APPENDIX H

Biological Resources Assessment

Pacific Gateway Specific Plan Project
Tracy, San Joaquin County, California

Prepared For: Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Report Date: September 2025

BARGAS

Sacramento Valley • Inland Empire • Greater Los Angeles • San Diego • San Francisco Bay Area

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Project Team

Report Author(s):	Dustin Baumbach, Gregory Garcia, Jamie Jackson, Thomas Liddicoat, and Vivian Lowe
Field Surveyor(s):	Corey Clapp and Vivian Lowe
GIS:	Vivian Lowe
Project Manager:	Dustin Baumbach
Reviewer:	Thomas Liddicoat
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1 Introduction

Bargas Environmental Consulting, LLC (Bargas) prepared this Biological Resources Assessment (hereafter, Assessment) on behalf of Raney Planning & Management, Inc for the proposed Pacific Gateway Specific Plan Project (Project), which generally proposes new university-focused development of an agricultural area for an industrial, commercial, and recreational use. This Assessment documents the existing biological conditions on-site and evaluates potential impacts to sensitive biological resources with respect to federal, state, and local policies. This Assessment provides the biological resources technical documentation necessary for project review under the California Environmental Quality Act (CEQA) by the Lead Agency.

1.1 Project Location

The Project site consists of approximately 1,561.80 acres bordered by Durham Ferry Road to the north; an unnamed, unimproved road and the California Aqueduct to the south; South Tracy Boulevard to the west; and an unnamed, unimproved road 0.5 miles west of South Bird Road to the east, in an unincorporated region of San Joaquin County, 0.85 miles south of the City of Tracy (**Figure 1**). The Project site is within Sections 15, 21-23, 25-28, 30, 31, 35, and 36 of Township 3 South, Range 5 and 6 East of the Mount Diablo Prime Meridian of the U.S. Geological Survey's 7.5-minute Tracy and Vernalis Quadrangle. The site consists of forty-nine parcels; County Assessor's Parcel Numbers (APNs) 253-140-01, -09, -11, -13, -14, -15, -16, -17, -19, -20, -21, -22, -23, -24, -25, 253-150-06, 253-180-02, -06, -11, 253-190-04, -05, -07, -08, -09, -10, -11, -19, -21, -22, 253-260-05, -09, -12, -13, -14, 253-280-06, -07, 253-290-02, -05, -09, -10, 253-200-06, -11, -12, -13, -19, -20, 255-070-01, 255-060-14, and 255-060-39. The Project is located within the boundaries of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).

1.2 Project Description

The proposed Pacific Gateway Specific Plan Project and related entitlements will establish the land uses, zoning, development standards, and development regulations for the Project site. The Project consists of the development of 24,675,000 square feet (sf) of Limited Industrial use, 160,000 sf of General commercial use, 93,000 sf of Industrial Park use, 66.5 acres of University Campus, plus 9.87 acres for future expansion, a Veterans of Foreign Wars (VFW) post, a new fire station, pedestrian and bicycle facilities, and various open space parks including a 11.87-acre Central Park. The Project also includes infrastructure improvements associated with the future development including water, wastewater, stormwater, and additional roadways.

The open space, park, and pedestrian and bike facilities proposed will provide outdoor spaces for both passive outdoor areas and recreation as well as provide accessibility for both the workforce and the community. Furthermore, a network of public streets to be constructed as part of the Project will provide access to each part of the development including on-site private interior site circulation and the necessary vehicle and truck and trailer courts.

The Project would be developed in two phases: an Initial Phase Development followed by Programmatic-Level long-term buildout phases based on market demand. The subsequent Programmatic-Level development would expand upon the Initial Phase Development. The Initial Phase includes the development of four Class "A" facilities for a total of approximately 4,000,000 sf situated on 181.26 net acres immediately east of Chrisman Road. The Initial Phase Development also includes the development of 25,000 sf for the University facility that would serve as Phase 1 of the University Campus. The VFW facility would also be developed in the Initial Phase as well as a new building and associated parking for the new home of Tracy Post 1537. The Initial Phase would also include the construction of the

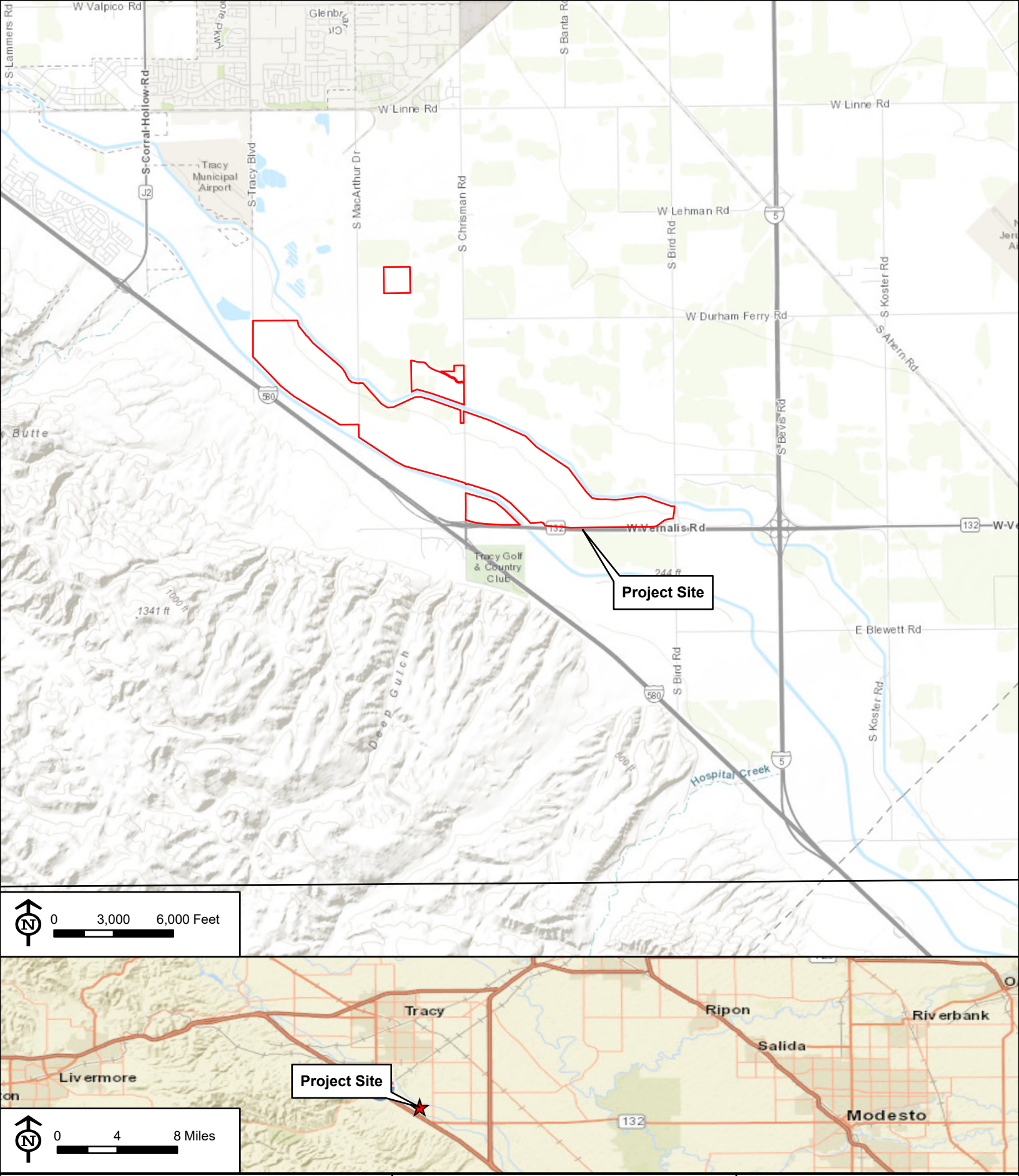
necessary backbone infrastructure to serve the Initial Phase development; this includes improvements to Chrisman Road as well as utilities improvements including the installation of a groundwater well and treatment facilities, construction of a pre-packaged WWTP, and construction of a large stormwater retention basin. The Initial Phase is anticipated to be developed over five to six years while the subsequent Programmatic-Level development would occur over a 25 to 30-year period.

1.3 Definitions

The following terms and definitions reflect areas of the Project will be followed throughout this Assessment. These areas are presented on **Figure 2**.

- **Project site:** The Project site is defined as the approximately [1]1,561.80-acre Pacific Gateway Specific Plan Project area. The Project site includes both the Initial Phase and surrounding Programmatic-Level long-term buildout areas.
- **Initial Phase:** The Initial Phase reflects approximately 249.33 acres being analyzed for the first stage of development (**Figure 3**).
- **Biological Study Area:** The Biological Study Area consists of the Project Site and a surrounding 250-foot buffer. This is the area for which biological resources were analyzed for this Assessment, consisting of approximately 1,990.93 acres.
- **Regional Area:** The Regional Area consists of the Project site and a 5-mile surrounding buffer. The Regional Area was used as a basis for generating lists of special-status species and other biological resources considered in this report.

[1] The total Project acreage of 1,576 provided in the environmental impact report includes North Street, MacArthur Drive, and an unnamed road that are not included in this report. Information regarding these roads will be provided in the off-site report.



Source: ESRI ArcGIS Online Basemap - World Topographic Map, World Street Map

Public Land Survey System (PLSS):
Mount Diablo,Township 3S, Range 5E, 6E, Section 15, 21, 22, 23, 25, 26, 27, 28, 30, 35, 36

USGS Quad(s): Tracy (n.d.), Vernalis (n.d.)

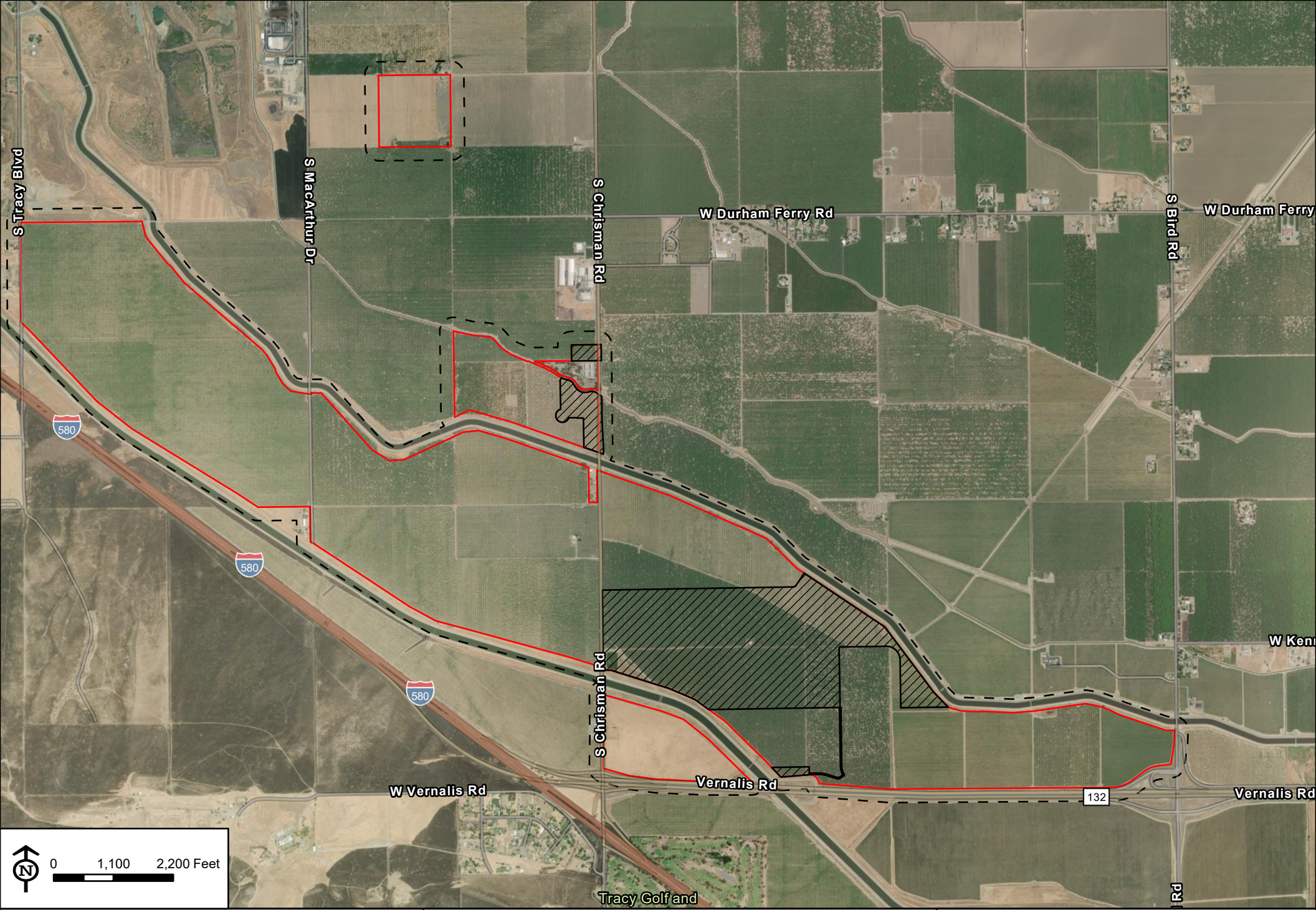
Project Site Coordinates: 121°23'24"W 37°38'42"N

Figure 1
Project Site and Vicinity

Pacific Gateway Specific Plan Project

BARGAS Environmental Consulting

Map Created: 1/31/2025, Bargas Project Number: 1644-22



Source: ESRI ArcGIS Online Basemap - World Imagery Hybrid (10/2022)

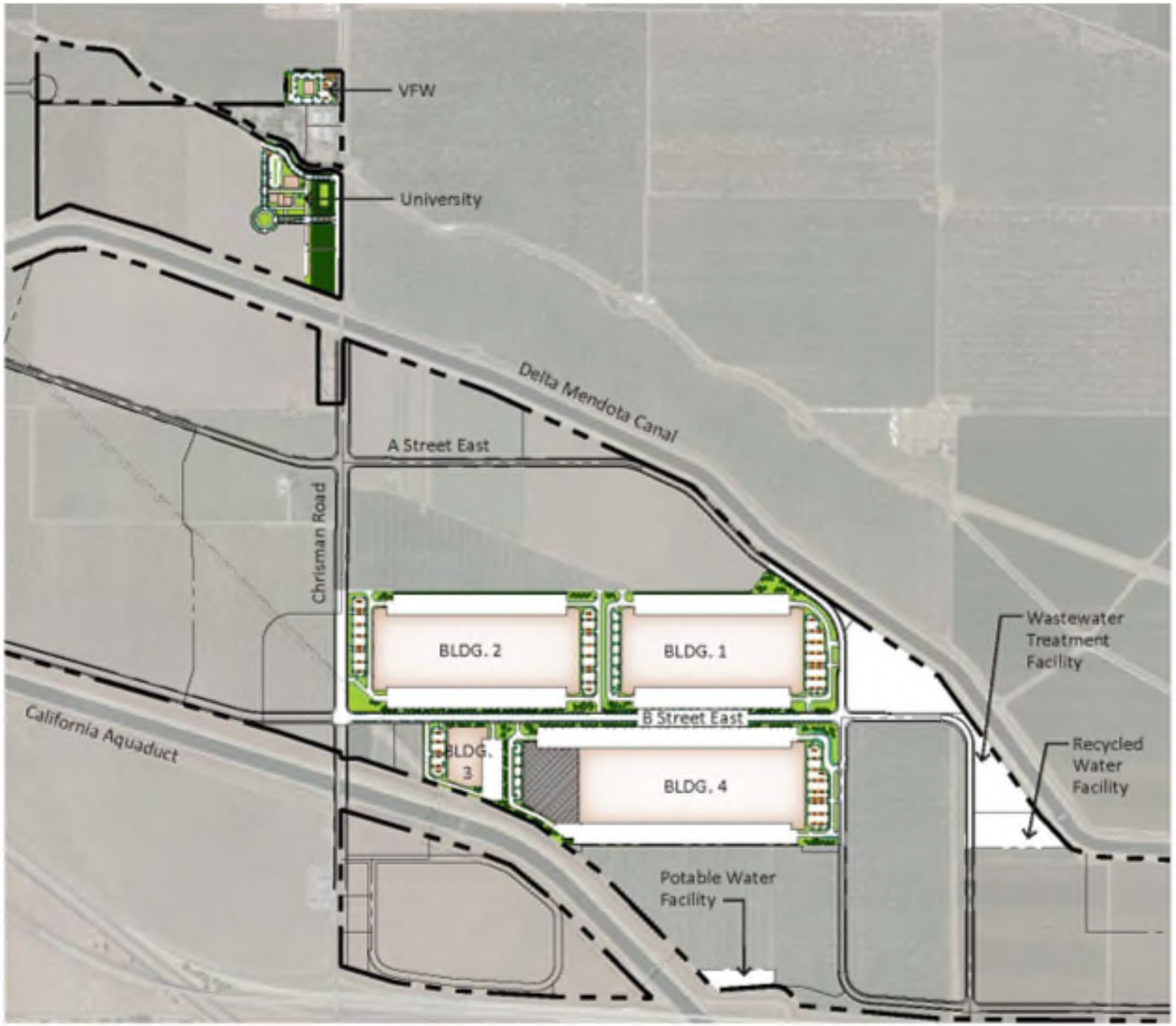
BARGAS Environmental Consulting

Initial Phase
Biological Study Area
Project Site

Figure 2 Study Area Context

Pacific Gateway Specific Plan Project

Map Created: 1/31/2025, Bargas Project Number: 1644-22



Source: Raney Planning Group, 3. Project Description, 2024

BARGAS Environmental Consulting

Figure 3
Initial Phase Conceptual Plan

Pacific Gateway Specific Plan Project

Map Created: 1/22/2024, Bargas Project Number: 1644-22

2 Regulatory Setting

The Project could be subject to the federal, state, and local regulations discussed below.

2.1 Federal

2.1.1 Endangered Species Act

The Federal Endangered Species Act (ESA) is the federal government's regulations protecting rare and declining plant and wildlife species. FESA is jointly implemented by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS, marine resources only). FESA protects species using the following status designations:

- A federally **endangered** species is a species of invertebrate, plant, or wildlife formally listed by the USFWS under FESA as facing extinction throughout all or a significant portion of its geographic range.
- A federally **threatened** species is one formally listed by the USFWS as likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
- A **proposed** threatened or endangered species is one officially proposed by the USFWS for addition to the federal threatened or endangered species lists.
- **Candidate** species are "plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under FESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities."

"Take" of a federally endangered or threatened species or its habitat is prohibited by federal law without a special permit. The term "take," under FESA, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Harm" is defined by the USFWS to encompass "an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR § 17.3).

Section 10(a)(1)(B) of the FESA allows for take of a threatened or endangered species incidental to development activities once a Habitat Conservation Plan (HCP) has been prepared to the satisfaction of the USFWS and a Section 10(a) incidental take permit has been issued to an applicant. For federal projects (including those involving federal funding), Section 7 of the FESA allows for consultation between the affected agency and the USFWS to determine what measures may be necessary to compensate for the incidental take of a listed species. A federal project is any project that is proposed by a federal agency or is at least partially funded or authorized by a federal agency. Additionally, if the listed species or its habitat occurs in a portion of the project subject to federal jurisdiction (such as Waters of the United States by the United States Army Corps of Engineers under Section 404 of the Clean Water Act), then consultation under Section 7 of the FESA is usually permissible and may be required.

FESA also requires the USFWS to consider whether there are areas of habitat essential to conservation for each listed species. Critical habitat designations protect these areas, including habitat that is currently unoccupied but may be essential to the recovery of a species. An area is designated as critical habitat after the USFWS publishes a proposed Federal regulation in the Federal Register and then receives and considers public comments on the proposal. The final boundaries of critical habitat are officially designated when published in the Federal Register.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) is a federal law governing the taking, killing, possession, transportation, and importation of various birds, their eggs, parts, and nests. The take of any number of a bird species listed as protected on any one of four treaty lists is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreational purposes and requiring harvest to be limited to levels that prevent over utilization. The MBTA also prohibits taking, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, certain bird species, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11).

2.1.3 Clean Water Act and Rivers and Harbors Act

The regulatory setting with regards to aquatic resources is framed by current enabling legislation and case law. Under Section 404 of the Clean Water Act (CWA), the US Army Corps of Engineers (USACE) regulates the discharge of dredged and fill materials into "waters of the U.S." Jurisdictional waters of the U.S. include "territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; tributaries; lakes and ponds, and impoundments of jurisdictional waters; and adjacent wetlands" (33 Code of Federal Regulations [CFR] § 328.3). Certain waters of the U.S. are considered "special aquatic sites" because they are generally recognized as having ecological value; such sites include sanctuaries and refuges, wetlands, mudflats, vegetated shallows, and riffle and pool complexes (40 CFR § 230). Special aquatic sites are defined by the U.S. Environmental Protection Agency (USEPA) and may be afforded additional consideration in a project's permit process. The USACE also regulates navigable waters under Section 10 of the Rivers and Harbors Act of 1899. Navigable waters are defined as "… those waters of the U.S. that… are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce" (33 CFR § 322.2).

Recent federal rulemaking has modified how the USACE defines certain waters of the U.S. As a result of the Supreme Court's May 25, 2023 decision in Sackett v. Environmental Protection Agency, the USACE is now interpreting waters of the U.S. consistent with the Supreme Court's decision, which ruled that the federal Clean Water Act extends to only those "wetlands with a continuous surface connection to bodies that are 'waters of the United States' in their own right," so that they are "indistinguishable" from those waters.

Projects that propose to place fill in jurisdictional wetlands and non-wetland waters of the U.S. is regulated by the USACE under Section 404 of the CWA. The USACE issues nationwide permits for specific types of activities with minimal individual or cumulative adverse environmental impacts. Individual permits are required for large complex projects or projects that exceed the impact thresholds for nationwide permits.

