

Friant-Kern Canal Pump-Back Project Environmental Impact Report

Appendix H: Biological Survey Report

Prepared for:
Friant Water Authority

October 2024

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Acronyms and Other Abbreviations

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
ESA	Endangered Species Act
FKC	Friant-Kern Canal
FWA	Friant Water Authority
OHWM	Ordinary high-water mark
Reclamation	Department of Interior, Bureau of Reclamation
Settlement Act	San Joaquin River Restoration Settlement Act
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

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Executive Summary

The United States Department of the Interior, Bureau of Reclamation (Reclamation) and the Friant Water Authority are considering multiple alternatives to improve the operational flexibility and long-term reliability of the water supply in the Friant-Kern Canal. The alternatives also seek to support Reclamation's effort in meeting the San Joaquin River Restoration Settlement Act. In support of the effort to evaluate capacity upgrades to two existing pump-back facilities and construction of a new pump-back facility, a wetland delineation and biological field survey were performed on March 8 and 9, 2021 by Magdalena Loftstedt, a CDM Smith Senior Professional Wetland Scientist. A second biological field survey was performed on January 26 and 27, 2023 by Jennifer Jones, a CDM Smith Senior Biologist, and Jenna Quan, a CDM Smith Junior Biologist to assess current habitat conditions. Three sites were surveyed during both visits: Lake Woollomes, Shafter-Wasco, and Deer Creek. The study area consisted of the three Project sites listed above and their immediate surroundings. Prior to the biological surveys, desktop analyses were performed to identify potential jurisdictional waters and special-status species with potential to occur in the study area based on a review of federal and state natural resource databases.

Biological surveys conducted in March 2021 and January 2023 consisted of reconnaissance-level habitat surveys in the study area to identify the potential for special-status wildlife and plant species to occur and be affected by the Project. No protocol-level surveys were conducted. The surveys covered a representative sample of the study area and should not be considered complete coverage of the study area. During the March 2021 survey, a wetland delineation was also conducted.

Vegetation communities and wildlife habitat identified in the study area during the biological surveys include: valley/foothill riparian, dry scrubland, and disturbed areas. While a majority of the study area is disturbed, there is low potential for some special-status species to occur based on limited suitable habitat. Potential federal and state jurisdictional waters were also identified within the study area.

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Chapter 1 Introduction

1.1 Background and Purpose

In support of the effort to evaluate the construction of three pump-back facilities along the FKC, this report describes the biological resources present during the March 8 and 9, 2021 (March 2021) biological survey and the January 26 and 27, 2023 (January 2023) biological survey and the wetland delineation that was performed during the March 2021 survey. These surveys were conducted to assess vegetation and wildlife habitats to identify the potential presence and distribution of common and special-status plant and wildlife species and sensitive natural communities. The wetland delineation was conducted to identify the presence and boundaries of federally and state-regulated waters and wetlands. The intent and scope of this document is to characterize biological resources in the study area and associated constraints that may affect the use of the study area.

1.2 Study Area

The study area is located in Kern and Tulare Counties, in the Ducor, McFarland, and Famoso United States Geological Survey (USGS) 7.5-minute quadrangle and is positioned east of Interstate 5 (Figure 1-1). Situated in the San Joaquin River watershed and the Tulare Basin, the study area is highly altered from agricultural practices. The study area refers to 22.44 acres across three discrete project sites: Shafter-Wasco, Lake Woollomes, and Deer Creek.

1.2.1 Shafter-Wasco

The Shafter Wasco site (coordinates 35.5233, -119.2266) is located south of Merced Avenue in the unincorporated community of Saco and northwest of the Meadows Field Airport in Kern County, California. Agricultural lands surround the site both to the east and west. A powerline runs between the dry scrubland habitat and the agricultural field on the west side of the FKC. Figure 1-2 depicts the area of potential effect including proposed staging areas and excavation limits for the upgrades to the existing pump-back facility at the Shafter-Wasco site.



Figure 1-1. Regional Location

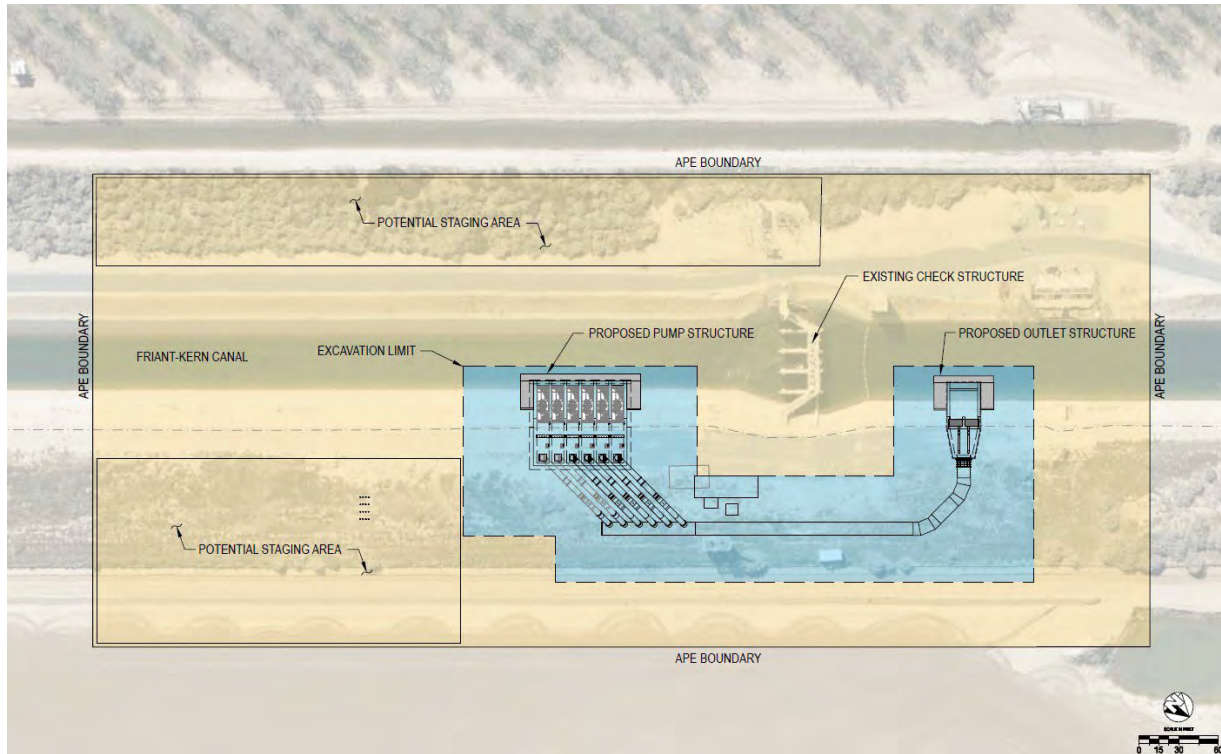


Figure 1-2. Shafter-Wasco Conceptual Layout of Proposed Facility and Area of Potential Effect

1.2.2 Lake Woollomes

The Lake Woollomes site (35.7254, -119.1831) is located north of Pond Road in Kern County, California (Figure 1-3). Lake Woollomes is an equalizing reservoir for the FKC and is owned by Reclamation and leased by the Kern County Parks Division. Figure 1-3 depicts the area of potential effect including proposed staging areas and excavation limits for the construction of the pump-back facility proposed at the Lake Woollomes site.

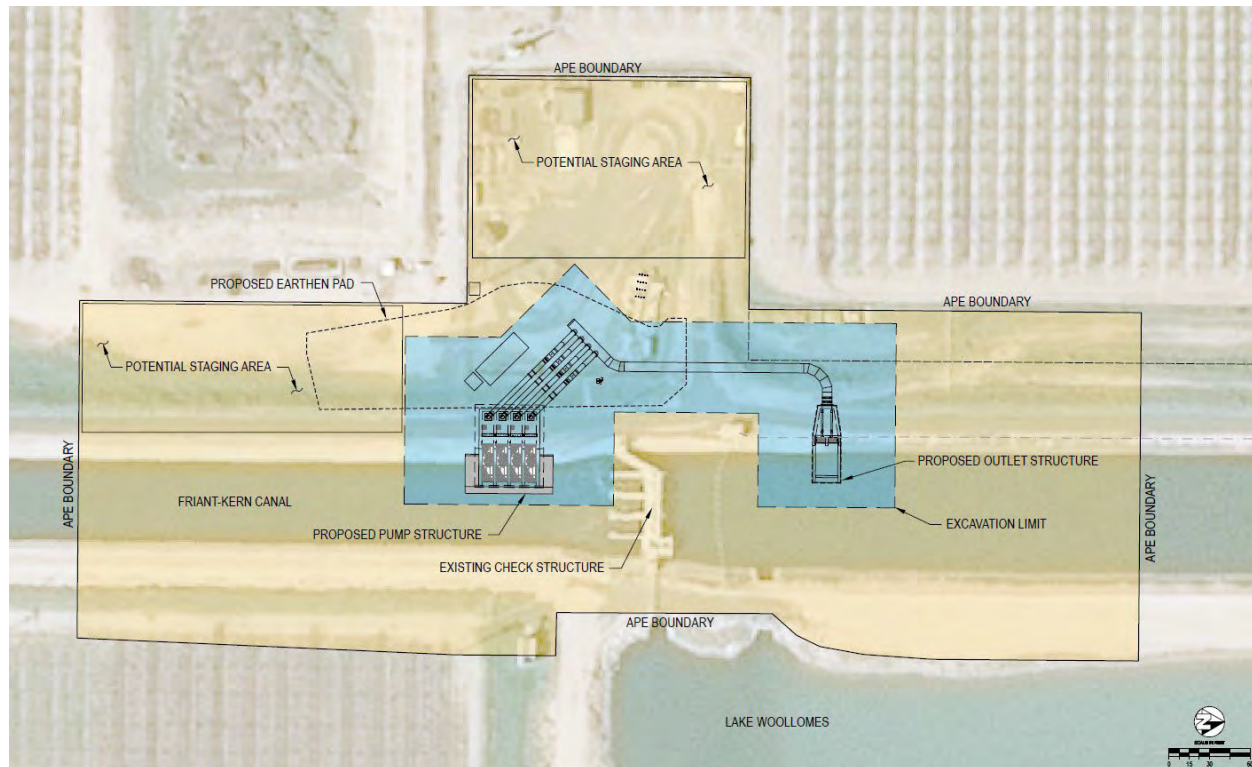


Figure 1-3. Lake Woollomes Conceptual Layout of Proposed Facility and Area of Potential Effect

1.2.3 Deer Creek

The Deer Creek site (35.9783, -119.1058) is located east of Road 208 in Terra Bella in Tulare County, California (Figure 1-4). The proposed construction footprint consists of the Deer Creek check structure within the FKC, the adjacent FKC levees which serve as access roads, and patches of annual grassland and shrubland habitat located west of the FKC. At the time of the January 2023 survey, the entire east side of the FKC had been graded and was serving as an active construction site for the FKC Middle Reach Capacity Correction Project¹ (see Attachment E). The FKC Middle Reach Capacity Correction Project constructed a new canal parallel to the existing FKC, a new large-diameter pipe that will discharge into the existing FKC, and a new pump station that connects the upstream pool back with the new canal. Figure 1-4 depicts the area of potential effect and survey boundaries including proposed staging areas and excavation limits for construction of the pump-back facility proposed at the Deer Creek site. During the January 2023 survey, the area that was graded for construction of the FKC Middle Reach Capacity Correction Project is indicated on the figure as the “New Friant-Kern Canal”.

¹ In October 2020, FWA (CEQA Lead Agency) and Reclamation (NEPA Lead Agency) approved the EIS/EIR for the Friant-Kern Canal Middle Reach Capacity Correction Project. The project includes building a parallel canal to the original Friant-Kern Canal where it passes the Deer Creek check structure. A new check structure will be constructed for the parallel canal at the Deer Creek crossing.

