PREPARED FOR:

CESAR CHAVEZ FOUNDATION

PREPARED BY:

SOUTH VALLEY BIOLOGY CONSULTING, LLC

SHAFTER FAMILY APARTMENTS

BIOLOGICAL RESOURCES EVALUATION

DATE:
MARCH 2025

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1.0 Introduction

South Valley Biology Consulting LLC (SVB) is pleased to present this Biological Resources Evaluation (BRE) completed on behalf of the Cesar Chavez Foundation and Shafter Housing Development, LP, in support of a proposed residential housing development referred to as the Shafter Family Apartments located within the city of Shafter, California between Birch and Los Angeles Streets. For the purposes of continuity throughout this evaluation, the term "Project" refers to the operations required and described within the Project description, the term "Project Site" will be used to reference the actual Project footprint at the existing right-of-way, while the term "Project Area" will reference a broader area encompassing the Project footprint as well as the direct adjacent lands surrounding the Project Site.

The purpose of this BRE is to determine whether the Project will affect state or federally protected resources pursuant to California Environmental Quality Act (CEQA) guidelines. These resources include State and/or federally listed species or species proposed for listing under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); avian species protected under the auspices of the Migratory Bird Treaty Act (MBTA); as well as species afforded protection under several sections of the California Fish and Game Code, such as the California Native Plant Protection Act, Fully Protected Species, and protections for nesting birds. Any Project related impacts to federal or state regulated habitats such as wetlands and waters of the United States, and waters of the State are also addressed.

1.1 Project Description

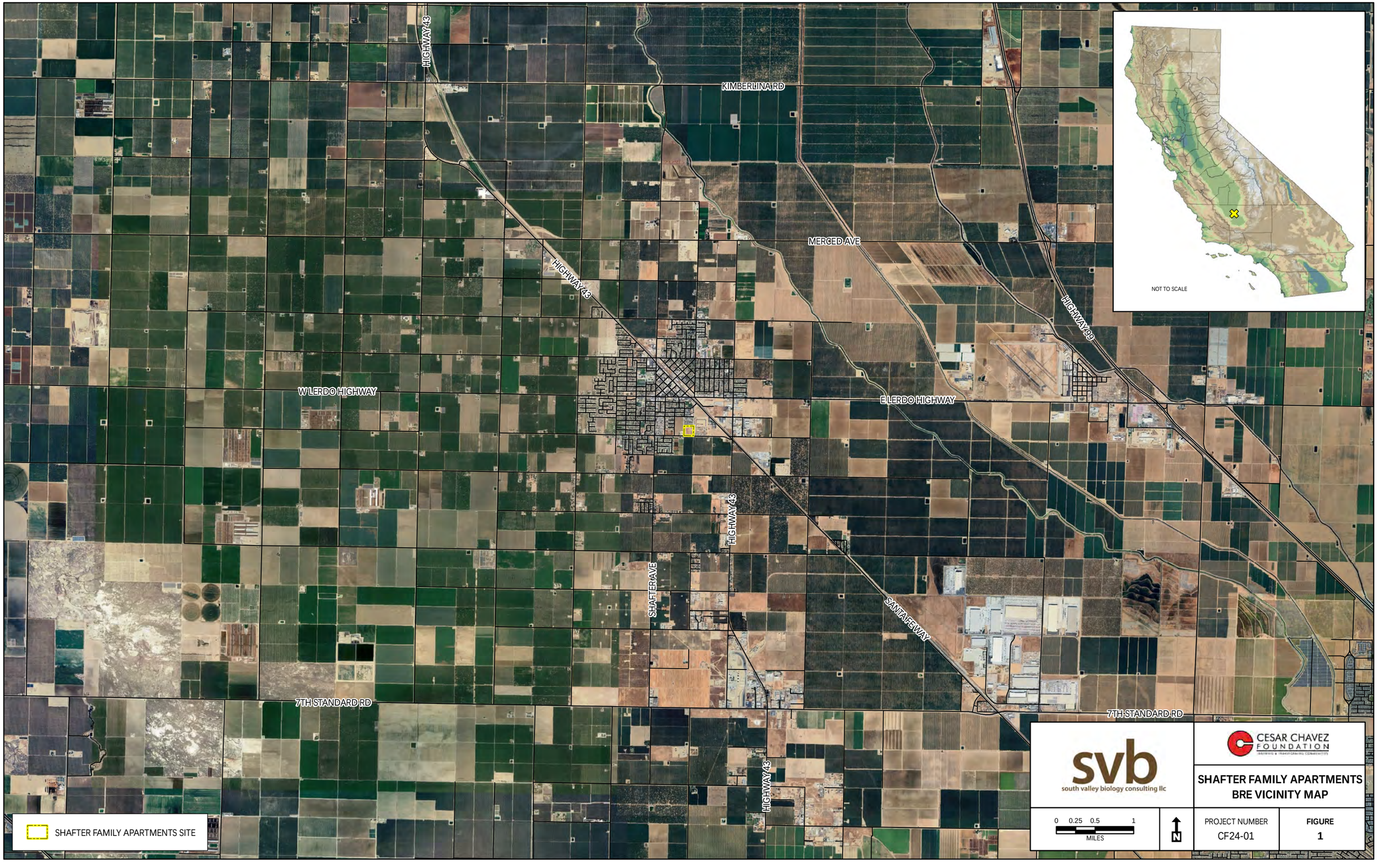
The Shafter Family Apartments Project aims to construct a three-story residential apartment complex within the city of Shafter, California. This residential development will occur on a parcel of land located at APN: 028-180-57, Parcel 57-Los Angeles Street. The construction of these apartments will be divided into 3 phases.

The Proposed Project will expand housing opportunities and will also expand economic opportunities for residents and community members. The by-right design, in addition to a DENSITY BONUS and further undergoing a General Plan Amendment and a Zone Change, totals 174 units broken down into three phases of 61 units for Phase I, 61 units for Phase II, and 50 units for Phase III of 30%, 40%, 50%, 60% Area Medium Income (AMI) levels. The proposed development is a three-level podium development of 174 units with 348 on-site parking stalls broken down into the following three phases.

For Phase I and I, CCF Staff is proposing to develop 61 unit development of 100% affordable housing at 30%, 40%, 50%, 60% AMI levels for large families working in the farm labor movement. The Proposed Project has not received entitlements from the City of Shafter Planning Commission. The Proposed Project will be consistent with the design principles of the General Plan and Housing Element for the site, but will need undergo a Zone Change and a General Plan Amendment from R-1 Low Density Residential District into a R-3 Medium High Density Residential District. CCF Staff are currently working with the City of Shafter Planning Department acquiring the necessary Zone Change and General Plan Amendment. Phase I and Phase II will mirror each other with each a three-story residential building with pertaining a total of 124 off-street parking (surface level parking spaces) equating to 248 parking spaces for both Phase I & II.

1.2 Project Location

The Shafter Family Apartments Project is located within Shafter California, on a parcel of land located at APN: 028-180-57, Parcel 57-Los Angeles Street. The parcel is located east of Birch Street, west of South Mannel Avenue, and north of Los Angeles Street (**Figure 1**). The Project Site lies within Section 15, Township 28 South, Range 25 East, Mount Diablo Base & Meridian (MDB&M). The entirety of the Project lies within the Rio Bravo USGS 7.5-minute topographic quadrangle (**Figure 2**). The Project Site can be accessed by traveling north on Highway 99, taking the East Lerdo Highway exit then traveling eastward for approximately 5.40 miles before turning south on to Beech Avenue. Then continuing on Beech Avenue and cross Highway 43 where Beech Avenue will become Los Angeles Street. After crossing Highway 43, continue west for approximately 0.50 miles. The southeast corner of the Project Site is located directly north of Los Angeles Avenue and west of South Mannel Avenue (**Figure 3**).



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SHAFTER FAMILY APARTMENTS BRE VICINITY MAP

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FIGURE
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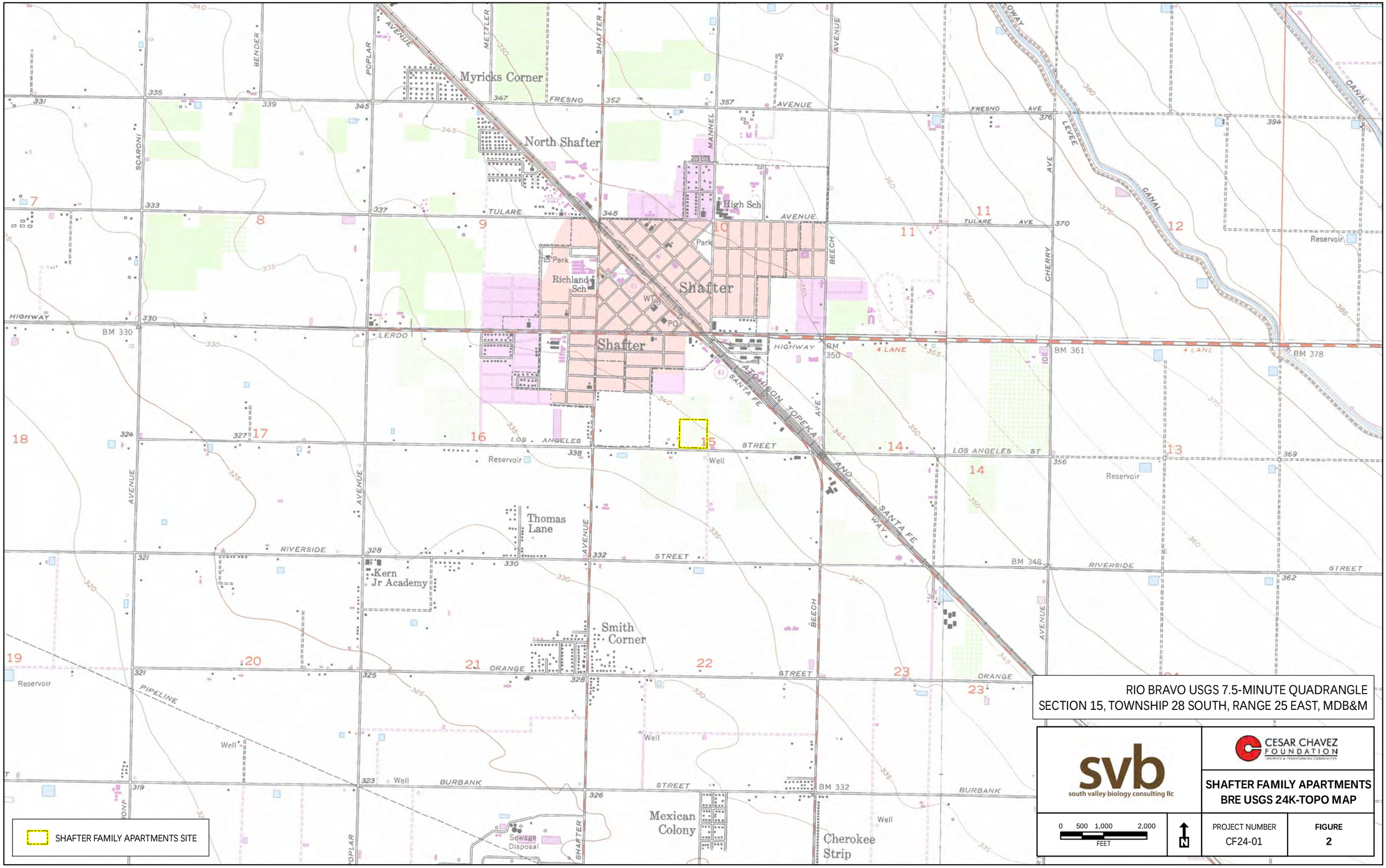

