-01-01	
												© 2021 Ryan O'Dell
<u><i>Monolopia congdonii</i></u>	San Joaquin woollythreads	Asteraceae	annual herb	Feb-May	FE	None	G2	S2	1B.2	Yes	1988-01-01	No Photo Available
<u><i>Navarretia panochensis</i></u>	Panoche navarretia	Polemoniaceae	annual herb	Apr-Aug	None	None	G3	S3	1B.3	Yes	2019-12-31	No Photo Available
<u><i>Navarretia prostrata</i></u>	prostrate vernal pool navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.2	Yes	2001-01-01	No Photo Available
<u><i>Senecio aphanactis</i></u>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	2B.2		1994-01-01	No Photo Available
<u><i>Trichostema ovatum</i></u>	San Joaquin bluecurls	Lamiaceae	annual herb	(Apr-Jun)Jul-Oct	None	None	G3	S3	4.2	Yes	1974-01-01	No Photo Available

Showing 1 to 27 of 27 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 18 March 2024].