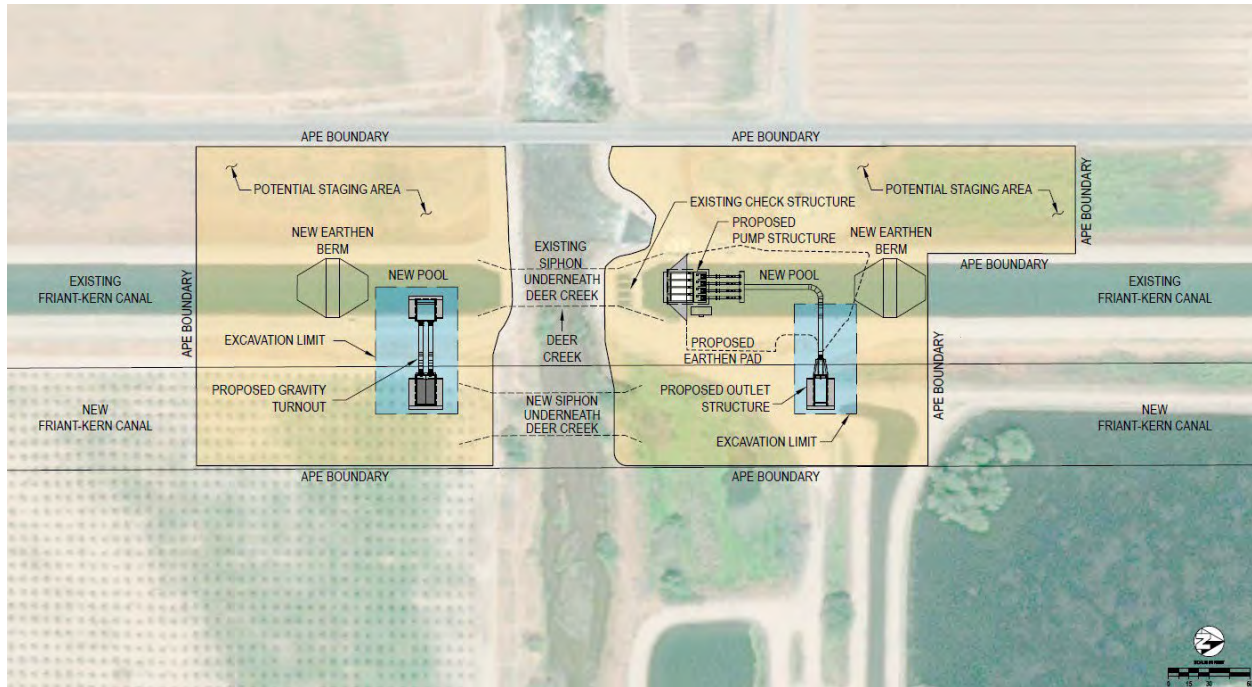


Figure 1-4. Deer Creek Conceptual Layout of Proposed Facility and Area of Potential Effect

1.3 Regulatory Context

Biological resources in the study area may fall under the jurisdiction of various regulatory agencies and be subject to their regulations. In general, the greatest legal protections are provided for plant and wildlife species that are formally listed by the federal or state government. The following regulations and agencies are commonly associated with projects that have the potential to affect biological resources:

- Federal Endangered Species Act (ESA)
- Migratory Bird Treaty Act
- Bald and Golden Eagle Protection Act
- Clean Water Act, Section 404
- California Endangered Species Act (CESA)
- California Fish and Game Code Sections 3500–3705, Migratory Bird Protection
- Native Plant Protection Act
- California Fish and Game Code Section 1600, Lake or Streambed Alterations
- Porter-Cologne Water Quality Control Act
- California Environmental Quality Act (CEQA) Guidelines Section 15380

These regulations are presented and discussed in Attachment A.

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Chapter 2 Methods and Observations

2.1 Survey Methodology and Observations

2.1.1 Survey Dates and Personnel

2.1.1.1 March 2021 Survey

CDM Smith Wetland Scientist Magdalena Loftstedt conducted representative reconnaissance-level surveys of the study area on March 8 and 9, 2021. The surveys were conducted to inspect and delineate wetlands areas, observe and characterize vegetation communities, and assess habitat quality and the potential for common and special-status wildlife species and special-status plant species to occur.

Potential field delineated wetland resource boundaries were evaluated for conformance with the U.S. Army Corps of Engineers 1987 *Wetlands Delineation Manual* (Environmental Laboratory 1987) and the U.S. Army Corps of Engineers 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (United States Army Corps of Engineers 2008). Potential wetland boundaries were evaluated for the presence of wetland vegetation (limit of plant community dominated, more than 50%, by species adapted to living in wetland conditions) by visual inspection, as well as indicators of hydric soils and wetland hydrology. Wetland boundaries including Ordinary High-Water Mark (OHWM) along waterbodies were marked with blue flagging. The flags were surveyed using a handheld Trimble GPS Unit.

A reconnaissance-level special-status wildlife and plant survey was conducted. All surveys conducted in March 2021 are a representative sample of the study area and should not be considered complete coverage of the study area.

2.1.1.2 January 2023 Survey

CDM Smith Senior Biologist Jennifer Jones and Junior Biologist Jenna Quan conducted representative reconnaissance-level surveys of the study area on January 26 and 27, 2023. The surveys were conducted to observe and characterize vegetation communities, assess habitat quality and the potential for common and special-status wildlife and plant species to occur, and characterize any changes to the project sites since the March 2021 survey.

2.1.1.3 Changes in Site Conditions

The conditions observed at the Shafter-Wasco and Lake Woollomes sites were largely unchanged between the March 2021 survey and the January 2023 survey; thus, the descriptions of these sites provided throughout the rest of these reports are largely representative of the observations made during both the March 2021 and January 2023 surveys.

As previously described, the FKC Middle Reach Capacity Correction Project entails the construction of a new 10-mile-long concrete-lined canal to replace the subsided segment of the FKC. A portion of the new canal is being constructed directly east of the existing FKC at the Deer Creek site, as

shown in the conceptual plan (Figure 1-4). The new canal will include a structure to siphon water underneath Deer Creek. Construction was initiated in January 2022 (California Department of Water Resources 2022); thus, the site was observed in its pre-construction state during the March 2021 survey and was observed mid-construction during the January 2023 survey. During construction of that structure, a temporary bypass berm was installed to restrict water flow in Deer Creek upstream of the siphon structure. The temporary berm was breached and washed away after a series of severe storms in January 2023 (Gutierrez 2023). During the January 2023 survey, water was flowing through Deer Creek and the work areas for the new canal that had been inundated by floodwaters were being dewatered into the FKC. The reconnaissance-level habitat conditions described at the Deer Creek site throughout this report reflect the most recent observations of the January 2023 survey.

2.1.2 Habitat and Vegetation Surveys

No protocol-level rare plant surveys were performed during either site visit. Botanical surveys were reconnaissance in nature to identify the potential locations of habitat for rare plants and determine which species have the potential to occur in the study area. Plant species observed in the study area during the surveys are described below. Plant communities were characterized for their potential to occur within the study area and surrounding USGS quadrangles (Attachment B, Table B-2).

2.1.2.1 Shafter-Wasco

There is a narrow swath (app. 60-70 ft wide) of natural dry scrubland habitat on both the east and west banks of the FKC between the access roads and the agricultural fields (see Attachment C). However, within the proposed work area along the east side of the FKC, the dry scrubland is previously disturbed and consists of sparsely vegetated gravelly sand (see Attachment C). The dry scrubland habitat is dominated by the following vegetation: chamise (*Adenostoma fasciculatum*), Russian thistle (*Salsola* spp.), coyote brush (*Baccharis pilularis*), and California buckwheat (*Eriogonum fasciculatum*). A few individuals of red-stemmed filaree (*Erodium cicutarium*) were observed near the pipe/headwall on the east side of the FKC during the March 2021 survey.

2.1.2.2 Lake Woollomes

The Lake Woollomes site is previously disturbed and consists of gravel improved access road along the FKC, steep earthen embankment created as part of the FKC construction, and dirt access road for the adjacent orchard (see Attachment D). There are no trees present other than an orange tree within the fenced in maintenance area (see Attachment D). The irrigation pond south of the yard, outside the proposed work area, appeared to have been drained of water during the January 2023 survey. The pond supports vegetation including hardstem bulrush (*Schoenoplectus acutus*). Vegetation on the steep earthen embankment and along the access road at the top of the embankment are mostly nuisance and noxious weeds including: wall barley (*Hordeum murinum*), Russian thistle/tumble weed (*Salsola* spp.), grasses including California broom (*Bromus carinatus*), and fiddlenecks (*Amsinckia* spp.).

2.1.2.3 Deer Creek

The entire portion of the project area east of the FKC has been graded and is currently serving as an active construction site for the FKC Middle Reach Capacity Correction Project; thus, no vegetation communities were noted east of the FKC. The portion of the project footprint south of Deer Creek and west of the FKC consists of an approximately 1.4-acre rectangular patch of annual grassland that is bordered by Road 208 to the west and the FKC access road to the east. The transition

between the annual grassland habitat and the adjacent access road consists of a steep naturally-vegetated slope.

The portion of the project footprint north of Deer Creek and west of the FKC consists of the FKC check station, associated canal infrastructure, and a sparsely vegetated area bordered by Road 208 to the west and the canal access road to the east. The transition between the sparsely vegetated habitat and the adjacent access road consists of a steep naturally-vegetated slope. Vegetation in this area is dominated by Russian thistle and poison hemlock (*Conium maculatum*).

2.1.3 Wildlife Surveys

No focused (i.e., protocol-level) surveys for the Friant-Kern Canal Pump-Back Project were conducted during either survey. Wildlife species observed in the study area during these surveys are listed below. Wildlife surveys cataloged all common and special-status wildlife species observed within the study area or nearby and aided in determining the potential presence of suitable habitat for special-status wildlife species (Attachment B, Table B-1).

2.1.3.1 Shafter-Wasco

The scrubland habitat supports several common bird species including California scrub jay (*Aphelocoma californica*), red-tailed hawk (*Buteo jamaicensis*), house finch (*Haemorrhous purpureus*), cliff swallow (*Petrochelidon pyrrhonota*), black phoebe (*Sayornis nigricans*), mourning dove (*Zenaidura macroura*), common raven (*Corvus corax*), house sparrow (*Passer domesticus*), American pipit (*Anthus rubescens*), white-crowned sparrow (*Zonotrichia leucophrys*), and killdeer (*Charadrius vociferous*). Mammals observed during the January 2023 survey included multiple black-tailed jackrabbits (*Lepus californicus*) and a coyote (*Canis latrans*). Small mammal burrows, likely made by California ground squirrels (*Otospermophilus beecheyi*), were observed in highly compacted soils within the dry scrubland habitat. Large amounts of small scat were observed adjacent to the burrow entrances, likely deposited by California ground squirrels.

2.1.3.2 Lake Woollomes

Birds observed during the surveys included great egret (*Ardea alba*), turkey vulture (*Cathartes aura*), Swainson's hawk (*Buteo swainsoni*), great blue heron (*Ardea Herodias*), black-crowned night-heron (*Nycticorax nycticorax*), white-tailed kite (*Elanus leucurus*), American robin (*Turdus migratorius*), song sparrow (*Melospiza melodia*), black phoebe, mourning dove, red-winged blackbird (*Agelaius phoeniceus*), killdeer, and house finch. Although bullfrogs (*Lithobates catesbeianus*) were heard from the irrigation pond in the orchard during the March 2021 survey, the pond appeared to be drained during the January 2023 survey and the presence of bullfrogs was not noted. Small mammal burrows, likely created by California ground squirrels, were observed on the embankment (see Attachment D).

2.1.3.3 Deer Creek

Birds observed at the site and surrounding area included northern harrier (*Circus hudsonius*), black phoebe, California scrub jay, house sparrow, house finch, white-crowned sparrow, golden-crowned sparrow (*Zonotrichia atricapilla*), and Lincoln's sparrow (*Melospiza lincolni*). No other wildlife was observed during the January 2023 survey.

2.1.4 Wetland Delineation – March 2021

This section presents the results of the wetland delineation performed in March 2021. Potential federal and state jurisdictional wetlands were identified within the study area. Descriptions of each site are presented below.

2.1.4.1 Shafter-Wasco

No jurisdictional wetlands or waterways are present. There is an irrigation pond within the cultivated field on east side of the FKC outside of the proposed work area. Furthermore, there is an irrigation ditch (flagged as OHW 1-1 to OHW 1-4, and OHW 2-1 to OHW 2-10) that parallels the FKC to the west. Since both the irrigation pond and the parallel irrigation ditch were constructed in uplands they are not jurisdictional as Waters of the United States (WOTUS).

2.1.4.2 Lake Woollomes

Lake Woollomes is a jurisdictional WOTUS as an impoundment of jurisdictional waters from the FKC. The upper limit of jurisdiction is at the OHWM, which for a controlled water body as Lake Woollomes, is the operating elevation of the normal summer pool. The southwest corner of Lake Woollomes is reinforced with large riprap stone and pieces of concrete. Beyond the southwest corner, the bank is not reinforced by riprap and sparsely vegetated (see Attachment D).

2.1.4.3 Deer Creek

The OHWM of Deer Creek (upper jurisdictional limit) was determined by a CDM Smith Wetland Scientist in the field in March 2021 based on the August 2008 Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States and flagged in the field using blue flags.

Deer Creek is an intermittent stream that originates in the Sequoia National Forest in the southern portion of Tulare County and terminates at the bank of Homeland Canal approximately 49 miles to the west of its origin. About 18 miles from its origin, Deer Creek passes under Deer Creek Drive and transitions into the Central Valley's developed agricultural lands. The creek bed meanders until approximately 15 miles from its terminus where it became a straightened channel prior to 1994. During storm events, the canal bank can be breached at Deer Creek's terminus to allow excess water to flow into the Homeland Canal. Deer Creek abruptly ends at the east bank of the Homeland Canal. The Homeland Canal is an irrigation channel which flows to the southwest from its juncture and terminates at Gates-Jones Canal. As an intermittent stream, Deer Creek meets the definition of WOTUS.