SHAFTER FAMILY APARTMENTS SITE

RIO BRAVO USGS 7.5-MINUTE QUADRANGLE
SECTION 15, TOWNSHIP 28 SOUTH, RANGE 25 EAST, MDB&M

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SHAFTER FAMILY APARTMENTS
BRE USGS 24K-TOPO MAP

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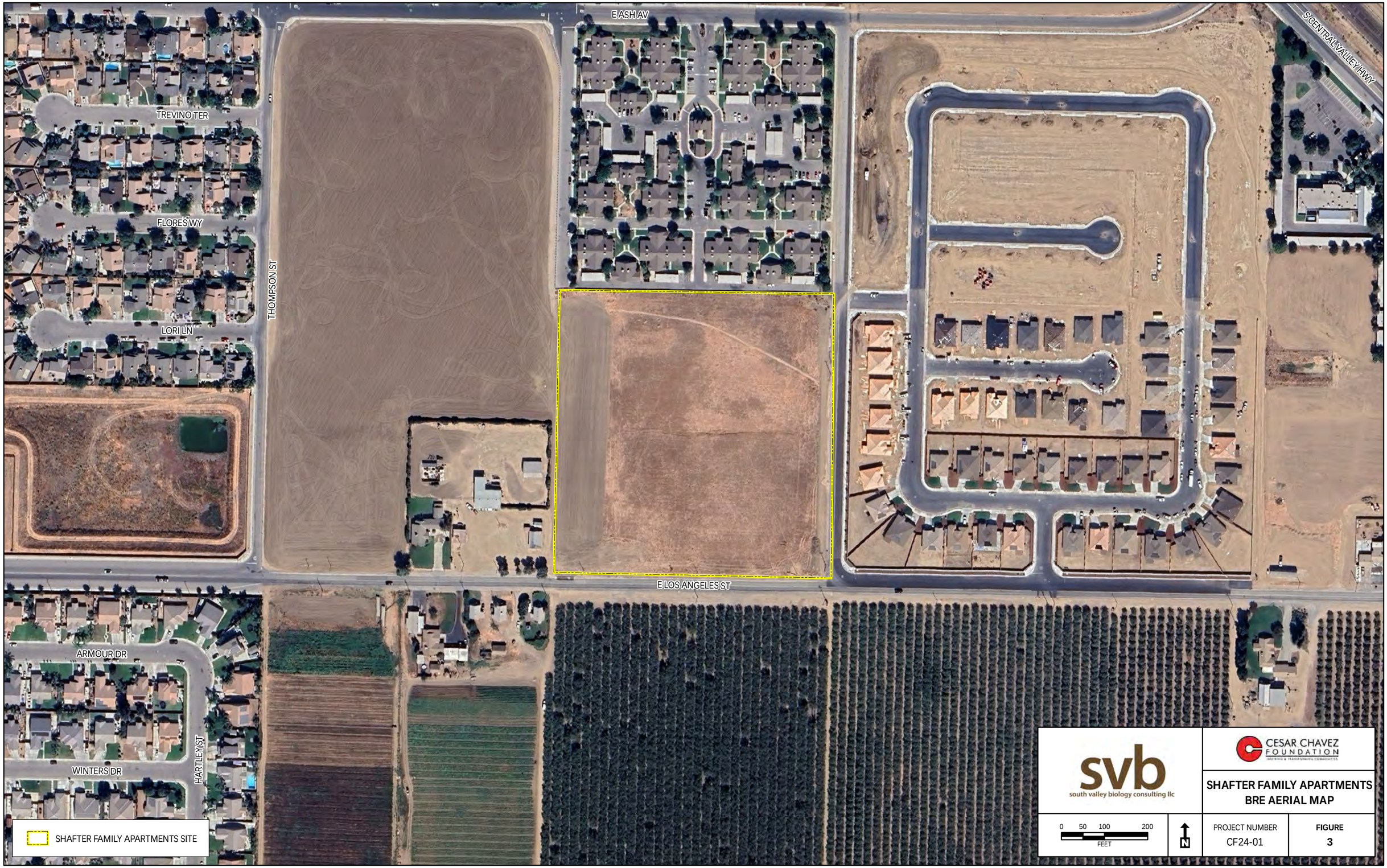
FIGURE
2



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SHAFTER FAMILY APARTMENTS
BRE AERIAL MAP

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FIGURE
3

1.3 Goals of the Biological Resources Evaluation Report

The primary goals and objectives of this BRE are as follows: 1) determine the type and extent of plant communities present in the Project Site and surrounding Project Area; 2) identify plant and wildlife species known to occur or that could potentially occur on the Project Site and within the Project Area; 3) evaluate the potential for special-status species to occur on the Project Site and in the Project Area; 4) provide appropriate avoidance and minimization measures to help minimize impacts to special-status species and their habitats and 5) provide the necessary biological resource data to satisfy the necessary regulatory requirements explained in Section 4.0 Regulatory Setting.

2.0 Regional Setting

The proposed Project Site is located in central California within the southern San Joaquin Valley, situated east of the Temblor Range. The Project Site is located within Shafter, California. The surrounding area of the Project Site contains established residential neighborhoods to the north and east, a barren disced field void of vegetation to the west, and an active almond orchard to the south. Lands further away from the Project Site are largely a mix of rural residential, agricultural, and oil fields.

3.0 Environmental Setting

The Project is located in the San Joaquin Valley region of the California floristic province (Hickman 1993). This region encompasses a variety of physical features that offer a diversity of habitat types, represented by a characteristic assemblage of plant species. The size of the region, together with its geology, soils, climate, and anthropogenic influences, have combined to produce a variety of floristic components and associated wildlife species. The climate of the region is dry and shares many characteristics with the California desert province. Relatively cold winters and hot summers can characterize the climate in the vicinity. Annual precipitation is low, averaging five to seven inches annually, occurring primarily during the winter and early spring. Yearly precipitation patterns are quite variable and this high variability, coupled with extremes in temperature, creates a harsh and unpredictable environment for a variety of wildlife. The availability of water or soil moisture is the critical factor that determines the broad distribution of vegetation types and associated wildlife species in the region.

Topography of the Project Site consists of a mostly flat parcel of land with an elevation ranging from 338 to 347 feet (103 to 106 meters).

4.0 Regulatory Setting

This section discusses the policies and regulations administered by state, federal, and local resource agencies pertaining to the biological resources known to exist or that have the potential to be impacted by the proposed Project.

4.1 Federal Regulations

National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA) was one of the first laws to establish a broad national framework for protecting the environment. Its purpose includes: "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent damage to the environment and biosphere and stimulate the health and welfare of man." NEPA assures that all branches of government give proper consideration to the environment prior to undertaking major federal actions that could significantly affect the environment.

Environmental Assessments (EA's) and Environmental Impact Statements (EIS's) which assess the likelihood of impacts from alternative courses of action, are required from all federal agencies and are the most visible NEPA requirements. The documentation must include discussion of environmental impacts of the alternatives, including the proposed action; any adverse environmental effects that cannot be avoided should the proposal be implemented; the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity; and any irreversible or irretrievable commitments of resources that would be involved in the proposed action should be avoided.

Endangered Species Act of 1973

The Federal Endangered Species Act (FESA), administered by the USFWS and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS), provides protection to species listed as Threatened or Endangered, and critical habitat designated for the protection of such species. The FESA also provides protection to those species proposed to be listed under FESA or critical habitats proposed to be designated for such species. In addition to the listed species, the federal government also maintains lists of species that are neither formally listed nor proposed but could potentially be listed in the future. These federal candidates include species for which substantial information on biological vulnerability and potential threats exist and are maintained in order to support the appropriateness of proposing to list the taxa as an Endangered or Threatened species. The USFWS also manages Birds of Conservation Concern, which include bird species of highest conservation priorities in an effort to draw attention to species in need of conservation action.

Migratory Bird Treaty Act of 1918

The USFWS also administers the Federal Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-712). The MBTA establishes Federal responsibilities for the protection of nearly all species of birds, their eggs, and their nests. The MBTA of 1918 implemented the 1916 Convention between the United States and Great Britain for the protection of birds migrating between the United States and Canada; implemented the 1936 Convention for the Protection of Migratory Birds and Animals between the United States and Mexico; and similar conventions between the United States and Japan (1972) and the Union of Soviet Socialists Republics (1976). Under the MBTA, it is unlawful to kill, collect, take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR 10, including feathers or other parts, nests, eggs or products,

except as allowed by implementing regulations (50 CFR 21). Certain game bird species are allowed to be hunted for specific periods determined by federal and state governments.

Clean Water Act of 1972

The Clean Water Act (CWA) is legislation that generally includes reference to the Federal Water Pollution Control Act of 1972, and its substantial supplementation by the CWA of 1977. Both Acts were subsequently amended in 1981, 1987, and 1993. Overall, the CWA seeks to protect the nation's water from pollution by setting water quality standards for surface water and by limiting the discharge of effluents into waters of the United States. The U.S. Environmental Protection Agency (EPA) enforces these water quality standards. The U.S. Army Corp of Engineers (ACOE) is responsible for the issuance of permits for the placement of dredged or fill material into waters of the United States (waters of the U.S.) pursuant to Section 404 of the Clean Water Act (33 USC 1344). As defined by the ACOE in 33 CFR 328.3(a)(3), waters of the U.S. are those that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; tributaries and impoundments to such waters; all interstate waters including interstate wetlands; and territorial seas. In addition, federal guidance has been developed that requires careful examination and documentation of the physical location(s) and hydrologic connections among waters/wetlands. To determine federal jurisdiction, particular focus is given to (1) surface hydrologic connections between a wetland and "navigable waters in fact," (2) "adjacency" of a wetland to traditionally navigable waters, and thus (3) a "significant nexus" to interstate commerce. Waters of the U.S./wetlands features can also be determined to be under federal jurisdiction by the ACOE or EPA if a "significant nexus" can be shown between the wetland feature in question and its contribution to the maintenance or restoration of the physical, chemical, or biological integrity of downstream waters that are traditionally navigable.

In non-tidal waters, the lateral extent of ACOE jurisdiction is determined by the ordinary high water mark (OHWM), which is defined as the: "…line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR 328[e]).

4.2 State Regulations

California Environmental Quality Act (CEQA)

California Public Resources Code Section 21000 et seq. and California Code of Regulations Title 14, Chapter 3, Section 15000 et seq. These laws provide for the California Environmental Quality Act and guidelines on how it is to be implemented and specifically who is subject to CEQA. All state and local agencies are required to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. This includes all Projects that are either carried out by the state or local agency, or a private party Project that is subject to the discretionary approval of a state or local agency.

Porter-Cologne Water Quality Control Act of 1969

The Porter-Cologne Water Quality Control Act (CA Water Code §§ 13000-13999.10) mandates that waters of the state shall be protected, such that activities that may affect waters of the state shall be regulated to attain the highest quality. This Act establishes the State Water Resources Control Board (SWRCB) as the principal state agency for controlling water quality in California. The SWRCB provides regulations that mandate a "non-degradation policy" for state waters, especially those of high quality. The SWRCB is divided into local Regional Water Quality Control Boards (RWQCB). Pursuant to Section 401 of the Clean Water Act, the Corps cannot issue a federal permit until the State of California first issues a water quality certification to ensure that a Project will comply with state water quality standards.

California Fish and Game Code

The CDFW administers a number of laws, regulations, and programs designed to protect fish and wildlife resources. Principal of these is the California Endangered Species Act of 1984 (CESA - Fish and Game Code Section 2050) that regulates the listing and take of State Endangered and Threatened species. CDFW also maintains lists of Candidate-Endangered species and Candidate-Threatened species. California candidate species are afforded the same level of protection as listed species. CDFW also designates Species of Special Concern (CSC) that are 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 but may be added to official lists in the future.

The CDFW also manage a Watch List that includes "Taxa to Watch", which includes: 1) species not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) species that were previously state or federally listed and now are on neither list; or 3) species are on the list of "Fully Protected" species. CDFW administers other State laws designed to protect wildlife and plants. Section 3511 of the California Fish and Game Code designates species of birds that are afforded "Fully Protected" (FP) status. Fish and Game Code Sections 4700, 5050 and 5515 assign the same status to specified mammals, reptiles and amphibians, and fish, respectively. These statutes generally provide that specifically identified fully protected species "or parts thereof may not be taken or possessed at any time and no provision of [the Fish and Game] code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected [bird, mammal, reptile, amphibian or fish] and no permits or licenses heretofore issued shall have any force or effect" for any such purpose. For fully protected fish and mammals, the only exception to the take prohibition is that the Fish and Game Commission may authorize the collecting of such species "for necessary scientific research" (Fish and Game Code, Sections 4700, 5050 and 5515). With a proper permit, fully protected birds may also be captured live and relocated "for the protection of livestock" (Section 3511).

Section 3503 provides that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird...". Section 3503.5 specifically protects birds-of-prey (i.e., birds of the Orders Falconiformes and Strigiformes), their eggs, and their nests. Section 3513 provides "...it is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird...".

CDFW manages the California Native Plant Protection Act of 1977 (Fish and Game Code Section 1900, et seq.), which was enacted to identify, designate and, protect rare plants. In accordance with CDFW guidelines, California Native Plant Society (CNPS) List 1B plants are considered "rare" under the Act and are evaluated during California Environmental Quality Act (CEQA) review of a proposed Project.

Pursuant to Section 1602 of the California Fish and Game Code, CDFW requires a Lake or Streambed Alteration Agreement between CDFW and any person, State or local governmental agency or public utility before the initiation of any construction Project that will: 1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; 2) use materials from a streambed; or 3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. Therefore, the CDFW claims jurisdiction over the bed, bank, and channel of the drainage that may be impacted by Project activities, or if riparian habitat is present, the area encompassing the outer edge or "drip line" of the canopy.