2.2 State

2.2.1 California Environmental Quality Act

CEQA is a public disclosure process codified by California Public Resources Code 21000, requiring decision-makers to analyze the environmental impacts of a project, disclose those impacts to the public, and mitigate environmental impacts to the extent feasible. The state or local lead agency provides an evaluation of project effects on biological resources; determining the significance of those effects is guided by Appendix G of the CEQA guidelines. These evaluations must consider direct effects on a biological resource within the project site itself, indirect effects on

adjacent resources, and cumulative effects within a larger area or region. Effects can be locally important but not significant according to CEQA if they would not substantially affect the regional population of the biological resource. Significant adverse impacts on biological resources would include the following:

- Substantial adverse effects on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the CDFW or the USFWS (these effects could be either direct or via habitat modification);
- Substantial adverse impacts to species designated by the CDFW as Species of Special Concern (SSC);
- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the CWA (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g., tree preservation policies); and;
- Conflict with provisions of an adopted HCP, NCCP, or another approved local, regional, or state habitat conservation plan.

2.2.2 California Endangered Species Act

The California Endangered Species Act (CESA) prohibits the take of state-listed threatened and endangered species. Under CESA, state agencies are required to consult with CDFW when preparing CEQA documents. Under CESA, CDFW is responsible for maintaining a list of rare, threatened, and endangered species designated under state law (California Fish and Game Code § 2070-2079). CDFW also maintains lists of candidate species, SSC, and fully-protected species. Candidate species are those taxa that have been formally recognized by the CDFW and are under review for addition to the state threatened and endangered list. Species of special concern are those taxa that are considered sensitive, and this list serves as a "watch list." The CDFW can authorize "take" if an incidental take permit is issued by the Secretary of the Interior or Commerce in compliance with FESA, or if the director of the CDFW issues a permit under Section 2080 in those cases where it is demonstrated that the impacts are minimized and mitigated.

2.2.3 California Fish and Game Code

Section 1600 et seq. – Lake and Streambed Alteration Agreement. Section 1600 provides provisions for protecting riparian systems, including the bed, banks, and riparian habitat of lakes, seasonal and perennial streams, and rivers. This section requires an applicant to notify CDFW and obtain a Lake and Streambed Alteration Agreement (LSAA) if their project would divert or obstruct the natural flow of any river, stream, or lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; or deposit or dispose of material into any river, stream, or lake.

Section 2050 et seq. – California Endangered Species Act. CESA establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA is administered by CDFW and prohibits the take of any species that the California Fish and Game Commission (CFGC) determines to be a threatened or endangered species. CESA also mandates that "state agencies should not approve projects as proposed which

would jeopardize the continued existence of any endangered species or threatened species" if reasonable and prudent alternatives are available that would avoid jeopardy. CDFW administers CESA and authorizes take through California Fish and Game Code Section 2081 Incidental Take Permits or through Section 2080.1 (for species also listed under FESA, consistency determination with a USFWS Biological Opinion).

Section 3511 – Fully Protected Species. The legislature of the State of California designated certain species as "fully protected" prior to the creation of CESA. Section 3511 states that "fully protected" birds or parts thereof may not be taken or possessed at any time. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, mammals, amphibians and reptiles, and birds. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA.

Sections 3503, 3503.5, 3505, 3513 — Birds. These California Fish and Game Code sections protect all birds, birds of prey, and all nongame birds, as well as their eggs and nests, for species that are not already listed as fully protected and that occur naturally within the state. Sections 3503 and 3503.5 of the CFGC stipulate the following regarding eggs and nests: Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by CFGC or any regulation made pursuant thereto; and Section 3503.5 states that is it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by CFGC or any regulation adopted pursuant thereto. Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

2.2.4 California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code § 1900-1913) affords the CDFW Commission the authority to designate native plants as endangered or rare and protect them from "take." The California Native Plant Society (CNPS) maintains a list of sensitive plant species native to California and assigns each a rank in the California Rare Plant Rank (CRPR) system:

- 1A: Plants presumed extirpated in California and either rare or extinct elsewhere;
- 1B: Plants are rare, threatened, or endangered in California and elsewhere;
- 2A: Plants presumed extirpated in California, but more common elsewhere;
- 2B: Plant are rare, threatened, or endangered in California, but more common elsewhere;
- 3: Plants about which more information is needed (on a review list);
- 4: Plants of limited distribution (on a watch list).

This CRPR system is further defined:

- 0.1: Seriously threatened in California, meaning there is a high degree (over 80% of occurrences) and immediacy of threat;
- 0.2: Moderately threatened in California, meaning there is a moderate degree (20-80% of occurrences) and immediacy of threat;

- 0.3: Not very threatened in California, meaning there is a low degree (less than 20% of occurrences) and immediacy of threat.

All plants with a CRPR of 1 and 2 meet the standards for state listing under the CEQA Guidelines (14 CCR § 15380). CNPS recommends that plants of a CRPR of 3 and 4 also be evaluated for consideration under CEQA.

2.2.5 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 established the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB), collectively referred to as the Water Boards, and authorized them to provide oversight for water rights and water quality. It uses the National Pollutant Discharge Elimination System (NPDES) to monitor point source discharges into the waters of the State to prevent water quality degradation. It also protects wetlands, surface waters, and groundwater from both point and nonpoint sources of pollution.

2.2.6 State Wetland Definition and Procedures

The SWRCB adopted the State Wetland Definition and Procedures for Discharges or Fill Material to Waters of the State in 2019 and completed revisions to this set of procedures in 2021 (SWRCB 2021). Four major elements are included in these procedures as described below, in addition to procedures for the submittal, review and approval of CWA Section 401 permits not described in this report.

1. Wetland definition:

   An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration such saturation is sufficient to cause anaerobic conditions in the upper substrate; and 3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

2. Framework for determining waters of the state:

   Waters of the state are broadly defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The 2021 procedures expand upon this definition to clearly include natural wetlands, wetlands created by modification of a surface water of the state, and artificial wetlands meeting specific criteria.

   The criteria for an artificial wetland include wetlands created for agency-approved compensatory mitigation; those identified in a water quality control plan; and those greater than or equal to one acre in size unless they are constructed and maintained for wastewater treatment or disposal, sediment settling, stormwater permitting program pollutant or runoff management, surface water treatment, agricultural crop irrigation or stock watering, fire suppression, industrial processing and cooling, active surface mining, log storage, recycled water management, maximizing groundwater recharge, and rice paddies.

3. Wetland delineation procedures:

   USACE-defined procedures for aquatic resources delineation used to assess the presence or absence of hydrophytic vegetation, hydric soils, and wetland hydrology are required by the SWRCB to delineate waters of the state, with one modification being that "the lack of vegetation does not preclude the determination of such an area that meets the definition of wetland."

2.3 Local Policies and Ordinances

2.3.1 San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

A habitat conservation plan (HCP) is a planning document required as part of an application for an incidental take permit under Section 10(a)(1)(B) of FESA. Such permits are issued by the USFWS when take is not the intention of, and is incidental to, otherwise legal activities. An application for an incidental take permit under Section 10 of FESA must be accompanied by an HCP. HCPs describe the impacts of the proposed action that may result in take of federally listed species; how those impacts will be minimized or mitigated; and how the HCP is to be funded. HCPs can apply to both listed and non-listed species, including those that are candidates or have been proposed for listing. Conserving species before they are in danger of extinction or are likely to become so can also provide early benefits and prevent the need for listing.

The Project is within the boundaries of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which encompasses San Joaquin County's 1,400+ square miles and 900,000+ acres. The SJMSCP is the county's strategy for balancing conservation with the needs of development while safeguarding agriculture; protecting land-owner rights; providing and maintaining multiple-use Open Spaces, and managing biological resources, especially special-status species under state and federal regulation. The SJMSCP contains numerous goals, policies, and strategies to protect and/or preserve biological resources. The SJMSCP covers 97 special-status plant, fish, and wildlife species in 52 vegetative communities scattered throughout San Joaquin County.

2.3.2 San Joaquin County General Plan

The San Joaquin County General Plan (General Plan) is a set of goals, objectives, policies, implementation measures, and maps that form a blueprint for physical development within the County. The General Plan contains numerous goals, policies, and strategies to protect and/or preserve environmental resources (San Joaquin County 2016).

The Land Use Section of the General Plan includes policies to help develop the unincorporated areas within the County's jurisdiction. This section encourages land development while establishing land use designators to identify the type and intensity of uses on unincorporated land. These designations will help guide development while simultaneously preserving farmland and protecting natural habitats within the County. The Natural and Cultural Resources Element includes policies to guide development and infrastructure practices with goals of preserving environmental resources and promoting cleaner air and water quality. Preservation and protection of the County's natural habitats are highlighted in this element, including its network of rivers, streams, and tributaries that flow into the San Joaquin Delta. Avoiding impacts to the San Joaquin Delta, wherever possible, is of particular concern as it supports wildlife habitat and the agriculture industry.

2.3.3 San Joaquin County Code Division 15: Natural Resources Regulations Code

2.3.3.1 Title 9-1505 Trees

The County has adopted a tree ordinance "to preserve the County's tree resources." Title 9-1505 of the San Joaquin County Natural Resources Regulations Code regulates the removal of Native Oak Trees, Heritage Oak Trees, or Historic Trees. The ordinance requires the applicant to submit an approved Improvement Plan application subject to staff review prior to the removal of any Native Oak Tree, Heritage Oak Tree, or Historic Tree.

2.3.3.2 Title 9-1510 Riparian Habitat

Title 9-1510 of the San Joaquin County Natural Resources Regulations Code seeks to preserve the County's riparian habitat. The ordinance requires applicants to submit a Riparian Habitat Mitigation Plan prior to the destruction, elimination, or degradation of riparian habitat.

3 Methods

This Assessment is informed by data gathered from a comprehensive desktop analysis of literature, maps, numerous resource databases pertaining biological resources, and multiple field surveys at the Project site.

3.1 Desktop Review

Prior to conducting field surveys, Bargas conducted an initial review of literature and data sources to characterize biological conditions and to compile records of sensitive biological resources that could potentially occur in the Biological Study Area (Study Area).

3.1.1 Biological Setting

The biological setting includes terrain, hydrology, soils, land uses, and other features that support or inhibit biological resources in an area. The following resources were reviewed in detail to better understand the biological setting of the Project site.

- US Geological Survey's *National Hydrography Dataset* (USGS 2024);
- US Department of Agriculture National Resource Conservation Service *Web Soil Survey* (NRCS 2024);
- Google Earth Pro aerial map images, including historical aerial images to determine how habitat within the Project site has changed over time (Google 2024).

3.1.2 Special-Status Species & Habitats

It is important to create a well-defined list of habitats and species that could reasonably be expected to occur at the Project site to analyze potential Project effects on such species and their suitable habitats. The following summarizes how the list of potentially occurring special-status species and other sensitive biological resources was assembled.

3.1.2.1 Data Sources

Records of special-status species occurrences were queried from the following resources:

- US Fish and Wildlife Service's *Information for Planning and Consultation* portal (IPaC) (USFWS 2024) for a list of federally listed species and designated critical habitat recommended for impact analysis consideration, based on an upload of the Study Area.
- California Department of Fish and Wildlife's *California Natural Diversity Database* (CNDDB) (CDFW 2024) for special-status species records within the Regional Area.
- California Native Plant Society's *Inventory of Rare and Endangered Plants* (CNPSa 2024) for a list of special-status plant species occurrences within the USGS 7.5-minute quadrangles that overlap the Regional Area.
- San Joaquin County's *Multi-species Habitat Conservation and Open Space Plan* (SJMSCP 2000) for a list of species covered under the Plan, or "SJMSCP Covered Species", occurring within the Central-Southwest Transition Zone. These species can also be considered to occur in the Row and Field Crop/Riparian Preserve

habitats of the Central Zone, except for those associated only with the Stanislaus, San Joaquin, or Mokelumne Rivers.

3.1.2.2 Special-Status Designations Considered

A variety of agencies and respected non-profit organizations assess the conservation status of plant and wildlife species; however, not all are applicable to this Assessment. The following special-status designations were considered when determining special-status species to be discussed in this Assessment:

- **Federal Status:** Species listed as Endangered (FE) or Threatened (FT), as well as species Proposed as Endangered (FPE), Proposed as Threatened (FPT), Proposed for Delisting (FPD), and Candidates (FC) for listing under the Federal Endangered Species Act.
- **California Status:** Species listed as Endangered (CE) or Threatened (CT), as well as species that are Candidates for Endangered (CCE) status, Threatened (CCT) status, or Delisting (CCD) under the California Endangered Species Act. Also considered are species listed as Fully Protected (FP) and Species of Special Concern (SSC).
- **CNPS Status:** All plants listed with a California Rare Plant Rank (CRPR) maintained by the CNPS *Inventory of Rare and Endangered Plants*.

3.1.3 Occurrence Potential

Based on the desktop review, field surveys, and habitat analyses, Bargas generated a list of special-status species for evaluation and assessed the potential for each special-status species likelihood of occurrence on-site. Biological conditions (e.g., vegetation communities, habitats, disturbances, etc.) on-site as well as the habitat and life cycle requirements of special-status species identified for the potential to occur analysis were considered. "Recent" occurrences are defined as observed within the past 30 years. Based on these considerations, each species was assigned a level of potential to occur, using the following categories:

- **Present:** Species was detected during biological surveys conducted for the Project by Bargas.
- **High**: Species with recorded occurrence(s) within or near the Study Area and suitable habitat (e.g., appropriate elevation, hydrology, soils, cover, habitat type, food resources, and etc.) exists in the Study Area; however, the species was not observed during biological surveys for the Project.
- **Moderate:** Species with no known recorded occurrence(s) within or near the Study Area and the species was not observed during biological surveys for the Project. However, habitat within the Study Area is suitable to support the species.
- **Not Expected:** Species with no known recorded occurrence(s) within or near the Study Area. No suitable habitat present on-site; or habitat is within the Project, but habitat on-site is substantially disturbed, fragmented, or is small in extent such that is very unlikely to support the species.
- **Presumed Absent:** There are no records of the species occurring within or near the Study Area. The Study Area is not within the known geographic range for the species, and/or suitable habitat (e.g., soil, vegetation, elevational range, etc.) was not found during the field surveys conducted for the Project. This species is detectable year-round and would have been detected during surveys, but was not, or focused surveys were conducted for the species and the species was not detected.

The potential for bird species to occur were further distinguished into those that may: 1) nest within or near the Study Area; 2) forage within or near the Study Area; and/or 3) occur on or near the Study Area as transients during migratory flights or other dispersal events.

3.2 Field Surveys

Bargas biologists conducted three surveys of the site between June 2023 to November 2024. On June 13 and 14, 2023, Bargas biologist Anthony Hartman conducted a reconnaissance-level field survey for biological resources. Weather was typical for the season with temperatures ranging from 77 to 80 degrees Fahrenheit (°F), partly cloudy skies, and no substantial wind or precipitation on either day. On Tuesday, July 25, 2023, Bargas biologists Jinnah Benn, Anthony Hartman, and Dustin Baumbach conducted the aquatic resources delineation. Weather conditions were typical for the season with temperatures ranging from 80 to 96 °F, low wind speeds, and no precipitation. On November 20, 2024, Bargas Biologists Vivian Lowe and Corey Clapp conducted an additional reconnaissance-level field survey for biological resources and to verify the current conditions of the entire site remained relatively consistent with observations from the prior surveys conducted by Bargas in 2023. Bargas biologists also updated and refined biological resources mapping as appropriate. The weather was typical for the season with the temperature being 52°F and mostly cloudy skies with a light breeze.

The pedestrian surveys consisted of walking transects throughout the Project site and scanning adjacent areas within the Biological Study Area with binoculars. The entirety of the Project site and some areas within the Biological Study Area were accessible via public rights-of-way. The Project site was evaluated for the presence of habitat components that could support special-status wildlife and plant species identified during the Literature and Database Review. Habitats that were determined to be potential habitat for a special-status species were further assessed for suitability. The biologists conducted vegetation mapping, classifying vegetation communities and land cover types generally following the Manual of California Vegetation (MCV): Second Edition (CNPS 2022a), where applicable. The MCV provides standard classifications based on community composition and structure defining inclusion based on thresholds of dominant species cover. Additionally, the identified communities reflect the vegetation community classifications outlined in Section 2.2.1 of the SJMSCP. The biological surveys conducted were comprehensive but do not equate to protocol–level surveys or focused surveys, defined by regulating and/or resource protection agencies. Throughout the survey, plant and animal species detected on site were recorded.

The surveys included a formal aquatic resources delineation following the USACE protocol for the Arid West, which was conducted by Dustin Baumbach, Jinnah Benn, and Anthony Hartman in July of 2023. The detailed USACE methodology can be found in the Aquatic Resources Delineation Report prepared for the Project (Bargas 2023). During the biological survey conducted in November 2024, Bargas reviewed the jurisdictional aquatic resources previously mapped and updated the mapping to include potentially jurisdictionally aquatic resources within the Project site. Aquatic resource boundaries were mapped by Corey Clapp and Vivian Lowe using an Eos Positioning Systems Arrow GNSS Global Positioning System (GPS) receiver paired with ESRI Field Maps application. The November 2024 survey did not include a formal jurisdictional delineation.

The initial June and July surveys occurred within the typical nesting bird season (February 15 - August 31). Additionally, the on-site surveys were performed within the blooming period of three of the plant species (big tarplant

[*Blepharizonia plumosa*], slough thistle [*Cirsium crassicaule*], and large-flowered fiddleneck [*Amsinckia grandiflora*]) identified during the Literature and Database Review. The survey dates, times, personnel, and weather conditions are summarized in **Table 1** below. The biological surveys conducted for this Assessment do not equate to protocol–level focused surveys.

Table 1. Survey Summary Table

Date	Biologist(s)	Time	Start Conditions			End Conditions		
			Temperature	Clouds	Wind	Temperature	Clouds	Wind
June 13, 2023	Anthony Hartman	0930 – 1500	77° Fahrenheit (F)	Partly Cloudy	Calm	80°F	Partly Cloudy	Calm
June 14, 2023	Anthony Hartman	0930 – 1530	77°F	Partly Cloudy	Calm	80°F	Partly Cloudy	Calm
July 25, 2023	Jinnah Benn Anthony Hartman Dustin Baumbach	0930 – 1500	80°F	Clear Skies	Calm	95°F	Clear Skies	Calm
November 20, 2024	Corey Clapp Vivian Lowe	0815 – 1345	52°F	Mostly Cloudy	Light Breeze out of the Southeast	62°F	Fully Cloudy	Light Breeze Out of the Southeast

3.3 Taxonomy and Nomenclature

Naming standards used in this Assessment are those recognized by the scientific community. Some common names used in this Assessment report may not be the same as those used by the underlying data sources for species records. Bargas maintains a yearly-updated reference species list which uses the following taxonomic sources:

- **Birds** – American Ornithological Society Check-list and Supplements (AOS 2024).
- **Mammals** – The reference list in the CDFW's California Wildlife Habitats Relationships Database (CDFW 2024), with updates based on the American Society of Mammologists Mammal Diversity Database (2024).
- **Reptiles and Amphibians** – The technical website californiaherps.com, which is regularly updated based on the latest taxonomic literature.
- **Fish** – Common and Scientific Names of Fishes from the United States, Canada, and Mexico, 8th edition (AFS 2023).
- **Invertebrates** – no naming standard was identified that was current and applicable to freshwater and terrestrial invertebrates. Names used by the underlying data sources when a species was first identified were retained.
- **Plants** – the Jepson eFlora (Jepson Flora Project 2024).

4 Results

This section describes what is known about biological resources in the Study Area based on information from field surveys, 147 CNDDB records, 7 CNPS records, 14 IPaC records, and 1 critical habitat for Delta Smelt determination in the Regional Area. Although the Regional Area was evaluated, the information, analyses, and discussions in the

following sections focus on the Project site; additional areas within the buffer surrounding the project site (i.e., Study Area and Regional Area) were reviewed for adjacency context only, are generally summarized herein as applicable, but are not discussed in detail.

4.1 Existing Conditions and Land Uses

When viewing the Project site and surrounding Regional Area in its entirety on aerial photography, the primary land use of the region is agriculture. Natural habitats are present, consisting of interspersed annual grasslands and riparian vegetation surrounding aquatic features. The Delta Mendota canal and the Edmund G. Brown California Aqueduct transect the Regional Area to the north and south side of the Project site, respectively. There are no substantial terrain features present in the Regional Area: elevations range from approximately 150 to 275 feet above mean sea level (AMSL). The Regional Area is a part of the San Joaquin Delta watershed, Hydrologic Unit Code-8 18040003. Under the SJMSCP, the Project site is identified as part of the Central/Southwest Transition Zone and the Land Use designation for the site is Agricultural.

4.2 Soils

Eight soil types are mapped within the Project site (NRCS 2024), as summarized in **Table 2** below with the types, parent material, drainage class, and hydric rating. Mapped soil types support agricultural cropland along with annual grasses and forbs where native vegetation occurs. A map showing the distribution of soils mapped on-site is provided as **Figure 4**.