During the March 2021 survey, there were three other wetland features delineated on the east side of the FKC; however, all three of those features have been graded and filled since then to support the construction of the FKC Middle Reach Capacity Correction Project.

2.2 Review of Background Information

Before performing field surveys, CDM Smith reviewed publicly available and subscription-based biological resource data. In part, the field surveys confirmed the general accuracy of the publicly available data.

The following data sources assisted in this analysis:

- Historic and current aerial imagery (Google Earth 2023).
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2024).
- The California Native Plant Society (CNPS) online database (CNPS 2024).
- United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) species list (USFWS 2024).

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Chapter 3 Environmental Setting

This chapter provides the environmental baseline for natural communities and habitats and special-status plant and wildlife species in the study area.

3.1 Special-Status Species

Several species known to occur in or near the study area are protected by federal and/or state endangered species laws or have been designated as Species of Special Concern by CDFW. In addition, Section 15380(b) of the CEQA Guidelines defines rare, endangered, or threatened species that are not included in any listing.² Species recognized under these terms are collectively referred to as *special-status species*.

A list of special-status wildlife and plant species with potential to occur in or near the study area was compiled from nineteen-quadrangle searches of the CNDDB (CDFW 2024) and CNPS's Rare Plant Inventory (CNPS 2024); a search of the USFWS Information for Planning and Consultation database (USFWS 2024); and review of biological literature of the region for the following 7.5-minute USGS topographic quadrangles:

Deepwell Ranch	North of Oildale	Rosedale
Delano East	Oildale	Sausalito School
Delano West	Pond	Success Dam
Ducor	Porterville	Wasco
Famoso	Quincy School	Woodville
Fountain Springs	Richgrove	
McFarland	Rio Bravo	

² For example, vascular plants listed as rare or endangered or as Rare Plant Rank 1 or 2 by CDFW are considered to meet the requirements of CEQA Guidelines Section 15380(b).

From the full list of species identified during the desktop review (Attachment F), each species was individually assessed based on habitat requirements and distribution relative to the vegetation communities present in and around the study area, and on the results of previous surveys and assessments. Comprehensive lists of the special-status plant and wildlife species considered in the analysis are provided in Attachment B. Of the full list of 28 wildlife species, 20 species were identified as having low potential to occur in or near the study area, and one species was identified as having a moderate potential to occur, based on the rationale provided in Attachment B. Of the full list of 30 plant species, seven were identified as having low potential to occur in or near the study area, as described in Attachment B. No species were identified as having a high potential to occur. The species with low or moderate potential to occur in the study area are described in greater detail in Attachment B.

Figure 3-1 presents a map of CNDDDB special-status species occurrences within 10 miles of the study area. Figure 3-2 presents a map of the critical habitat within 10 miles of the study area. As shown, no critical habitat is present in or near the study area.

One special-status species, Swainson's hawk (*Buteo swainsoni*), was observed in the study area during the March 2021 survey; no special-status species were observed during the January 2023 survey.

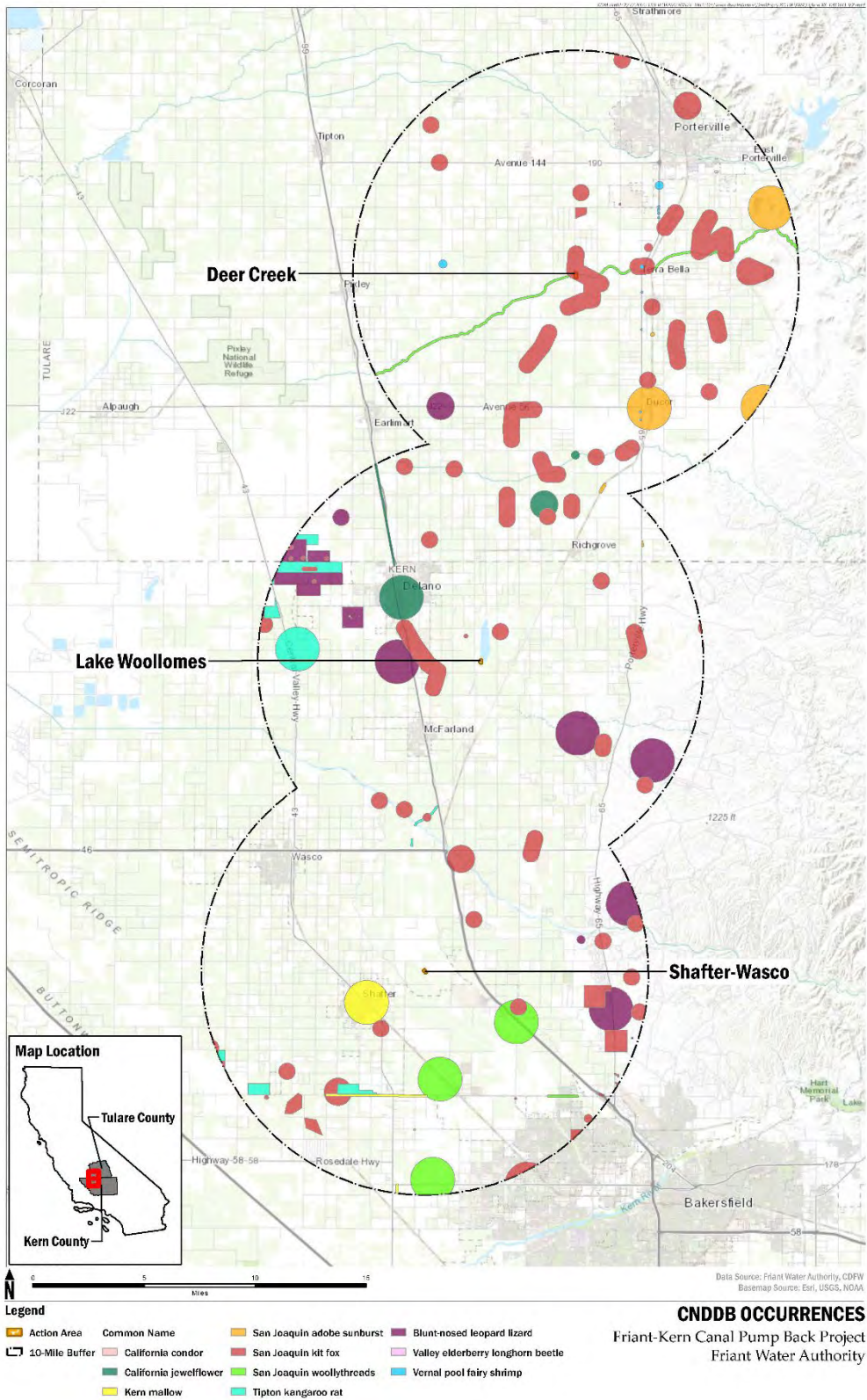


Figure 3-1. CNDDDB Occurrence Records within 10-miles of the Study Area

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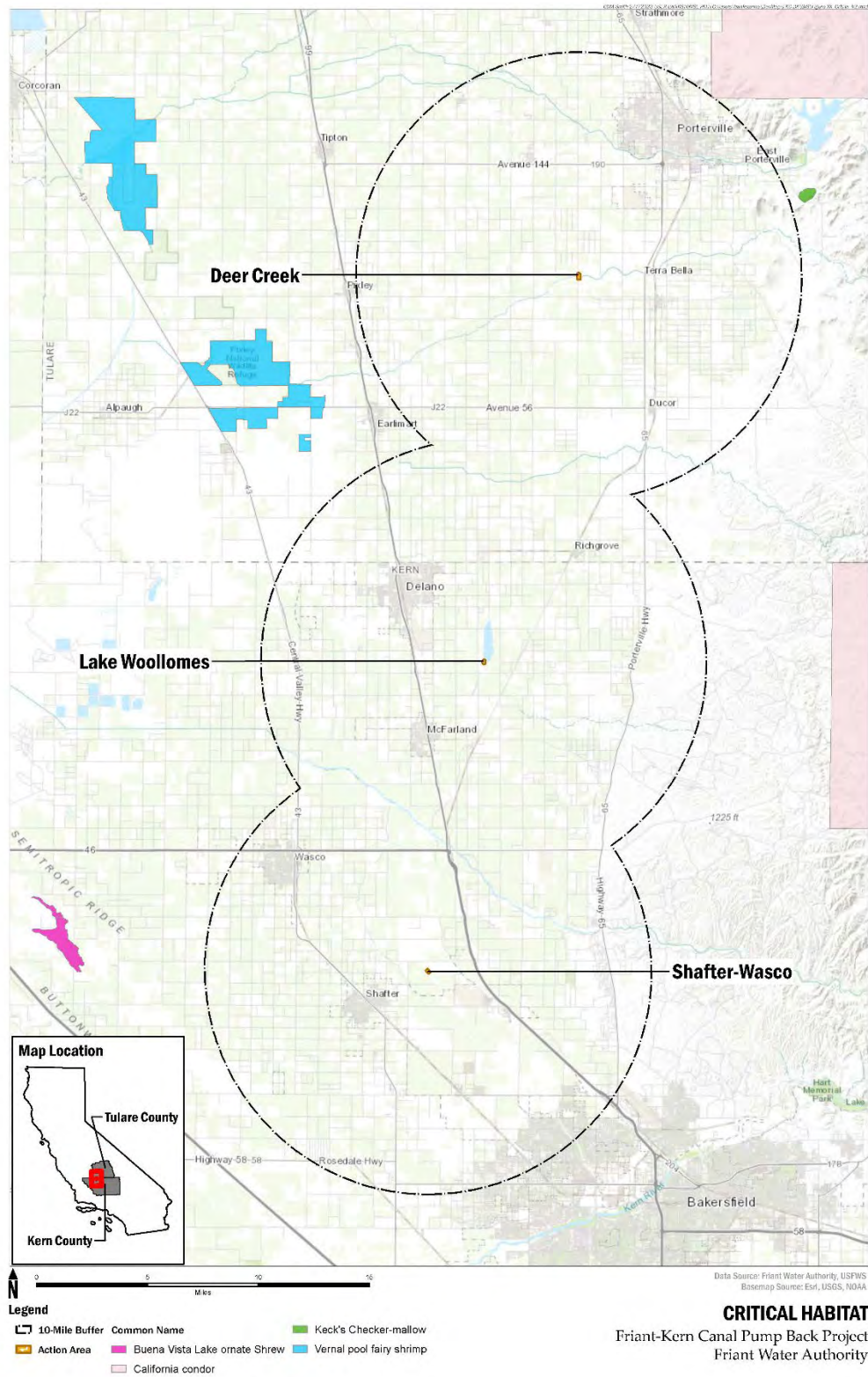


Figure 3-2. Critical Habitat within 10-miles of the Study Area

Chapter 4 References

4.1 References

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Appendix H

Attachment A: Regulatory Context

Attachment A Regulatory Context

A.1 Federal

A.1.1 U.S. Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS) administers the Federal ESA (16 United States Code [USC] 153 et seq.), the Migratory Bird Treaty Act (MBTA) (16 USC 703–711), and the Bald and Golden Eagle Protection Act (16 USC 668). These regulations are described below.

A.1.1.1 Federal Endangered Species Act

Under the ESA, the Secretary of the Interior and Secretary of Commerce have joint authority to list a species as threatened or endangered (16 USC Section 1533[c]). Two federal agencies oversee the ESA: USFWS has jurisdiction over plants, wildlife, and resident fish, while the National Marine Fisheries Service (NMFS) has jurisdiction over anadromous fish and marine fish and mammals. Section 7 of the ESA mandates that federal agencies consult with USFWS and NMFS to ensure that federal agency actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species. The ESA prohibits the “take”³ of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery.

Section 10 requires the issuance of an incidental take permit before any public or private action may be taken that could take an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan that would offset the take of individuals that may occur, incidental to implementation of a proposed project, by providing for the protection of the affected species.

The ESA specifies that a federal agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the study area, and whether the proposed action will have a potentially significant impact on such species. The agency also must determine whether the proposed action is likely to jeopardize the continued existence of any species proposed to be listed under the ESA, or to result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC Sections 1536[3] and 1536[4]). No federal actions apply to the current study area.

A.1.1.1.1 Critical Habitat

USFWS designates *critical habitat* for listed species under the ESA. Critical habitat designations are specific areas within the geographic region that are occupied by a listed species and are determined to be critical to the species’ survival and recovery in accordance with the ESA. Federal entities issuing permits or acting as lead agencies must show that their actions do not negatively affect the

³ Take is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct.

critical habitat to the extent that it impedes the recovery of the species. The study area is not within designated critical habitat.

A.1.1.2 Migratory Bird Treaty Act

The MBTA (16 USC Sections 703–711) affirms and implements a commitment by the United States to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. This law prohibits intentionally pursuing, hunting, taking, capturing, or killing migratory birds anywhere in the United States, unless and except as permitted by regulations. Under the MBTA, surveys are required to determine whether nests will be disturbed and, if so, a buffer area with a specified radius around the nest must be established so that no disturbance or intrusion is allowed until the young have fledged and left the nest. The size of the buffer area would vary depending on species, local conditions, and the professional judgement of a biologist. The law also applies to the intentional disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season.