4.3 Local Regulations

City of Shafter General Plan

The City of Shafter General Plan April 4, 2005, was prepared and adopted to ensure the type of community Shafter desires for its future. This desired community and maintenance of it can be obtained through the implementation of The General Plan. The City of Shafter General Plan outlines a Land Use Program, Transportation Program, Public Services and Facilities Program, Housing Program, Environmental Management Program, and Environmental Hazards Program all in accordance with state law (Government Code 65302 et. seq.). The aim of this document is to achieve and maintaining a vibrant community in which all residents enjoy, to retain a small town characteristic while also expanding the city's employment base, to protect the area's agricultural economy why converting certain lands to provide expanded local employment and housing opportunities, to protect and maintain Shafter's downtown community, to provide regional and local mobility and avoiding urban traffic congestions problems, to establish clear performance objectives for area infrastructure and services, and to achieve an appropriate range of housing opportunities.

Section 6.4 Biological Habitats and Wildlife Resources of the City of Shafter General Plan specify the following policies be implemented when developing within areas containing native vegetation (saltbush scrub, and native grasslands)

1. Ensure that development proposals, including City-sponsored Projects, are analyzed for short- and long-term impacts to biological resources.
2. Direct development Projects away from lands with sensitive biological resources to the extent feasible. Where alternative sites are infeasible, unavailable, or otherwise undesirable, require the implementation of appropriate mitigation measures.
3. Whenever a biological resources survey is undertaken to determine the presence or absence of a threatened or endangered species, or of a species of special concern identified by the U.S. Fish and Wildlife Service or the California Department of Fish and Game, require the survey to follow

established protocols for the species in question prior to any final determination that the species is absent from the site.

4. Encourage educational programs to increase public awareness of the importance of biological resources through programs that:
    - Promote awareness of local biological resources;
    - Inform the public about existing and potential future protection and preservation programs;
    - Foster community attitudes and behaviors that protect local plants and wildlife; and
    - Encourage community involvement in protection programs.

5.0 Methodologies

5.1 Desktop Review

A search of the CDFW California Natural Diversity Database (CNDDB 2025) was conducted to identify reported historical occurrences of special-status plant, wildlife species and sensitive habitats within the Rio Bravo and 8 surrounding USGS 7.5-minute topographic quadrangles (Wasco SW, Wasco, Famoso, Buttonwillow, Rosedale, East Elk Hills, Tupman, Stevens). The results of the CNDDB inquiry were subsequently reviewed to evaluate the potential for occurrence of special-status species within or near the Project Area (**Appendix A**). The California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2025) was also reviewed to provide information on rare plants with potential to occur in the Project Area (**Appendix B**). Lastly, a species list was obtained from the USFWS IPaC website for the Project Area and is provided as **Appendix C**.

5.2 Field Surveys

The biological field survey focused on identifying habitat communities and other biological resources occurring or potentially occurring within the Project Area and surrounding vicinity. The survey consisted of a reconnaissance-level site survey focused on identifying habitats, determining the potential for special-status species presence, and identifying any special-status plant or animal species within the Project Area. Burrow mapping was performed within the entirety of the Project Site. Information acquired from this survey is referred to in this report to provide support for its findings.

Reconnaissance-level Survey

SVB performed a reconnaissance-level survey within the entirety of the Project Site as well as a 500-foot buffer surrounding the parcel. This survey was conducted on March 4, 2025, and focused on identifying any sensitive biological resources in the area. This survey was conducted during nesting bird season as well as during the blooming period for many special-status species with a potential to occur in the area. During this survey, special emphasis was placed on identifying special-status plants, nesting birds, and burrows capable of supporting special-status wildlife. All burrows within the Project Site were mapped using a Trimble GeoXT unit. Weather conditions during the survey are shown below in **Table 1**. The results of this survey are described in further detail in sections 6.3 and 6.4.

Table1. Weather Conditions on the Shafter Family Apartments Site During a Reconnaissance-level Survey Performed by South Valley Biology on March 4, 2025.

	Time	Air Temperature (°F)°	Soil Temperature (°F)	Wind Speed (MPH)	Weather Conditions
Start	8:00 am	49.5	48.7	0.8	Partly cloudy
End	10:05 am	58.9	50.2	0.7	Partly cloudy

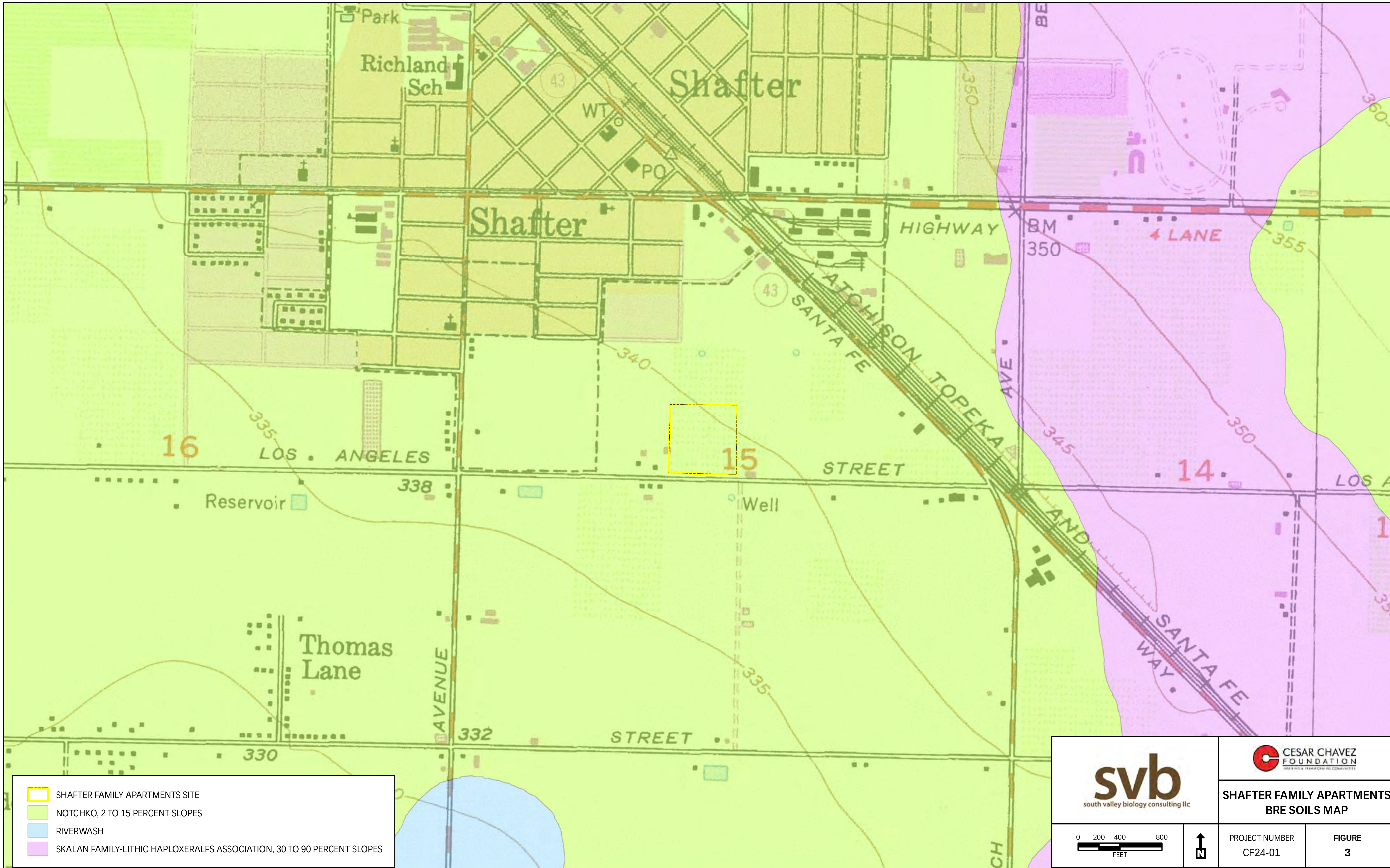
6.0 Findings

6.1 Geology and Soils

The USDA-NRCS Web Soil Survey (2025) indicated one soil mapping unit within the boundaries of the Project Site. This soil type is further expanded below in **Table 2** and illustrated in **Figure 4**. The complete soil report is provided in **Appendix D.**

Table 2. USDA-NRCS Web Soil Survey information for Shafter Family Apartments Project Site.

Map Unit	Soil Type	Slope (%)	Depth to Restrictive Feature (Inches)	Natural Drainage Class	Frequency of Flooding	Frequency of Ponding
243	Wasco sandy loam	0-2	80+	Well Drained	Rare	None



SHAFTER FAMILY APARTMENTS SITE
NOTCHKO, 2 TO 15 PERCENT SLOPES
RIVERWASH
SKALAN FAMILY-LITHIC HAPLOXERALFS ASSOCIATION, 30 TO 90 PERCENT SLOPES

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SHAFTER FAMILY APARTMENTS
BRE SOILS MAP

0 200 400 800
FEET

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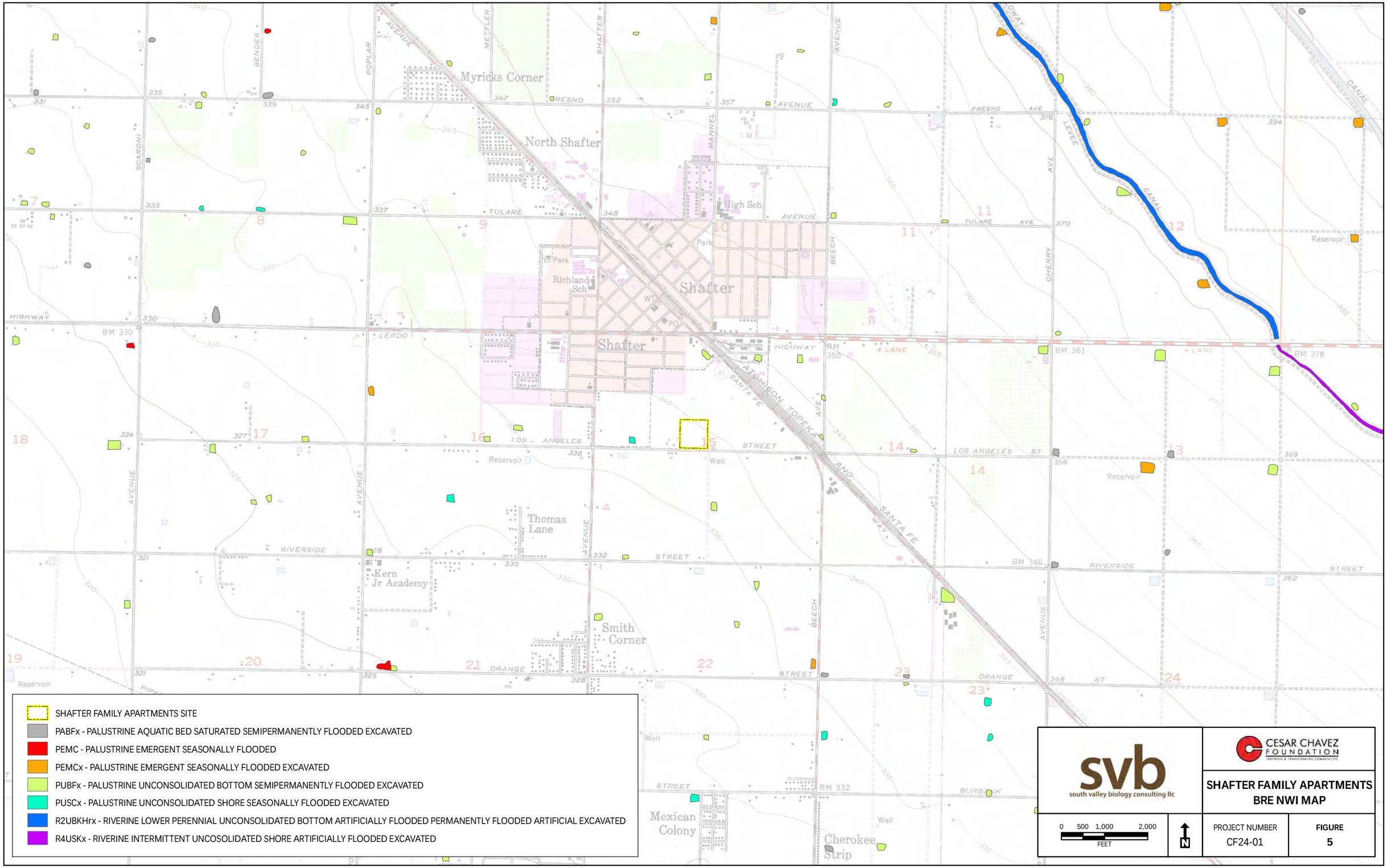
PROJECT NUMBER	FIGURE
CF24-01	3

6.2 Jurisdictional Waterways and Wetlands

No federal U.S. or state jurisdictional waterways and/or wetlands are present within the Project Site as identified in the National Hydrography Dataset (NHD) and shown in **Figure 5**, and as confirmed during the field survey.