Table 2. Soil Series within the Project Site

Soil Series	Map Unit Number	Map Unit Symbol	Parent Material	Drainage Class	Hydric Rating
Capay clay, 0 to 1 percent slopes, MLRA 17	118	2xc8q	Clayey alluvium derived from sedimentary rock	Moderately well drained	No
Capay clay, 1 to 6 percent slopes, MLRA 17	119	2y0dw	Clayey alluvium derived from sedimentary rock	Moderately well drained	No
El Solyo clay loam, 0 to 2 percent slopes	156	hhss	Alluvium derived from sedimentary rock	Well drained	No
Reiff loam, 0 to 2 percent slopes	223	hhvy	Alluvium derived from sandstone and shale	Well drained	Yes
Stomar clay loam, 0 to 2 percent slopes	252	hhww	Alluvium derived from sedimentary rock	Well drained	No
Vernalis clay loam, 0 to 2 percent slopes	268	hhxd	Alluvium derived from mixed rock sources	Well drained	No
Zacharias clay loam, 0 to 2 percent slopes	281	hhxt	Alluvium derived from mixed rock sources	Well drained	No

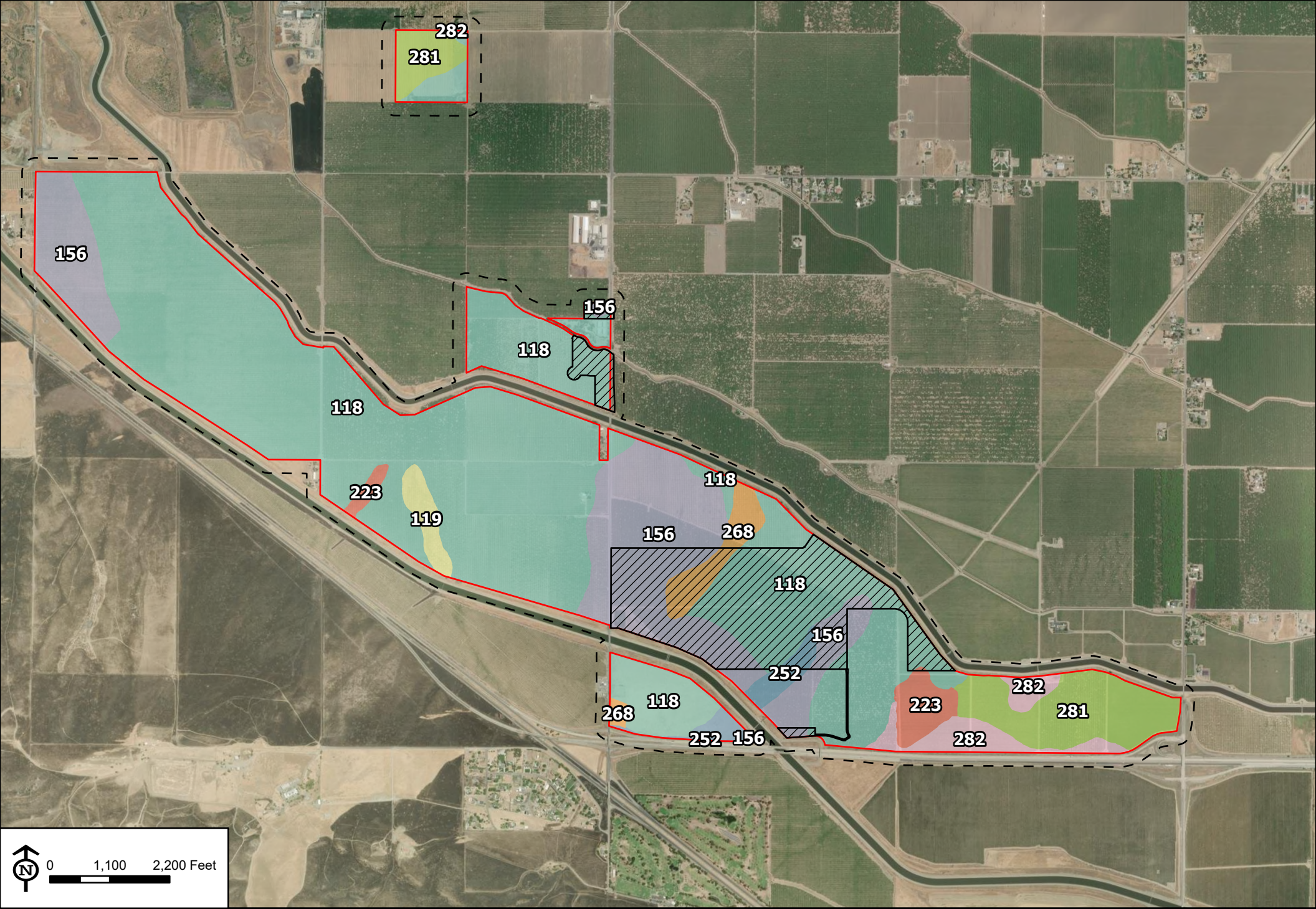
Soil Series	Map Unit Number	Map Unit Symbol	Parent Material	Drainage Class	Hydric Rating
Zacharias gravelly clay loam, 0 to 2 percent slopes	282	hhxv	Alluvium derived from mixed rock sources	Well drained	No

Source: NRCS 2024

Of these eight soil types mapped on-site, five soil types are mapped within the Initial Phase Development area (NRCS 2024), as summarized in **Table 3** below with the types, parent material, drainage class, and hydric rating. Mapped soil types support agricultural cropland along with annual grasses and forbs where native vegetation occurs. A map showing soils on-site is provided as **Figure 3**.

Table 3. Soil Series within the Initial Phase Development Area

Soil Series	Map Unit Number	Map Unit Symbol	Parent Material	Drainage Class	Hydric Rating
Capay clay, 0 to 1 percent slopes, MLRA 17	118	2xc8q	Clayey alluvium derived from sedimentary rock	Moderately well drained	No
El Solyo clay loam, 0 to 2 percent slopes	156	hhss	Alluvium derived from sedimentary rock	Well drained	No
Reiff loam, 0 to 2 percent slopes	223	hhvy	Alluvium derived from sandstone and shale	Well drained	Yes
Stomar clay loam, 0 to 2 percent slopes	252	hhww	Alluvium derived from sedimentary rock	Well drained	No
Vernalis clay loam, 0 to 2 percent slopes	268	hhxd	Alluvium derived from mixed rock sources	Well drained	No



Source: ESRI ArcGIS Online Basemap - World Imagery Hybrid (10/2022)

BARGAS Environmental Consulting

Initial Phase
Project Site
Biological Study Area

MUPOLYGON_V2

SSURGO Soils

- 118 - Capay clay, 0 to 1 percent slopes, MLRA 17
- - Capay clay, 1 to 6 percent slopes, MLRA 17
- 156 - El Solyo clay loam, 0 to 2 percent slopes
- 223 - Reiff loam, 0 to 2 percent slopes
- 252 - Stomar clay loam, 0 to 2 percent slopes
- 268 - Vernalis clay loam, 0 to 2 percent slopes
- 281 - Zacharias clay loam, 0 to 2 percent slopes
- 282 - Zacharias gravelly clay loam, 0 to 2 percent slopes

Figure 4 Soils Map

Pacific Gateway Specific Plan Project

Map Created: 1/31/2025, Bargas Project Number: 1644-22

4.3 Vegetation Communities and Land Cover Types

The Project site was found to support five vegetation communities and land cover types defined by the CNPS MCV, which are summarized below in **Table 4** and described in Sections 4.3.1 through 4.3.5. A crosswalk between the CNPS MCV alliances and the vegetation communities described in the SJMSCP are also provided below in **Table 4**. The spatial distribution of vegetation communities and land covers mapped by Bargas of the site is presented on **Figure 5**. The Initial Phase included acres outside of the Project site along the roadways and are included in the off-site report. Photographs showing representative vegetation conditions during the field surveys are attached as an Appendix to the end of this Assessment.

Table 4. Vegetation Community and Land Cover Summary

Vegetation Community Common Name	Scientific Name and MCV Alliance	SJMSCP Vegetation Community Classification	Initial Phase Acreage	Programmatic-Level Acreage[1]
Cattail Marsh and Wetlands	*Typha* (*angustifolia, domingensis, latifolia*) Herbaceous Alliance	Freshwater Emergent Wetland (W7)	3.58	6.32
Cultivated/Landscaped	NA	Golf Courses/Cultivated Parks (U3)	0.11	4.93
Deciduous Orchards	NA	Orchards and Vineyards (C2)	234.39	1,443.89
Disturbed/Developed	NA	Scraped/Paved Areas (U2)	9.18	46.66
Wild Oats and Annual Brome Grassland	*Avena spp. – Bromus spp.* Herbaceous Semi-Natural Alliance	Valley Grassland (G)	0.00	60.0
		TOTAL:	**247.26**	**1,561.78**

[1] Program-level Area acreages includes Initial Phase Area acreages. Initial Phase Area and Programmatic-Level Area do not sum.

While not directly synonymous with the naming or acreages in Table 4 above, it should be noted that the SJMSCP also organizes its 52 vegetation types into four (4) broad categories (i.e., Natural Lands, Agricultural Lands, Multi-Purpose Open Space Lands, and Urban Lands) to help assess and quantify the conversion of Open Space areas to other land uses. The SJMSCP Habitat Technical Advisory Committee (HTAC) and San Joquin Council of Governments (SJCOG) oversee the classifications of SJMSCP vegetation into these four (4) categories, which reflect generalized mapping categories from a macro-lens and strongly considers land use, rather the micro-lens mapping of vegetation composition across the site performed by Bargas. Because the areas of Project site are “unmapped” by the SJMSCP or were mis-classified during the establishment of the SJMSCP, the HTAC conducted a recent aerial review of the Project site and applied a current mapping of categorical land use across the site (HTAC; SJCOG, 2025).

4.3.1 Cattail Marsh and Wetland

Cattail Marsh (*Typha* [*angustifolia, domingensis, latifolia*] Herbaceous Alliance) and other wetland features were found within the Project site. This vegetation community is classified as "Freshwater Emergent Wetlands (W7)" in the SJMSCP. The Cattail marsh vegetation community is dominated by cattails (*Typha* spp.), with one or more of the species Narrowleaf cattail (*Typha angustifolia)*, Southern cattail (*T. domingensis)*, or Broadleaf cattail (*T. latifolia)* typically present. This herbaceous layer has a maximum height of 5 feet, with intermittent to continuous cover (CNPS 2025). According to the MCV, this vegetation community reflects areas where Typha species comprise greater than 50 percent relative cover. This vegetation community is generally found in semi-permanently flooded freshwater or brackish marshes between 0 and 1,148 feet AMSL (CNPS 2024b).

This vegetation community on-site is associated with certain marshes located south of the Delta Mendota Canal, located between agricultural fields. These areas include one water basin and ten marshes, dominated by Cattail species, narrow-leaf willow (*Salix exigua*), duckweed (*Lemna minor*), pacific willow (*Salix lucida*), purple willow (*Salix purpurea*), and stinkwort (*Datura stramonium*). The remaining wetland areas have experienced significant disturbance and/or have been artificially irrigated to serve an agricultural purpose. These areas include two artificial agricultural water basins, characterized by short pod mustard (*Hirschfeldia incana*), tree tobacco (*Nicotiana glauca*), tall flatsedge (*Cyperus eragrostis*), turkey-mullein (*Croton setiger*), stinkwort, and flax leaved horseweed (*Conyza bonariensis*).

4.3.2 Cultivated/Landscaped

One Cultivated / Landscaped area occurs along the northern edge of the Project site, west of South Chrisman road. This landcover type is classified as "Golf Courses/Cultivated Parks (U3)" in the SJMSCP. This community surrounds a manufacturing plant and a gated residential property to provide visual aesthetics and privacy. This landscaped area is primarily ornamental and appears to be maintained by regular trimming.

4.3.3 Deciduous Orchard

Deciduous orchards comprise the majority of land cover within the Project site. This landcover type is classified as "Orchards and Vineyards (C2)" in the SJMSCP. The primary crops grown within this area consist of almonds (*Prunus dulcis*) and peaches (*Prunus persica*). Multiple fields of vineyards were found east of South Chrisman Road within the Project site and are included in this classification. The orchards have been managed for weed control resulting in limited understory plant growth. Some areas have been treated with a layer of straw for an additional level of weed suppression.

4.3.4 Developed/Disturbed

Developed/disturbed land cover was found within the Project site, consisting primarily of developed industrial and residential properties, disturbed roadside areas, paved and unpaved roads. This landcover type is classified as "Scraped/Paved Areas (U2)" in the SJMSCP. The main paved roads bisecting the project site include South MacArthur Drive, South Chrisman Road, and Highway 132. Industrial buildings within the Project site are associated with agriculture harvesting, processing, and transport of agricultural products. Four residential buildings are located within the Project site.

4.3.5 Wild Oats and Annual Brome Grassland

Wild Oats and Annual Brome Grassland *(Avena spp. – Bromus spp.)* was found on the Project site. This vegetation community is classified as "Valley Grassland (G)" in the SJMSCP. This vegetation community is characterized by the

dominance of non-native annual grasses, including wild oats (*Avena* spp.) and bromes (*Bromus* spp.), which typically comprise greater than 50 percent relative cover. This herbaceous layer is generally below 4 feet tall, with cover ranging from open to continuous. Emergent shrubs and forbs may also be present at low cover. This vegetation community frequently occurs in foothills, rangelands, openings in woodlands, and disturbed areas.

This vegetation community was observed south of the California Aqueduct, bounded by Vernalis Road on the south and South Chrisman Road to the north. This area is characterized by one open, non-cultivated roadside field. Historic aerial imagery suggests the vegetation in these areas may be managed through mowing or shallow tilling for fire fuel abatement. The dominant species in this area consists of wild oat.

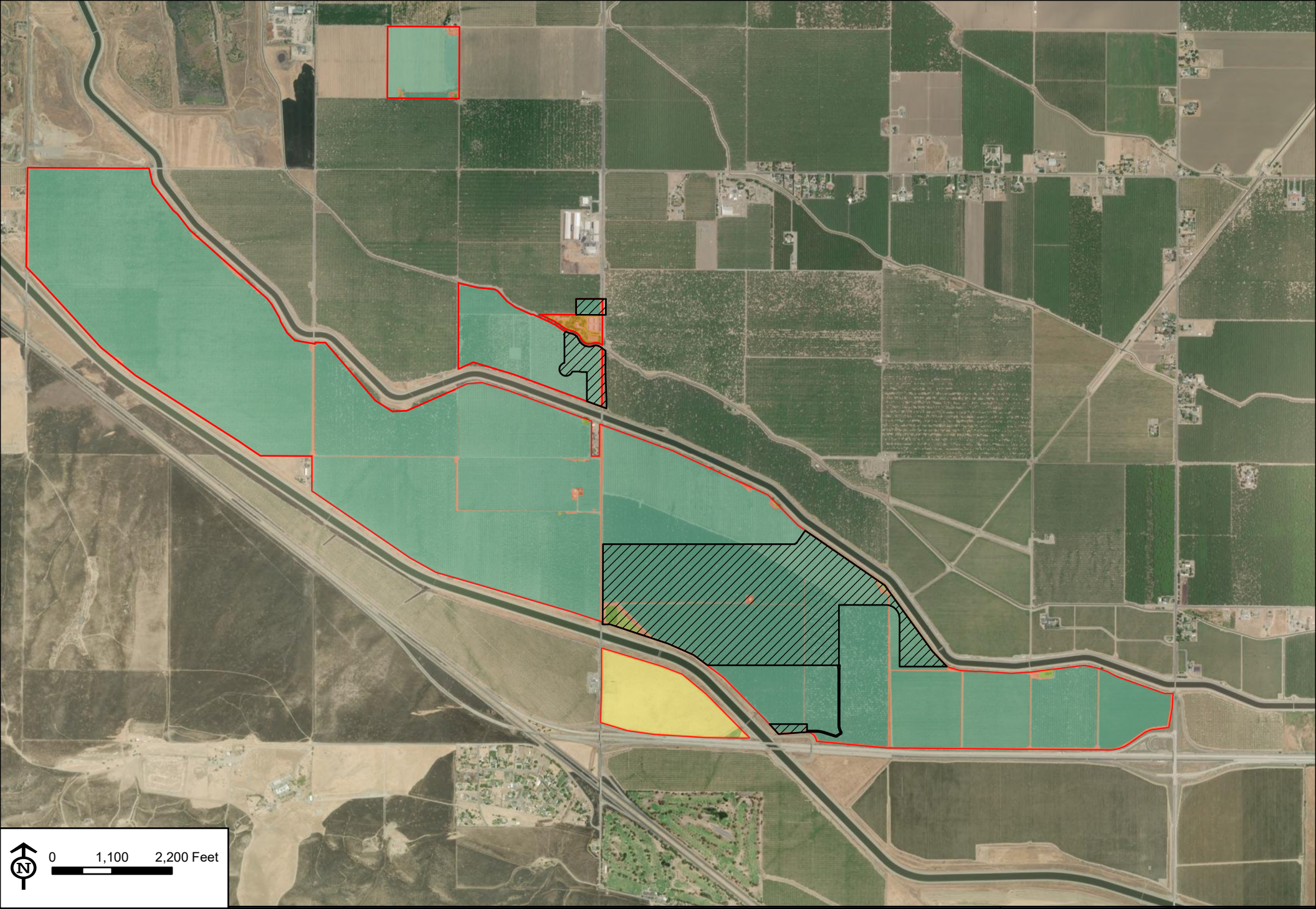
4.3.6 Sensitive Vegetation Communities

Sensitive vegetation communities reflect lands that support unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants. CDFW identifies sensitive communities according to rarity, trends, and other ecological threats and assigns natural vegetation communities a global (G) and state (S) sensitivity rank (CNPS 2022b). Sensitive vegetation communities are those assigned a rank of 1 through 5, with 1 being very rare and threatened and 5 being relatively secure. Vegetation with a ranking of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable) are considered sensitive communities. Surveys across the Project site found the site does not contain vegetation community alliances identified by CDFW and CNPS as a sensitive natural community (CNPS 2022b). Vegetation communities mapped on-site and their sensitivity ranking are presented below in **Table 5**.

Table 5. Vegetation Community and Sensitivity Ranking

Vegetation Community Common Name	Scientific Name and MCV Alliance[1]	SJMSCP Vegetation Community Classification	Sensitive Ranking[2]
Cattail Marsh	*Typha* (*angustifolia, domingensis, latifolia*) Herbaceous Alliance	Freshwater Emergent Wetland (W7)	S5
Cultivated/Landscaped	Not Applicable	Golf Courses/Cultivated Parks (U3)	None
Deciduous Orchards	Not Applicable	Orchards and Vineyards (C2)	None
Developed/Disturbed	Not Applicable	Scraped/Paved Areas (U2)	None
Wild Oats and Annual Brome Grassland	*Avena spp. – Bromus spp.* Herbaceous Semi-Natural Alliance	Valley Grassland (G)	SNA

[1] Alliance from the Manual of California Vegetation.
[2] Ranking S=State of California.



Source: ESRI ArcGIS Online Basemap - World Imagery Hybrid (10/2022)

BARGAS Environmental Consulting

Initial Phase
Project Site
Biological Study Area

Vegetation Communities and Land Cover Types

Cattail Marsh and Wetland (W7)
Cultivated/Landscaped (U3)
Deciduous Orchard (C2)
Disturbed/Developed (U2)
Wild Oat and Annual Brome Grassland (G)

Figure 5 Vegetation and Land Cover

Pacific Gateway Specific Plan Project

Map Created: 1/31/2025, Bargas Project Number: 1644-22

4.4 Aquatic Resources

Results of the jurisdictional delineation for the Project site performed by Bargas in June of 2023, updated to include additional areas of the Project site in November of 2024, found aquatic resources on-site. However, the Project site is primarily composed of agricultural land/field; thus, lacks naturally occurring aquatic resources. Aquatic features found on site consisted of Marshes and Water Basins, which were relatively similar; however, were mapped differently due to the presence of aquatic plant species found within the Marshes, whereas the Water Basins primarily supported upland weedy herbaceous plants. **Table 6** below provides a summary of the aquatic features on-site, including feature type, acreage, and length within the Initial Phase area as well as surrounding Programmatic-Level area. These features may be subject to regulatory jurisdiction by RWQCB; however, only these agencies can make the final determination on whether or not such are jurisdictional. **Figure 6** displays each feature identified at the Project site.

Table 6. Aquatic Features On-Site

Feature Type	Initial Phase Area		Programmatic-Level Area[1]	
	Acres	Length (linear feet)	Acres	Length (linear feet)
RWQCB				
Wetland Waters of the State	3.27	831	5.72	2,515
Non-Wetland Waters of the State	0.31	349	0.38	454
RWQCB Total:	**3.58**	**1,180**	**6.10**	**2,969**

[1] Program-level Area acreages and linear feet includes Initial Phase Area acreages and linear feet. Initial Phase Area and Programmatic-Level Area do not sum.

4.4.1 Waters of the U.S. – Potential USACE Jurisdiction

Aquatic resources found on-site consist of freshwater Marshes or agricultural Water Basins. These presumably are isolated features and are neither connected to Traditionally Navigable Waters (TNWs) nor have hydrologic surface connection to other USACE waters/wetlands; therefore, would not be regulated by USACE per current regulatory guidance. However, only USACE can make the final determination on their jurisdictional authority.

4.4.2 Wetland and Non-Wetland Waters of the State – Potential RWQCB Jurisdiction

Thirteen aquatic features found on-site were considered potentially jurisdictional waters of the state, including wetland and non-wetland features. A jurisdictional delineation was conducted in 2023, but not during the 2024 survey. Due to the on-site conditions observed during the 2024 field survey, which were consistent with observations in 2023, it was assumed Water Basin 2 and Marshes 3 through 10 had similar soils and hydrology to each other based on similar conditions to what was observed during the jurisdictional delineation. Given their isolated position in the landscape and the similarity to other aquatic features that met wetland criteria, these areas could be under the jurisdiction of the RWQCB per the Porter-Cologne Water Quality Act.