A.1.1.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act, enforced by USFWS, makes it illegal to import, export, take (which includes molest or disturb), sell, purchase, or barter any bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*) or parts thereof.

A.1.2 United States Army Corps of Engineers

A.1.2.1 Clean Water Act, Section 404

The United States Army Corps of Engineers administers Section 404 of the Clean Water Act. Section 404 regulates activities in wetlands and “other waters of the United States.” Wetlands are a subset of waters of the United States that are defined as follows in Code of Federal Regulations (CFR) Title 33, Section 328.3(a) and Title 40, Section 230.3(s) (33 CFR 328.3[a] and 40 CFR 230.3[s]):

1. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide.
2. All interstate waters including interstate wetlands. (Wetlands are defined by the federal government [33 CFR 328.3(b), 1991] as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances support, a prevalence of vegetation typically adapted for life in saturated soil conditions).
3. All other waters—such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds—the use, degradation, or destruction of which could affect interstate or foreign commerce. This includes any waters with the following current or potential uses:
 - That are or could be used by interstate or foreign travelers for recreational or other purposes,
 - From which fish or shellfish are or could be taken and sold in interstate or foreign commerce, or

- That are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under the definition.
 5. Tributaries of waters identified in paragraphs (1) through (4).
 6. Territorial seas.
 7. Wetlands next to waters identified in paragraphs (1) through (6).
 8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding the Clean Water Act jurisdiction remains with the U. S. Environmental Protection Agency (328.3[a][8] added 58 CFR 45035, August 25, 1993).

Regulatory waters under the jurisdiction of the United States Army Corps of Engineers do not occur in the study area and would not be affected by proposed activities.

A.2 State

A.2.1 California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) administers laws and programs designed to protect fish and wildlife resources under the Fish and Game Code, such as the California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et seq.), Fully Protected Species (Section 3511), the Native Plant Protection Act (Sections 1900 to 1913), and the Lake or Streambed Alteration Agreement Program (Sections 1600 to 1616). These regulations are described below.

A.2.1.1 California Endangered Species Act

CDFW is responsible for administration of the California Endangered Species Act (CESA). CESA requires incidental take authorization or permits for certain projects undertaken by public agencies. For projects where CESA compliance is required, and that affect a species that is both state and federally listed, compliance with the federal ESA will satisfy the CESA if CDFW determines that the federal incidental take authorization is “consistent” with the CESA. Projects that result in a “take” of a state-listed species require an incidental take permit under the CESA. CESA also lends protection to species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat.

A.2.1.2 California Fish and Game Code Sections 3500 – 3705, Migratory Bird Protection

Sections 3500 through 3705 of the California Fish and Game Code regulate the taking of migratory birds and their nests. These codes prohibit the taking of nesting birds, their nests, eggs, or any portion thereof during the nesting season. Typically, the breeding/nesting season is from March 1 through August 30. Depending on each year's seasonal factors, the breeding season can start earlier

and/or end later. Several species of migratory birds are known to occur in the area of analysis (California Fish and Game Code 3500-3705).

A.2.1.3 Native Plant Protection Act

California Fish and Game Code Section 1900–1913, also known as the Native Plant Protection Act, is intended to preserve, protect, and enhance endangered or rare native plants in California. The act directs CDFW to establish criteria for determining which native plants are endangered or rare. Under Section 1901, a species is considered *endangered* when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is considered *rare* when, although not threatened with immediate extinction, it is in such small numbers throughout its range that it may become endangered. The act also directs the California Fish and Game Commission to adopt regulations governing the take, possession, propagation, or sale of any endangered or rare native plant.

Vascular plants that are identified as rare by CDFW, but that may have no designated status or protection under federal or state endangered species laws or regulations, are defined using the following California Rare Plant Ranks (CRPRs):

- **Rank 1A:** Plants presumed extinct.
- **Rank 1B:** Plants rare, threatened, or endangered in California and elsewhere.
- **Rank 2:** Plants rare, threatened, or endangered in California, but more numerous elsewhere.
- **Rank 3:** Plants about which more information is needed—a review list.
- **Rank 4:** Plants of limited distribution—a watch list.

In general, CRPR 1A, 1B, and 2 plants are considered to meet the criteria of California Environmental Quality Act (CEQA) Guidelines Section 15380, and effects on these species are considered “significant” in environmental impact reports. CRPR 1A, 1B or 2 plants also meet the definition of Section 1901, Chapter 10 (Native Plant Protection Act) and Sections 2062 and 2067 (California Endangered Species Act) of the California Fish and Game Code.

A.2.1.4 Species of Special Concern

CDFW maintains lists for candidate-endangered species and candidate-threatened species. California candidate species are afforded the same level of protection as listed species. California also designates *species of special concern*, which are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species or fully protected species but may be added to official lists in the future. CDFW intends the species of special concern list to be a management tool for consideration in future land use decisions.

A.2.2 State Water Resources Control Board

A.2.2.1 Porter-Cologne Water Quality Control Act

The State Water Resources Control Board, through its nine regional water quality control boards, regulates waters of the state through the California Clean Water Act (i.e., Porter-Cologne Water Quality Control Act). If the United States Army Corps of Engineers determines that wetlands or other waters are isolated waters and not subject to regulation under the federal Clean Water Act, the

regional water quality control board may choose to exert its jurisdiction over these waters under the Porter-Cologne Water Quality Control Act as waters of the state.

A.2.3 CEQA Guidelines Section 15380

CEQA Guidelines Section 15380(b) provides that a species not on the federal or state list of legally protected threatened or endangered species may be considered rare or endangered if the species can be shown to meet certain specific criteria. These criteria have been modeled after the definition of the ESA and the section of the Fish and Game Code that discusses rare or endangered plants or animals. This section was included in the CEQA Guidelines primarily for situations in which a public agency is reviewing a project that may have a significant effect on a candidate species that has not yet been listed by CDFW or USFWS. CEQA provides the ability to protect species from potential project impacts until the respective agencies have the opportunity to designate the species' protection.

CEQA also specifies the protection of other locally or regionally significant resources, including natural communities or habitats. Although natural communities do not presently have legal protection, CEQA requires an assessment of such communities and potential project impacts. Natural communities identified as sensitive in the CNDDDB are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents such as general and area plans often identify natural communities.

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Appendix H

Attachment B: Special-Status Species with Potential to Occur in the Study Area

Attachment B Special-Status Species with Potential to Occur in the Study Area

Table B-1. Special-Status Wildlife Species with Potential to Occur in the Study Area

Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
WILDLIFE				
Invertebrates				
Crotch's Bumble Bee <i>Bombus crotchii</i>	Fed: None CA: CE	This species occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California.	Inhabits grasslands and shrublands occurring in hot dry environments. Preferred food plant species include milkweeds (<i>Asclepias</i>), dusty maidens (<i>Chaenactis douglasii</i> var. <i>douglasii</i>), lupines (<i>Lupinus</i>), medics (<i>Medicago</i>), phacelias (<i>Phacelia</i>), sages (<i>Salvia</i>), clarkias (<i>Clarkia</i>), and wild buckwheats (<i>Eriogonum</i>). Workers active from April to August. Queen active from March until May.	Low potential. Although limited suitable habitat may be present in the study area, CNDDDB occurrences have not been documented within the study area.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	Fed: T CA: None	Inhabits the Central Valley from southern Shasta County south to Fresno County in the San Joaquin Valley.	Found only in association with its host plant, elderberry (<i>Sambucus</i> spp.). Adults present from March to June.	None. Although CNDDDB records exist for Kern County, no specimens or observations of living individuals have been obtained to confirm that the species is there. Therefore, it is assumed that the study area occurs outside the known range of the species, and thus, no impacts on the species are expected.

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Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	Fed: T CA: None	Endemic to the Central Valley, Central Coast Mountains, and South Coast Mountains of California. It ranges from the Stillwater Plain in Shasta County through most of the length of the Central Valley to Paisley in Tulare County, and along the central Coast Range from northern Solano County to Pinnacles National Monument in San Benito County. Disjunct populations were also reported to occur in San Luis Obispo County, Santa Barbara County, and Riverside County.	Inhabits the ephemeral water of swales and vernal pools. It is most commonly found in grassed or mud bottomed swales, earth sump, or basalt flow depression pools in unplowed grasslands. Species has been collected from early December to early May.	None. The study area does not support habitat for the vernal pool fairy shrimp since there are no vernal pools, seasonal wetlands, or ditches present.
Amphibians				
California Red-legged frog <i>Rana draytonii</i>	Fed: T CA: None	Throughout the Central Valley and coastal regions of central and southern California.	Found mostly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover. Frequently found in woods adjacent to streams. The species is found year-round.	None. Although some potentially suitable aquatic habitat is present at each project site, the combined study area occurs outside of the known range of the species.
Western Spadefoot <i>Spea hammondi</i>	Fed: PT CA: SSC	Found throughout the central and southwestern portions of California, ranges from near Redding south throughout the Great Valley and its associated foothills, through the South Coast Ranges in coastal southern California south of the Traverse mountains and west of the Peninsular mountains.	Prefers mostly in open areas with sandy or gravelly soils. This species can be found in a variety of habitats including mixed woodlands, grasslands, chaparral, foothills, and mountains. The species is found year-round.	Low potential. Suitable habitat is present. No CNDDB occurrences have not been documented within the study area.

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Special-Status Species with Potential to Occur in the Study Area

Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
Reptiles				
Bakersfield legless lizard <i>Anniella grinnelli</i>	Fed: None CA: SSC	Throughout the Central Valley and coastal regions of central and southern California.	Occurs in moist warm loose soil with plant cover. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. The species is found year-round.	Low potential. Some potentially suitable habitat may occur in mesic portions of the study area; however, the species has not been documented within 10 miles of any of the project sites.
Blunt-nosed leopard lizard <i>Gambelia sila</i>	Fed: E CA: E, FP	Endemic to California, inhabits the San Joaquin Valley and nearby valleys and foothills	Inhabits large (often more than 615 acres) contiguous areas of habitat characterized by open, patchily-vegetated areas of low relief. Vegetation communities associated with species presence include alkali sink scrub, saltbush (<i>Atriplex</i> spp.) scrub, Ephedra scrub, and grasslands. The species is found year-round.	None. Although some potentially suitable patches of habitat are present within the study area, such habitats are small and relatively isolated. Therefore, these areas are of insufficient size to support the wide-ranging blunt-nosed leopard lizard. In addition, there have been no recent occurrences within 10 miles of the study area in the last 75 years.
California glossy snake <i>Arizona elegans occidentalis</i>	Fed: None CA: SSC	Occurs from the eastern part of the San Francisco Bay Area south to northwestern Baja California.	Inhabits arid scrub, rocky washes, grasslands, chaparral. The species is found year-round.	Low potential. Some potentially suitable habitat is present within the study area, such habitats are characterized by past and ongoing disturbance. The species has not been documented within the study area. It is highly unlikely that the species would occur in the study area.
Coast horned lizard <i>Phrynosoma blainvillii</i>	Fed: None CA: SSC	Occurs in the Sierra Nevada foothills from Butte County to Kern County and throughout the central and southern California coast.	Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads. The species is found year-round.	Low potential. Some potentially suitable habitat is present within the study area, such habitats are characterized by past and ongoing disturbance. The species has not been documented within the study area. It is highly unlikely that the species would occur in the study area.

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Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
Giant garter snake <i>Thamnophis gigas</i>	Fed: T CA: T	Sacramento and San Joaquin Valleys from Butte County in the north to Kern County in the south.	Primarily associated with marshes, sloughs, and irrigation ditches. Generally absent in larger rivers. The species is found year-round.	None. Occurrences have not been documented within 10 miles of the study area. Additionally, the most recent USFWS status review for the species indicates that the species has likely been extirpated from the region.
Northern California legless lizard <i>Anniella pulchra</i>	Fed: None CA: SSC	Common in suitable habitats in the Coast Ranges from the vicinity of Antioch, Contra Costa County south to the Mexican border. Patchily distributed throughout the rest of their range, which includes the floor of the San Joaquin Valley from San Joaquin County south, the west slope of the southern Sierra, the Tehachapi Mountains west of the desert, and the mountains of southern California.	Occurs in moist warm loose soil with plant cover. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. The species is found year-round.	Low potential. Some potentially suitable habitat may occur in mesic portions of the study area. The species has not been documented within 5 miles of any of the project sites.
Northwestern pond turtle <i>Actinemys marmorata</i>	Fed: PT CA: SSC	Occurs from the Puget Sound lowlands in Washington through western Oregon and California, south to Baja California.	Occurs in streams, ponds, lakes, and permanent and ephemeral wetlands. Require terrestrial habitats for nesting.	None. Suitable aquatic and upland habitat does not occur in the project area. No occurrences have been recorded within 10 miles of the project sites.
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	Fed: None CA: SSC	Ranges from Arbuckle in the Sacramento Valley in Colusa County southward to the Grapevine in the Kern County portion of the San Joaquin Valley and westward into the inner South Coast Ranges.	Occurs in open, dry, treeless areas with little or no cover, including valley grassland and saltbush scrub. The species is found year-round.	Low potential. Suitable habitat may occur in the study area. The species has not been documented within 10 miles of any of the project sites.
Mammals				
Buena Vista Lake ornate shrew <i>Sorex ornatus relictus</i>	Fed: E CA: SSC	Only found in the Tulare Basin of the San Joaquin Valley.	Occurs near water sources in dense groundcover (i.e., deep leaf litter, cattails, and fallen logs) and moist soils. Typically associated with wetlands.	None. Suitable wetland habitat with dense groundcover does not occur in the study area. No occurrences have been documented within 10 miles of the project sites.