- ⬚ SHAFTER FAMILY APARTMENTS SITE
- ■ PABFx - PALUSTRINE AQUATIC BED SATURATED SEMIPERMANENTLY FLOODED EXCAVATED
- 🟥 PEMC - PALUSTRINE EMERGENT SEASONALLY FLOODED
- 🟧 PEMCx - PALUSTRINE EMERGENT SEASONALLY FLOODED EXCAVATED
- 🟩 PUBFx - PALUSTRINE UNCONSOLIDATED BOTTOM SEMIPERMANENTLY FLOODED EXCAVATED
- 🟩 PUSCx - PALUSTRINE UNCONSOLIDATED SHORE SEASONALLY FLOODED EXCAVATED
- 🟦 R2UBKHrx - RIVERINE LOWER PERENNIAL UNCONSOLIDATED BOTTOM ARTIFICIALLY FLOODED PERMANENTLY FLOODED ARTIFICIAL EXCAVATED
- 🟪 R4USKx - RIVERINE INTERMITTENT UNCOSOLIDATED SHORE ARTIFICIALLY FLOODED EXCAVATED

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CESAR CHAVEZ FOUNDATION

SHAFTER FAMILY APARTMENTS
BRE NWI MAP

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FIGURE
5

6.3 Plants and Habitat Communities

A list of plant species identified on the Project Site during the reconnaissance-level survey performed on March 4, 2025, is provided in **Table 3** below**.** The vegetation within the Project Site consists entirely of non-native ruderal, weedy vegetation apart from a small patch of California mustard (*Caulanthus lasiophyllus*) located in the southwest corner of the Project Site. Foxtail barley (*Hordeum murinum*) occupies the vast majority of the Project Site. Representative photographs of the Project Area are provided in **Appendix E – Photoplate**. Based on identifiable species compositions, the vegetation on the Project Site can be currently categorized as a highly disturbed non-native grassland and is surrounded by previously disturbed areas. Historical aerial photographs depicted in Google Earth show that the Project Area has been periodically disced, removing all vegetation. Google Earth depicts the discing starting in 2004 and continuing periodically throughout the years with the most recent depiction of complete discing appearing in April of 2021. Frequent heavy disturbances in and surrounding the Project Site greatly decrease the likelihood of special-status plant species occurring within the Project Area. Vegetation communities identified within the Project Area are further discussed below.

Non-native grasslands

Non-native grasslands are dominated by non-native, sometimes invasive, weedy vegetation which include species such as brome grass (*Bromus* sp.), wild oat (*Avena* sp.), and/or barley (*Hordeum* sp.). Non-native grasslands are often found in heavily disturbed areas that have been impacted through activities including heavy cattle grazing and human disturbances/development. These species often outcompete native plant species and lead to a decrease in native species diversity (Hillerislambers 2010). Where vegetation is present on the Project Site, it is dominated by foxtail barley and contains a relative low diversity of plant species – primarily other non-natives.

Previously Disturbed Areas

Previously disturbed areas is a term used to describe those areas that have been significantly disturbed by past land use practices, recent ground disturbance, and current development activities. The majority of the Project Site is heavily disturbed and had been historically disced in preparation for future development. As illustrated in **Figure 3**, the Project Site lies between preexisting residential development to the north and east as well as an active almond orchard to the south. A large baren field that is frequently disced and void of vegetation resides directly west of the Project Site. The area also contains overhead electrical lines, and their associated power poles as well as paved roads to the east and south.

Table 3. Plant Species Observed During the Reconnaissance-level Survey Performed by SVB on March 4, 2025

SCIENTIFIC NAME	COMMON NAME
Amsinkia menziezii var. intermedia	common fiddleneck
Caulanthus lasiophyllus	California mustard
Digitaria sanguinalis	hairy crabgrass
Erodium cicutarium	red-stem filaree

Hordeum murinum	foxtail barley
Lactuca serriola	prickly lettuce
Malva parviflora	cheeseweed mallow
Salsola tragus	Russian thistle
Sisymbrium irio	London rocket

6.3.1 Special-Status Plant Species

Special-status plants are listed as either Threatened or Endangered under FESA and/or CESA, considered as rare under the California Native Plant Protection Act (CNPPA 1977), or considered rare (but not legally listed) by resources agencies, professional organizations, and the scientific community. A total of 25 special-status plant species were identified during the literature review outlined in **Table 4** listing the species by scientific and common name, current status, habitat description, blooming period, and the potential for occurrence in the Project Area. **Figure 6** illustrates the CNDDB locations of the individual recorded occurrences of special-status plant species within the Project Area and surrounding vicinity.

Table 4. List of Sensitive Plant Species Reported within the Rio Bravo and Eight Surrounding USGS 7.5-minute Quadrangles.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURENCE IN The Project Area
Plants			
alkali-sink goldfields *(Lasthenia chrysantha)*	Alkali Sink, Valley grassland, wetland-riparian. Loam, sandy loam saline soils. Elevation (m): 0-330 Blooms: Feb-Apr	1B.2	**Absent:** Suitable habitat for this species does not occur within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
alkali mariposa-lily (*Calochortus striatus*)	Shadscale scrub, chaparral, wetland-riparian. Often in meadows. Loam, sandy loam soils. Elevation (m): 0-1650 Blooms: Apr-Jun	1B.2	**Absent:** Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURENCE IN The Project Area
California alkali grass *(Puccinellia simplex)*	Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools. Alkaline, vernally mesic; sinks, flats, and lake margins. Wetlands. Elevation (m): 5-1420 Blooms: Mar-May	1B.2	**Absent:** Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The soils and wetland habitat associated with this species area not present on site. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
California jewelflower *(Caulanthus californicus)*	Chenopod scrub, Pinyon and juniper woodland, Valley and foothill grassland with sandy substrates. Elevation (m): 61 – 1000 Blooms: Feb-May	1B.1 CE FE	**Absent:** Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The soils associated with this species area not present on site. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. Furthermore, all occurrences of California jewelflower on the San Joaquin Valley Floor are believed to have been extirpated.
cottony buckwheat *(Eriogonum gossypinum)*	Shadscale scrub, Valley and foothill grassland. Clay, loam, sandy loam soils. Elevation (m): 80-1060 Blooms: Mar-Sep	4.2	**Absent:** Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
crownscale *(Atriplex coronata* var. *coronata)*	Chenopod scrub, Valley and foothill grassland, Vernal pools. alkaline, often clay Elevation (m): 1 - 590 Blooms: Mar-Oct	4.2	**Absent:** Vernal pools and clay soils required for this species do not exist on site. No historical CNDDB observations of this species exist within 5 miles of the Project Site.
Earlimart orache (*Atriplex cordulata* var. *erecticaulis*)	Clay soils. Elevation (m): 0 - 330 Blooms: Aug-Sep(Nov)	1B.2	**Absent:** Suitable clay soils associated with this species do not occur within the Project Site. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURENCE IN The Project Area
			was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
Ferris' goldfields (*Lasthenia ferrisiae*)	Valley grassland, wetland-riparian. Alkali flats, vernal pools. Clay soils. Elevation (m): 55 - 610 Blooms: Feb-May	4.2	**Absent:** Vernal pools and clay soils associated with Ferris' goldfields do not exist on site. No historical CNDDB observations of this species exist within 5 miles of the Project Site. This species was not observed within the Project Site during the reconnaissance-level survey.
golden goodmania (*Goodmania luteola*)	Creosote bush scrub, alkali sink, valley grassland, wet-land riparian. Occurs in meadows and playas. Sandy loam soils. Elevation (m): 0-2200 Blooms: Apr-Aug	4.2	**Absent:** Suitable wetland habitat associated with this species does not occur within the Project Area or surrounding areas. This species was not observed within the Project Site during the reconnaissance-level survey and no CNDDB recorded observations of this species exist within 5 miles of the Project Site.
heartscale (*Atriplex cordulata* var. *cordulata)*	Shadscale scrub, valley grassland, wetland-riparian. Clay soils. Elevation (m): 15-220 Blooms: Apr-Oct	1B.2	**Absent:** Suitable clay soils associated with this species do not occur within the Project Site. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
Hoover's eriastrum *(Eriastrum hooveri)*	Shadscale scrub, Valley and foothill grassland. Clay loam, loam, sandy loam, sand, bedrock, sometimes gravelly soils Elevation (m): 50 - 1070 Blooms: (Feb)Mar-Jul	4.2	**Absent:** Although CNDDB recorded observations of this species occur approximately 2.9 miles east of the Project Site, the cryptogamic crust associated with Hoover's eriastrum is not present on site. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey. The survey was conducted within the blooming period for this species.
Horn's milk-vetch *(Astragalus hornii* var. *hornii)*	Meadows and seeps, Playas. lake margins, alkaline soils Elevation (m): 60 - 850 Blooms: May-Oct	1B.1	**Absent:** No suitable alkali soils or wetland habitat associated with Horn's milk-vetch occur on the Project Site. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURENCE IN The Project Area
			Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey.
Kern mallow *(Eremalche parryi* ssp*. kernensis)*	Chenopod scrub, Pinyon and juniper woodland, Valley and foothill grassland. On dry, open sandy to clay soils; often at edge of balds Elevation (m): 70 - 1210 Blooms: Mar-May	1B.2 FE	**Absent:** CNDDB recorded observations of this species occur within the Project Site as well as the entire city of Shafter. This observation was recorded in 1937 with no specific location and encompasses the totality of the city of Shafter. This observation was recorded prior to the heavy residential development in the area. Prior to conducting the reconnaissance-level field survey, SVB referenced known populations of this species within the Kern Water Bank in Bakersfield, California. These referenced individuals were identifiable and blooming. No individuals of this species were observed within the Project Site during the reconnaissance-level survey. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area.
lesser saltscale *(Atriplex minuscula)*	Shadscale scrub, alkali sink, valley grassland. Clay loam, sandy loam, alkali soils. Elevation (m): 20 - 690 Blooms: May-Oct	1B.1	**Absent**: Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
Lost Hills crownscale *(Atriplex coronata* var. *vallicola)*	Chenopod scrub, Valley and foothill grassland, Vernal pools with alkaline conditions. Elevation (m): 220 - 850 Blooms: Apr-Sep	1B.2	**Absent:** No suitable wetland habitat or alkaline soils associated with Lost Hills crownscale exist within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURENCE IN The Project Area
Mason's neststraw *(Stylocline citroleum)*	Shadscale scrub, Pinyon-juniper woodland. Loam, bedrock. Elevation (m): 0-730 Blooms: Mar-May	1B.1	**Absent:** Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
Mexican mosquito fern (*Azolla microphylla*)	Freshwater-marsh, wetland-riparian. Loam, sandy soils. Elevation (m): 0-1690 Blooms: Aug	4.2	**Absent:** No suitable wetland habitat associated with Mexican mosquito fern exists within the Project Site. No CNDDB recorded observations of this species exist within 5 miles of the Project Site.
oil neststraw *(Stylocline citroleum)*	Chenopod scrub, Coastal scrub, Valley and foothill grassland. clay Elevation (m): 50 - 400 Blooms: Mar-Apr	1B.1	**Absent:** No suitable habitat for this species or cryptogamic crust associated with oil neststraw is present within the Project Site. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
recurved larkspur *(Delphinium recurvatum)*	Shadscale scrub, foothill woodland, Valley and foothill grassland. alkaline Elevation (m): 20 - 1110 Blooms: Mar-Jun	1B.2	**Absent:** Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species was not observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
San Joaquin bluecurls *(Trichostema ovatum)*	Chenopod scrub, Valley and foothill grassland. Clay loam, loam, sandy loam, bedrock soils. Elevation (m): 90 - 1120 Blooms: Jul-Oct	4.2	**Absent:** The sandy alluvial soils associated with San Joaquin bluecurls are not present on site. Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. No historical CNDDB observations of