Wetland waters of the state consisted of ten freshwater Marshes and one artificial agricultural Water Basins. Results of the jurisdictional delineation found Marsh 1 (W01) met all three wetland criteria (i.e., vegetation, soils, and

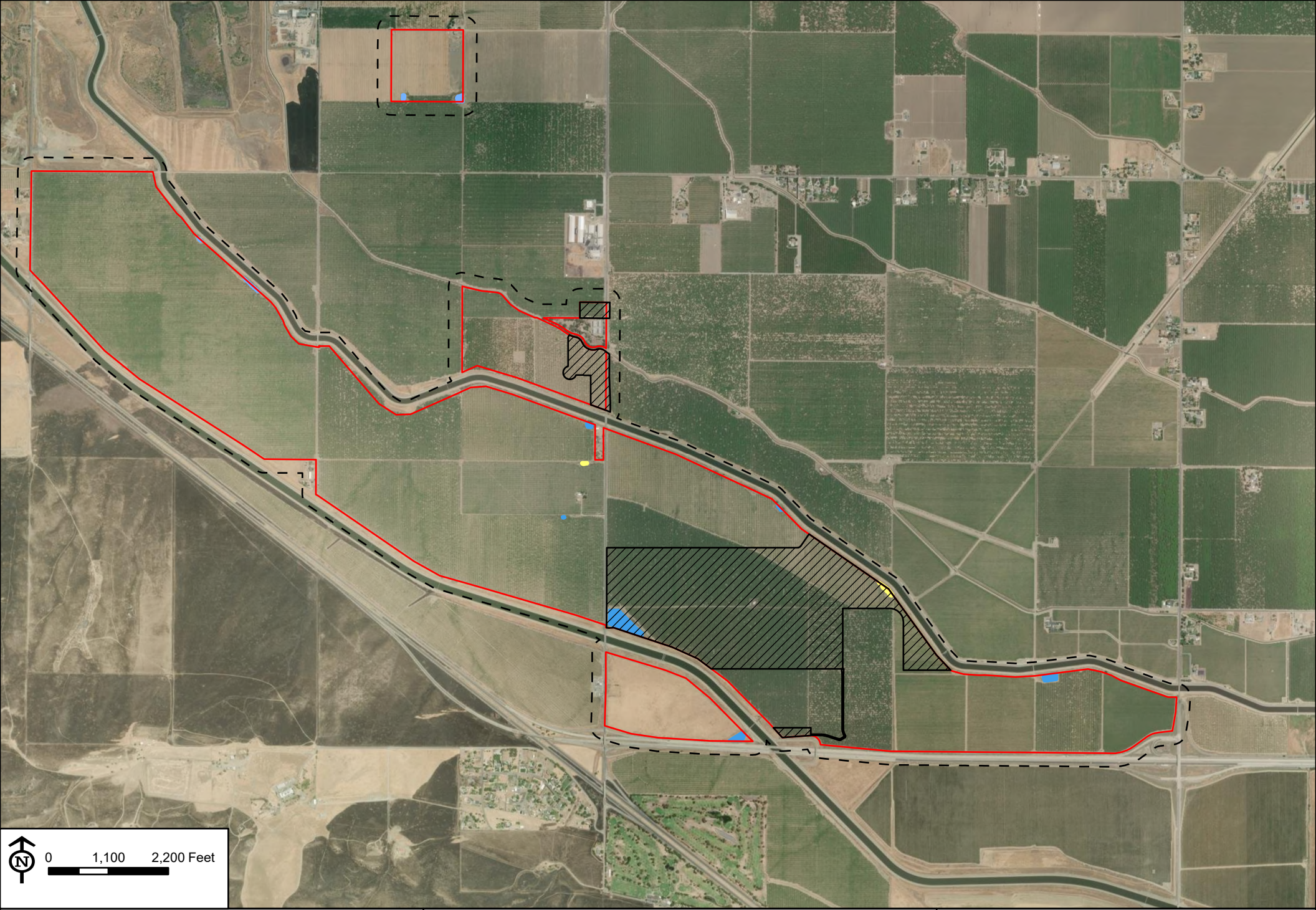
hydrology) of the Wetland Delineation Data forms; therefore, Marsh 1 is considered a wetland. Marsh 2 was observed to be under similar conditions as Marsh 1; thus, was determined to meet all three wetland criteria. Water Basin 2 (W02) was also analyzed and determined to be a potential water of the state due to the presence of hydric soils and hydrology within the basin. Marshes 3 through 10 were also determined to be wetland waters of the state based on vegetation or presence of surface water. There was evidence of dirt mounding and vegetation trimming/removal from heavy equipment within and adjacent to the marshes, suggesting that these aquatic features are highly disturbed and presumably maintained regularly as part of the agricultural practices on-site.

Non-wetland waters of the state consisted of two artificial agricultural Water Basins (Water Basins 1 and 3). These aquatic features were observed to be isolated and received water via artificial pumping. Both basins also lacked aquatic species/vegetation suggesting that these basins are used infrequently, and water is not present long enough to support growth of aquatic plant species.

Given the agricultural land use of the areas surrounding the aquatic features observed on-site, it is possible these thirteen Marshes and Water Basins receive supplemental artificial irrigation. If the application of irrigation water to these aquatic features should cease, these features could revert to uplands characteristics and may no longer be considered a wetland or waters of the state.

4.4.3 Streambed, Lake, and Riparian Habitat – Potential CDFW Jurisdiction

Aquatic resources found on-site consisted of freshwater Marshes or agricultural Water Basins. These features are presumably isolated features which also lack bed, bank, and associated riparian habitat; therefore, these features would not be regulated by CDFW. However, only CDFW can make the final determination on their jurisdictional authority.



Source: ESRI ArcGIS Online Basemap - World Imagery Hybrid (10/2022)

BARGAS Environmental Consulting

Initial Phase
Project Site
Biological Study Area

Potentially Jurisdictional Aquatic Resources

Non-Wetland - Waters of the State (Basins 1 & 3)

Wetland - Waters of the State (Marshes 1-6, Basins 2, 4-6)

Figure 6 Aquatic Resources

Pacific Gateway Specific Plan Project

Map Created: 1/31/2025, Bargas Project Number: 1644-22

4.5 Plants

4.5.1 Plant Diversity

A total of 48 plant taxa were detected during field surveys. A list of plants detected during field surveys is provided in **Appendix A**. Areas throughout the Project site have been disturbed by agriculture, as well as rural and urban development. These anthropogenic activities often result in lower floral diversity compared to areas containing intact natural plant communities and habitats. The majority of the Project site is composed of non-natural vegetation, including orchards, vineyards, and landscaped areas. The remaining vegetation throughout the site was comprised of semi-natural vegetation alliances, including Cattail Marsh and Wetlands and Wild Oats and Annual Brome Grassland.

4.5.2 Special-Status Plants

The desktop review found that seven plant taxa with special-status have been documented as occurring within the Regional Area. A total of three special-status plants found during the desktop review are listed as covered under the SJMSCP. These taxa and their occurrence potential are discussed below and summarized in **Appendix B**.

4.5.2.1 Taxa Confirmed Present

No special-status plant taxa from desktop analysis were determined to be **Present** on the Project site and none are expected to occur.

4.5.2.2 Taxa With High Potential for Occurrence

No special-status plant taxa from desktop analysis were determined to have **High** potential for occurrence on the Project site and none are expected to occur.

4.5.2.3 Taxa with Moderate Potential for Occurrence

No special-status plant taxa from desktop analysis were determined to have **Moderate** potential for occurrence on the Project site and none are expected to occur.

4.5.2.4 Taxa Not Expected to Occur

Two special-status plant taxa from desktop analysis were determined to be **Not Expected** to occur in the Project site.

- **Big Tarplant**
  Asteraceae > *Blepharizonia plumosa*
  FESA: None, CESA: None, CRPR 1B.1

Growth Habit:	Annual herb blooms July-October
Habitat Requirements:	Valley and foothill grassland elevations ranging from 100 to 1,655 feet AMSL.
Inclusion Source(s):	CNDDB, CNPS
Nearest CNDDB Record:	2.84 miles
Habitat Present:	Low Quality
Soils Present:	Yes. Clay soils are present in the Study Area.
Determination Reason:	The Project site contains a small section of annual grassland with clay soils in the southern portion of the Project site but the site is isolated among orchards and lacks hillside slopes preferred by this species.

- **Diamond-petaled California poppy**

  Papaveraceae > *Eschscholzia rhombipetala*

  FESA: None, CESA: None, CRPR 1B.1

California Endemic:	True
Growth Habit:	Annual herb blooms March-April
Habitat Requirements:	Valley and foothill grassland (alkaline, clay) at elevations ranging from 0 to 3,200 feet AMSL.
Inclusion Source(s):	CNPS
Nearest CNDDB Record:	> 5 Miles
Habitat Present:	Low Quality
Soils Present:	Yes. Clay soils are present in the Study Area.
Determination Reason:	The Project site contains a small section of annual grassland with clay soils in the southern portion of the site but the grassland area is isolated among agricultural orchards and the species may be outcompeted for space by non-native grassland species. Additionally, the closest records are greater than five miles from the Project site.

4.5.2.5 Taxa to be Presumed Absent

The following five special-status plant taxa from desktop analysis were **Presumed Absent** on the Project site. None of these five species are expected to occur.

- **Slough Thistle**

  Asteraceae > *Cirsium crassicaule*

  FESA: None, CESA: None, CRPR 1B.1; SJMSCP-covered species

California Endemic:	True
Growth Habit:	Annual/perennial herb blooms May-August
Habitat Requirements:	Chenopod scrub, marshes and swamps, and riparian scrub at elevations ranging from 10 to 330 feet AMSL.
Inclusion Source(s):	CNPS, SJMSCP
Nearest CNDDB Record:	> 5 Miles
Habitat Present:	Not Present
Soils Present:	Not Present
Determination Reason:	The Project site does not contain chenopod or riparian scrub wetlands to support these species. Although Marshes were present, most were dry during the time of the survey and lacked wet soils necessary to support the species. Those Marshes that did contain water were isolated within agricultural fields and were heavily disturbed by vegetation trimming or grading during the time of the surveys. Additionally, the closest record is greater than five miles from the Project site.

- **Mt. Hamilton Coreopsis**

  Asteraceae > *Leptosyne hamiltonii*

  FESA: None, CESA: None, CRPR 1B.2, SJMSCP-covered Species

California Endemic:	True
Growth Habit:	Annual herb blooms March-May
Habitat Requirements:	Cismontane woodland at elevations ranging from 1,805 to 4,265 feet AMSL.

Inclusion Source(s): CNPS, SJMSCP
Nearest CNDDB Record: > 5 Miles
Habitat Present: Not Present
Soils Present: Unknown
Determination Reason: This species is known to grow on slopes on dry, rocky soils within foothill woodlands. The Project site lacks the elevation and foothill woodlands present to support this species. Additionally, the closest record of this species is located greater than five miles from the Project site.

Showy Golden Madia

Asteraceae > *Madia radiata*

FESA: None, CESA: None, CRPR 1B.1, SJMSCP-covered Species

California Endemic: True
Growth Habit: Annual herb blooms March-May
Habitat Requirements: Cismontane woodland, Valley and foothill grassland at elevations ranging from 80 to 3,985 feet AMSL.
Inclusion Source(s): CNDDB, CNPS, SJMSCP
Nearest CNDDB Record: 2.52 Miles
Habitat Present: Not Present
Soils Present: Yes. Clay soils are present.
Determination Reason: This species is known to inhabit grasslands and oak woodlands with clay soils. Oak woodlands are not present within the Project site to support this species. Although grasslands with clay soils are present in the southern portion of the Project site, this area is isolated within agricultural orchards and the species may be outcompeted for space by non-native grassland species.

Large-flowered Fiddleneck

Boraginaceae > *Amsinckia grandiflora*

FESA: Endangered, CESA: Endangered, CRPR 1B.1

California Endemic: True
Growth Habit: Annual herb blooms (March) April-October
Habitat Requirements: Cismontane woodland, Valley and foothill grassland at elevations ranging from 885 to 1,805 feet AMSL.
Inclusion Source(s): CNDDB, CNPS, IPaC
Nearest CNDDB Record: > 5 Miles
Habitat Present: Not Present
Soils Present: Unknown
Determination Reason: The Project site lacks cismontane woodland and is the site is located at elevations below the minimum 885 feet to support this species. Additionally, the nearest record is located greater than five miles from the Project site.

- **Lemmon's Jewelflower**

Brassicaceae > *Caulanthus lemmonii*
FESA: None, CESA: None, CRPR 1B.2

California Endemic:	True
Growth Habit:	Annual herb blooms March-May
Habitat Requirements:	Grassland, chaparral, scrub habitats at elevations ranging from 260 to 5,185 feet AMSL.
Inclusion Source(s):	CNDDB
Nearest CNDDB Record:	3.15 miles south
Habitat Present:	Not Present
Soils Present:	Unknown
Determination Reason:	Chaparral and scrub habitats are not present to support this species within the Project site. Although grasslands are present within the southern area of the Project site, this area is isolated among agricultural orchards and the species may be outcompeted for space by non-native grassland species.

4.6 Wildlife

4.6.1 Wildlife Diversity

A total of 25 wildlife taxa were detected during field surveys, including 23 bird species and two mammal species. A list of all wildlife taxa detected during field surveys is provided in **Appendix A**.

4.6.2 Special-Status Wildlife

The desktop review found that 43 wildlife taxa with special-status have been documented as occurring within the Regional Area. A total of 34 special-status wildlife species found during the desktop review are listed as covered under the SJMSCP. These taxa and their occurrence potential are discussed below and summarized in **Appendix B**.

4.6.2.1 Taxa Confirmed Present

The following three special-status wildlife taxa was determined to be **Present** on-site from desktop analysis and biological surveys on the Project site.

- **Swainson's Hawk**

Accipitridae > *Buteo swainsoni*
FESA: None, CESA: Threatened, SJMSCP-covered Species

Life History:	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Very limited breeding reported from Lanfair Valley, Owens Valley, Fish Lake Valley, and Antelope Valley. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures. In southern California, now mostly limited to spring and fall transient. Formerly abundant in California with wider breeding range. Decline resulted in part from loss of nesting habitat. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s):	CNDDB; Bargas; SJMSCP

Nearest CNDDB Record: 1.52 miles east
Habitat Present: Medium Quality
Determination Reason: Observed flying over and perching on an electric pole within the Project site during November surveys. There is medium quality foraging habitat within the agricultural fields adjacent to the Project site and within the annual grassland habitat north of Highway 132 and south of the California Aqueduct within the Project site that could support this species. Tall trees to support nesting are limited in the Project site thus, nesting is unlikely and not expected.

White-tailed Kite

Accipitridae > *Elanus leucurus*

FESA: None, CESA: Fully Protected, SJMSCP-covered Species

Life History: Common to uncommon, yearlong resident in coastal and valley lowlands; rarely found away from agricultural areas. Inhabits herbaceous and open stages of most habitats mostly in cismontane California. Has extended range and increased numbers in recent decades. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s): SJMSCP, Bargas
Nearest CNDDB Record: > 5 miles
Habitat Present: Medium Quality
Determination Reason: Observed flying over and perching within the Project site during the November survey. There is medium quality foraging habitat within the agricultural fields adjacent to the Project site and within annual grassland habitat north of Highway 132 and south of the California Aqueduct within the Project site that could support this species. Tall tress to supporting nesting are not present in the Project site thus, nesting is unlikely.

Song Sparrow (Modesto Population)

Passerellidae > *Melospiza melodia*

FESA: None, CESA: Fully Protected

Life History: A common resident of most of California, but avoids higher mountains and occurs only locally in southern deserts. In winter, most leave montane habitats; more abundant and widespread then in lowlands and deserts. At all seasons, prefers riparian, fresh or saline emergent wetland, and wet meadow habitats. Breeds in riparian thickets of willows, other shrubs, vines, tall herbs, and in fresh or saline emergent vegetation. Also breeds in damp thickets and coastal scrub of northern California and Channel Islands where fog drip and a moist climate compensate for a lack of surface water. In winter in much of northern California, also may be found far from water, in open habitats with thickets of shrubs or tall herbs. Usually avoids densely wooded habitats, except along forest edges. An uncommon resident in suitable habitat in southern deserts along western edge (very locally) and in Imperial and Colorado River valleys. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s): CNDDB, Bargas

Nearest CNDDB Record:	4.81 miles northeast
Habitat Present:	Medium Quality
Determination Reason:	Observed flying over and perching within the Project site during November surveys. There is medium quality foraging habitat within the agricultural fields adjacent to the Project site and within annual grassland habitat north of Highway 132 and south of the California Aqueduct within the Project site that could support this species. Nesting habitat is limited to the small grassland area at the southern portion of the Project site.

4.6.2.2 Taxa With High Potential for Occurrence

No special-status wildlife taxa from desktop analysis or site visits were determined to have **High** potential for occurrence at the Project site and none are expected to occur.

4.6.2.3 Taxa With Moderate Potential for Occurrence

The following two special-status wildlife taxa from desktop analysis or site visits were determined to have **Moderate** Potential for occurrence at the Project site.

Northern Harrier

Accipitridae > *Circus hudsonius*

FESA: None, CESA: Species of Special Concern, SJMSCP-covered Species

Life History:	Occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 3,000 m (10,000 ft). Breeds from sea level to 1,700 m (0-5,700 ft) in the Central Valley and Sierra Nevada, and up to 800 m (3,600 ft) in northeastern California. Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Permanent resident of the northeastern plateau and coastal areas; less common resident of the Central Valley. Widespread winter resident and migrant in suitable habitat. California population has decreased in recent decades but can be locally abundant where suitable habitat remains free of disturbance, especially from intensive agriculture. Breeding population much reduced, especially in southern coastal district. Destruction of wetland habitat, native grassland, and moist meadows, and burning and plowing of nesting areas during early stages of breeding cycle, are major reasons for the decline. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s):	SJMSCP
Nearest CNDDB Record:	> 5 miles
Habitat Present:	Medium Quality
Determination Reason:	The Project site contains medium quality foraging habitat in the form of small grasslands and adjacent agricultural fields that could support this species. Nesting habitat is located around the isolated Marshes and grasslands, but these habitats are only marginally suitable within the Project site due to the small extent and extensive human disturbance in these areas.

Crotch's Bumblebee

Apidae > *Bombus crotchii*

FESA: None, CESA: Candidate, Species of Special Concern

Life History: Crotch's Bumblebee a short-tongued bumble bee that inhabits open grasslands and scrub habitats, nesting underground. Males perch and chase moving objects to find mates. Bumble bee colonies consist of a queen, workers, and reproductive (males and new queens). The queen hibernates over winter and starts foraging in spring, seeking a nest site. Nests are often underground or in abandoned animal burrows. Initially, the queen handles foraging and care until workers emerge. Bumble bees forage from diverse plants, and are known to sonicate the flowers to vibrate the pollen loose from the anthers. *Source: Hatfield, R., Jepsen, S., Thorp, R., Richardson, L. & Colla, S. 2015. Bombus crotchii. The IUCN Red List of Threatened Species 2015: e.T44937582A46440211. https://dx.doi.org/10.2305/IUCN.UK.2015-2.RLTS.T44937582A46440211.en. Accessed on 19 December 2024. Sacramento, CA.*

Inclusion Source(s): CNDDB

Nearest CNDDB Record: 3.61 miles north

Habitat Present: Medium Quality

Determination Reason: The Project site contains sufficient flowering plants within the orchards and vineyards to support foraging (i.e., nectar collection) for this species. Nesting habitat is limited to the open grassland north of Highway 132 and south of the California Aqueduct within the Project site. Therefore, Crotch's bumble bee may only be present as a transient species foraging within the orchards and vineyards during the flowering period.

4.6.2.4 Taxa Not Expected to Occur

The following 15 special-status wildlife taxa from desktop analysis were determined as **Not Expected** to occur in the Project site.

- **Sharp-shinned Hawk**

  Accipitridae > *Accipiter striatus*

  FESA: None, CESA: None, SJMSCP-covered Species

  Life History: Fairly common migrant and winter resident throughout California, except in areas with deep snow. Breeding distribution poorly documented. Very few breeding records for Cascades/Sierra Nevada. Probably breeds south in Coast Ranges to about 35 degrees latitude, and at scattered locations in the Transverse and Peninsular Ranges. May no longer breed in the southern Sierra Nevada. Uncommon winter migrant to Channel Islands. Uncommon permanent resident and breeder in mid-elevation habitats. Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. North facing slopes, with plucking perches are critical requirements. All habitats except alpine, open prairie, and bare desert used in winter. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

  Inclusion Source(s): SJMSCP

  Nearest CNDDB Record: > 5 miles

  Habitat Present: Low Quality

Determination Reason: This species prefers wooded areas throughout their range but may also forage within agricultural fields. There are agricultural fields present adjacent to the Project site that may provide marginal foraging habitat to support this species. Tall, densely populated trees within woodlands are required for nesting and are not present within the Project site thus, nesting is unlikely. Additionally, the nearest record is located greater than five miles from the Project site.

Cooper's Hawk

Accipitridae > *Accipiter cooperii*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: A breeding resident throughout most of the wooded portion of the state. Breeds in southern Sierra Nevada foothills, New York Mountains, Owens Valley, and other local areas in southern California. Ranges from sea level to above 2700 m (0-9000 ft). Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Low Quality

Determination Reason: This species prefers wooded areas throughout their range but may also forage within open fields. There is an open grassland field present north of Highway 132 and south of the California Aqueduct within the Project site that may provide marginal foraging habitat to support this species. Tall, densely populated trees within woodlands are required for nesting and are not present within the Project site thus, nesting is unlikely. Additionally, the nearest record is located greater than five miles from the Project site.

Great Blue Heron

Ardeidae > *Ardea Herodias*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: The Great Blue Heron is fairly common all year throughout most of California, in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills. Common July to October in salt ponds where fish are numerous. Locally common near rookeries February to June or July. Few rookeries are found in southern California, but many are scattered throughout northern California; knowledge of their locations is incomplete. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Low Quality

Determination Reason: The Project site contains small, marginal quality Marshes that may be used for foraging on insects, reptiles, and small mammals. Most of these Marshes were observed to be dry during the surveys, which limits the amount of foraging habitat. Nesting habitat in the form of isolated islands, channel markers, or artificial nest structures are not present within the

Project site and thus, nesting is unlikely. Additionally, the nearest record is greater than five miles from the Project site.