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Special-Status Species with Potential to Occur in the Study Area

Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
American badger <i>Taxidea taxus</i>	Fed: None CA: SSC	Occurs throughout California, excepting the northwestern corner of the state.	Dry open stages of most shrub, forest, and herbaceous habitats, with friable soils. The species is found year-round.	Low potential. Suitable habitat may occur within the study area. No recent occurrences have been documented within 10 miles of the study area.
Giant kangaroo rat <i>Dipodomys ingens</i>	Fed: E CA: E	Found in the San Joaquin Valley of California, from Los Banos south of Bakersfield, and west to San Luis Obispo.	Prefers dry areas that receive less than 15 centimeters of rain each year, in well-drained sandy soils by annual grasslands. The species is found year-round.	None. Suitable habitat is present at project sites; however, the study area falls outside of both the historical and current range of the species.
Pallid bat <i>Antrozous pallidus</i>	Fed: None CA: SSC	Throughout California excepting the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County.	Inhabits a wide variety of habitats including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. The species is found year-round.	None. No suitable roosting habitat is present within the study area and no occurrences of the species have been documented within 10 miles of project boundaries.
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i>	Fed: E CA: T	Westside of San Joaquin Valley of California, from the San Francisco bay area to south of Bakersfield	San Joaquin scrub and grasslands. The species is found year-round.	Low potential. Although no dens were found during biological surveys, there is suitable habitat present within the proposed construction areas. In addition, multiple occurrences have been documented near the construction areas.
Tipton kangaroo rat <i>Dipodomys nitratooides nitratooides</i>	Fed: E CA: E	San Joaquin Valley of California, Kings, Tulare, and Kern	Prefer elevated terrain for burrows (road berms, canal banks, and railroad beds. Primarily found in alkali marshes and plains, scattered woody shrubs. The species is found year-round.	Low potential. Suitable habitat is present within the study area; however, no occurrences have been documented in the study area.
Townsend's Big-eared bat <i>Corynorhinus townsendii</i>	Fed: None CA: SSC	Occurs throughout California, however the details of its distribution are not well known.,	Found in all but subalpine and alpine habitats and may be found at any season throughout its range. The species is found year-round.	None. No suitable roosting habitat is present within the study area and no recent occurrences of the species have been documented within 10 miles of project boundaries.

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Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
Western Mastiff Bat <i>Eumops perotis californicus</i>	Fed: None CA: SSC	Ranges from central Mexico across the southwestern United States (parts of California, southern Nevada, southwestern Arizona, southern New Mexico and western Texas).	Found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt where there are significant rock features offering suitable roosting habitat. The species is found year-round.	None. No suitable roosting habitat is present within the study area and no occurrences of the species have been documented within 10 miles of project boundaries.
Birds				
Bald eagle <i>Haliaeetus leucocephalus</i>	Fed: D CA: FP	Distributed throughout North America, including Alaska, Canada, the lower 48 states, and northwest Mexico. Breeding territories are mainly distributed in northern California, but also nest in scattered locations in the central and southern Sierra Nevada mountains and foothills.	In winter, bald eagles typically occur throughout most of California at lakes, reservoirs, and rivers. During breeding season (generally January through August), eagles build nests in the upper canopy of the tallest trees in the area.	Low potential (foraging only). There are no CNDDDB occurrences of bald eagles recorded within 10 miles of the project boundaries; the closest occurrence is approximately 30 miles north of the Deer Creek project area. A review of eBird indicates that this species occurs mostly within foothill/mountainous areas and almost never in the Central Valley. Furthermore, suitable nesting habitat does not occur within or near the project area. Therefore, while there is very low potential for this species to occur transiently within the project area, it is not expected to nest within 0.5 miles of the project area.
Burrowing Owl <i>Athene cunicularia</i>	Fed: None CA: SSC	Widely distributed throughout the lowlands of California, but rare along the coast north of Marin County and extremely rare east of the Sierra Nevada crest.	Inhabits dry open rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub with gullies, washes, arroyos, and edges of human-disturbed lands. The species is found year-round.	Low potential. Marginally suitable habitat may be present within the study area. There are multiple recent occurrences of the species that have been documented within 10 miles of project boundaries.

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Special-Status Species with Potential to Occur in the Study Area

Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
California condor <i>Gymnogyps californianus</i>	Fed: E CA: E, FP	Historically occurred along the Pacific Coast from British Columbia south to northern Baja California, Mexico. Currently distributed among release sites in Arizona, California, and Mexico.	Nesting habitat found in caves and crevasses located on steep rock formations, cliff ledges, in the burned-out hollows of old-growth conifers or the nests of other species. Foraging habitat typically consists of open grasslands and oak savannas. The species is found year-round.	None. Neither suitable nesting nor foraging habitat occurs in the study area and no recent occurrences of the species have been documented within 10 miles of project sites.
Golden eagle <i>Aquila chrysaetos</i>	Fed: None CA: FP	Occur throughout North America.	Can inhabit a variety of habitats including forests, canyons, shrublands, grasslands, and oak woodlands. Preferred nesting habitat comprises clifftops and rocky ledges, tall trees, and dense forests.	Low potential (foraging only). There are no CNDDDB occurrences recorded within 10 miles of the project boundaries; the closest occurrence is approximately 24 miles west of the Deer Creek project area. A review of eBird shows an absence of occurrences within the general project vicinity, and relatively few occurrences within the Central Valley as a whole. The species' preferred nesting habitat does not occur within or near the project area. Therefore, while there is very low potential for this species to occur transiently within the project area, it is not expected to nest within 0.5 miles of the project area.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Fed: E CA: E	Breeding individuals occur in southern California, southern Nevada, southern Utah, southern Colorado, Arizona, New Mexico, and western Texas.	Requires dense riparian habitats dominated by cottonwood, willows, and tamarisk vegetation. Suitable habitat features saturated soils, standing water or nearby streams, or other water features.	None. Suitable large expanses of dense riparian nesting habitat does not occur in the study area, and there are no occurrences recorded within 10 miles of any of the project sites.

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Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
Swainson's hawk <i>Buteo swainsoni</i>	Fed: None CA: T	Locally common to rare breeders in California, with the majority of known territories being located in the Central Valley and Great Basin bioregions.	Inhabits a wide variety of open habitats, ranging from prairie and shrub-steppe to desert and intensive agricultural systems. The species is found year-round.	Low potential (foraging only). The species has been observed flying over project sites and surrounding open areas may provide foraging habitat. No suitable nesting habitat occurs in or near the study area and individuals using adjacent habitats are likely accustomed to some degree of human disturbance.
Tricolored blackbird <i>Agelaius tricolor</i>	Fed: None CA: T, SSC	Breeding largely occurs in the Central Valley region. The species also breeds locally in other lowland areas of California west of the Cascade Sierra axis and in valleys at higher elevations in northeastern California.	Nests in wetlands with cattails, bulrushes, and willows as well as agricultural fields. The species is found year-round.	Low potential. The species may occupy project sites where wetland and riparian vegetation occurs. Individuals using such habitats are likely accustomed to some degree of human disturbance.
White-tailed kite <i>Elanus leucurus</i>	Fed: None CA: FP	In the lower 48 states, this species occurs in California, Oregon, and the southernmost parts of Texas and Florida.	Foraging habitat comprises grassland, cultivated fields, and open woodlands. The species typically nests in tree crowns, generally 20 to 50 feet from the ground. Live oak (<i>Quercus agrifolia</i>) is generally preferred for nesting. Nest trees may be growing in isolation or at the edge of or within a forest.	Low potential (foraging only). There are no CNDDB occurrences recorded within 10 miles of the project area; however, the species was observed soaring overhead during the 2021 site visit, and there are multiple observations recorded on eBird near the Lake Woollomes and Deer Creek project areas. Suitable foraging habitat for the species occurs within and around the project area. However, no known nests have been recorded in the project vicinity. Suitable nesting habitat does not occur within or around the project areas. Therefore, while there is low to moderate potential for this species to occur transiently within the project area, it is not expected to nest within 0.5 miles of the project area.

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Special-Status Species with Potential to Occur in the Study Area

Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
Fish				
Kern brook lamprey <i>Lampetra hubbsi</i>	Fed: None CA: SSC	Lower reaches of the Merced River, Kaweah River, Kings River, and San Joaquin River, as well as in the Kings River above Pine Flat Reservoir and the San Joaquin River above Millerton Lake, but below Redinger Dam.	Silty backwaters of large rivers in foothill regions. Ammocoetes (larvae) favor sand/mud substrate, which is present in the siphons of the Friant-Kern Canal. Adults require coarser gravel-rubble substrate for spawning. The species is found year-round.	Moderate potential. Kern brook lamprey ammocoetes are known to thrive in the siphons of the Friant-Kern Canal, and the species was documented approximately two miles north of the Lake Woollomes project site.
Delta Smelt <i>Archoplites interruptus</i>	Fed: T CA: E	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay.	Seldom found at salinities greater than 10 parts per thousand. Most often at salinities less than 2 parts per thousand. The species is found year-round.	None. The study area occurs outside the known range of the species.

Status explanations:

Federal

D = delisted

E = listed as endangered under the federal Endangered Species Act

PT = proposed threatened

T = listed as threatened under the federal Endangered Species Act

State

E = listed as endangered under the California Endangered Species Act

T = listed as threatened under the California Endangered Species Act

CE = candidate endangered under the California Endangered Species Act

FP = fully protected under the California Fish and Game Code

SSC = species of special concern

Table B-2. Special-Status Plant Species with Potential to Occur in the Study Area

Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
PLANTS				
Alkali mariposa-lily <i>Calochortus striatus</i>	Fed: None CA: None CRPR: 1B	Found in Inyo, Kern, Los Angeles, San Bernardino, and Tulare counties where conditions are favorable.	Alkaline meadows and ephemeral washes occurring in association with chaparral, chenopod scrub, Mojavean desert scrub. Blooms between April-June.	Low potential. Although there are no CNDDDB occurrences within 10 miles of the study area, suitable habitat for the species may present.
Alkali-sink goldfields <i>Lasthenia chrysantha</i>	Fed: None CA: None CRPR: 1B	Found throughout the Sacramento and San Joaquin valleys where conditions are favorable.	Vernal pools and wet saline flats. Blooms between February-April.	None. Although there are CNDDDB occurrences within 10 miles of the study area, neither suitable edaphic nor hydrological conditions are present in the study area.
Bakersfield cactus <i>Opuntia basilaris</i> var. <i>treleasei</i>	Fed: E CA: E CRPR: 1B	Restricted to a limited area of central Kern County near Bakersfield in the Southern San Joaquin Valley.	Occurs on flood plains, ridges, bluffs and rolling hills in saltbush scrub plant communities, and occasionally in blue oak woodland or riparian woodland at elevations from 460 to 1,800 feet. Blooms between April-May.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, based on occurrence data the study area occurs outside of the known range of the species.
Brittlescale <i>Atriplex depressa</i>	Fed: None CA: None CRPR: 1B	Found throughout the Sacramento and San Joaquin valleys where conditions are favorable.	Requires alkaline, clay soils and occurs association with chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pools. Blooms between April-October.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, suitable edaphic conditions are not present in the study area.
Calico monkeyflower <i>Diplacus pictus</i>	Fed: None CA: None CRPR: 1B	Found in the southern Sierra Nevada Foothills and Tehachapi Mountain area where conditions are favorable.	Occurs on bare ground around gooseberry bushes or around granite rock outcrops in broadleaved upland forest cismontane woodland habitats. Blooms between March-May	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, suitable habitat conditions are not present in the study area.