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURENCE IN The Project Area
			this species exist within 5 miles of the Project Site.
San Joaquin woollythreads *(Monolopia congdonii)*	Shadscale scrub, Valley and foothill grassland (sandy). Clay, clay loam, silt laom, sandy loam, sand, bedrock soils. Elevation (m): 65 - 1000 Blooms: Feb-May	1B.2 FE	**Absent:** CNDDB recorded observations of this species occur approximately 3.2 miles southeast of the Project Site. However, no suitable habitat or soil associated with San Joaquin woollythreads occur within the Project Site. Prior to conducting the reconnaissance-level field survey, SVB referenced known populations of this species within the Kern Water Bank in Bakersfield, California. These referenced individuals were identifiable and blooming. No individuals of this species were observed within the Project Site during the reconnaissance-level survey. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decrease the likelihood of this species occurring within the Project Site.
slough thistle *(Cirsium crassicaule)*	Riparian, freshwater-marsh, wetlands, shadscale scrub, wetland-riparian. Elevation (m): <100 Blooms: May-Aug	1B.1	**Absent:** No suitable wetland habitat required for slough thistle occurs within the Project Site. No CNDDB recorded observations of this species occur within 5 miles of the Project Site.
subtle orache (*Atriplex subtilis*)	Saline depressions. Valley and foothill grasslands. Elevation (m): 0-50 Blooms: (Apr)Jun-Sep(Oct)	1B.2	**Absent:** Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species – nor any *Atriplex* spp. - were observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
Tejon poppy *(Eschscholzia lemmonii* ssp. *kernensis)*	Chenopod scrub, Valley and foothill grassland. Sandy loam soils. Elevation (m): 160 - 600 Blooms: (Feb)Mar-May	1B.1	**Absent:** Similar to many of the species on this list, suitable habitat for this species does not occur within the Project Area. The heavily disturbed nature and presence of dense ruderal, weedy vegetation throughout the area further decreases the likelihood of this species occurring within the Project Area. This species – nor any other

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURENCE IN The Project Area
			Eschscholzia spp.- were observed within the Project Site during the reconnaissance-level field survey and no historical CNDDB observations of this species exist within 5 miles of the Project Site.
vernal barley (*Hordeum intercedens*)	Vernal pools, freshwater wetlands, valley grassland, wetland-riparian. Sandy loam, sandy soils. Elevation (m): 0-1380 Blooms: Mar-Jun	3.2	**Absent:** No suitable wetland habitat or vernal pools associated with vernal barley exist within the Project Site. No CNDDB recorded observations of this species occur within 5 miles of the Project Site.
Sensitive Vegetation Communities			
Great Valley Cottonwood Riparian Forest			**Absent**
Great Valley Mesquite Scrub			**Absent**
Valley Saltbush Scrub			**Absent**
Valley Sink Scrub			**Absent**

Abbreviations:

FE	Federal Endangered Species	FT	Federal Threatened Species
FC	Federal Candidate Species	FP	California Fish and Game Code Fully Protected Species
CE	California Endangered Species	CT	California Threatened Species
CSC	California Department of Fish and Wildlife Species of Special Concern		

CNPS

1B	California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and elsewhere
2	California Native Plant Society List 2 Species- Plants Categorized as Rare, threatened, or endangered in California, but more common elsewhere.
3	California Native Plant Society List 3 Species- Plants Categorized needing more information about, a review list
4	California Native Plant Society List 4 Species- Plants Categorized as having limited distribution, a watch list.

Degree of Threat Codes:

.1	Seriously endangered in California.
.2	Fairly endangered in California.
.3	Not very endangered in California.

SHAFTER FAMILY APARTMENTS SITE
HOOVER'S ERIASTRUM
KERN MALLOW
SAN JOAQUIN WOOLLYTHREADS
VALLEY SALTBUSH SCRUB

svb
south valley biology consulting llc

CESAR CHAVEZ FOUNDATION

SHAFTER FAMILY APT. BRE
CNDDB - PLANTS & VEG. COM.

0 0.25 0.5 1
MILES

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PROJECT NUMBER
CF24-01

FIGURE
6

6.4 Wildlife Species

Regional and local wildlife movements are expected to occur along existing roads and elsewhere within the region. As described within Section 6.3 Plants and Habitat Communities, the Project Site is heavily disturbed and dominated by non-native grasses. The Project Site contains a high density of burrows throughout the entirety of the parcel. All the burrows observed during the reconnaissance-level survey contained fresh sign (tracks and scat) from California ground squirrel (*Otospermophilus beecheyi*). Additionally, numerous individual California ground squirrels were observed within the Project Site actively foraging and using these burrows during the reconnaissance-level survey. The locations of these burrows were mapped and are shown below in **Figure 7**. Due to the heavy disturbances within and surrounding the Project Area, the small size of the Project Site, and periodic discing of the Project Site, it is highly unlikely that the Project Site supports any special-status small burrowing mammals. Furthermore, competition with such an abundant population of California ground squirrels within the Project Site significantly decreases the likelihood of special-status small mammal species occurring on the Project Site. **Appendix E – Photoplate** provides a visual illustration of the Project Site, as well as representative photographs of active California ground squirrel burrows found throughout the entirety of the Project Site. **Table 5** below lists the wildlife species identified during the reconnaissance-level survey.

Table 5. Wildlife Species Observed During a Reconnaissance-level Survey Performed by SVB on March 4, 2025.

SCIENTIFIC NAME	COMMON NAME
Corvux corax	common raven
Mimus polyglottos	Northern mockingbird
Otospermophilus beecheyi	California ground squirrel
Zenaida macroura	Mourning dove

6.4.1 Special-Status Wildlife Species

A total of 30 special-status wildlife species have been identified from the database queries. Of these 30 species, a total of 5 have been identified by the CNDDB as occurring within approximately 5 miles of the Project Site. **Table 6** below discusses all 30 wildlife species and their potential to occur on the Project Site. The species listed with “possible”, “likely” or “present” in the Potential for Occurrence on the Property are further discussed in Section 7.0. **Figure 8** below illustrates the special-status species that have been recorded by the CNDDB within the vicinity of the Shafter Family Apartments Project.

Table 6. List of Sensitive Wildlife Species Reported within the Rio Bravo and Eight Surrounding USGS 7.5-minute Quadrangles.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURRENCE IN THE PROJECT AREA
Mammals			
American badger (*Taxidea taxus*)	Abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Needs sufficient food source of burrowing rodents, friable soils, and open, uncultivated grounds.	CSC	**Unlikely:** No CNDDB recorded observations of this species occur within 5 miles of the Project Site. Although ample prey species in the form of California ground squirrels are abundant on site, no sign associated with this species was observed on site. The heavy residential disturbances and active agriculture surrounding the Project Area significantly diminish the likelihood of this species occurring within the Project Site.
Buena Vista Lake shrew (*Sorex ornatus relictus*)	Marshlands and riparian areas.	FE	**Absent:** No riparian habitat able to support Buena Vista Lake shrew occurs within the Project Area. No CNDDB records of this species occur within 5 miles of the Project Site.
Giant kangaroo rat (*Dipodomys ingens*)	Annual grassland, some shrubland; gently sloping topography; friable sandy-loam soils.	FE, CE	**Absent:** No CNDDB recorded observations of this species occur within 5 miles of the Project Site. No characteristic signs of the species (appropriately sized scat, burrows, precincts, pit caches or haystacks) were observed during the field survey.
Nelson's antelope squirrel (*Ammospermophilus nelsoni*) (also known as San Joaquin antelope squirrel)	Frequents grassland, oak savanna, and edges of mixed woodland and lower elevation coniferous forest.	CT	**Absent**: No CNDDB recorded observations of this species occur within 5 miles of the Project Site. The abundance of California ground squirrels within the Project Site, heavy residential disturbances, and active agriculture surrounding the Project Area diminish the likelihood of this species occurring within the Project Site.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURRENCE IN THE PROJECT AREA
San Joaquin kit fox (*Vulpes macrotis mutica*)	Chenopod scrub, grasslands, open areas with scattered shrubby vegetation; kit fox also sometimes forage in agricultural areas. This species requires loose-textured sandy soils for burrowing, and a suitable prey base in order to persist in an area.	FE, CT	**Possible**: Multiple CNDDB recorded observations of this species occur within 5 miles of the Project Area, with the closest observation occurring approximately 0.31 miles southeast. Although no specific sign (tracks, scat, prey remains) associated with the San Joaquin kit fox were observed on site, the Project Site contains ample prey for this species in the form of California ground squirrels. No suitable sized dens capable of supporting this species were observed on site, however, it is known that San Joaquin kit foxes can modify California ground squirrel burrows and use them for denning. Although this species is not expected to persist within the Project Site, it is possible a transient foraging kit fox could forage on the Project Site.
San Joaquin pocket mouse (*Perognathus inornatus inornatus*)	Annual grassland and desert shrub communities, especially where plant cover is not dense and soils are friable.	CSC	**Unlikely**: No CNDDB recorded observations of this species occur within 5 miles of the Project Site. Furthermore, the heavy California ground squirrel activity in the area diminishes the likelihood of this species occurring on the Project Site.
Short-nosed kangaroo rat (*Dipodomys nitratoides brevinasus*)	Western San Joaquin Valley in grassland and shrub associations, especially *Atriplex*, favors flat to gently sloping terrain. The range for this species is located west and south of the California Aqueduct. It does not occur anywhere on the east or north sides of the Aqueduct.	CSC	**Absent**: The Project Area is located east of the California aqueduct which is outside of the known range of short-nosed kangaroo rats. No CNDDB records of this species occur within 5 miles of the Project Site.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURRENCE IN THE PROJECT AREA
Tipton kangaroo rat (*Dipodomys nitratiodes nitratoides*)	Saltbush scrub and sink scrub communities. Needs soft friable soils, which escape seasonal flooding. The range for this species is located east and north of the California Aqueduct. It does not occur anywhere on the west or south sides of the Aqueduct.	FE, CE	**Unlikely**: Although CNDDB recorded observations of this species occur within 5 miles of the Project Site, with the closest observation occurring approximately 3.1 miles south, suitable habitat conditions for this species do not occur on site. Like many of the small burrowing mammals on this list, the heavy California ground squirrel activity within the Project Site greatly diminishes the likelihood of this species occurring on site.
Tulare grasshopper mouse (*Onychomys torridus tularensis*)	Typically inhabit arid shrubland communities in hot, arid grassland and shrubland associations. Other reported habitats are alkali sink, dominated by one or more saltbush species, iodine bush, seepweed, and pale-leaf goldenbush; mesquite associations on the Valley floor; saltbush scrub.	CSC	**Unlikely**: Like many of the small burrowing mammals on this list, the heavy California ground squirrel activity within the Project Site greatly diminishes the likelihood of this species occurring on site. Furthermore, no CNDDB recorded observations of this species occur within 5 miles of the Project Site.
Western mastiff bat (*Eumops perotis californicus*)	Diurnal refuge in crevices in rocks that form vertical or nearly vertical cliffs. The roost entrances typically are horizontally oriented, have moderately large openings, and face downward so they can be entered from below.	CSC, WBWG: H, BLM:S	**Unlikely:** No CNDDB recorded observations of this species occur within 5 miles of the Project Site. No suitable roosting sites associated with this species occur on the Project Site.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURRENCE IN THE PROJECT AREA
Birds			
Burrowing owl (*Athene cunicularia*)	Occurs in open, dry grasslands, deserts, and ruderal areas along ditch levees. Requires burrows for refuge and subterranean nesting; frequently utilize California ground squirrel burrows.	CE (candidate), CSC, MBTA BLM:S	**Unlikely**: No CNDDB recorded observations of this species occur within 5 miles of the Project Site. Although burrowing owls can use California ground squirrel burrows for nesting sites, the high disturbances from adjacent residential areas, small size of the Project Site, and active agricultural operations significantly diminish the possibility of this species occurring on site.
California condor (*Gymnogyps californianus*)	Mountain ranges, semi-arid habitat. Roosts on ledges, cavities, sandstone cliffs. Will roost on old-growth Douglas-fir, ponderosa pine, and snags.	FE, MBTA	**Unlikely:** No suitable cliffs or trees capable of offering nesting sites for the California condor occur within the Project Area. No CNDDB records of this species occur within 5 miles of the Project Site.
California horned lark (*Eremophila alpestris actia*)	Open prairies, deserts, tundra, beaches, dunes, and grasslands. Often frequent areas cleared by humans such as plowed fields. Nest on the ground.	MBTA, WL	**Unlikely:** No CNDDB recorded observations of this species occur within 5 miles of the Project Site. Although potentially suitable habitat required for nesting may occur on site when the site is not disced, the heavy disturbances in the surrounding areas likely diminish the possibility of this species occurring on the Project Site.
least Bell's vireo (*Vireo bellii pusillus*)	Willow dominated riparian woodland, oak woodlands, chaparral, and mesquite thickets.	FE, SE, MBTA	**Unlikely:** No CNDDB recorded observations of this species occur within 5 miles of the Project Site. No suitable nesting habitat associated with this species occurs on site or in the surrounding areas.
Le Conte's thrasher (*Toxostoma lecontei*)	Open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats, also occurs in Joshua tree habitat with scattered shrubs.	CSC, MBTA	**Unlikely**: No CNDDB recorded observations of this species occur within 5 miles of the Project Site. No suitable nesting habitat associated with this species occurs on site or in the surrounding areas.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURRENCE IN THE PROJECT AREA
Mountain plover (*Charadrius montanus*)	Short grasslands and plowed fields of the Central Valley from Sutter and Yuba counties southward. Also found in foothill valleys west of the San Joaquin Valley, and in Imperial Valley.	MBTA, BCC, CSC	**Unlikely**: Suitable nesting habitat for this species does not occur within the Project Site. Heavy disturbances surrounding the Project Site diminish the likelihood of this species occurring on site. Furthermore, no CNDDB records of this species exist within 5 miles of the Project Site.
Swainson's hawk (*Buteo swainsoni*)	Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland. Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	CT, MBTA	**Possible**: Although no CNDDB records of this species exist within 5 miles of the Project Site, known observations exist north in the city of Wasco, California. Additionally, SVB biologists have observed foraging Swainson's hawks within 5 miles south and southwest of the Project Site. No suitable nest sites occur on the Project Site. Although this species would not nest on the Project Site nor in the immediate vicinity of the Project Site, Swainson's hawks are known to forage as far away as 10 miles from a nest site. The Project Site is likely too small to serve as an important foraging area for this species but it is possible that Swainson's hawks may potentially pass over the area during foraging flights to other more suitable foraging locations.
Tricolored blackbird (*Agelaius tricolor*)	Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the (nesting) colony.	CSC, BLM:S, MBTA	**Possible**: No open water or nesting habitat occurs within the Project Area. However, CNDDB recorded observations of this species occur approximately 2.9 miles northwest of the Project Site. Although this species would not nest on site, it is possible this species could potentially pass over the area during foraging flights.
white-tailed kite (*Elanus leucurus*)	Savannas, open woodlands, marshes, desert grasslands, and cultivated fields	FP, MBTA	**Unlikely**: No CNDDB recorded observations of this species occur within 5 miles of the Project Site. Heavy disturbances surrounding the Project Site diminish the likelihood of this species occurring on site.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURRENCE IN THE PROJECT AREA
Reptiles/Amphibians			
Bakersfield legless lizard (*Anniella grinnelli)*	Southern San Joaquin Valley. Known from two disjunct areas: the east side of the Carrizo Plain and portions of the city limits of Bakersfield. Microhabitat of this species is poorly known. Other legless lizard species occur in sparsely vegetated areas with moist, loose soil. Often found underneath leaf litter, rocks, and logs.	CSC	**Unlikely:** No CNDDB recorded observations of this species occur within 5 miles of the Project Area. The loose, wet soils associated with *Anniella* spp. do not occur on site. The heavy disturbances within and surrounding the Project Site, including periodic discing, as well as abundant California ground squirrel activity within the Project Site greatly diminish the likelihood of this species occurring on site.
blunt-nosed leopard lizard (*Gambelia sila*)	Sparsely vegetated alkali and desert scrub habitats in areas of low topographic relief. Requires small mammal burrows to seek cover and overwinter.	FE, CE, FP	**Absent**: No CNDDB recorded observations of this species occur within 5 miles of the Project Site. The Project Site is set in the middle of preexisting neighborhoods and active agricultural fields. If this species were ever present in the Project Area, it would have become extirpated many years ago before urban development and habitat conversion in and around the Shafter area.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURRENCE IN THE PROJECT AREA
California glossy snake (*Arizona elegans occidentalis*)	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils	CSC	**Unlikely:** Although CNDDB recorded observations of this species occur approximately 4.5 miles east of the Project Area, the associated soils and habitat required for this species do not occur on site. Heavy disturbances within and surrounding the Project Area greatly diminish the likelihood of this species occurring on site.
coat horned lizard (*Phrynosoma blainvillii*)	Prefers bare, sandy soils with sparce vegetation, washes, and flood plains. Found near ant nests.	CSC	**Unlikely:** No CNDDB records of this species exist within 5 miles of the Project Site. Suitable habitat for this species does not occur within the Project Area. Heavy disturbances within and surrounding the Project Area greatly diminish the likelihood of this species occurring on site.
giant gartersnake (*Thamnophis gigas*)	Inhabits marshes, sloughs, ponds, small lakes. Streams, and other waterways.	FT, CT	**Absent:** No CNDDB records of this species exist within 5 miles of the Project Site. Suitable wetland habitat associated with this species do not occur within the Project Area.
Northwestern pond turtle (*Actinemys marmorata*)	Found in marshes, streams, rivers, ponds, and lakes.	FT (proposed), CSC	**Absent:** No suitable wetland habitat for this species occurs within the Project Site. No CNDDB recorded observations of this species occur within 5 miles of the Project Site.
San Joaquin coachwhip (*Coluber flagellum ruddocki*) (also known as San Joaquin whipsnake)	Frequents a variety of habitats but prefers open, dry habitats with little to no tree cover. They occur in valley grassland and saltbush scrub in the San Joaquin Valley.	CSC	**Unlikely:** No CNDDB recorded observations of this species occur within 5 miles of the Project Site. Suitable habitat associated with this species does not exist on site. Heavy disturbances within and surrounding the Project Area greatly diminish the likelihood of this species occurring on site.