Great Egret

Ardeidae > Ardea alba

FESA: None, CESA: None, SJMSCP-covered Species

Life History: The Great Egret is a common yearlong resident throughout California, except for high mountains and deserts. Feeds and rests in fresh, and saline emergent wetlands, along the margins of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in irrigated croplands and pastures. Nests in large trees, and roosts in trees. In southern California, common all year, and breeds at Salton Sea and Colorado River. Fairly common in coastal lowlands September to April, rare in summer, and breeds in Riverside County (one small colony). Rare to uncommon in deserts, occurring mainly as a spring migrant. In northern California, fairly common to common yearlong in coastal lowlands, inland valleys, and the Central Valley. Locally abundant March to July near the larger nesting colonies. Uncommon to fairly common March to August on the northeastern plateau, and nests locally. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: >5 miles

Habitat Present: Low Quality

Determination Reason: The Project site contains small, marginally suitable Marshes that this species may use as foraging sites, but most were dry during the time of the survey which limits the amount of foraging habitat within the Project site. Tall trees on-site are limited and trees suitable for nesting by this species are not present within the Project site thus, nesting for this species is unlikely. Additionally, the nearest record is located greater than five miles from the Project site.

San Joaquin Kit Fox

Canidae > *Vulpes macrotis mutica*

FESA: Endangered, CESA Endangered, SJMSCP-covered Species

Life History: The San Joaquin Kit Fox (*Vulpes macrotis mutica*) is the smallest fox in North America, with an average body length of 20 inches and weight of about 5 pounds. This species prefers to live in areas with loose soil and in open grassland with no to sparse shrubs and grasses. Kit Foxes start breeding when they're 1 year old. In the fall, females begin to clean and enlarge their pupping dens. The foxes mate between December and March. Females give birth to two to six pups in February or March. The Kit Fox's range in the San Joaquin Valley extends from southern Kern County north to Contra Costa, Alameda, and San Joaquin counties on the western side of the valley; and to the La Grange area of Stanislaus County on the eastern side of the valley. The Kit Fox's range also includes valleys along the Coast Range including the Panoche and Cuyama valleys and the Carrizo Plain in San Luis Obispo County. Threats include habitat modification and destruction, energy development, drought, disease or pathogens, rodenticides, and predation. *Source: https://www.fws.gov/species/san-joaquin-kit-fox-vulpes-macrotis-mutica*

Inclusion Source(s): CNDDB, IPaC, SJMSCP

Nearest CNDDB Record: 0.33 miles southwest

Habitat Present: Low Quality

Determination Reason: There is limited and marginal quality grassland habitat on the Project site, located north of Highway 132 and south of the California Aqueduct within the Project site to support this species; however, this grassland area was densely populated with grasses and is not preferred by San Joaquin kit foxes. Preferred habitat of open grassland with low, sparse vegetation is not located within the Project site. No scat or potential dens were observed during the field visits. The Corral-Lower San Joaquin Wildlife Corridor is located approximately 0.65 miles northwest of the Project site and thus, this species may occur as a transient through the Project site.

California Glossy Snake

Colubridae > *Arizona elegans occidentalis*

FESA: None, CESA: Species of Special Concern

Life History: This snake is common throughout southern California especially in desert regions. Less common to the north, Glossy Snakes occur in the interior Coast Ranges as far as Mount Diablo in Contra Costa County. Glossy Snakes are most common in desert habitats but also occur in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grass. Elevation from below sea level to 1830 meters (6,000 feet AMSL). *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): CNDDB

Nearest CNDDB Record: 2.12 miles west

Habitat Present: Low Quality

Determination Reason: The Project Site lacks the typical desert environments preferred by this snake. There is a small area of annual grassland located north of Highway 132 and south of the California Aqueduct that may contain limited and marginally suitable habitat for this species; however, the preferred prey for this species is typically limited to mostly desert lizard species; thus, the Project site is unlikely to provide suitable food source.

San Joaquin Coachwhip

Colubridae > *Coluber flagellum ruddocki*

FESA: None, CESA: Species of Special Concern

Life History: San Joaquin coachwhip snakes are diurnal animals and prefer warm temperatures. As a result, they emerge from estivation late in the season (April - May). This species prefers dry, open, treeless habitats including valley grassland and saltscrub. They are known to avoid dense vegetation that restricts movement such as mixed oak chaparral woodland. Small mammal burrows are used for overwintering. *Source: Thomson, Robert C., Amber N. Wright, and H. Bradley Shaffer. (2016). California Amphibian and Reptile Species of Special Concern. California Department of Fish and Wildlife. University of California Press.*

Inclusion Source(s): CNDDB

Nearest CNDDB Record: 2.17 Miles west

Habitat Present: Low Quality

Determination Reason: The Project site supports a relatively small area of annual grassland located north of Highway 132 and south of the California Aqueduct; however, this area is densely populated with non-native grasses and does not contain the preferred open habitat to support this species. The Project site contains mostly orchards that does not provide the open, treeless habitat preferred by this species.

Tricolored Blackbird

Icteridae > *Agelaius tricolor*

FESA: None, CESA: Threatened, SJMSCP-covered Species

Life History: Mostly a resident in California. Common locally throughout Central Valley and in coastal districts from Sonoma County south. Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs. Feeds in grassland and cropland habitats. Breeds locally in northeastern California. In winter, becomes more widespread along central coast and San Francisco Bay area and is found in portions of the Colorado Desert. Numbers appear to be declining in California. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): CNDDB; SJMSCP

Nearest CNDDB Record: 1.93 Miles south

Habitat Present: Low Quality

Determination Reason: The Project site contains small, marginally suitable Marshes to support this species; however, there was high human disturbance in the form of vegetation trimming and grading within the Marshes present in the Project site. Tricolored blackbird are not expected to occur due to the lack of tall, undisturbed cattails or tules. Additionally, most Marshes present on the Project site were observed to be dry during the field observations and are unlikely to support this species.

Yellow-breasted Chat

Icteriidae > *Icteria virens*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: An uncommon summer resident and migrant in coastal California and in foothills of the Sierra Nevada. Found up to about 1450 m (4800 feet AMSL) in valley foothill riparian, and up to 2,050 meters (6,500 feet AMSL) east of the Sierra Nevada in desert riparian habitats. Uncommon along coast of northern California east to Cascades and occurs only locally south of Mendocino County. In southern California, breeds locally on the coast and very locally inland. In migration, may be found in lower elevations of mountains in riparian habitat. Numbers much reduced in recent decades. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Low Quality

Determination Reason: The Project site does not contain valley foothill or desert riparian habitat to support this species. The Marshes present on the Project site do not contain adequate vegetation to support yellow-breasted chat. Additionally, the nearest record is located greater than five miles from the Project site.

Western Mastiff Bat

Molossidae > *Eumops perotis*

FESA: None, CESA: Species of Special Concern

Life History: Uncommon resident in southeastern San Joaquin Valley and Coastal Ranges from Monterey County southward through southern California, from the coast eastward to the Colorado Desert. Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands,

coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): CNDDB

Nearest CNDDB Record: 3.49 miles west

Habitat Present: Not Present

Determination Reason: The Project site contains marginal annual grassland habitat to the north of Highway 132 and south of the California Aqueduct; however, this grassland area lacks cliffs, rocky hillsides, and urban development to support roosting within the Project site. Large water bodies, such as lakes and rivers, are required for foraging and are marginal throughout the Project site. Additionally, the nearest record is greater than three miles from the Project site and is unlikely to occur.

American Badger

Mustelidae > *Taxidea taxus*

FESA: None, CESA: Species of Special Concern, SJMSCP-covered Species

Life History: Uncommon, permanent resident found throughout most of the state, except in the northern North Coast area. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. American badgers prefer open habitat with loamy or sandy soils for digging and will feed on a variety of prey including ground burrowing mammals, lizards, earthworms, eggs, and birds. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): CNDDB; SJMSCP

Nearest CNDDB Record: 1.59 miles west

Habitat Present: Low Quality

Determination Reason: The Project site is located approximately 0.65 miles southeast of the Corral-Lower San Joaquin Wildlife Corridor that this species may use; thus, it may occur as a transient through the Project site but may be precluded due to paved roads and high human disturbance between the corridor and the Project site. Soils within the grassland area on-site contain hard clay which does not provide suitable soils for digging; thus, foraging and den habitat is unlikely to occur in the Project site. No burrows, scat, or other signs were observed during the field surveys for the Project.

Monarch - California Overwintering Population

Nymphalidae > *Danaus plexippus pop. 1*

FESA: Candidate, CESA: None

Life History: The iconic black and orange Monarch butterfly is known for its astonishing long-distance annual migration and reliance on milkweed as its obligate larval host plant. Though genetically similar, there are two subpopulations of Monarchs in North America, with the eastern population overwintering in Mexico and breeding in the midwestern states, and the western population overwintering in coastal California and fanning out across the west from Arizona to Idaho. Both North American migratory populations have declined over the past twenty years due to a suite of interrelated factors including habitat loss in breeding and overwintering sites, habitat degradation, disease, pesticide exposure, and climate change. Recently the western population has experienced dramatic swings, for a low of less than 2,000 in 2020-21 to over 200,000 in 2021-22. While it is unclear which of the many factors are driving these dynamics, insect population commonly fluctuate from year to year. Though

more research is needed, a stable population for western monarchs is likely closer to the historic averages in the 1980's, which are estimated to have ranged between one to four million overwintering butterflies. *Source: https://wildlife.ca.gov/Conservation/Invertebrates/Monarch-Butterfly*

Inclusion Source(s): IPaC

Nearest CNDDB Record: > 5 miles

Habitat Present: Low Quality

Determination Reason: As a migratory species with flight capability, this species has potential to occur anywhere during movements. There is low potential to be resident on-site due to agricultural land uses and lack of suitable milkweed host plants. The Project site is also not located in roosting habitat for this species. The nearest record is located greater than five miles from the Project site.

Burrowing Owl

Strigidae > *Athene cunicularia*

FESA: None, CESA: Candidate Endangered, SJMSCP-covered species

Life History: A yearlong resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of Pinyon-Juniper and Ponderosa Pine habitats. Formerly common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains. Numbers markedly reduced in recent decades. Present on the larger offshore islands. Found as high as 1,600 meters (5300 feet AMSL) in Lassen County. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): CNDDB; SJMSCP

Nearest CNDDB Record: 2.66 miles north

Habitat Present: Low Quality

Determination Reason: The Project site contains marginal annual grassland north of Highway 132 and south of the California Aqueduct, but vegetation in this area was observed to be tall and densely populated by non-native grasses, which is likely to preclude use by burrowing owl as burrowing owl prefers more open landscapes/habitat. Ground squirrel (*Otospermophilus beecheyi*) burrows were observed on-site. The Project site primarily consists of orchards, which is not a typical habitat associated with this species, which prefer open, treeless habitat.

Pallid Bat

Vespertilionidae > *Antrozous pallidus*

FESA: None, CESA: Species of Special Concern

Life History: The Pallid Bat is a locally common species of low elevations in California. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County. A wide variety of habitats are occupied, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats. Day roosts include crevices in rocky outcrops and cliffs, caves, mines, hollows / cavities and exfoliating bark of trees, and crevices and cavernous spaces of human structures such as bridges, barns, porches, and buildings (human-occupied or vacant). A yearlong resident in most of the range. *Source: California Department of Fish and Wildlife.*

California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.
Western Bat Working Group. 2005. Western Bat Species Accounts, http://wbwg.org/western-bat-species/

Inclusion Source(s): CNDDB
Nearest CNDDB Record: 3.38 miles southwest
Habitat Present: Low quality
Determination Reason: The Project site lacks the open forest and woodland habitats preferred by this species for foraging; however, annual grassland is present north of Highway 132 and south of the California Aqueduct but lacks roosting habitat. This area may provide marginal foraging habitat but is limited in size and is unlikely to be used. Additionally, there are few manmade structures that may be used for roosting but are often highly disturbed by frequent human activity. There was no evidence of bats observed during the surveys.

- **Townsend's Big-eared Bat**

Vespertilionidae > *Corynorhinus townsendii*
FESA: None, CESA: Species of Special Concern

Life History: Townsend's Big-eared Bat is found throughout California, but the details of its distribution are not well known. This species is found in all but subalpine and alpine habitats and may be found at any season throughout its range. Once considered common, Townsend's Big-eared Bat now is considered uncommon in California. It is most abundant in mesic habitats. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s): CNDDB
Nearest CNDDB Record: 4.16 miles west
Habitat Present: Low Quality
Determination Reason: Although potential roosting habitat exists on the Project site in the form of manmade structures and open grassland habitat, there was no evidence of bats observed during the surveys. Additionally, grassland habitat is limited to a small area north of Highway 132 and south of the California Aqueduct and may only provide marginal foraging habitat. The nearest record is located approximately four miles from the Project site and thus, this species is unlikely to occur in the Project site.

4.6.2.5 Taxa to be Presumed Absent

The following 24 special-status wildlife taxa from desktop analysis were determined to be **Presumed Absent** from the Project site.

- **Horned Lark**

Alaudidae > *Eremophila alpestris*
FESA: None, CESA: None, SJMSCP-covered Species

Life History: The Horned Lark is a common to abundant resident in a variety of open habitats, usually where trees and large shrubs are absent. Found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above treeline. Less

common in mountain regions, on the North Coast, and in coniferous or chaparral habitats. Mostly leaves mountains in winter, but small flocks may remain to winter on windswept, snow-free areas at high elevations in the Sierra Nevada. In winter, flocks in desert lowlands and other areas augmented by winter visitants, many migrating from outside the state. Resident on the Channel Islands. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Horned Lark prefers grassland areas with vegetation less than two inches in height or bare ground for nesting and foraging habitat, which is lacking within the Project site. Therefore, nesting and foraging by this species is not expected to occur in the Project site. Additionally, the nearest record is located greater than five miles from the Project site and is not expected to occur.

California Tiger Salamander

Ambystomatidae > *Ambystoma californiense*

FESA: Endangered, CESA: Endangered

Life History: Most commonly found in Annual Grassland habitat, but also occurs in the grassy understory of Valley-Foothill Hardwood habitats, and uncommonly along stream courses in Valley-Foothill Riparian habitats. The species occurs from near Petaluma, Sonoma County, east through the Central Valley to Yolo and Sacramento counties and south to Tulare County; and from the vicinity of San Francisco Bay south to Santa Barbara County. They occur at elevations from 3 meters up to 1,054 meters (3,200 feet AMSL). *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): CNDDB, IPaC

Nearest CNDDB Record: 1.64 miles west

Habitat Present: Not Present

Determination Reason: The Project site is more than two miles from known breeding ponds. Interstate 580 serves a barrier between the Project site and known breeding sites to the west. In addition, the Project site lacks small mammal burrows required for sheltering.

Black-crowned Night Heron

Ardeidae> *Nycticorax nycticorax*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: The Black-crowned Night-Heron is a fairly common, yearlong resident in lowlands and foothills throughout most of California, including the Salton Sea and Colorado River areas, and very common locally in large nesting colonies. Feeds along the margins of lacustrine, large riverine, and fresh and saline emergent habitats and, rarely, on kelp beds in marine subtidal habitats. Nests and roosts in dense-foliaged trees and dense emergent wetlands. Common nesting species on northeastern plateau from April to August. Uncommon in northwestern, and rare in northeastern, California in midwinter. Uncommon transient and rare in winter in southern deserts, and rare on Channel Islands. Seldom seen in mountains, but formerly nested at Big

Bear Lake in San Bernardino Mountains. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site does not contain suitable foraging habitat such as, large riverine and emergent habitat, and densely vegetated Marshes. Trees are limited on-site. Nesting habitat in trees or in dense cattails is also not present on the Project site and thus, nesting is not likely to occur. The nearest record for this species is located greater than five miles from the Project site and is not expected.

Vernal Pool Fairy Shrimp

Branchinectidae > *Branchinecta lynchi*

FESA: Threatened, CESA: None

Life History: The Vernal Pool Fairy Shrimp inhabits ephemeral pools with clear to tea- colored water. This species has been most commonly observed in grass or mud bottomed swales, earth sump, or basalt flow depression pools in unplowed grasslands. The Vernal Pool Fairy Shrimp has been collected from early December to early May. The water in pools inhabited by this species has a pH averaging 7.0; and low TDS, conductivity, alkalinity, and chloride. Although the Vernal Pool Fairy Shrimp is found at a number of sites, it is not abundant at any of them. It often occurs with other fairy shrimp species, but is never the numerically dominant one. *Source: https://www.govinfo.gov/content/pkg/FR-1992-05-08/pdf/FR-1992-05-08.pdf#page=76*

Inclusion Source(s): IPaC

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: Project site lacks the vernal pool habitat to support this species. Ponded areas consist of water basins and marshes on site, irregularly inundated and artificially irrigated as part of agricultural operations. Given these non-natural conditions, these areas are unlikely to support this species, and this species is not expected to occur.

California Condor

Cathartidae > *Gymnogyps californianus*

FESA: Endangered, Protected, CESA: Endangered

Life History: Endangered, permanent resident of the semi-arid, rugged mountain ranges surrounding the southern San Joaquin Valley, including the Coast Ranges from Santa Clara County south to Los Angeles County, the Transverse Ranges, Tehachapi Mountains, and southern Sierra Nevada. Forages over wide areas of open rangelands, roosts on cliffs and in large trees and snags. Occurs mostly between sea-level and 2700 m (0-9000 ft), and nests from 610-1372 m (2000-6500 ft). Nonbreeding individuals move north to Kern and Tulare counties in April, often returning south in September to winter in Tehachapi Mountains, Mount Pinos, and Ventura and Santa Barbara counties. Total population in early 1980's estimated to

be fewer than 20, and declining. Occurrence in the wild now in question. Two U.S. Forest Service sanctuaries set aside within the Los Padres National Forest, primarily for nesting and roosting protection. *California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): IPaC

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks the open rangelands and rugged mountain habitats preferred by this species for foraging. The Project site is below the preferred elevations for nesting and thus, is not expected to occur. The nearest record for this species is located greater than five miles from the Project site and is not expected to occur.

Valley Elderberry Longhorn Beetle

Cerambycidae > *Desmocerus californicus dimorphus*

FESA: Threatened, CESA: None, SJMSCP-covered Species

Life History: Valley elderberry longhorn beetle is a medium sized beetle that is endemic to the Central Valley of California. The beetle is found only in association with its host plant, elderberry (Sambucus spp.) and originally occurred in elderberry thickets in moist valley oak woodland along the margins of the Sacramento and San Joaquin Rivers in the Central Valley of California. The habitat of this insect has now largely disappeared throughout much of its former range due to agricultural conversion, levee construction, and stream channelization. The clearing of undergrowth (including elderberry) and planting of lawns has resulted in further habitat degradation. *Source: https://ecos.fws.gov/ecp/species/7850*

Inclusion Source(s): IPaC; SJMSCP

Nearest CNDDB Record: 1 to 3 Miles

Habitat Present: Not Present

Determination Reason: The Project site lacks the valley elderberry plants to support this species. Additionally, the Project site is located outside of the range for this species due to the Project site being located upland from the San Joaquin River.

Riparian Woodrat

Cricetidae > *Neotoma fuscipes riparia*

FESA: Threatened, CESA: None, SJMSCP-covered Species

Life History: The riparian woodrat is a subspecies of the dusky footed woodrat (N. fuscipes). As the name suggests, they prefer to build stick nests near rivers and streams in riparian woodland habitats. Historically, they were distributed along the San Joaquin, Stanislaus and Tuolumne rivers. Today, there are only two known population centers: Caswell Memorial Park and the San Joaquin River National Wildlife Refuge, both in San Joaquin County. *Source: https://www.fws.gov/species/riparian-woodrat-san-joaquin-valley-neotoma-fuscipes-riparia*

Inclusion Source(s): IPaC, SJMSCP

Habitat Present: Not Present

Determination Reason: The Project site lacks suitable riparian woodland habitat to support this species. Additionally, the Project site is located upland from the San Joaquin River and is not within either the Caswell Memorial Park or the San Joaquin River National Wildlife Refuge. The nearest record is located greater than five miles from the Project site and is not expected to occur.

Yellow-billed Cuckoo

Cuculidae > *Coccyzus americanus*

FESA: Threatened, CESA: None, SJMSCP-covered Species

Life History: An uncommon to rare summer resident of valley foothill and desert riparian habitats in scattered locations in California. Along the Colorado River, breeding population on California side was estimated at 180 pairs in 1977. Additional pairs reside in the Sacramento and Owens valleys; along the South Fork of the Kern River, Kern County; along the Santa Ana River, Riverside County; and along the Amargosa River, Inyo and San Bernardino counties. Also may nest along San Luis Rey River, San Diego County. Formerly much more common and widespread throughout lowland California, but numbers drastically reduced by habitat loss. Current population estimations show about 50 pairs existing in California. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): IPaC

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks suitable riverine habitat to support nesting or foraging for this species. The Project site is also not located along any of the rivers where this species is known to occur. The nearest record of this species is located greater than five miles from the Project site and is not expected to occur.

Northwestern Pond Turtle

Emydidae > *Actinemys marmorata*

FESA: Proposed Threatened, CESA: Species of Special Concern

Life History: Actinemys species are uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. Elevation range extends from near sea level to 1,430 meters (4,690 feet AMSL). Associated with permanent or nearly permanent water in a wide variety of habitat types. Western Pond Turtle was split into two species in 2014, with A. marmorata ranging from the Central Valley north. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): CNDDB; IPaC

Nearest CNDDB Record: 2.63 miles west

Habitat Present: Not Present

Determination Reason: The Project site lacks suitable aquatic habitat to support this species. The existing Marshes surveyed on the Project site are bermed, and lack a consistent source of water to support this species. Additionally, upland refugia necessary to support nesting is lacking within these areas.

Merlin

Falconidae > *Falco columbarius*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: Uncommon winter migrant from September to May. Seldom found in heavily wooded areas, or open deserts. Frequents coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages. Ranges from annual grasslands to ponderosa pine and montane hardwood-conifer habitats. Occurs in most of the western half of the state below 1500 m (3900 ft). A rare winter migrant in the Mojave Desert; a few records from the Channel Islands. Numbers have declined markedly in California in recent decades. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks the forested openings and riverine habitats preferred by this species for foraging. Additionally, the tall trees preferred by this species for nesting are limited on-site and nesting by this species is unlikely. The nearest record for this species is located greater than five miles from the Project site and is not expected to occur.