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Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
PLANTS				
California jewelflower <i>Caulanthus californicus</i>	Fed: E CA: E CRPR: 1B	Currently known from limited occurrences in Kern, Santa Barbara County, San Luis Obispo, Fresno, and Kings counties.	Occurs on flats, gentle slopes, and generally in non-alkaline grassland, and open-juniper woodland at elevations ranging from 230 to 3,280 feet. Blooms between February-May	None. There are historical CNDDDB occurrences within 10 miles of the study area; however, these occurrences are now considered extirpated or possibly extirpated. In addition, natural communities necessary to support the species are not present in the study area.
California satintail <i>Imperata brevifolia</i>	Fed: None CA: None CRPR: 2B	Found throughout arid regions of California where sufficient water is available.	Chaparral, coastal scrub, mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub. Blooms between September- May.	Low potential. Although there are no CNDDDB occurrences within 5 miles of the study area, suitable habitat for the species is present.
Chaparral ragwort <i>Senecio aphanactis</i>	Fed: None CA: None CRPR: 2B	Ranges from the San Francisco Bay Area south into Baja California.	Drying alkaline flats in chaparral, cismontane woodland, or coastal scrub habitats. Blooms between January-April.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, suitable habitat conditions are not present in the study area.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>Coulteri</i>	Fed: None CA: None CRPR: 1B	Found throughout the Sacramento and San Joaquin valleys where conditions are favorable.	Found on alkaline soils in coastal salt marshes, playas, and vernal pools. Blooms between February-June.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, neither suitable edaphic nor hydrological conditions are present in the study area.
Earlimart orache <i>Atriplex cordulata</i> var. <i>erecticaulis</i>	Fed: None CA: None CRPR: 1B	Found throughout the San Joaquin Valley where conditions are favorable.	Found on saline or alkaline soils in valley and foothill grassland. Blooms between August-September.	None. Although There are a historical and recent CNDDDB occurrences within 10 miles of the study area, natural communities necessary to support the species are not present in the study area.
Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	Fed: None CA: None CRPR: 1B	Found throughout the San Joaquin Valley where conditions are favorable.	Found on saline or alkaline soils in chenopod scrub, meadows and seeps, and valley and foothill grassland. Blooms between April-October.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, natural communities necessary to support the species are not present in the study area.

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Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
PLANTS				
Hispid salty bird's-beak <i>Chloropyron molle</i> <i>ssp. Hispidum</i>	Fed: None CA: None CRPR: 1B	Sparsely distributed throughout the Sacramento and San Joaquin valleys.	Found on damp alkaline soils in meadows and seeps, playas as well as valley and foothill grassland habitat. Blooms between June-September.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, suitable edaphic conditions and natural communities necessary to support the species are absent from the study area.
Horn's milk-vetch <i>Astragalus hornii</i> <i>var. hornii</i>	Fed: None CA: None CRPR: 1B	Known from Inyo, Kings, Kern, Los Angeles, and San Bernardino counties.	Alkaline lake margins. Blooms between May-October.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, suitable habitat for the species is not present in the study area.
Keck's checkerbloom <i>Sidalcea keckii</i>	Fed: E CA: None CRPR: 1B	Confirmed extant populations restricted to Fresno and Tulare counties.	Serpentine-derived, clay soils occurring in association with Cismontane woodland, valley and foothill grassland habitats. Blooms between April-May.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, suitable edaphic conditions and natural communities necessary to support the species are absent from the study area.
Kern mallow <i>Eremalche parryi</i> <i>ssp. Kernensis</i>	Fed: E CA: None CRPR: 1B	Found in arid environments in the southern San Joaquin Valley, on the Carrizo Plain, in the Cuyama Valley and in the Transverse Range.	Found in grassland and saltbush scrub habitat on dry, open, sandy to clay soils. Blooms between January-May.	Low potential. There are recent CNDDDB occurrences within 10 miles of the study area and marginally suitable habitat for the species is present.
Lesser saltscale <i>Atriplex minuscule</i>	Fed: None CA: None CRPR: 1B	Found throughout the San Joaquin Valley where conditions are favorable.	Found on alkaline, sandy soils in chenopod scrub, playas, and valley and foothill grassland habitats. Blooms between May-October.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, suitable habitat for the species is not present in the study area.
Lost Hills crownscale <i>Atriplex coronata</i> <i>var. vallicola</i>	Fed: None CA: None CRPR: 1B	Found throughout the San Joaquin Valley where conditions are favorable.	Found on powdery, alkaline soils that are vernal moist. Blooms between April-August.	None. There are no recent CNDDDB occurrences within 5 miles of the study area. In addition, suitable edaphic any hydrological conditions are not present in the study area.
Madera leptosiphon <i>Leptosiphon</i> <i>serrulatus</i>	Fed: None CA: None CRPR: 1B	Known from Madera County south to Kern County.	Occurs on dry slopes (often on decomposed granite) in woodland in cismontane woodland and lower montane coniferous forest habitats. Blooms between April-May.	None. There are no recent CNDDDB occurrences within 5 miles of the study area. In addition, suitable topographic conditions and natural communities necessary to support the species are absent from the study area.

Attachment B

Special-Status Species with Potential to Occur in the Study Area

Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
PLANTS				
Mason's neststraw <i>Stylocline masonii</i>	Fed: None CA: None CRPR: 1B	Known from Kern, Los Angeles, Monterey, and San Luis Obispo counties.	Open loose sand of washes and flats in chenopod scrub, pinyon and juniper woodland habitat. Blooms between March-May.	Low potential. Although there are no CNDDDB occurrences within 5 miles of the study area, suitable habitat for the species may present.
Munz's tidy-tips <i>Layia munzii</i>	Fed: None CA: None CRPR: 1B	Found throughout the San Joaquin Valley where conditions are favorable.	Occurs on alkaline clay in low-lying scrublands and on hillsides in grasslands. Blooms between March-April.	None. There are no extant CNDDDB occurrences within 5 miles of the study area. In addition, suitable edaphic conditions are not present in the study area.
Purple mountain-parsley <i>Oreonana purpurascens</i>	Fed: None CA: None CRPR: 1B	Found in the southern High Sierra Nevada region where conditions are favorable.	Occurs on metamorphic rocks in red-fir or lodgepole-pine forests.	None. There are no CNDDDB occurrences within 5 miles of the study area. In addition, suitable habitat for the species is not present in the study area.
Recurved larkspur <i>Delphinium recurvatum</i>	Fed: None CA: None CRPR: 1B	Found throughout central California where conditions are favorable.	Occurs on alkaline soils; often in valley saltbush or valley chenopod scrub habitats. Blooms between March-June.	Low potential. Although there are no recent CNDDDB occurrences within 10 miles of the study area, suitable habitat for the species may present.
San Joaquin adobe sunburst <i>Pseudobahia peirsonii</i>	Fed: T CA: E CRPR: 1B	Found throughout central and southern California where conditions are favorable.	Prefers adobe clay within valley grassland and foothill woodland habitats. Blooms between February-April.	None. There are no recent, extant CNDDDB occurrences within 10 miles of the study area. In addition, suitable habitat is not present as the study area is underlain by sandy loam soil, not adobe clay as required by the species.
San Joaquin woollythreads <i>Monolopia congdonii</i>	Fed: E CA: None CRPR: 1B	Distributed throughout the southern portion of the San Joaquin Valley.	Inhabit mainly chenopod scrub, and valley and foothill grasslands. Blooms between February-May.	Low potential. There are historical occurrences within 10 miles of the study area; however, they are all possibly extirpated. Suitable habitat (i.e., sandy grasslands) is present within the study area.
Shining navarretia <i>Navarretia nigelliformis</i> ssp. <i>Radians</i>	Fed: None CA: None CRPR: 1B	Found throughout the Inner and South Coast ranges where conditions are favorable.	Found in cismontane woodland, valley and foothill grassland, and vernal pool habitats. Blooms between April- July.	None. There are no CNDDDB occurrences within 5 miles of the Study area. In addition, the natural communities necessary to support the species are absent from the study area.

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Common Name	Status	Distribution	Habitat Association/ Seasonal Occurrence	Likelihood of Occurrence
PLANTS				
Spiny-sepaed button-celery <i>Eryngium spinosepalum</i>	Fed: None CA: None CRPR: 1B	Found throughout the San Joaquin Valley	Found in valley and foothill grasslands and vernal pools. Blooms between April- June.	None. There are no extant CNDDB occurrences within 5 miles of the study area. In addition, suitable habitats (i.e., vernal pools) are not present in the study area.
Springville clarkia <i>Clarkia springvillensis</i>	Fed: T CA: CE CRPR: 1B	Narrowly distributed along the Tule River drainage in the western Sierra Nevada foothills within Tulare County.	Cutbanks and openings in blue oak woodland habitats. Blooms between May- July.	None. There are no CNDDB occurrences within 5 miles of the study area. In addition, the edaphic conditions and natural community necessary to support the species are absent from the study area.
Striped adobe-lily <i>Fritillaria striata</i>	Fed: None CA: T CRPR: 1B	Known only from the southern Sierra Nevada foothills in Kern County and Tulare County, and east of the Tejon Hills in the Tehachapi Mountains foothills, on the Tejon Ranch in Kern County.	Found on heavy clay adobe soils in oak grassland. Blooms between February- April.	None. There are no extant CNDDB occurrences within 5 miles of the study area. In addition, the edaphic conditions and natural community necessary to support the species are absent from the study area.
Subtle orache <i>Atriplex subtilis</i>	Fed: None CA: None CRPR: 1B	Found throughout the San Joaquin Valley where conditions are favorable.	Found on sandy alkaline soils occurring in depressional areas. Blooms between June- August.	Low potential. Although there are no recent CNDDB occurrences within 10 miles of the study area, suitable habitat for the species may present.
Vernal pool smallscale <i>Atriplex persistens</i>	Fed: None CA: None CRPR: 1B	Found throughout the Sacramento and San Joaquin valleys where suitable habitat occurs.	Found in vernal pool habitats. Blooms between June- October.	None. There are no recent CNDDB occurrences within 10 miles of the study area. In addition, suitable habitats (i.e., vernal pools) are not present in the Study area.

Status explanations:

Federal

E = listed as endangered under the federal Endangered Species Act

T = listed as threatened under the federal Endangered Species Act

State

E = listed as endangered under the California Endangered Species Act

T = listed as threatened under the California Endangered Species Act

CE = listed as candidate endangered under the California Endangered Species Act

CRPR = California Rare Plant Rank

Appendix H

Attachment C: Shafter-Wasco

Photo Log

January 2023 Survey

Presented below are photos that represent the site conditions at the Shafter-Wasco Site. All photos (except those labeled otherwise) were taken on January 26, 2023, between 3:00 and 4:00 p.m. Figure 1 depicts an aerial view of the project area and proposed changes and indicates the location and direction that the subsequent photos were taken.

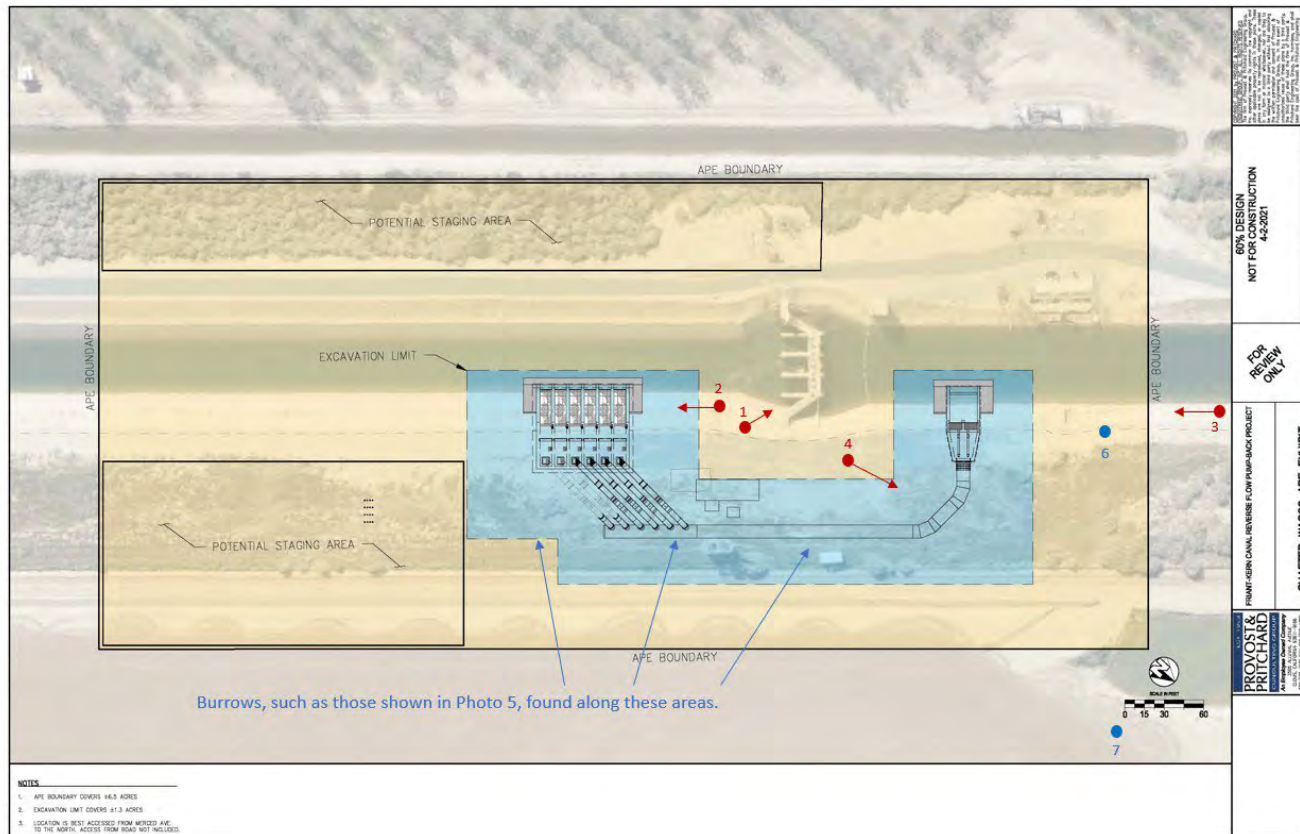


Figure 1. Aerial View of Shafter-Wasco Site and Proposed Changes

Note: The photos that correspond with labels 1-7 are presented below. Red dots indicate the location at which a photo was taken, and red arrows indicate the direction a photo was taken. Blue dots and arrows indicate the location(s) of a photo subject.