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURRENCE IN THE PROJECT AREA
Western spadefoot (*Spea hammondii*)	Grasslands, valley-foothill hardwood woodlands, orchards, or vineyards. Require breeding ponds or vernal pools.	FT (proposed), CSC	**Unlikely:** No CNDDB records of this species occur within 5 miles of the Project Site. Suitable water for breeding does not exist within the Project Area. No western spadefoot individuals were observed during field surveys.
Invertebrates			
Crotch bumble bee (*Bombus crotchii*)	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	CSC	**Unlikely**: Although CNDDB records of this species occur within and surrounding the Project Site, these observations have no exact location and were made in 1940 and 1953 encompassing the entirety of the city of Shafter. Since this species recently became a Candidate for Listing, additional survey efforts have identified some new observations in habitats that support suitable food plants, which are thought to be only from a few genera. None of the food plants associated with this species were found on the Project Site. Heavy disturbances within and surrounding the Project Area greatly diminish the likelihood of this species occurring on site.
Monarch butterfly (*Danaus plexippus*)	Overwinter along the California coast and can expand during the spring along the Central Coast and Central Valley. Requires milkweed *(Asclepias* ssp.) for food and reproduction.	FE (candidate)	**Absent:** No milkweed host plants associated with the monarch butterfly exist within the Project Site. Additionally, no roost sites are located within the Project Area.
Crustaceans			

COMMON NAME (SCIENTIFIC NAME)	HABITAT REQUIREMENTS	STATUS	POTENTIAL OCCURRENCE IN THE PROJECT AREA
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	Vernal pools with clear to tea-colored water, typically in grass or mud-bottomed swales in unplowed grasslands (Eriksen and Belk 1999). Has been found in pools ranging from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools.	FT, CSC	**Absent**: Suitable habitat for this species does not occur within the Project Site. The Project Site does not support vernal pools or any other inundated features. Furthermore, no CNDDB recorded observations of this species exist within 5 miles of the Project Site.

Abbreviations:

FE	Federal Endangered Species	FT	Federal Threatened Species
FC	Federal Candidate Species	FP	California Fish and Game Code Fully Protected
CE	California Endangered Species	CT	California Threatened Species
CSC	California Department of Fish and Wildlife Species of Special Concern		
CDFW:WL	California Department of Fish and Wildlife Watch List		
Rare	California Rare	BLM:S	Bureau of Land Management Sensitive
USFS:S	U.S. Forest Service Sensitive	CDF:S	California Department of Forestry Sensitive
WBWG:H	Western Bat Working Group High Priority Species		

E ASH AV
BIRCH ST
S CENTRAL VALLEY HWY
TREVINO TER
FLORES WY
NICKEL ST
THOMPSON ST
LORI LN
E LOS ANGELES ST
ARMOUR DR
HICKORY ST
HARTLEY ST

CALIFORNIA GROUND SQUIRREL BURROWS
SHAFTER FAMILY APARTMENTS SITE
SURVEY COVERAGE AREA

svb
south valley biology consulting llc

CESAR CHAVEZ FOUNDATION

SHAFTER FAMILY APT. BRE RECON SURVEY/BURROW MAP

0 50 100 200
FEET

N

PROJECT NUMBER
CF24-01

FIGURE
7

- SHAFTER FAMILY APARTMENTS SITE
- AMERICAN BADGER
- BLUNT-NOSED LEOPARD LIZARD
- BURROWING OWL
- CALIFORNIA GLOSSY SNAKE
- COAST HORNED LIZARD
- CROTCH'S BUMBLE BEE
- NELSON'S (=SAN JOAQUIN) ANTELOPE SQUIRREL
- SAN JOAQUIN KIT FOX
- SAN JOAQUIN POCKET MOUSE
- SWAINSON'S HAWK
- TIPTON KANGAROO RAT
- TRICOLORED BLACKBIRD
- TULARE GRASSHOPPER MOUSE
- WESTERN SPADEFOOT

svb
south valley biology consulting llc

CESAR CHAVEZ FOUNDATION

SHAFTER FAMILY APT. BRE
CNDDB - WILDLIFE

0 0.25 0.5 1
MILES

N

PROJECT NUMBER
CF24-01

FIGURE
8

7.0 Results and Discussion

7.1 Special-Status Plant Species

Three special-status plant species were identified by the CNDDB to occur within 5 miles of the Project Area- Kern mallow (*Eremalche kernensis*), San Joaquin woollythreads (*Monolopia congdonii*), and Hoover's eriastrum (*Eriastrum hooveri*). During the reconnaissance-level survey, special emphasis was placed on identifying these three plants within the Project Area. No individuals of any special-status plant species were observed during this survey. The reconnaissance-level survey performed on March 4, 2025, occurred within the blooming period for all three of these plants. Prior to surveying the Project Site, a reference site containing these species was visited within the Kern Water Bank in Bakersfield, California. The reference site was located approximately 11.5 miles south of the Project Site. This reference site contained identifiable, blooming individuals for these three species. Due to the disturbed nature within the Project Site, residential development to the north and east of the site, active agricultural fields to the south, and the dominance of non-native weedy vegetation within the Project Site, it is highly unlikely that any special-status plant species would be present within the Project Site. Suitable habitat required for these species does not exist within the Project Area. No impacts to any special-status plant species will occur as a result of the proposed Project.

7.2 Special-Status Wildlife Species

Table 6 above lists sensitive wildlife that have been documented within the vicinity of the Project Area as identified by the database reviews. Because the wildlife species list presented in this table is regional, an analysis of the range and habitat preferences of those species was conducted to identify special-status wildlife species that have the potential to occur or have been observed in the Project Area. Results of this analysis indicate the San Joaquin kit fox (*Vulpes macrotis mutica*), Swainson's Hawk (*Buteo swainsoni*), and tricolored blackbird (*Agelaius tricolor*) all have the potential to occur in the Project Area or are known to occur near the Project Site. The following discussions provide an overview of the general characteristics for each of these species and further detail on the potential for each of these species to be impacted by the Project.

San Joaquin kit fox (*Vulpes macrotis mutica*)

San Joaquin kit fox is a small, slender fox with exceptionally large ears. Its body is pale gray washed with rust, with a white belly and a black tip on the tail (Burt and Grossenheider 1978). It is a federal endangered species and a state threatened species. The kit fox is the smallest of the arid land foxes and is nocturnal and primarily carnivorous (Zeiner et al. 1990a). They are associated with annual grasslands or grassy open stages with scattered shrubby vegetation. They occur in annual grassland, valley saltbush scrub, and valley sink scrub habitats as well as in agricultural and some developed areas. This species requires loose soils for burrowing or atypical den areas such as exposed pipe openings, culverts, etc., and a suitable prey base. They may construct their own dens or modify burrows created by American badgers, coyotes, and California ground squirrels. Kit foxes are vulnerable to human activities, such as hunting, use of

rodenticide and other poisons, off-road vehicles, and trapping. Agriculture, grazing, development, competition from coyotes and red fox, and road killings are reasons for the kit fox's decline.

Potential Presence of San Joaquin kit fox:

CNDDB records indicate presence of this species within a 5-mile radius of the Project Site with the closest observation occurring approximately 0.31 miles southeast. The observations of this species occur south of the Project Site, in areas with much less development. The Project Site contains heavy California ground squirrel activity and multiple active California ground squirrel burrows. Although San Joaquin kit foxes are known to utilize California ground squirrel burrows for denning, no sign (tracks, prey remains, scat) of San Joaquin kit fox was observed during the reconnaissance-level survey. However, the kit fox is a wide-ranging species that can forage in a variety of areas, even marginally suitable areas such as the Project Site. Therefore, it is possible this species could use and/or pass through the site while foraging in other nearby more suitable areas. Due to the small size of the Project Site and lack of suitable habitat in the surrounding areas, it is highly unlikely this species would occupy the Project Site as a resident.