Loggerhead Shrike

Laniidae > *Lanius ludovicianus*

FESA: None, CESA: None, SJMSCP-covered species

Life History: A common resident and winter visitor in lowlands and foothills throughout California. Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Highest density occurs in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua Tree habitats. In the Great Basin, from Inyo County north, population declines markedly from November through March. Rare on coastal slope north of Mendocino County, occurring only in winter. Occurs only rarely in heavily urbanized areas, but often found in open cropland. Sometimes uses edges of denser habitats. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site does not contain scattered vegetation with open canopy that is preferred by this species. Additionally, thorny vegetation is not present within the Project site to

support nesting for this species. The nearest record of this species is located greater than five miles from the Project site and is not expected to occur.

Riparian Brush Rabbit

Leporidae > *Sylvilagus bachmani riparius*

FESA: Endangered, CESA: None, SJMSCP-covered Species

Life History: The riparian brush rabbit is a subspecies of the common brush rabbit. There are three known population centers for this species: Caswell Memorial Park, Lathrop, and the San Joaquin River National Wildlife Refuge, all in San Joaquin County. The riparian brush rabbit prefers riverine habitats with thickets of willow (Salix spp.), blackberry (Rubus vitifolius), wild rose (Rosa californica), wild grape (Vitis calfornica), Douglas' coyote bush (Baccharis douglasii), and grasses for foraging and sheltering. *Source: https://www.fws.gov/species/riparian-brush-rabbit-sylvilagus-bachmani-riparius*

Inclusion Source(s): IPaC

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks suitable riparian riverine habitats to support this species. Additionally, the Project site does not occur in the Caswell Memorial Park, Lathrop, or the San Joaquin River National Wildlife Refuge and is, therefore, not expected to occur. The nearest record is located greater than five miles from the Project site and is not expected to occur.

Osprey

Pandionidae > *Pandion haliaetus*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: Breeds in northern California from Cascade Ranges south to Lake Tahoe, and along the coast south to Marin County. Regular breeding sites include Shasta Lake, Eagle Lake, Lake Almanor, other inland lakes and reservoirs, and northwest river systems. Breeding population estimated in 1975 at 350-400 pairs in northern California; numbers apparently increasing in recent years. An uncommon breeder along southern Colorado River, and uncommon winter visitor along the coast of southern California. Associated strictly with large, fish-bearing waters, primarily in ponderosa pine through mixed conifer habitats. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks the proximity to lacustrine, riverine, or pelagic habitats preferred by this species for foraging. Additionally, the tall trees preferred by this species for nesting are limited on-site and nesting by this species is unlikely. The nearest record is located greater than five miles from the Project site and is not expected to occur.

Yellow Warbler

Parulidae > *Dendroica petechia brewsteri*

FESA: None, CESA: None, SJMSCP-covered Species

Life History:	Breeding distribution includes from the coast range in Del Norte county, east to Modoc plateau, south along coast range to Santa Barbara and Ventura counties and along western slope of Sierra Nevada south to Kern county. Also breeds along eastern side of California from the Lake Tahoe area south through Inyo county. Also breeds in several southern California mountain ranges and throughout most of San Diego county. Winters in Imperial and Colorado river valleys. Breeds in riparian woodlands from coastal and desert lowlands up to 2500 m (8000 ft) in Sierra Nevada. Also breeds in montane chaparral, and in open ponderosa pine and mixed conifer habitats with substantial amounts of brush. Numbers of breeding pairs have declined dramatically in recent decades in many lowland areas (southern coast, Colorado River, San Joaquin and Sacramento valleys). Now rare to uncommon in many lowland areas where formerly common. A common migrant on Channel and Farallon Islands in spring and fall. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s):	SJMSCP
Nearest CNDDB Record:	> 5 miles
Habitat Present:	Not Present
Determination Reason:	The Project site does not contain forested or riparian breeding habitat suitable to support this species thus, this species is not expected to occur on-site. Nesting sites occur within riparian vegetation as well and is not expected to occur within the Project site. The nearest record of this species is located greater than five miles from the Project site and is not expected to occur.

Coast Horned Lizard

Phrynosomatidae > *Phrynosoma blainvillii*

FESA: None, CESA: Species of Special Concern

Life History:	Blainville's Horned Lizard is uncommon to common in suitable habitat. Occurs in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress, juniper and annual grassland habitats. Occurs in the Sierra Nevada foothills from Butte County to Kern County and throughout the central and southern California coast. Its elevational range extends up to 1,200 m (4000 ft) in the Sierra Nevada foothills and up to 1800 m (6000 ft) in the mountains of southern California. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s):	CNDDB
Nearest CNDDB Record:	> 5 miles
Habitat Present:	Not Present
Determination Reason:	The Project site lacks the riparian and forested habitat preferred by this species for breeding and foraging. This species may also forage in open grassland areas with sandy soils and, although grassland habitat occurs within the Project site, this area lacks bare ground and sandy soils required to support this species. Additionally, the nearest record for this species is located greater than five miles from the Project site and it is not expected to occur.

Ringtail

Procyonidae > *Bassariscus astutus*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: Widely distributed, common to uncommon permanent resident. Occurs in various riparian habitats, and in brush stands of most forest and shrub habitats, at low to middle elevations. Little information available on distribution and relative abundance among habitats. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks the riparian and forested habitat preferred by this species for nesting or foraging. Additionally, the nearest record for this species is located greater than five miles from the Project site and it is not expected to occur.

California Red-legged Frog

Ranidae > *Rana draytonii*

FESA: Threatened, CESA: None

Life History: The California Red-legged Frog inhabits quiet pools of streams, marshes, and occasionally ponds. Occurs along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges, usually below 1,200 m (3936 ft). This species was once a subspecies of Rana aurora, then known as the Red-legged Frog, and has been elevated to species-level status. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): IPaC

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: Although the Project site does contain aquatic resources in the form of small Marshes, most were observed to be dry during the survey and would not support this species. Those Marshes where water was present have high human disturbance from vegetation trimming and grading that would preclude this from these areas. Additionally, the nearest record of this species is located greater than five miles from the Project site and it is not expected to occur.

Western Spadefoot

Scaphiopodidae > *Spea hammondii*

FESA: None, CESA: Species of Special Concern, SJMSCP-covered Species

Life History: The Western Spadefoot ranges throughout the Central Valley and adjacent foothills, and is usually quite common where it occurs. In the Coast Ranges it is found from Point Conception, Santa Barbara County, south to the Mexican border. Elevations of occurrence extend from near sea level to 1,363 m (4,460 ft) in the southern Sierra foothills. This species occurs primarily in grasslands, but occasional populations also occur in valley-foothill hardwood woodlands. Western spadefoot also require shallow, temporary pools or streams during the breeding season but may also use artificial ponds or livestock water tanks for habitat. Some populations persist for a few years in orchard or vineyard habitats. *Source: California*

Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.

Inclusion Source(s): CNDDB, SJMSCP

Nearest CNDDB Record: 2.81 miles west

Habitat Present: Not Present

Determination Reason: The Project site does contain grassland habitat north of Highway 132 and south of the California Aqueduct, but this habitat contains dense vegetation that is not suitable for western spadefoot. No shallow water resources are present within the Project site to support this species. Additionally, the orchards and vineyards are regularly maintained by agricultural machinery and human disturbance is common within these areas; thus, given the ground disturbances this species is unlikely to occur.

Long-Billed Curlew

Scolopacidae > *Numenius americanus*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: An uncommon to fairly common breeder from April to September in wet meadow habitat in northeastern California in Siskiyou, Modoc, and Lassen counties. One recent nesting record for Owens Valley, Inyo County. Uncommon to locally very common as a winter visitant from early July to early April along most of the California coast, and in the Central and Imperial valleys, where the largest flocks occur. Preferred winter habitats include large coastal estuaries, upland herbaceous areas, and croplands. On estuaries, feeding occurs mostly on intertidal mudflats. Small numbers of nonbreeders remain on coast in summer, and larger numbers remain in some years in the Central Valley. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks the wet meadow, coastal estuary, or inter-tidal mudflat habitat preferred by this species for nesting and foraging. Additionally, the nearest record for this species is located greater than five miles from the Project site and it is not expected to occur.

Vernal Pool Tadpole Shrimp

Triopsidae > *Lepidurus packardi*

FESA: Endangered, CESA: None

Life History: Vernal Pool Tadpole Shrimp inhabits vernal pools and swales containing clear to highly turbid water. The Vernal Pool Tadpole Shrimp is found at 14 vernal pool complexes in the Sacramento Valley from the Vina Plains in Butte County south of the Sacramento area in Sacramento County and west to the Jepson Prairie region of Salano County. The pools inhabited by the Vernal Pool Tadpole Shrimp range in size from 5 square meters (16.4 square ft) in the Mather Air Force Base area of Sacramento County to the 38 hectare (89 acre) Olcott Lake at Jepson Prairie. The pools at Jepson Prairie and Vina Plains have a neutral pH, and very low conductivity, TDS, and alkalinity. These pools are most commonly located in grass bottomed swales of unplowed grasslands in old alluvial soils underlain by hardpan, or in mud-

bottomed pools containing highly turbid water. All pools known to be inhabited by this species are filled by winter and spring rains and may last until June. *Source: https://www.govinfo.gov/content/pkg/FR-1992-05-08/pdf/FR-1992-05-08.pdf#page=76*

Inclusion Source(s): IPaC

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks the vernal pool habitat to support this species. Ponded areas consist of water basins and marshes on site, irregularly inundated and artificially irrigated as part of agricultural operations. Given these non-natural conditions, these areas are unlikely to support this species, and this species is not expected to occur.

Yuma Myotis

Vespertilionidae > *Myotis yumanensis*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: The Yuma Myotis is common and widespread in California. It is uncommon in the Mojave and Colorado Desert regions, except for the mountain ranges bordering the Colorado River Valley. Found in a wide variety of habitats ranging from sea level to 3300 m (11,000 ft), but it is uncommon to rare above 2560 m (8000 ft). Optimal habitats are open forests and woodlands with sources of water over which to feed. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks the open forest and woodland habitats preferred by this species for foraging. Additionally, there were few manmade structures present within the Project site that would support these species, but regular human disturbance around these buildings may preclude bats from these structures. Roosting sites are not expected to occur within the Project site. The nearest record of this species is located greater than five miles from the Project site and it is not expected to occur.

Western Red Bat

Vespertilionidae > *Lasiurus blossevillii*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: The Western Red Bat is locally common in some areas of California, occurring from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts. The winter range includes western lowlands and coastal regions south of San Francisco Bay. There is migration between summer and winter ranges, and migrants may be found outside the normal range. Day-roost habitat is primarily among the foliage of trees such as willows, cottonwoods, and sycamores in forests and woodlands from sea level up through mixed conifer forests. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Forages on a variety of insects. Not found in desert

areas. During warm months, sexes occupy different portions of the range. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Western Bat Working Group. 2005. Western Bat Species Accounts, http://wbwg.org/western-bat-species/

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site lacks the forested and woodland areas required for roosting habitat for this species. The western red bat feeds over open grassland area, which exists within the Project site to the north of Highway 132 and south of the California Aqueduct, but is small in extent and no visible signs of bats (i.e. scat or insect carcasses) were observed during the surveys. Additionally, the nearest record for this species is located greater than five miles from the Project site and it is not expected to occur.

Eastern Red Bat

Vespertilionidae > *Lasiurus borealis*

FESA: None, CESA: None, SJMSCP-covered Species

Life History: The Eastern Red Bat roots approximately 3 – 36 feet (1-12 meters) above ground in tree foliage, shrubs, or even house shingles, usually in shaded but open areas generally east of the Continental Divide in North America. They prefer large trees in cleared landscapes and commonly use deciduous species near streams, fields, or urban edges. They forage over open areas, including water, pastures, and forest edges, and are drawn to streetlights that attract insects. They prefer landscapes with water and moderate development while avoiding dense forests and agriculture. *Source: New York Natural Heritage Program, https://guides.nynhp.org/eastern-red-bat/*

Inclusion Source(s): SJMSCP

Nearest CNDDB Record: > 5 miles

Habitat Present: Not Present

Determination Reason: The Project site is located outside of the primary distribution range east of the continental divide for this species. Additionally, the Project site lacks the tall, forested areas preferred by this species for roosting. The eastern red bat feeds over open area, which exists within the Project site to the north of Highway 132 and south of the California Aqueduct but is small in extent and no visible signs of bats (i.e. scat or insect carcasses) were observed during the surveys. Additionally, the nearest record for this species is located greater than five miles from the Project site and it is not expected to occur.

Least Bell's Vireo

Vireonidae > *Vireo bellii pusillus*

FESA: Endangered, CESA: Endangered

Life History: Formerly a common and widespread summer resident below about 600 m (2,000 ft) in western Sierra Nevada, throughout Sacramento and San Joaquin valleys, and in the coastal valleys and foothills from Santa Clara County south. Also, was common in

	coastal southern California from Santa Barbara County south, below about 1,200 m (4,000 ft) east of the Sierra Nevada, in Owens and Benton valleys, along Mojave River and other streams at western edge of southeastern deserts, and along entire length of Colorado River. Has declined drastically or vanished entirely throughout California range in recent decades, apparently from cowbird parasitism and habitat destruction and degradation. Now a rare, local, summer resident below about 600 m (2,000 ft) in willows and other low, dense valley foothill riparian habitat and lower portions of canyons mostly in San Benito and Monterey counties; in coastal southern California from Santa Barbara County south; and along the western edge of the deserts in desert riparian habitat. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s):	CNDDB
Nearest CNDDB Record:	2.68 miles west
Habitat Present:	Not Present
Determination Reason:	The Project site lacks suitable dense riparian habitat and streams to support this species. This species is considered locally extirpated.

4.7 Other Considerations

4.7.1 Wildlife Movement

Effects on wildlife movement are an important consideration when assessing the potential anthropogenic effects of any project. At a small enough scale, any project or activity can potentially affect the movement of wildlife if any wildlife are present at all. In general, however, the term “wildlife movement corridor” means an area of habitat that is important for the movement of wildlife between larger habitat areas. Wildlife movement corridors are important for maintaining population levels and genetic diversity.

Wildlife require space to roam in search of food, shelter, mates, or for seasonal migration. Fragmentation of wildlife movement from human development can disrupt the normal flow of essential ecosystem functions. The extent of habitat movement requirements is dependent on the taxa and is crucial to the survival of many species. Overall wildlife movement has become restricted due to man-made barriers, such as roads, structures, development, walls or fencing, and even agricultural fields.

The Project site lies within the Central/Southwest Transition Zone of the SJMSCP. While the land cover and habitat types are generally consistent with that of the Central Zone (row and field crops), there are records of San Joaquin kit fox within the Southwest Transition Zone indicating some movement between the Southwest Zone and the Central Zone. A known wildlife corridor, the Corral-Lower San Joaquin Wildlife Corridor, runs from the Corral Hollow Pass through the Southwest/Central Transition Zone, approximately 0.65 miles northwest of the Project site and approximately 3.85 miles southwest of the Project site within the Southwestern Zone (**Figure 7**). No known wildlife movement corridors overlap the Project site.

The Project site generally does not function as a movement corridor for terrestrial wildlife. The Project site contains large areas of orchards and one grassland area bordered by either roads (paved and dirt) or large canals, which functionally serve as barriers to the movement of most terrestrial wildlife outside of birds. Additional active

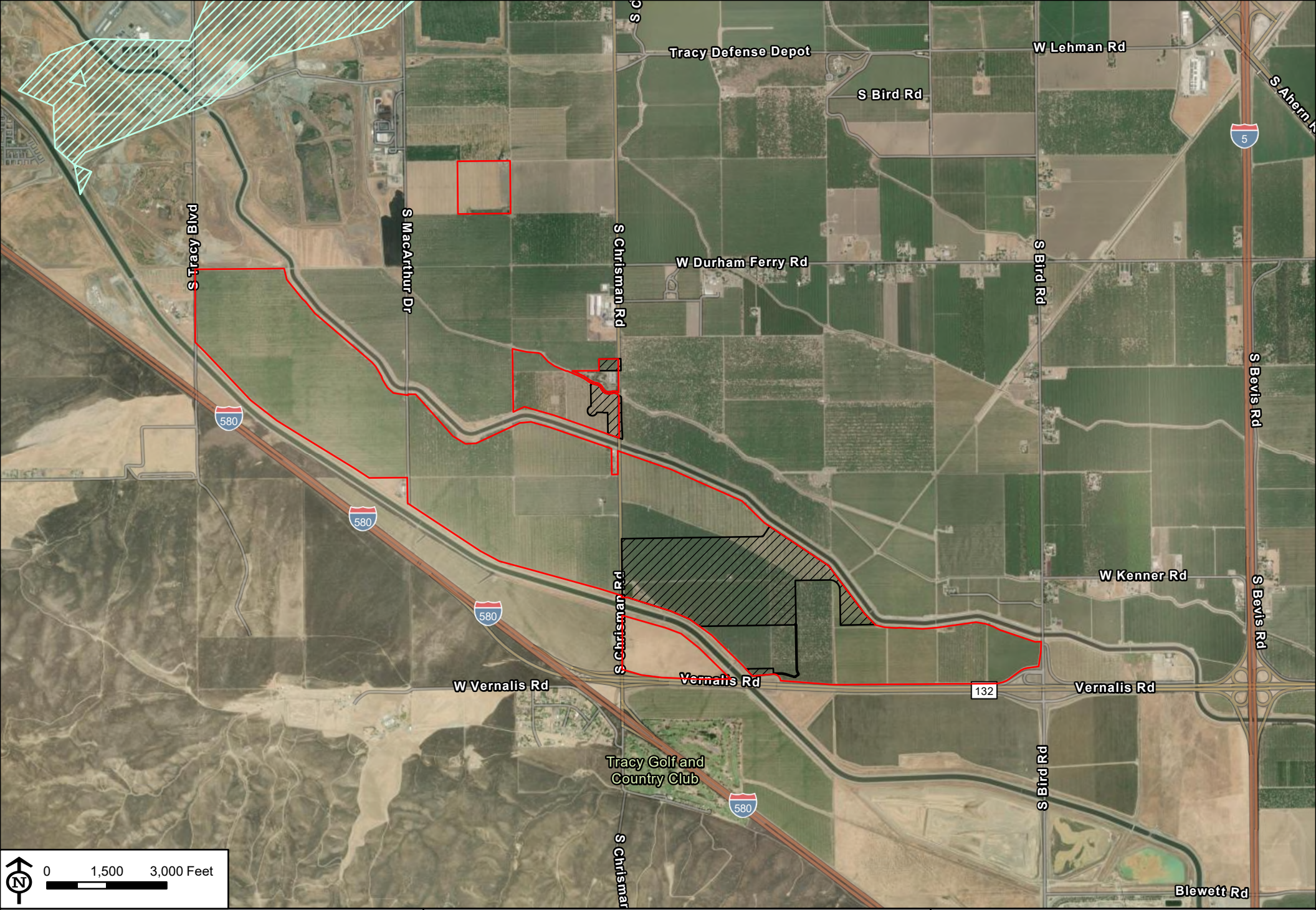
agricultural fields or urban development are located on all sides of the Project site, which generally do not serve as high quality habitat areas that would potentially attract wildlife.

The Project site does contain semi-natural and natural vegetation communities that provide foraging habitat for a number of bird species, including Swainson's hawk, northern harrier, white-tailed kite, and other avian taxa discussed in **Section 4.6.2** above. Although marginally suitable foraging habitat is present on-site, the Project site contains limited habitat to support nesting for these species due to the frequent disturbance of potential nesting areas associated with agricultural operations.

4.7.2 Nesting Birds

Birds, including native species protected by the MBTA and California Fish and Game Code, have the potential to nest in nearly any environment, including those heavily altered by anthropogenic activity. This includes the orchards that dominate the Project site and fields maintained for fire reduction. Depending upon the nature of the agricultural activities and fire management practices on-site, there may be large areas that would contain tall herbaceous vegetation or bare ground to support bird species with those nesting habitat preferences, such as the rock dove (*Columba livia*), mourning dove (*Zenaida macroura*), and house finch (*Haemorhous mexicanus*). Tall mature trees are limited on-site; however, the site does contain manmade structures such as utility poles that provide potentially suitable nesting habitat raptors or other large birds identified in the desktop and literature review.

The areas surrounding the aquatic features within the Project site may provide marginal nesting habitat for blackbirds such as the red-winged blackbird (*Agelaius phoeniceus*) observed during the field visits, or the tricolored blackbird (*Agelaius tricolor*) identified in the desktop and literature review. However, the areas surrounding the aquatic features are not extensive enough and do not support the mature canopies that would provide suitable nesting habitat for larger wetland birds, such as great blue heron (*Ardea Herodias*) or great egret (*Ardea alba).*



Source: ESRI ArcGIS Online Basemap - World Imagery Hybrid (04/2024)

BARGAS Environmental Consulting

Project Site

Initial Phase

Corral/Lower San Joaquin Wildlife Corridor

Figure 7 San Joaquin Wildlife Corridors

Pacific Gateway Specific Plan Project

Map Created: 2/3/2025, Map Revised: N/A, Bargas Project Number: 1644-22

5 Project Effects

5.1 Thresholds of Significance

Appendix G of the CEQA Guidelines (as amended through January 2019) is frequently cited by public agencies to determine whether a project may have a significant impact on biological resources. Under Appendix G, a project may have a significant impact on biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations by the CDFW or USFWS.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

5.2 Key Metrics for Assessing Project Effects

Prior to assessing the significance of Project effects on biological resources, it is important to understand the factors to be considered in the analysis. Primary among these are direct impacts to vegetation communities, which may provide habitat for special-status species or support jurisdictional aquatic resources. Direct impacts to vegetation communities are typically associated with site grading, which often result in a 100% loss of vegetation and habitat on-site.