Photo 1: Canal Infrastructure

Facing northwest



Photo 2: Canal Infrastructure

Facing southeast



Photo 3: Canal Infrastructure and Gravel-Improved Access Road
Facing southeast



Photo 4: Vegetation Present in Dry Scrubland Habitat



Photo 5: Small Mammal Burrows



Photo 6: Black-tailed Jackrabbit (*Lepus californicus*)
Adjacent to dry scrubland area



Photo 7: Coyote (*Canis latrans*)

In agriculture fields east of project area

March 2021 Survey

The following are a selection of photos taken on March 8, 2021, at the Shafter-Wasco Site.



Photo 1: Vegetation in Northern End of Proposed Work Area

East side of FKC, facing north



Photo 2: Gravel Improved Access Road

East side of FKC, facing north



Photo 3: Irrigation Ditch Parallel to FKC in Agricultural Fields

West side of FKC, facing south



Photo 4: Dry Scrubland Habitat

West side of FKC, facing southwest

Appendix H

Attachment D: Lake Woollomes

Photo Log

January 2023 Survey

Presented below are photos that represent the site conditions at the Lake Woollomes Site. All photos were taken on January 27, 2023, between 8:00 and 9:00 a.m. Figure 2 depicts an aerial view of the project area and proposed changes and indicates the location and direction that the subsequent photos were taken.

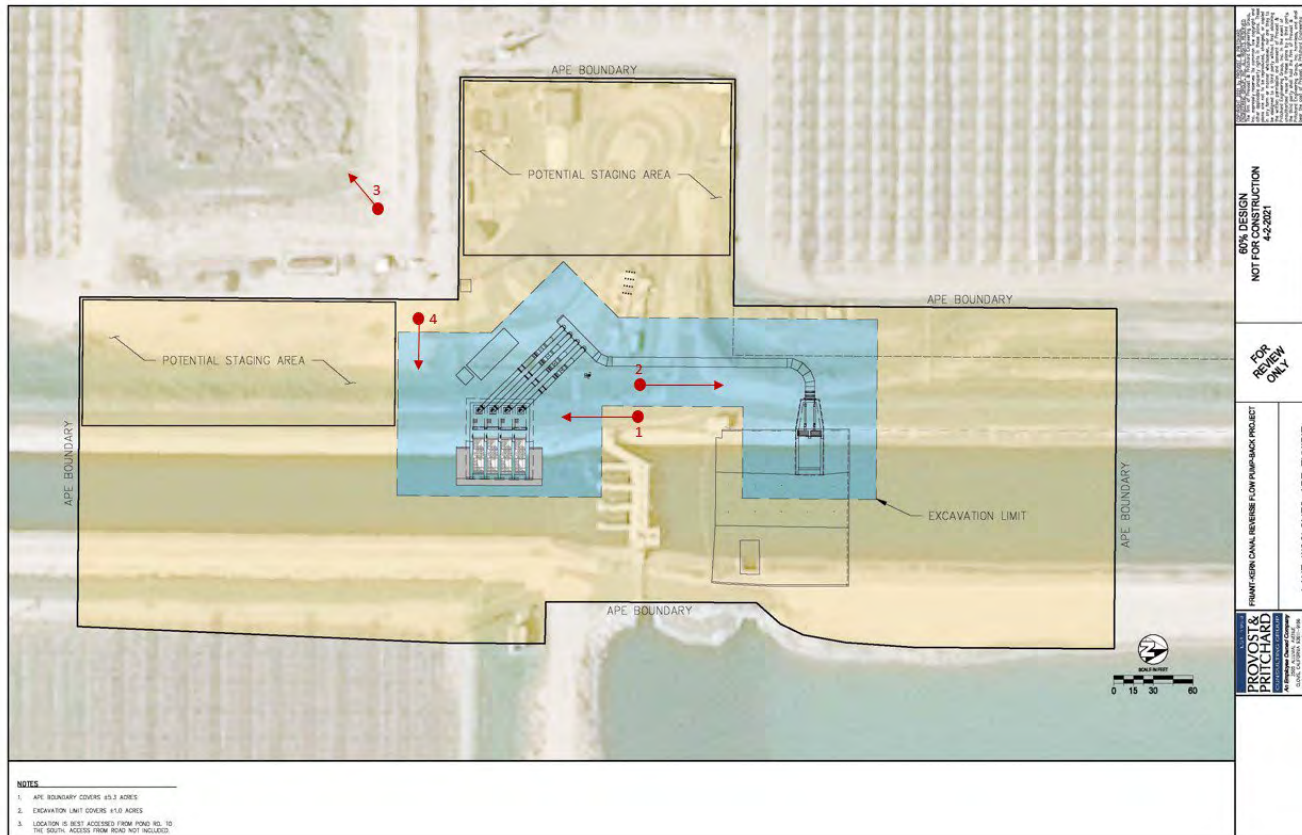


Figure 2. Aerial View of Lake Woollomes Site and Proposed Changes.

Note: The photos that correspond with labels 1-4 are presented below. Red dots indicate the location at which a photo was taken, and the red arrows indicate the direction the photo was taken.



Photo 1: Lake Woollomes Check Station

Facing south

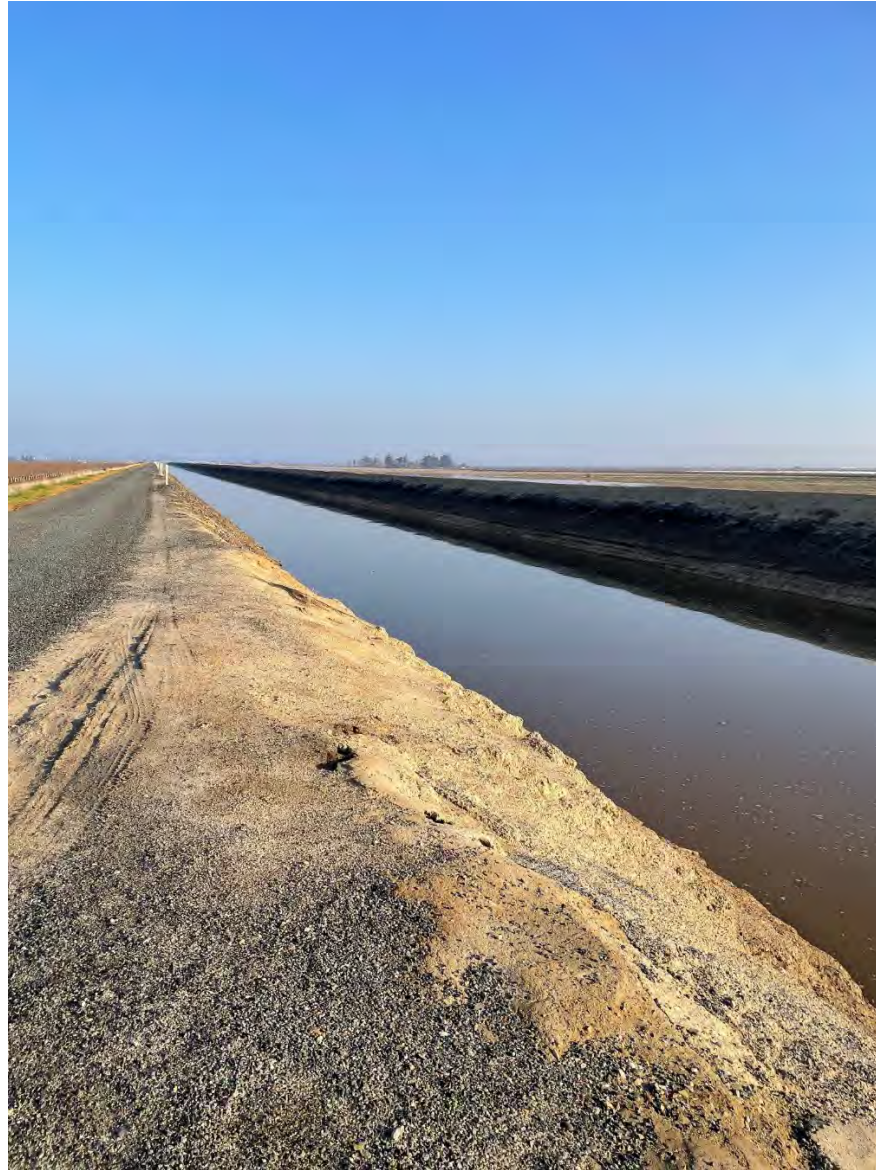


Photo 2: Canal Infrastructure and Access Road

Facing north



Photo 3: Drained Pond
West of the Friant-Kern Canal



Photo 4: Small Mammal Burrows

Located on the steep embankment on the west side of the canal

March 2021 Survey

The following are a selection of photos taken on March 8, 2021.



Photo 1: Gravel Improved Access Road Along FKC

Facing north



Photo 2: Steep Earthen Embankment Along Access Road

Facing north



Photo 3: Irrigation Basin in Orchard

West of FKC, facing west



Photo 4: FKC Connection to Lake Woollomes

Facing Northwest

Appendix H

Attachment E: Deer Creek Photo Log

January 2023 Survey

Presented below are photos that represent the site conditions at the Deer Creek Site. All photos were taken on January 27, 2023, between 9:00 and 10:00 a.m. Figure 3 depicts an aerial view of the project area and proposed changes and indicates the location and direction that the subsequent photos were taken.

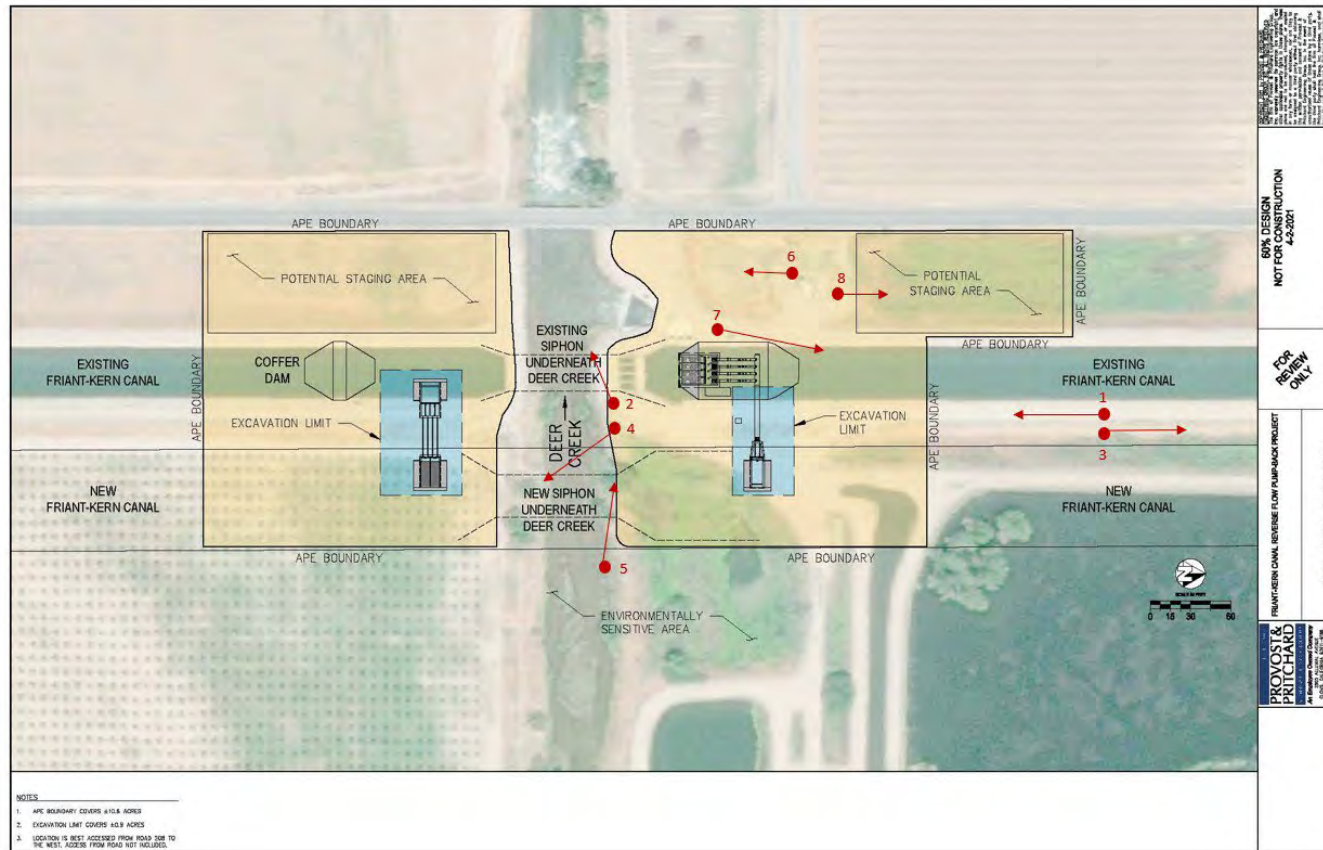


Figure 3. Aerial View of Deer Creek Site and Proposed Changes

Note: The photos that correspond with labels 1-8 are presented below. Red dots indicate the location at which a photo was taken, and the red arrows indicate the direction the photo was taken.