Proposed Mitigation Measures for San Joaquin kit fox:

- A pre-construction survey should be conducted 14 - 30 days prior to ground disturbing activities within the Project Area and a 500-foot buffer to identify active or potential San Joaquin kit fox dens. If this survey is conducted during the avian nesting season (February – August) the biologists will also be able to survey for active nesting birds (see the discussion on Migratory Birds below).
- If potential kit fox dens are observed within the Project Area, a 50-foot avoidance buffer should be implemented. If construction activities require the destruction of a potential den, then den monitoring shall be conducted by a qualified biologist for a minimum of 4 consecutive nights following the protocols set forth in the *U.S. Fish and Wildlife Service Standardized Recommendations for the Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011). Known dens shall require an avoidance buffer of at least 100 feet. If a known den cannot be avoided, it shall be left undisturbed, and the monitoring biologist shall be contacted immediately. Natal dens found within the Project Area or within a 500-buffer surrounding the Project Area should be avoided and the USFWS and CDFW shall be contacted.
- To prevent the entrapment of a San Joaquin kit fox or other wildlife, all steep walled, open trenches greater than 2 feet in depth should be covered at the end of each day. If covering an open excavation is not feasible, escape ramps made of earthen material or wooden planks at a 1:1- slope (45-degree angle) should be implemented. Trenches should be inspected in the morning prior to commencing work activities and prior to backfilling. If a San Joaquin kit fox or any other special-status species is found within the excavation, the monitoring biologist shall be contacted immediately. At no time should any personnel attempt to handle, corral, remove, or otherwise interact with the animal.

Swainson's Hawk (*Buteo swainsoni*)

The Swainson's hawk is a medium sized raptor with white underparts, a reddish bib on their chest and a white face patch and throat. While soaring, the leading edge of the wing is light in color while contrasted by a darker flight feathers. They are an uncommon breeding resident and migrant in the Central Valley California. This species is known to nest in large trees along riparian areas, oak savannah, and juniper-sage flats. The Swainson's hawk forages in adjacent grasslands, livestock pastures, or agricultural fields (Bloom 1980).

Potential Presence of Swainson's Hawk:

Although no observations of this species were identified in the CNDDB within a 5-mile radius of the Project Area, known observations of this species occur close by, further north in the city of Wasco, California and to the south and southwest in agricultural and open space grassland/shrubland areas. The heavily disturbed nature of the Project Site, along with no suitable nesting sites within the Project Site make it highly unlikely this species would nest on the Project Site or the Project Area. However, this is a highly mobile species known to forage in other nearby locations and it is possible this species could flyover the Project Site during foraging flights. Although other smaller prey such as mice, voles, gophers, etc. are more typical for Swainson's hawks, this species is known to consume insects if other prey species are not available, and Swainson's hawks can also capture and eat California ground squirrels as well.

Proposed Mitigation Measures for Swainson's Hawk:

- If construction activities are to take place during the nesting season (February - August), a pre-construction survey will be conducted 14 - 30 days prior to ground disturbing activities within the Project Area and a 500-foot buffer to identify individual Swainson's hawk's and active nests. This survey can be conducted concurrently with the San Joaquin kit fox pre-construction survey described above, depending on the timing of the pre-construction survey.
- If any active Swainson's hawk nest is found during the pre-construction survey, a qualified biologist will prescribe an appropriate buffer zone surrounding the nest and a plan to be implemented to prevent disruption of nesting activities. If nest disruption is not possible, CDFW should be contacted for guidance.

Tricolored Blackbird (*Agelaius tricolor*)

The tricolored blackbird is black in color, males contain distinctive red shoulder patches with a white stripe underneath. The tricolored blackbird is found throughout the Central Valley of California. This species prefers to nest within wetlands with dense cattails or tules, thickets of willow, blackberry, wild rose, and mesquite, as well as in tall herbs. The tricolored blackbird is known to forage in grassland and cropland habitats (Garret and Dunn 1981). They are a highly colonial species and are often seen in groups of at least 50 pairs.

Potential Presence of Tricolored Blackbird:

CNDDB recorded observations of this species occur within 5 miles of the Project Site, with the closest observation occurring approximately 2.9 miles northwest. Tricolored blackbirds are known to nest in wetland habitat. No suitable wetland habitat associated with this species occurs within the Project Area. However, it is possible this species could pass over the Project Area during foraging flights during the late winter and spring months while back and forth to and from nesting sand foraging sites.

Proposed Mitigation Measures for Tricolored Blackbird:

- If construction activities are to take place during the nesting season for tricolored blackbird (February - May), a pre-construction survey will be conducted 14 - 30 days prior to ground disturbing activities within the Project Area and a 500-foot buffer to identify individual tricolored blackbirds and active nests. This survey can be conducted concurrently with the San Joaquin kit fox pre-construction survey described above, depending on the timing of the pre-construction survey.

- If any active tricolored blackbird nest sites are found during the pre-construction survey, a qualified biologist will prescribe an appropriate buffer zone surrounding the nest site and a plan to be implemented to prevent disruption of nesting activities.

Other Migratory Birds

Other migratory birds may use the proposed Project Site or surrounding lands for feeding, nesting, and roosting. In compliance with Sections 3503 and 3503.5 of the California Fish and Game Code and the Migratory Bird Treaty Act, if construction activities are to occur during the nesting and breeding season (February 1 through August 31), a qualified biologist shall determine the presence of any native bird and raptor nests prior to construction activities. If any nests are identified, appropriate buffer zones will be established around any identified nests to prevent disruption of nesting. If an adequate buffer zone cannot be established around any active nest, CDFW and USFWS will be contacted for guidance.

General Wildlife Avoidance Measures

To further ensure no special-status species are impacted by the Shafter Family Apartments Project, SVB recommends the follow general wildlife avoidance measures.

• All vehicles should implement a maximum 10mph speed limit within the Project Area or adhere to the posted speed limit.
• To avoid the entrapment of any animal, all excavations greater than 2 feet should be backfilled by the end of day. If backfilling by the end of day is not possible, excavations should be covered in a way to prevent wildlife species from entering the excavation. If excavations
cannot be covered, an earthen escape ramp or a ramp constructed of wooden planks should be implemented inside the excavation at a 1:1 slope (45 degrees). If any wildlife is found entrapped inside an open excavation, the biologist should be contacted immediately.

• All pipes, culverts, or similar structures staged onsite should be capped in a way to prevent the entry of wildlife. Such structures should be checked prior to moving to ensure no wildlife is entrapped inside.
• All food-related trash items including wrappers, cans, bottles, and scraps should be disposed of in a securely closed container and removed from the site at the end of each day.
• No firearms or pets should be allowed onsite.
• Any protected wildlife species that may venture onsite should be allowed to leave the site of their own accord. No attempt to handle or otherwise engage with the animal should be made. If after a reasonable amount of time the animal does not leave the Project Site, the biologist should be contacted.

8.0 Conclusion

The primary objectives of this BRE were to determine the type and extent of plant communities present in the Project Site and surrounding adjacent area; identify plant and wildlife species known to occur or that could potentially occur on the Project Site and adjacent lands; and evaluate the potential for special-status species to occur on or adjacent to the Project Site.

Findings discussed within this evaluation have determined that no special-status plant species are expected to occur within the Project Site. The reconnaissance-level survey performed by SVB on March 4, 2025, occurred during the blooming period of many of the special-status plant species discussed above in **Table 4**. No individual observations of any special-status plant species were observed during this survey. The dense non-native weedy vegetation in the area, heavy disturbances within and surrounding the Project Area, as well as active agricultural operations to the south greatly diminish the likelihood of any special-status plant species occurring on site.

Although unlikely, there is a possibility for 3 special-status wildlife species to occur within the Project Site. These species include the San Joaquin kit fox, Swainson's hawk, and tricolored blackbird. In the case of the San Joaquin kit fox, no potential, known, or natal denning sites were observed within the Project Area or surrounding 500-foot buffer zone. Although it is possible this species could utilize the many California ground squirrel burrows within the Project Area as denning sites, the heavy disturbances within and surrounding the Project Area, along with the small parcel size of the Project Site greatly diminish the possibility of this species occurring on site. The implementation of the mitigation measures for San Joaquin kit fox included in Section 7 above will minimize any impacts to San Joaquin kit fox to a less than significant level.

No suitable nesting sites for both the Swainson's hawk or tricolored blackbird occur within or immediately surrounding the Project Site. However, these species could potentially pass over the area or use the area as a foraging site. The implementation of the mitigation measures for Swainson's hawk and for tricolored blackbird included in Section 7 above will minimize any impacts to these species to a less than significant level.

Other migratory birds could be present within or nearby the Project Site. The implementation of the mitigation measures for migratory birds included in Section 7 above will minimize any impacts to migratory birds to a less than significant level.

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APPENDIX A

California Department of Fish and Wildlife Natural Diversity Database (CNDDB) 9 Quad Search Results

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Rio Bravo (3511943) OR Wasco SW (3511954) OR Wasco (3511953) OR Famoso (3511952) OR Buttonwillow (3511944) OR Rosedale (3511942) OR East Elk Hills (3511934) OR Tupman (3511933) OR Stevens (3511932))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alkali mariposa-lily *Calochortus striatus*	PMLIL0D190	None	None	G3	S2S3	1B.2
alkali-sink goldfields *Lasthenia chrysantha*	PDAST5L030	None	None	G2	S2	1B.1
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
Bakersfield legless lizard *Anniella grinnelli*	ARACC01050	None	None	G2G3	S2S3	SSC
blunt-nosed leopard lizard *Gambelia sila*	ARACF07010	Endangered	Endangered	G1	S2	FP
Buena Vista Lake ornate shrew *Sorex ornatus relictus*	AMABA01102	Endangered	None	G5T1	S1	SSC
burrowing owl *Athene cunicularia*	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
California glossy snake *Arizona elegans occidentalis*	ARADB01017	None	None	G5T2	S2	SSC
California horned lark *Eremophila alpestris actia*	ABPAT02011	None	None	G5T4Q	S4	WL
California jewelflower *Caulanthus californicus*	PDBRA31010	Endangered	Endangered	G1	S1	1B.1
coast horned lizard *Phrynosoma blainvillii*	ARACF12100	None	None	G4	S4	SSC
Crotch's bumble bee *Bombus crotchii*	IIHYM24480	None	Candidate Endangered	G2	S2	
Earlimart orache *Atriplex cordulata var. erecticaulis*	PDCHE042V0	None	None	G3T1	S1	1B.2
giant gartersnake *Thamnophis gigas*	ARADB36150	Threatened	Threatened	G2	S2	
giant kangaroo rat *Dipodomys ingens*	AMAFD03080	Endangered	Endangered	G1G2	S2	
Great Valley Cottonwood Riparian Forest *Great Valley Cottonwood Riparian Forest*	CTT61410CA	None	None	G2	S2.1	
Great Valley Mesquite Scrub *Great Valley Mesquite Scrub*	CTT63420CA	None	None	G1	S1.1	
heartscale *Atriplex cordulata var. cordulata*	PDCHE040B0	None	None	G3T2	S2	1B.2
Hoover's eriastrum *Eriastrum hooveri*	PDPLM03070	Delisted	None	G3	S3	4.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Horn's milk-vetch *Astragalus hornii var. hornii*	PDFAB0F421	None	None	GUT1	S1	1B.1
Kern mallow *Eremalche parryi ssp. kernensis*	PDMAL0C031	Endangered	None	G3G4T3	S3	1B.2
Le Conte's thrasher *Toxostoma lecontei*	ABPBK06100	None	None	G4	S3	SSC
least Bell's vireo *Vireo bellii pusillus*	ABPBW01114	Endangered	Endangered	G5T2	S3	
lesser saltscale *Atriplex minuscula*	PDCHE042M0	None	None	G2	S2	1B.1
Lost Hills crownscale *Atriplex coronata var. vallicola*	PDCHE04371	None	None	G4T3	S3	1B.2
Mason's neststraw *Stylocline masonii*	PDAST8Y080	None	None	G1	S1	1B.1
mountain plover *Charadrius montanus*	ABNNB03100	None	None	G3	S2	SSC
Nelson's (=San Joaquin) antelope squirrel *Ammospermophilus nelsoni*	AMAFB04040	None	Threatened	G2G3	S3	
northwestern pond turtle *Actinemys marmorata*	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
oil neststraw *Stylocline citroleum*	PDAST8Y070	None	None	G3	S3	1B.1
recurved larkspur *Delphinium recurvatum*	PDRAN0B1J0	None	None	G2?	S2	1B.2
San Joaquin coachwhip *Masticophis flagellum ruddocki*	ARADB21021	None	None	G5T2T3	S3	SSC
San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2	S3	
San Joaquin pocket mouse *Perognathus inornatus*	AMAFD01060	None	None	G2G3	S2S3	
San Joaquin woollythreads *Monolopia congdonii*	PDASTA8010	Endangered	None	G2	S2	1B.2
short-nosed kangaroo rat *Dipodomys nitratoides brevinasus*	AMAFD03153	None	None	G2T1T2	S1S2	SSC
slough thistle *Cirsium crassicaule*	PDAST2E0U0	None	None	G1	S1	1B.1
subtle orache *Atriplex subtilis*	PDCHE042T0	None	None	G1	S1	1B.2
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S4	
Tejon poppy *Eschscholzia lemmonii ssp. kernensis*	PDPAP0A071	None	None	G5T2	S2	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Tipton kangaroo rat *Dipodomys nitratoides nitratoides*	AMAFD03152	Endangered	Endangered	G2T1T2	S2	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Tulare grasshopper mouse *Onychomys torridus tularensis*	AMAFF06021	None	None	G5T1T2	S1S2	SSC
Valley Saltbush Scrub *Valley Saltbush Scrub*	CTT36220CA	None	None	G2	S2.1	
Valley Sink Scrub *Valley Sink Scrub*	CTT36210CA	None	None	G1	S1.1	
western mastiff bat *Eumops perotis californicus*	AMACD02011	None	None	G4G5T4	S3S4	SSC
western spadefoot *Spea hammondii*	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
white-tailed kite *Elanus leucurus*	ABNKC06010	None	None	G5	S3S4	FP