Current plans for the Initial Phase of the Project propose to directly impact approximately 247.26 acres of existing vegetation communities as a result of mass grading to prepare the site for Initial Phase development (**Figure 8**). Approximate impacts from the Initial Phase are summarized below in **Table 7**, which include 234.39 acres of Deciduous Orchard, 0.11 acres of Cultivated/Landscaped, 9.18 acres of Developed/Disturbed, and 3.58 acres of Cattail Marsh and Wetlands.

Table 7. Initial Phase Impacts

Mapped Vegetation Communities Common Name	SJMSCP Vegetation Community Classification	Acres Impacted
Cattail Marsh and Wetlands	Freshwater Emergent Wetland (W7)	3.58
Cultivated/Landscaped	Golf Courses/Cultivated Parks (U3)	0.11
Deciduous Orchard	Orchards and Vineyards (C2)	234.39
Disturbed/Developed	Scraped/Paved Areas (U2)	9.18
	TOTAL	**247.26**

Development plans for the remainder (i.e., Programmatic-Level) areas of the Project area have not yet been designed; thus, impacts for the remainder of the Project are unknown are discussed in general terms. Overall, the implementation of the Project build-out could impact the following vegetation communities: Deciduous Orchards, Cultivated/Landscaped, Disturbed/Developed, Wild Oats and Annual Brome Grassland, and Cattail Marsh and Wetlands.

5.3 Project Effects on Candidate, Sensitive, or Special-Status Species

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project would *have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations by the CDFW or USFWS.*

5.3.1 Summary of Effects

Due to the anticipated movement of many foraging and breeding species, an assessment of whether the Project will have a substantial adverse effect on any candidate, sensitive, or special-status species applies to the entire Project site, including the Initial phase. As a result, the statements of effects, significance, and proposed mitigation measures applying to the Initial Phase are not independently analyzed but rather encompassed within the overall Project assessment.

Potential Project effects are assessed based on special-status species determined to have at least moderate potential to occur on-site. Special-status species determined Not Expected to occur or Presumed Absent, would not be adversely affected by implementation of the Project; thus are not discussed further.

Special-Status Plants

Overall, based on the determination of Not Expected and Presumed Absent, implementation of the Project is not expected to impact special-status plant species due to lack of suitable soils, habitat, or elevations within the Project site.

Special-Status Animals

Five special-status wildlife species could be impacted by implementation of the Project. Swainson's hawk, white-tailed kite, and song sparrow were observed on-site whereas northern harrier and Crotch's bumble bee are considered to have moderate potential to occur. After evaluating the presence of suitable habitat, along with species-specific nesting

and foraging behavior, appropriate Avoidance and Minimization measures are proposed to reduce Project-related effects on these species to less than significant.

- **Swainson's Hawk**: The Project site contains medium quality foraging habitat within the annual grassland located north of Highway 132 and south of the California Aqueduct, as well as within agricultural fields that are adjacent to the Project site that could support this species. Tall, scattered trees for nesting habitat are limited on-site; thus, nesting by this species on-site is unlikely and not expected. As per subsection 5.2.4.11 of the SJMSCP, the Project applicant shall consult with a qualified biologist prior to any vegetation activities or ground-disturbing work to determine if any known or potential nesting trees are located within the Project site. Known or potential nesting trees can be either retained or removed from the Project site. If identified nesting trees are retained and occupied during construction activities, then a buffer of twice the dripline of the tree will be established until the nest is no longer occupied. However, nesting trees may also be removed while trees are not occupied from September 1 to February 15.

- **White-tailed Kite**: The Project site contains medium quality foraging habitat within the annual grassland located north of Highway 132 and south of the California Aqueduct, as well as within agricultural fields that are adjacent to the Project site that could support this species. Tall trees for nesting habitat are limited on-site; thus, nesting by this species on-site is unlikely and not expected. As per subsection 5.2.4.19 of the SJMSCP, a nesting preconstruction survey shall be conducted by a qualified biologist prior to any vegetation activities or ground disturbance during the nesting season (February 15 to September 15), within and adjacent (as feasible) to the Project site to determine the presence of nesting white-tailed kites. Should an active nest be identified, a buffer of 100 feet from the nesting area shall be established and maintained until the nest has been deemed inactive by a qualified biologist.

- **Song Sparrow**: The Project site contains medium quality foraging habitat within the open annual grassland located north of Highway 132 and south of the California Aqueduct, as well as within agricultural fields that are adjacent to the Project site that could support this species. Open grassland and residential houses may provide nesting habitat for this species but is limited on-site thus, nesting by this species on-site is unlikely and not expected. To ensure this species is avoided, a qualified biologist shall conduct a nesting bird survey during the nesting season (February 15 to August 31) to determine if any nests or nesting activity is present within or adjacent (as feasible) to the Project site. As per the Migratory Bird Treaty Act, no birds or their nests may be harmed or disturbed if they are observed within the Project site. If nests are observed, then an appropriate buffer will be established by the biologist that will remain in effect until the nest is no longer active.

- **Northern Harrier**: The Project site contains medium quality foraging habitat within annual grassland located north of Highway 132 and south of the California Aqueduct, as well as within agricultural fields that are adjacent to the Project site that could support this species. Nesting habitat for this species is typically within grasses, willows, cattails, or sedges but this vegetation is limited on-site; thus, nesting by this species on-site is unlikely and not expected. Per subsection 5.2.4.17 of the SJMSCP, a nesting survey shall be conducted by a qualified biologist prior to any vegetation activities or ground-disturbing activities to determine if any nests or nesting activity is present within the Project site and a surrounding 500-foot buffer, as feasible. If nesting

is observed then a 500-foot buffer shall be applied during all vegetation activities or ground-disturbing activities that occur during the nesting season (February 15 – August 31).

- **Crotch's Bumble Bee**: The Project site contains sufficient flowering plants to support foraging (i.e., nectar collection) for this species. Nesting colony habitat on-site is limited to open annual grasslands located south of the California Aqueduct, and adjacent to the Project site. Therefore, Crotch's bumble bee may be present as a transient species foraging within the orchards and vineyards during the flower blooming period. A focused survey for Crotch's bumble bee within both foraging and nesting habitat shall be conducted for this species prior to any ground-disturbing activities during the colony active period (April - August) and when floral resources are present as per the *CDFW Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* protocols (CDFW 2023) dated June 6, 2023 to determine if any individuals or nests are present within the Project site. If Crotch's bumble bees or their nests are observed then the Project applicant shall consult with CDFW, which may require an Incidental Take Permit (ITP) if any bees are expected to be harmed during implementation of the Project.

5.3.2 Significance Statement

With the implementation of these Project-specific Avoidance and Minimization measures, potential impacts would be reduced to less than significant.

5.4 Project Effects on Riparian Habitat or Other Sensitive Natural Community

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project would *have a substantial adverse effect on riparian habitat or other sensitive natural communities identified locally, regionally, or by the CDFW or USFWS.*

5.4.1 Summary of Effects

The Project site does not to contain sensitive natural communities or riparian habitat pursuant to CDFW, CNPS, or USFWS. Therefore, the Project is not expected to result in impacts to riparian habitats or other sensitive natural communities.

5.4.2 Significance Statement

The Project would not result in a significant impact to riparian habitat or other sensitive vegetation community.

5.5 Project Effects on State or Federally Protected Wetlands

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project would *have a substantial adverse effect federally protected wetlands defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

5.5.1 Summary of Effects

The Project site does not support federally protected wetlands defined by Section 404 of the CWA, as none occur on the Project site. However, although not federally protected or regulated by Section 404 of the CWA, isolated wetlands/waters of the state potentially subject to RWQCB jurisdiction per the Porter-Cologne Act occur and would be impacted (see CVRWQCB Waste Discharge Requirements below**)**.

The Initial Phase of development for the Project would have direct impacts to a total of 3.58 acres of two isolated wetland and non-wetland waters of the state, including Marsh 7, Marsh 8, and Water Basin 3 (**Figure 8**). Additional impacts to aquatic resources on-site would likely result from implementation of future phases (i.e., Programmatic-Level) of development; however, the quantities and locations are unknown at this time. Approximately 2.45 acres of aquatic resources are present within the limits of the Project site and outside of the Initial Phase development. **Table 8** presents the proposed grading limit of the Initial Phase for the Project.

Table 8. Potential Jurisdictional Aquatic Resources within Proposed Grading Limits of the Initial Phase

Feature Type and Name	Area (acres)	Length (linear feet)
Wetland Water of the State (Marsh 7)	1.60	362
Wetland Water of the State (Marsh 8)	1.67	469
Non-Wetland Water of the State (Water Basin 3)	0.31	349
TOTAL	**3.58**	**1,180**

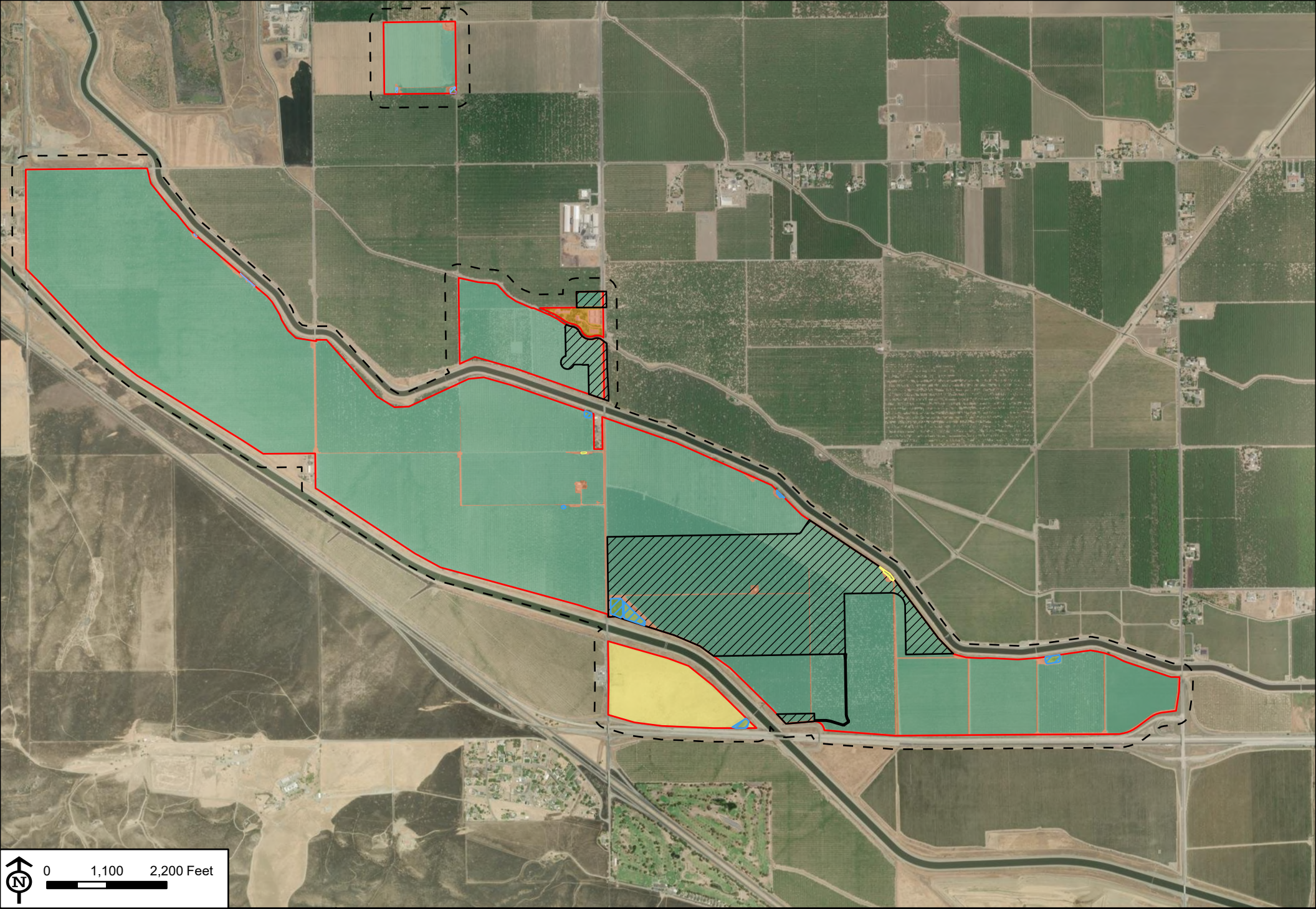
Although no aquatic features on-site were found to be under USACE jurisdiction, an Approved Jurisdictional Determination may be requested from the County during their project approval and or development/grading permit issuance process to confirm that aquatic features within the Project site and Initial Phase do not meet the definitions of waters of the U.S. If, it is determined that the aquatic resources within the Project site and Initial Phase do fall under the jurisdiction of USACE, CVRWQCB, or CDFW (Regulatory Agencies), appropriate compensation should be provided to achieve "no net loss" for impacts to aquatic resources associated with Project implementation. Wetland restoration, enhancement, and/or replacement shall be at a location and by methods acceptable to the Regulatory Agencies during appropriate consultation. The Regulatory Agency may require the purchase of compensatory mitigation credits at an agency-approved mitigation bank or preparation/submittal of a habitat mitigation and monitoring plan for on- or off-site mitigation. The mitigation plan would demonstrate how impacts to aquatic resources within Project site would be fully mitigated.

Project compliance with the Porter-Cologne Act is required; thus, coordination with RWQCB would occur.
Consultations with the applicable Regulatory Agency may result in the need to acquire the following permits and regulatory approvals:

- **CVRWQCB Waste Discharge Requirements**: An Individual Order for Waste Discharge Permit from the CVRWQCB would be required for Project activities impacted wetlands or waters of the State, which are not also under USACE jurisdiction (i.e., "isolated waters").

5.5.2 Significance Statement

With the implementation of the Project's proposed avoidance and minimization measures, as well as compliance with State and Federal regulations, the Project would not have a substantial adverse effect on state or federally protected wetlands.



Source: ESRI ArcGIS Online Basemap - World Imagery Hybrid (10/2022)

BARGAS Environmental Consulting

Initial Phase
Project Site
Biological Study Area

Potentially Jurisdictional Aquatic Resources
Non-Wetland - Waters of the State
Wetland - Waters of the State

Vegetation Communities and Land Cover Types
Cattail Marsh and Wetland
Cultivated/Landscaped
Deciduous Orchard
Disturbed/Developed
Wild Oat and Annual Brome Grassland

Figure 8 Initial Phase and Program-level Impacts
Pacific Gateway Specific Plan Project

Map Created: 1/30/2025, Bargas Project Number: 1644-22

5.6 Project Effects on Wildlife Movement and Nursery Sites

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project would *interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?*

5.6.1 Summary of Effects

The Project site is not known to be an established wildlife corridor or wildlife nursery site. The site is identified by the SJMSCP as part of the *Southwest/Central Transition Zone* which recognizes that species in the Southwest Zone may use portions of the Central Zone for foraging or transit, particularly San Joaquin kit fox. A known wildlife movement corridor lies about 0.65 miles northwest of the northwest corner of the Project site (Huber 2006). No known wildlife movement corridors overlap the Project site. Given the proximity of the Project site to a known wildlife movement corridor, it is possible wildlife may use the Project site for transit; however, such activity is presumably limited and unlikely given the agricultural operations and practices at the site. Overall, the site is not considered to substantially facilitate wildlife movement. The Project would not substantially interfere with connectivity between blocks of habitat and would not block or substantially interfere with a local or regional wildlife corridor or linkage.

The proposed development site plan includes passive outdoor open spaces including a network of pedestrian and bicycle trails, a university campus, and a public park. These open spaces could provide use of the Project site as a wildlife transit corridor for San Joaquin kit fox and other ambulatory species. As per section 5.5.3(C) of the SJMSCP, stepping stone refugia for San Joaquin kit foxes would be provided for projects located between the Delta Mendota Canal and the California Aqueduct so that kit foxes may traverse between the northern Corral-Lower San Joaquin Wildlife Corridor within the Southwest/Central transition zone to the southern Corral-Lower San Joaquin Wildlife Corridor within the Southwest zone where the Southwest Zone Preserve area is located. To implement this requirement, the Project plans to provide native grassland and shrubland habitat along the southern and northeastern edges of the Project site adjacent to the California Aqueduct and Delta Mendota Canal, respectively, that support San Joaquin kit foxes. Overall, the Project is not expected to impede wildlife movement.

With respect to nursery sites, the current agricultural use of the Project site as commercial orchards may provide suitable nesting habitat for birds, particularly common passerines. A decrease in commercial orchards may change nesting habits of birds in the surrounding area, but sufficient landscape trees may be available as nesting habitat after the implementation of this Project. Tall trees for nesting habitat to accommodate raptors are limited on-site, however, manmade structures such as utility poles may provide suitable nesting habitat. Additionally, due to the limited amount of tall trees, there is no suitable nesting substrate for large colonial nursery nesters such as great blue heron or great egret. The Project would be required to comply with the MBTA and California Fish and Game Code to protect nesting bird species. The following avoidance and minimization measures shall be implemented prior to site disturbance to avoid impacts to nesting raptors and other birds in the Project site or immediately adjacent areas.

- A nesting bird survey shall be conducted within the Project site (raptors and non-raptors) and a 500-foot buffer (raptors only) as feasible prior to commencing with earth-moving or construction work for each phase of the project, if this work would begin during the typical nesting season (between February 1 and August 31).
- If nesting birds are identified during the surveys, a qualified biologist will determine an appropriate disturbance-free buffer zone (between 100 and 500 feet) depending on the species as described in

Subsections 5.2.4.16 through 5.2.4.22 in the SJMSCP. Buffer zones should be clearly demarcated in the field for avoidance by construction activities.

- The size of an established buffer may be altered if a qualified biologist conducts behavioral observations and determines the nesting birds are well acclimated to disturbance. If this occurs, the biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting birds. If the buffer is reduced, the qualified biologist shall remain on site to monitor the behavior of the nesting birds during construction in order to ensure that the reduced buffer does not result in take of eggs or nestlings.
- No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified biologist that the young have fledged (are no longer dependent on the nest or the adults for feeding) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 31. This date may be earlier or later and shall be determined by a qualified biologist. If a qualified biologist is not hired to monitor the nesting raptors, then the full buffer(s) shall be maintained in place from February 1 to August 31. The buffer may be removed, and work may proceed as otherwise planned within the buffer on September 1.

5.6.2 Significance Statement

Implementation of the Project may result in some temporary disturbance to local wildlife from construction noise; however, implementation of the Project would have a less than significant impact on wildlife movement, including nesting birds.

5.7 Project Effects on Local Policies or Ordinances Protecting Biological Resources

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project would *conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

5.7.1 Summary of Effects

The Project would not conflict with any local policies or ordinances protecting biological resources. San Joaquin County has one ordinance pertaining the protection of biological resources and is applicable to the Project; the County General Plan requirements on Development of Unincorporated Lands.

Development of Unincorporated Land: The San Joaquin County General Plan ensures that development projects in unincorporated areas align with the County's long-term vision for sustainable land use and resource management. Compliance with this ordinance requires the Project to demonstrate consistency with the General Plan's adopted goals and policies. Adherence to these regulations demonstrates the Applicant's commitment to preserving local natural resources. The Applicant would comply with San Joaquin County General Plan by working with the County to ensure the Project is approved by San Joaquin County and is consistent with the adopted General Plan.

5.7.2 Significance Statement

The project would not conflict with any County policies or ordinances; no impact would occur.

5.8 Project Effects on the Provisions of an Adopted Habitat Conservation Plan

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project *would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?*

5.8.1 Summary of Effects

The Initial Phase of the Project would have direct impacts to approximately 249.33 acres of land within the boundaries of the SJMSCP and is therefore subject to the provisions of the SJMSCP. Through adherence to these provisions, the Project aligns with the SJMSCP's goals to offset impacts focused on listed and non-listed species, agricultural land, and other open space resources. To demonstrate consistency with the provisions of the SJMSCP, appropriate avoidance, minimization, or mitigation measures consistent with the goals of the SJMSCP are incorporated into the Project, which are outlined below.

- Per Section 5.2.2 of the SJMSCP, pre-construction surveys are required to verify vegetation types affected by the project and to determine if SJMSCP-covered Species are present. Such surveys were conducted by Bargas as part of preparing this Assessment. Additionally, SJMSCP Section 5.2.2 states that following survey results, appropriate Incidental Take Minimization Measures may be developed and required as conditions of project approval. Results of the surveys as well as discussions in Section 5.3 of this Assessment concluded that five SJMSCP-covered species have at least moderate potential for occurrence within the Project site, due to the presence of suitable habitat. As a result, species-specific Avoidance and Minimization measures are proposed for the Project, which are detailed by each species in Section 5.3.1.
- Although burrowing owls are not expected to occur at the Project site, ground squirrel burrows were observed, which may provide potential to support burrowing owl. To ensure impacts to this species are avoided, and to demonstrate consistency with the SJMSCP, the following efforts shall be employed. Within 14-days prior to any of Project activities on-site, a single pre-construction clearance survey for burrowing owl should be conducted within the Project work areas and surrounding 300-foot buffer, as accessible and as feasible, to confirm absence or presence of burrowing owl. The survey shall be conducted by a qualified biologist with experience in surveying for burrowing owl, including identification of burrowing owl sign and burrowing owl individuals. Furthermore, Subsection 5.2.4.15 of the SJMSCP provides guidelines for avoiding impacts and protecting burrowing owl, which would be implemented for the Project as applicable. These guidelines state that burrowing owls may be discouraged from entering a potential construction site by preventing ground squirrels from creating these burrows. This can be achieved through planting or maintaining vegetation entirely covering the site at a height of approximately 36" above the ground, discing or plowing the entire project site to destroy any burrows, and removing ground squirrels. Per the current guidance from CDFW regarding how to proceed if active burrows are located within and around 150 meters of the work area (CDFW 2024), Project activities conducted during the breeding (February 1 through August 31) and non-breeding seasons should delineate a 150-meter protective buffer with high-visibility material around occupied burrow and burrow complexes until the completion of the project when the delineation material can be removed. Furthermore, any burrowing owl observed within the Project site or within 150 meters adjacent to the site shall be allowed to leave on their own and any Project activities that could result in harm will cease until the owl has left the work area (CDFW 2024). The designated biologist shall locate the burrow or burrow complex and delineate using high-visibility material, as previously described, until work in the area has ceased. A designated biologist shall be present during all Project activities if active burrowing owl complexes are observed within 150 meters of the work area to conduct biological monitoring as prescribed

by CDFW (CDFW 2024) and determine if burrowing owl behavior is affected during construction activities. The designated biologist shall have the authority to cease construction activities if burrowing owl are being negatively affected by the work and shall consult with CDFW to determine proper protocols before work activities may recommence. All active burrowing owl complexes shall be avoided unless the burrow location or ground disturbing work pose a risk to individual burrowing owls. However, if burrowing owl complexes are located within an area of temporary disturbance and are not active at the time of work (as determined by the designated biologist), CDFW shall be consulted and an approved exclusion object may be inserted into the entrance of the burrow to ensure burrowing owls do not occupy potential burrows within the Project site. If burrowing owls are found present on-site or within 150 meters of Project activities, and such activities would result in direct impacts to occupied habitat or burrowing owl individuals (as determined by the designated project biologist), CDFW shall be notified immediately to discuss whether an Incidental Take Permit (ITP) would be required prior to work. Any measures or recommendations prescribed by CDFW to avoid and minimize impacts to burrowing owl shall be required.