Photo 1: Graded Area East of the Friant-Kern Canal
Facing south



Photo 2: Deer Creek
Facing downstream towards the west



Photo 3: Graded Area East of the Friant-Kern Canal
Facing north. Work area is being dewatered (via blue hose) into the Friant-Kern Canal.



Photo 4: Newly Constructed Siphon Structure on South Side of Deer Creek, East of Friant-Kern Canal
Facing southeast



Photo 5: Siphon Structure on North Side of Deer Creek, East of Friant-Kern Canal

Facing northwest



Photo 6: Potential Southwest Staging Area

Facing south. Picture subject is located west of the Friant-Kern Canal and north of Deer Creek.



Photo 7: Friant-Kern Canal Infrastructure

West side of the canal, facing north



Photo 8: Potential Northwest Staging Area

Facing north

March 2021 Survey

Photos taken at this site during the March 2021 Survey have been omitted. Conditions at this site have changed drastically since the March 2021 Survey, and the photos presented above have superseded those taken in March 2021.

Appendix H

Attachment F: Species Lists



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

March 11, 2024

Project Code: 2024-0060350

Project Name: Friant-Kern Canal Pump-Back Project

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

PROJECT SUMMARY

Project Code: 2024-0060350

Project Name: Friant-Kern Canal Pump-Back Project

Project Type: Water Supply Facility - Maintenance / Modification

Project Description: Installation of new pump-back stations along the FKC.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.9769419,-119.1070807,1309159,14z>



Counties: Kern and Tulare counties, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 13 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
Buena Vista Lake Ornate Shrew <i>Sorex ornatus relictus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1610	Endangered
Giant Kangaroo Rat <i>Dipodomys ingens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6051	Endangered
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered
Tipton Kangaroo Rat <i>Dipodomys nitratooides nitratooides</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7247	Endangered

BIRDS

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> Population: U.S.A. only, except where listed as an experimental population There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

REPTILES

NAME	STATUS
Blunt-nosed Leopard Lizard <i>Gambelia silus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered
Northwestern Pond Turtle <i>Actinemys marmorata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

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

INSECTS

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

CRUSTACEANS

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

FLOWERING PLANTS

NAME	STATUS
San Joaquin Adobe Sunburst <i>Pseudobahia peirsonii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2931	Threatened
San Joaquin Woolly-threads <i>Monolopia (=Lembertia) congdonii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3746	Endangered

CRITICAL HABITATS

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

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

IPAC USER CONTACT INFORMATION

Agency: Bureau of Reclamation
Name: Jenna Quan
Address: 2295 Gateway Oaks Dr.
Address Line 2: Suite 250
City: Sacramento
State: CA
Zip: 95833
Email: quanjr@cdmsmith.com
Phone: 9165767482



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria:

Quad IS (Deepwell Ranch (3511961) OR Delano East (3511972) OR Delano West (3511973) OR Ducor (3511981) OR Famoso (3511952) OR Fountain Springs (3511888) OR McFarland (3511962) OR North of Oildale (3511951) OR Oildale (3511941) OR Pond (3511963) OR Porterville (3611911) OR Quincy School (3511878) OR Richgrove (3511971) OR Rio Bravo (3511943) OR Rosedale (3511942) OR Sausalito School (3511982) OR Success Dam (3611818) OR Wasco (3511953) OR Woodville (3611912))
 AND (Federal Listing Status IS (Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Candidate) OR State Listing Status IS (Endangered OR Threatened OR Rare OR Candidate Endangered OR Candidate Threatened))



Selected Elements by Scientific 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
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
<i>Bombus crotchii</i> Crotch's bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
<i>Caulanthus californicus</i> California jewelflower	PDBRA31010	Endangered	Endangered	G1	S1	1B.1
<i>Clarkia springvillensis</i> Springville clarkia	PDONA05120	Threatened	Endangered	G2	S2	1B.2
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T3	S3	
<i>Dipodomys nitratoides nitratoides</i> Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	G3T1T2	S2	
<i>Eremalche parryi ssp. kernensis</i> Kern mallow	PDMAL0C031	Endangered	None	G3G4T3	S3	1B.2
<i>Fritillaria striata</i> striped adobe-lily	PMLIL0V0K0	None	Threatened	G1	S1	1B.1
<i>Gambelia sila</i> blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	G1	S2	FP
<i>Gymnogyps californianus</i> California condor	ABNKA03010	Endangered	Endangered	G1	S2	FP
<i>Monolopia congdonii</i> San Joaquin woollythreads	PDASTA8010	Endangered	None	G2	S2	1B.2
<i>Opuntia basilaris var. treleasei</i> Bakersfield cactus	PDCAC0D055	Endangered	Endangered	G5T1	S1	1B.1
<i>Pseudobahia peirsonii</i> San Joaquin adobe sunburst	PDAST7P030	Threatened	Endangered	G1	S1	1B.1
<i>Sidalcea keckii</i> Keck's checkerbloom	PDMAL110D0	Endangered	None	G2	S2	1B.1
<i>Spea hammondi</i> western spadefoot	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S3	

Record Count: 18



CNPS Rare Plant Inventory

Search Results

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[3511961:3511972:3511973:3511981:3511952:3511888:3511962:3511951:3511941:3511963:3611911:3511878:3511971:3511943:3511942:3511982:3611818:3511953:3611912]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
<u>Allium howellii</u> <u>var. howellii</u>	Howell's onion	Alliaceae	perennial bulbiferous herb	Mar-Apr	None	None	G3G4T3	S3	4.3	Yes	2017-04-04	 © 2013 Neal Kramer
<u>Astragalus hornii</u> <u>var. hornii</u>	Horn's milk-vetch	Fabaceae	annual herb	May-Oct	None	None	GUT1	S1	1B.1		2006-12-01	No Photo Available
<u>Atriplex cordulata</u> <u>var. erecticaulis</u>	Earlimart orache	Chenopodiaceae	annual herb	Aug-Sep(Nov)	None	None	G3T1	S1	1B.2	Yes	2001-01-01	 © 2009 Robert E. Preston, Ph.D.
<u>Atriplex coronata</u> <u>var. coronata</u>	crownscale	Chenopodiaceae	annual herb	Mar-Oct	None	None	G4T3	S3	4.2	Yes	1994-01-01	 © 1994 Robert E. Preston, Ph.D.
<u>Atriplex coronata</u> <u>var. vallicola</u>	Lost Hills crownscale	Chenopodiaceae	annual herb	Apr-Sep	None	None	G4T3	S3	1B.2	Yes	1974-01-01	No Photo Available
<u>Atriplex depressa</u>	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	Yes	1994-01-01	 © 2009 Zoya Akulova
<u>Atriplex persistens</u>	vernal pool smallscale	Chenopodiaceae	annual herb	Jun-Oct	None	None	G2	S2	1B.2	Yes	2001-01-01	No Photo Available
<u>Atriplex subtilis</u>	subtle orache	Chenopodiaceae	annual herb	(Apr)Jun-Sep(Oct)	None	None	G1	S1	1B.2	Yes	1994-01-01	 © 2000 Robert E. Preston, Ph.D.
<u>Azolla microphylla</u>	Mexican mosquito fern	Azollaceae	annual/perennial herb	Aug	None	None	G5	S4	4.2		1994-01-01	No Photo Available

<u><i>Calochortus striatus</i></u>	alkali mariposa-lily	Liliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G3	S2S3	1B.2		1974-01-01	No Photo Available
<u><i>Caulanthus californicus</i></u>	California jewelflower	Brassicaceae	annual herb	Feb-May	FE	CE	G1	S1	1B.1	Yes	1984-01-01	No Photo Available
<u><i>Chloropyron molle</i> ssp. <i>hispidum</i></u>	hispid salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Sep	None	None	G2T1	S1	1B.1	Yes	1974-01-01	No Photo Available
<u><i>Clarkia exilis</i></u>	slender clarkia	Onagraceae	annual herb	Apr-May	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
<u><i>Clarkia springvillensis</i></u>	Springville clarkia	Onagraceae	annual herb	(Mar)Apr-Jul	FT	CE	G2	S2	1B.2	Yes	1980-01-01	No Photo Available
<u><i>Claytonia palustris</i></u>	marsh claytonia	Montiaceae	perennial herb	May-Oct	None	None	G4	S4	4.3	Yes	1988-01-01	 ©2006 Dean Wm. Taylor, Ph.D.
<u><i>Convolvulus simulans</i></u>	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	None	None	G4	S4	4.2		1994-01-01	No Photo Available
<u><i>Delphinium hansenii</i> ssp. <i>ewanianum</i></u>	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	None	None	G4T3	S3	4.2	Yes	1994-01-01	No Photo Available
<u><i>Delphinium inopinum</i></u>	unexpected larkspur	Ranunculaceae	perennial herb	May-Jul	None	None	G3	S3	4.3	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>Diplacus pictus</i></u>	calico monkeyflower	Phrymaceae	annual herb	Mar-May	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2020 Matt C. Berger
<u><i>Eremalche parryi</i> ssp. <i>kernensis</i></u>	Kern mallow	Malvaceae	annual herb	Jan(Feb)Mar-May	FE	None	G3G4T3	S3	1B.2	Yes	1974-01-01	No Photo Available
<u><i>Eriastrum hooveri</i></u>	Hoover's eriastrum	Polemoniaceae	annual herb	Mar-Jul	FD	None	G3	S3	4.2	Yes	1974-01-01	 © 2011 Chris Windhell
<u><i>Eriogonum passyrium</i></u>	cottony buckwheat	Polygonaceae	annual herb	Mar-Sep	None	None	G3G4	S3S4	4.2	Yes	1974-01-01	No Photo Available
<u><i>Eryngium spinosepalum</i></u>	spiny-sepaled button-celery	Apiaceae	annual/perennial herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	1980-01-01	No Photo Available

<u><i>Fritillaria striata</i></u>	striped adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	CT	G1	S1	1B.1	Yes	1974-01-01	 © 2013 Aaron Schusteff
<u><i>Imperata brevifolia</i></u>	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	None	None	G3	S3	2B.1		2006-12-26	 © 2020 Matt C. Berger
<u><i>Lasthenia chrysantha</i></u>	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	Yes	2019-09-30	 © 2009 California State University, Stanislaus
<u><i>Lasthenia ferrisiae</i></u>	Ferris' goldfields	Asteraceae	annual herb	Feb-May	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2009 Zoya Akulova
<u><i>Lasthenia glabrata</i> ssp. <i>coulteri</i></u>	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	None	None	G4T2	S2	1B.1		1994-01-01	 © 2013 Keir Morse
<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
<u><i>Leptosiphon serrulatus</i></u>	Madera leptosiphon	Polemoniaceae	annual herb	Apr-May	None	None	G3	S3	1B.2	Yes	1980-01-01	 © 2008 Chris Winchell
<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 nigelliformis</i> ssp. <i>radians</i></u>	shining navarretia	Polemoniaceae	annual herb	(Mar)Apr-Jul	None	None	G4T2	S2	1B.2	Yes	1994-01-01	No Photo Available
<u><i>Opuntia basilaris</i> var. <i>treleasei</i></u>	Bakersfield cactus	Cactaceae	perennial stem	Apr-May	FE	CE	G5T1	S1	1B.1	Yes	1974-01-01	No Photo Available
<u><i>Pseudobahia peirsonii</i></u>	San Joaquin adobe sunburst	Asteraceae	annual herb	Feb-Apr	FT	CE	G1	S1	1B.1	Yes	1974-01-01	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>Sidalcea keckii</i></u>	Keck's checkerbloom	Malvaceae	annual herb	Apr-May(Jun)	FE	None	G2	S2	1B.1	Yes	1974-01-01	No Photo Available

<u><i>Stylocline</i></u> <u><i>masonii</i></u>	Mason's neststraw	Asteraceae	annual herb	Mar-May	None	None	G1	S1	1B.1	Yes	1994- 01-01	No Photo Available
<u><i>Trichostema</i></u> <u><i>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

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