Record Count: 48

APPENDIX B

California Native Plant Society (CNPS) Online Inventory (Version 8) 9 Quad Search Results

CNPS Rare Plant Inventory

Search Results

24 matches found. Click on scientific name for details

Search Criteria: , 9-Quad include [3511934:3511953:3511944:3511952:3511954:3511942:3511933:3511943:3511932]

▲ 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
Astragalus hornii var. *hornii*	Horn's milk-vetch	Fabaceae	annual herb	May-Oct	None	None	GUT1	S1	1B.1		2006-12-01	No Photo Available
Atriplex cordulata var. *cordulata*	heartscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G3T2	S2	1B.2	Yes	1988-01-01	 © 1994 Robert E. Preston, Ph.D.
Atriplex cordulata var. *erecticaulis*	Earlimart orache	Chenopodiaceae	annual herb	Aug-Sep(Nov)	None	None	G3T1	S1	1B.2	Yes	2001-01-01	 © 2009 Robert E. Preston, Ph.D.
Atriplex coronata var. *coronata*	crownscale	Chenopodiaceae	annual herb	Mar-Oct	None	None	G4T3	S3	4.2	Yes	1994-01-01	 © 1994 Robert E. Preston, Ph.D.
Atriplex coronata var. *vallicola*	Lost Hills crownscale	Chenopodiaceae	annual herb	Apr-Sep	None	None	G4T3	S3	1B.2	Yes	1974-01-01	No Photo Available

Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	None	None	G2	S2	1B.1	Yes	1994-01-01	 © 2000 Robert E. Preston, Ph.D.
Atriplex subtilis	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.
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual/perennial herb	Aug	None	None	G5	S4	4.2		1994-01-01	No Photo Available
Calochortus striatus	alkali mariposa-lily	Liliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G3	S2S3	1B.2		1974-01-01	No Photo Available
Caulanthus californicus	California jewelflower	Brassicaceae	annual herb	Feb-May	FE	CE	G1	S1	1B.1	Yes	1984-01-01	No Photo Available
Cirsium crassicaule	slough thistle	Asteraceae	annual/perennial herb	May-Aug	None	None	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2	1B.2	Yes	1988-01-01	No Photo Available
Eremalche parryi ssp. *kernensis*	Kern mallow	Malvaceae	annual herb	Jan(Feb)Mar-May	FE	None	G3G4T3	S3	1B.2	Yes	1974-01-01	No Photo Available
Eriastrum hooveri	Hoover's eriastrum	Polemoniaceae	annual herb	Mar-Jul	FD	None	G3	S3	4.2	Yes	1974-01-01	 © 2011 Chris Winchell
Eriogonum gossypinum	cottony buckwheat	Polygonaceae	annual herb	Mar-Sep	None	None	G3G4	S3S4	4.2	Yes	1974-01-01	No Photo Available
Eschscholzia lemmonii ssp. *kernensis*	Tejon poppy	Papaveraceae	annual herb	(Feb)Mar-May	None	None	G5T2	S2	1B.1	Yes	1994-01-01	No Photo Available

Goodmania luteola	golden goodmania	Polygonaceae	annual herb	Apr-Aug	None	None	G3	S3	4.2		1994-01-01	 © 2007 Steve Matson
Hordeum intercedens	vernal barley	Poaceae	annual herb	Mar-Jun	None	None	G3G4	S3S4	3.2		1994-01-01	No Photo Available
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	Yes	2019-09-30	 © 2009 California State University, Stanislaus
Lasthenia ferrisiae	Ferris' goldfields	Asteraceae	annual herb	Feb-May	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2009 Zoya Akulova
Monolopia congdonii	San Joaquin woollythreads	Asteraceae	annual herb	Feb-May	FE	None	G2	S2	1B.2	Yes	1988-01-01	No Photo Available
Stylocline citroleum	oil neststraw	Asteraceae	annual herb	Mar-Apr	None	None	G3	S3	1B.1	Yes	1994-01-01	No Photo Available
Stylocline masonii	Mason's neststraw	Asteraceae	annual herb	Mar-May	None	None	G1	S1	1B.1	Yes	1994-01-01	No Photo Available
Trichostema ovatum	San Joaquin bluecurls	Lamiaceae	annual herb	(Apr-Jun)Jul-Oct	None	None	G3	S3	4.2	Yes	1974-01-01	No Photo Available

Showing 1 to 24 of 24 entries

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Suggested Citation:
California Native Plant Society, Rare Plant Program. 2025. Rare Plant Inventory (online edition, v9.5.1). Website https://www.rareplants.cnps.org [accessed 26 February 2025].
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APPENDIX C

United States Department of the Interior Fish and Wildlife Service Information for Planning and Consultation System List of threatened and endangered species that may occur in proposed project location

IPaC resource list

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

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

Location

Kern County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

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

Endangered species

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

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

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

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

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

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

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

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Mammals

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

Birds

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

Reptiles

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

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

Amphibians

NAME	STATUS
Western Spadefoot Spea hammondii	Proposed Threatened

Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5425

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus	Proposed Threatened

Wherever found
There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/9743

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi	Threatened

Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/498

Flowering Plants

NAME	STATUS
Kern Mallow Eremalche kernensis	Endangered

Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1731

Critical habitats

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

There are no critical habitats at this location.

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

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Additional information can be found using the following links:

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

Bald & Golden Eagles FAQs

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

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

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

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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

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

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at

your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Northern Harrier Circus hudsonius This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Santa Barbara Song Sparrow Melospiza melodia graminea This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

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

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

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

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

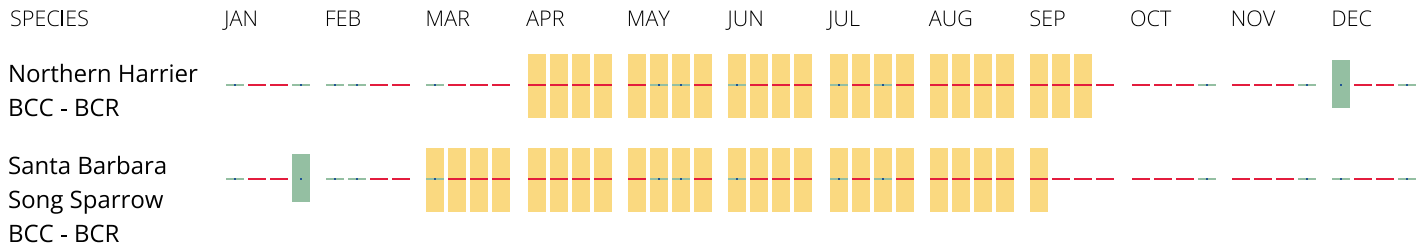
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

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

No Data (–)
A week is marked as having no data if there were no survey events for that week.

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



Migratory Bird FAQs

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

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

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

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

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

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

Proper interpretation and use of your migratory bird report

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

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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

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

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location did not intersect any wetlands mapped by NWI.

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

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

APPENDIX D

United States Department of Agriculture – National Resource Conservation Service Custom Soil Resource Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Kern County, California, Northwestern Part

February 26, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Scale: 1:1,520 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kern County, California, Northwestern Part
Survey Area Data: Version 17, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 12, 2022—Mar 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
243	Wasco sandy loam	10.0	100.0%
Totals for Area of Interest		**10.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Kern County, California, Northwestern Part

243—Wasco sandy loam

Map Unit Setting

National map unit symbol: hklx
Elevation: 250 to 3,700 feet
Mean annual precipitation: 4 to 7 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 210 to 275 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Wasco and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wasco

Setting

Landform: Flood plains, alluvial fans
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

Ap - 0 to 15 inches: sandy loam
C - 15 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R017XY906CA - Non-Alkali San Joaquin Valley Desert
Hydric soil rating: No

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APPENDIX E

Photoplate Depicting the Project Site and Immediate Vicinity

Photograph 1. The northeast corner of the Project Site. The photograph depicts ruderal, weedy vegetation throughout the entirety of the Project Site. Photograph was taken facing southwest.

Photograph 2. The northwest corner of the Project Site. The far western edge of the Project Site has been recently disced and is void of vegetation. Photograph was taken facing southeast.

Photograph 3. The southeast corner of the Project Site. Nonnative, weedy vegetation is depicted. Photograph was taken facing northwest.

Photograph 4. The southwest corner of the Project Site. California mustard and nonnative ruderal, weedy vegetation is depicted. Photograph was taken facing northeast.

Photograph 5. The center of Project Site facing south. Several active California ground squirrel burrows are depicted.

Photograph 6. Existing residential development to the east of the Project Site.

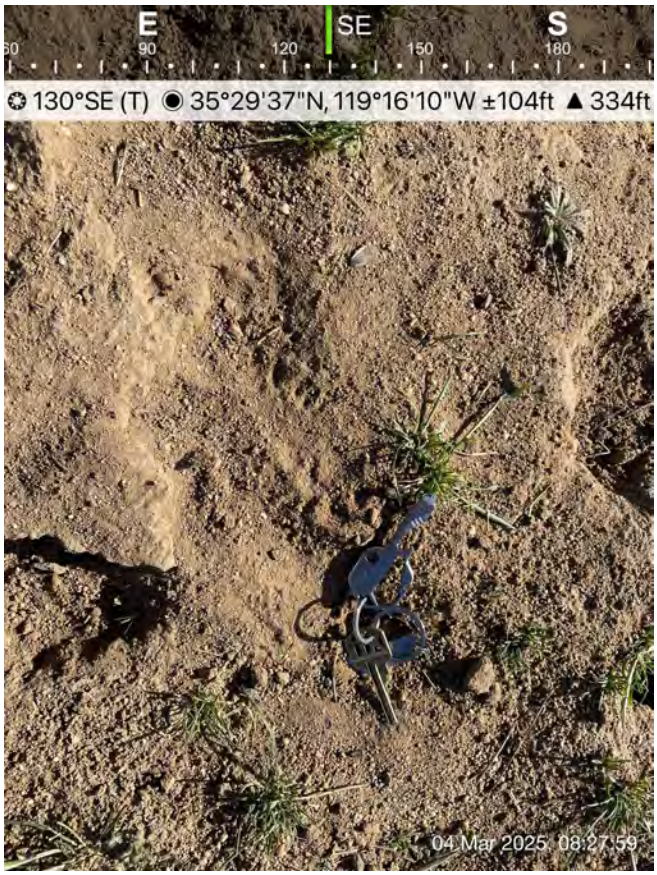
Photograph 7. Existing residential development to the north of the Project Site.

Photograph 8. An active almond orchard to the south of the Project Site.

Photograph 9. A disced field void of vegetation west of the Project Site.

Photograph 10. Representative photograph of several California ground squirrel burrows within the Project Site. The entirety of the Project Site contains dense, active California ground squirrel burrows.

Photograph 11. Representative photograph of fresh California ground squirrel scat at the entrance of a burrow. California ground squirrel scat was observed throughout the entirety of the Project Site. Multiple individual California ground squirrels were also observed actively foraging and using these burrows.



Photograph 12. Representative photograph of fresh California ground squirrel tracks around a burrow. California ground squirrel tracks were observed throughout the entirety of the Project Site. Multiple individual California ground squirrels were also observed actively foraging and using these burrows.