- The Project is also consistent with the SJMSCP regarding measures to protect San Joaquin kit fox even though the species is Not Expected to occur within the Project site. Because the site is located within the Southwest/Central Transition Zone, pre-construction surveys for San Joaquin kit fox shall be conducted prior to any ground-disturbing work. Specifically, subsection 5.2.4.25 of the SJMSCP states that pre-construction surveys for San Joaquin kit fox and/or their dens should be conducted by a qualified biologist between two calendar weeks to thirty calendar days prior to any ground-disturbing activities. If individual kit foxes are observed during the survey, then an additional protocol level survey will be conducted as outlined in the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* protocol dated January 2011 (USFWS 2011). Additionally, if dens with openings of a diameter of four inches and that open within two feet inside of the den are observed within the Project site then a biologist will dust the opening of the den for three calendar days to determine if the den is occupied. If is discovered that the den is occupied by a single adult kit fox then the den may be destroyed as soon as the fox either moves or leaves the den, whereas if the den is discovered to be a natal den, then a 250-foot buffer shall be maintained around the den until it is determined to be vacant by a qualified biologist. Implementation of a pre-construction survey for San Joaquin kit fox would be required as part of the Project implementation; thus, demonstrating consistency with the SJMSCP. Furthermore, Section 5.5.3(C) of the SJMSCP prescribes that projects located between the Delta Mendota Canal and the California Aqueduct shall provide 2.5 acre stepping stone refugia for San Joaquin kit foxes at 0.5-mile intervals. This requirement put forth by the SJMSCP is designed to aid foxes in traversing between the Corral-Lower San Joaquin Wildlife Corridor that terminates approximately 0.65 miles north of the Project site in the Southwest/Central Transition Zone and begins again approximately 3.85 miles southwest of the Project site within the Southwest Zone. The Project site plan proposes to provide several intermittent corridors of native grassland and shrubland habitat (averaging approximately 5,223 feet length) in the northeastern boundary of the site as well as nearly the entire length of the southern boundaries of the Project development. These habitat corridors are intentionally incorporated into the Project, along the outer extents of the site plan, adjacent to the California Aqueduct and Delta Mendota Canal, respectively, to serve as San Joaquin kit fox habitat refugia as they traverse between the Southwest/Central Transition Zone and Southwest Zone wildlife corridors. Thereby, demonstrating compliance with the SJMSCP regarding San Joaquin kit fox.

Additionally, the Project must establish concurrence with the SJMSCP Technical Advisory Committee (TAC) and Permitting Agencies that all potential suitable habitat for SJMSCP Covered Species will be fully avoided pursuant to Section 5.5.9 of the SJMSCP. Should concurrence be established, pre-construction surveys may be waived and further Avoidance and Minimization measures would not be required. Additionally, to compensate for the loss of habitat of the SJMSCP Covered Species, several Mitigation Measures may be required by the County for the Project, consistent with the SJMSCP:

- Pay the appropriate fee, in this case, $750 per acre for Conversion of Multi-Purpose Open Space Lands; or
- Establish Preserves, enhanced by the Joint Powers Authority (JPA), upon which SJMSCP Covered Species rely, through the purchase of easements from landowners willing to sell urban development rights; or
- Purchase approved mitigation bank credits as specified in Section 5.3.2.4. D. of the SJMSCP.
- Propose an alternative mitigation plan, consistent with the goals of the SJMSCP and equivalent in biological value to options above, subject to approval by the JPA with the concurrence of the Permitting Agencies' representatives on the TAC.

5.8.2 Significance Statement

The Project would result in development within the SJMSCP. The SJMSCP has an overall goal of creating a multi-species conservation program to mitigate impacts to covered species that may result from development in San Joaquin County. Accordingly, appropriate avoidance, minimization, or mitigation measures that are consistent with the goals of the SJMSCP, including covered-species condition requirements, would be implemented for the Project. Thus, implementation of the Project would not conflict with the adopted SJMSCP and Project impacts would be less than significant.

6 Literature Cited

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7 Appendix A. Floral & Faunal Compendia

Bargas has documented the presence of 48 plant taxa and 25 wildlife taxa. Taxa are presented in taxonomic order.

7.1.1 Plants

Common Name	Scientific Name	Family	Major Clade	Native/Non-Native
Cattail	*Typha domingensis*	Typhaceae	Monocots	Native
Common Sunflower	*Helianthus annuus*	Asteraceae	Eudicots	Native
Bristly Ox-Tongue	*Helminthotheca echioides*	Asteraceae	Eudicots	Non-native
Perennial Pepperweed	*Lepidium latifolium*	Brassicaceae	Eudicots	Non-native
Tumbleweed	*Amaranthus albus*	Amaranthaceae	Eudicots	Non-native
Lamb's Quarters	*Chenopodium album*	Chenopodiaceae	Eudicots	Non-native
Turkey-Mullein	*Croton setiger*	Euphorbiaceae	Eudicots	Native
Little Mallow	*Malva parviflora*	Malvaceae	Eudicots	Non-native
Common Devil's Claw	*Proboscidea louisianica subsp. louisianica*	Martyniaceae	Eudicots	Non-native
Mule Fat	*Baccharis salicifolia subsp. salicifolia*	Asteraceae	Eudicots	Native
Desert Almond	*Prunus fasciculata*	Rosaceae	Eudicots	Native
Peach	*Prunus persica*	Rosaceae	Eudicots	Non-native
Narrow-Leaved Willow	*Salix exigua var. exigua*	Salicaceae	Eudicots	Native
Tree Tobacco	*Nicotiana glauca*	Solanaceae	Eudicots	Non-native
American Black Nightshade	*Solanum americanum*	Solanaceae	Eudicots	Native
Yellow Star-Thistle	*Centaurea solstitialis*	Asteraceae	Eudicots	Non-native
Tall Flatsedge	*Cyperus eragrostis*	Cyperaceae	Monocots	Native
False Nutsedge	*Cyperus strigosus*	Cyperaceae	Monocots	Native
Wild Oat	*Avena fatua*	Poaceae	Monocots	Non-native
Rescue Grass	*Bromus catharticus*	Poaceae	Monocots	Non-native
Jungle Rice	*Echinochloa colona*	Poaceae	Monocots	Non-native
Barnyard Grass, Japanese Millet, Watergrass	*Echinochloa crus-galli*	Poaceae	Monocots	Non-native
Wall Barley	*Hordeum murinum*	Poaceae	Monocots	Non-native

Common Name	Scientific Name	Family	Major Clade	Native/Non-Native
Bull Thistle	*Cirsium vulgare*	Asteraceae	Eudicots	Non-native
Rough Blue Grass	*Poa trivialis*	Poaceae	Monocots	Non-native
Shortpod mustard	*Hirschfeldia incana*	Brassicaceae	Eudicots	Non-native
Prickly pear sp.	*Opuntia sp.*	Cactaceae	Eudicots	Native
Salsola sp.	*Salsola sp.*	Chenopodiaceae	Eudicots	Non-native
Horseweed	*Erigeron canadensis*	Asteraceae	Eudicots	Native
Pacific Willow	*Salix lasiandra var. lasiandra*	Salicaceae	Eudicots	Native
Alamo or Fremont Cottonwood	*Populus fremontii* subsp. *fremontii*	Salicaceae	Eudicots	Native
Purpleoiser Willow	*Salix purpurea*	Salicaceae	Eudicots	Non-native
California Bay	*Umbellularia californica*	Lauraceae	Magnoliid	Native
Bindweed, Orchard Morning Glory	*Convolvulus arvensis*	Convolvulaceae	Eudicots	Non-native
Saltcedar	*Tamarix ramosissima*	Tamaricaceae	Eudicots	Non-native
Common cocklebur	*Xanthium orientale*	Asteraceae	Eudicot	Native
Eastern annual saltmarsh aster	*Symphyotrichum subulatum*	Asteraceae	Eudicot	Native
Velvetleaf	*Abutilon theophrasti*	Malvaceae	Eudicot	Non-native
Bog yellowcress	*Rorippa palustris*	Brassicaceae	Eudicot	Native
Alkali heliotrope	*Heliotropium curassavicum var. oculatum*	Heliotropiaceae	Eudicot	Native
Tree Tobacco	*Nicotiana glauca*	Solanaceae	Eudicot	Non-native
Wild Radish	*Raphanus raphanistrum*	Brassicaceae	Eudicot	Non-native
Milk Thistle	*Silybum marianum*	Asteraceae	Eudicots	Non-native
Stinkwort	*Dittrichia graveolens*	Asteraceae	Eudicot	Non-native
Willow Herb	*Epilobium brachycarpum*	Onagraceae	Eudicot	Native
Wild Rhubarb	*Rumex hymenosepalus*	Polygonaceae	Eudicot	Native
Dwarf Mallow	*Malva neglecta*	Malvaceae	Eudicot	Non-native
California Dodder	*Cuscuta californica*	Convolvulaceae	Eudicot	Native

7.1.2 Wildlife

Common Name	Scientific Name	Family	Native/Non-Native
Rock Pigeon	*Columba livia*	Columbidae (Pigeons and Doves)	Non-native
Mourning Dove	*Zenaida macroura*	Columbidae (Pigeons and Doves)	Native
Red-shouldered Hawk	*Buteo lineatus*	Accipitridae (Hawks, Kites, Eagles, and Allies)	Native
California Scrub-Jay	*Aphelocoma californica*	Corvidae (Crows and Jays)	Native
Common Raven	*Corvus corax*	Corvidae (Crows and Jays)	Native
Northern Mockingbird	*Mimus polyglottos*	Mimidae (Mockingbirds and Thrashers)	Native
Song Sparrow	*Melospiza melodia*	Passerellidae (New World Sparrows)	Native
Red-winged Blackbird	*Agelaius phoeniceus*	Icteridae (Blackbirds)	Native
Black-tailed Jackrabbit	*Lepus californicus*	Leporidae (Hares and Rabbits)	Native
Coyote	*Canis latrans*	Canidae	Native
Swainson's Hawk	*Buteo swainsoni*	Accipitridae (Hawks, Kites, Eagles, and Allies)	Native
White-tailed Kite	*Elanus leucurus*	Accipitridae (Hawks, Kites, Eagles, and Allies)	Native
White-crowned Sparrow	*Zonotrichia leucophrys*	Passerellidae (New World Sparrows)	Native
California Gull	*Larus californicus*	Laridae (Gulls, Terns, and Skimmers)	Native
Black Phoebe	*Sayornis nigricans*	Tyrannidae (Tyrant Flycatchers)	Native
House Finch	*Haemorhous mexicanus*	Fringillidae (Fringilline and Cardueline Finches and Allies)	Native
Northern Mockingbird	*Mimus polyglottos*	Mimidae (Mockingbirds and Thrashers)	Native
Townsend’s Warbler	*Setophaga townsendi*	Parulidae (New World Warblers)	Native
Turkey Vulture	*Cathartes aura*	Cathartidae (New World Vultures)	Native
Eurasian Colored-Dove	*Streptopelia decaocto*	Columbidae (Pigeons and Doves)	Non-native
Double-crested Cormorant	*Phalacrocorax auritus*	Phalacrocoracidae (Cormorants and Shags)	Native
California Scrub Jay	*Aphelocoma californica*	Corvidae (Crows and Jays)	Native
Brewer's Blackbird	*Euphagus cyanocephalus*	Icteridae (Blackbirds)	Native

Common Name	Scientific Name	Family	Native/Non-Native
American Kestrel	*Falco sparverius*	Falconidae (Caracaras and Falcons)	Native
American Pipit	*Anthus rubescens*	Motacillidae (Wagtails and Pipits)	Native

8 Appendix B. Special-Status Biological Resource Summary

The research conducted for this report included a desktop review of numerous resource databases in order to determine a list of special-status biological resources, including 7 plant taxa and 44 wildlife taxa to be analyzed for potential occurrence. Table column definitions:

- **Common Name:** The most widely-accepted English common name for the taxon.
- **Scientific Name:** The most widely-accepted scientific name for the taxon.
- **Source(s):** The desktop review source(s) that contained this taxon.
- **Sensitivity Status:** The legal protected status of the taxon. These terms are described in detail in the Methods section of this report.
- **Habitat:** The quality of the habitat on the Project site for supporting the taxon. Classification of habitats is described in detail in the Methods section of this report.
- **Soils:** The suitability of soils on the Project site to support the taxon, if known. Classification of soils is described in detail in the Methods section of this report.
- **Potential:** The potential for the taxon to be found on the Project site. Ranking of potential is described in detail in the Methods section of this report.

8.1.1 Plants

Common Name	Scientific Name	Source(s)	Sensitivity Status	Habitat	Soils	Potential
Big Tarplant	*Blepharizonia plumosa*	CNDDB, CNPS	CRPR 1B.1	Low Quality	Unknown	Not Expected
Slough Thistle	*Cirsium crassicaule*	CNPS, SJMSCP	CRPR 1B.1	Not Present	No	Presumed Absent
Mt. Hamilton Coreopsis	*Leptosyne hamiltonii*	CNPS, SJMSCP	CRPR 1B.2	Not Present	Unknown	Presumed Absent
Showy Golden Madia	*Madia radiata*	CNDDB, CNPS, SJMSCP	CRPR 1B.1	Not Present	Unknown	Presumed Absent
Large-flowered Fiddleneck	*Amsinckia grandiflora*	CNDDB, CNPS, IPaC	FE, CE, CRPR 1B.1	Not Present	Unknown	Presumed Absent
Diamond-petaled California Poppy	*Eschsholzia rhombipetala*	CNPS	CRPR 1B.1	Low Quality	Unknown	Not Expected
Lemmon's jewelflower	*Caulanthus lemmonii*	CNDDB	CRPR 1B.2	Not Present	Unknown	Presumed Absent

8.1.2 Wildlife

Common Name	Scientific Name	Source(s)	Sensitivity Status	Habitat	Potential
Vernal Pool Fairy Shrimp	*Branchinecta lynchi*	IPaC, SJMSCP	FT	Not Present	Presumed Absent
Vernal Pool Tadpole Shrimp	*Lepidurus packardi*	IPaC, SJMSCP	FE	Not Present	Presumed Absent
Valley Elderberry Longhorn Beetle	*Desmocerus californicus dimorphus*	IPaC; SJMSCP	FT	Not Present	Presumed Absent

Common Name	Scientific Name	Source(s)	Sensitivity Status	Habitat	Potential
Monarch - California Overwintering Population	*Danaus plexippus pop. 1*	IPaC	FC	Low Quality	Not Expected
California Red-legged Frog	*Rana draytonii*	IPaC, SJMSCP	FT, SCC	Not Present	Presumed Absent
Western Spadefoot toad	*Spea hammondii*	CNDDB, SJMSCP	SSC	Not Present	Presumed Absent
California Tiger Salamander	*Ambystoma californiense*	CNDDB; IPaC, SJMSCP	FE, CE	Not Present	Presumed Absent
California Glossy Snake	*Arizona elegans occidentalis*	CNDDB	SSC	Low Quality	Not Expected
San Joaquin Coachwhip	*Coluber flagellum ruddocki*	CNDDB, SJMSCP	SSC	Low Quality	Not Expected
Northwestern Pond Turtle	*Actinemys marmorata*	CNDDB, IPaC, SJMSCP	SSC	Not Present	Presumed Absent
Yellow-billed Cuckoo	*Coccyzus americanus*	IPaC, SJMSCP	SJMSCP Covered Species	Not Present	Presumed Absent
Long-billed Curlew	*Numenius americanus*	SJMSCP	SJMSCP Covered Species	Not Present	Presumed Absent
Great Blue Heron	*Ardea herodias*	SJMSCP	SJMSCP Covered Species	Low Quality	Not Expected
Great Egret	*Ardea alba*	SJMSCP	SJMSCP Covered Species	Low Quality	Not Expected
California Condor	*Gymnogyps californianus*	IPaC	FE, CE, FP	Not Present	Presumed Absent
Osprey	*Pandion haliaetus*	SJMSCP	SJMSCP Covered Species	Not Present	Presumed Absent
Northern Harrier	*Circus hudsonius*	SJMSCP	SSC	Medium Quality	Moderate
Sharp-shinned Hawk	*Accipiter striatus*	SJMSCP	SJMSCP Covered Species	Low Quality	Not Expected
Cooper's Hawk	*Accipiter cooperii*	SJMSCP	SJMSCP Covered Species	Low Quality	Not Expected
Swainson's Hawk	*Buteo swainsoni*	CNDDB; SJMSCP	CT, SJMSCP Covered Species	Medium Quality	Present
Burrowing Owl	*Athene cunicularia*	CNDDB; SJMSCP	CCE	Low Quality	Not Expected
Merlin	*Falco columbarius*	SJMSCP	SJMSCP Covered Species	Not Present	Presumed Absent
Least Bell's Vireo	*Vireo bellii pusillus*	CNDDB	FE, CE	Not Present	Presumed Absent
Horned Lark	*Eremophila alpestris*	SJMSCP	SJMSCP Covered Species	Not Present	Presumed Absent
Yellow-breasted Chat	*Icteria virens*	SJMSCP	SSC	Low Quality	Not Expected
Tricolored Blackbird	*Agelaius tricolor*	CNDDB; SJMSCP	CT, SSC	Low Quality	Not Expected
Yuma Myotis	*Myotis yumanensis*	SJMSCP	SJMSCP Covered Species	Not Present	Presumed Absent
Western Red Bat	*Lasiurus blossevillii*	SJMSCP	SSC	Not Present	Presumed Absent
Eastern Red Bat	*Lasiurus borealis*	SJMSCP	SJMSCP Covered Species	Not Present	Presumed Absent

Common Name	Scientific Name	Source(s)	Sensitivity Status	Habitat	Potential
Riparian Brush Rabbit	*Sylvilagus bachmani riparius*	IPaC, SJMSCP	FE, CE	Not Present	Presumed Absent
Riparian Woodrat	*Neotoma fuscipes riparia*	IPaC, SJMSCP	FE, SSC	Not Present	Presumed Absent
San Joaquin Kit Fox	*Vulpes macrotis mutica*	CNDDB; IPaC; SJMSCP	FE, CE	Low Quality	Not Expected
Ringtail	*Bassariscus astutus*	SJMSCP	SJMSCP Covered Species	Not Present	Presumed Absent
American Badger	*Taxidea taxus*	CNDDB; SJMSCP	SSC	Low Quality	Not Expected
Yellow warbler	*Dendroica petechia brewsteri*	SJMSCP	SSC, SJMSCP Covered Species	Not Present	Presumed Absent
White-tailed Kite	*Elanus leucurus*	SJMSCP	FP, SJMSCP Covered Species	Medium Quality	Present
Loggerhead shrike	*Lanius ludovicianus*	SJMSCP, CNDDB	SSC, SJMSCP Covered Species	Not Present	Presumed Absent
Black-crowned night heron	*Nycticorax nycticorax*	SJMSCP	SJMSCP Covered Species	Not Present	Presumed Absent
Song Sparrow (Modesto Population)	*Melospiza melodia*	CNDDB	SSC	Medium Quality	Present
Townsend's big-eared bat	*Corynorhinus townsendii*	CNDDB	SSC	Low Quality	Not Expected
Pallid bat	*Antrozous pallidus*	CNDDB	SSC	Low Quality	Not Expected
Western mastiff bat	*Eumops perotis californicus*	CNDDB	SSC	Low Quality	Not Expected
Coast horned lizard	*Phrynosoma blainvillii*	CNDDB	SSC	Not Present	Presumed Absent
Crotch's bumblebee	*Bombus crotchii*	CNDDB	CE, SSC	Medium Quality	Moderate

Appendix C. Site Photographs

Photo 1. Potentially jurisdictional Marsh 8, containing tall flatsedge, turkey-mullein, stinkwort, and flax leaved horseweed; looking west.

Photo 2. Agricultural ditch with banks containing curly dock, stinkwort, milk thistle, yellow star thistle, and flax-leaved horseweed between orchard and vineyards; looking north.

Photo 3. Potentially jurisdictional Marsh 10 near an orchard containing pacific willow, narrowleaf willow, purple willow, and stinkwort; looking southwest.

Photo 4. Heavily disturbed potentially jurisdictional Agricultural Detention Basin 3 used for storage south of the Delta Mendota Canal; looking west.

Photo 5. Potentially jurisdictional Marsh 9 containing cattail species with a box culvert; looking southwest.

Photo 6. Valley grassland north of Vernalis Road at the southwestern end of the project site; looking north.

Photo 7. Potentially jurisdictional Marsh 6 containing California dodder surrounded by orchards, facing west.

Photo 8. Heavily disturbed Marsh 3 without vegetation and containing debris, surrounded by disturbed lands and orchards.