APPENDIX C

Biological Resources Assessment

Biological Resources Assessment for the Merced UC Villages Project

Merced County, California

Prepared For:

City of Merced

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
°F	Degrees Fahrenheit
AMSL	Above Mean Sea Level
BCC	Birds of Conservation Concern
BRA	Biological Resources Assessment
BSA	Biological Study Area
CDFW	California Department of Fish and Wildlife

Term	Definition
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Ranks
CWA	Clean Water Act
ECORP	ECORP Consulting, Inc.
ESA	Endangered Species Act
HCP	Habitat Conservation Plan
HM	Habitat Management
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MCV	*Manual of California Vegetation Online*
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WL	Watch List

1.0 INTRODUCTION

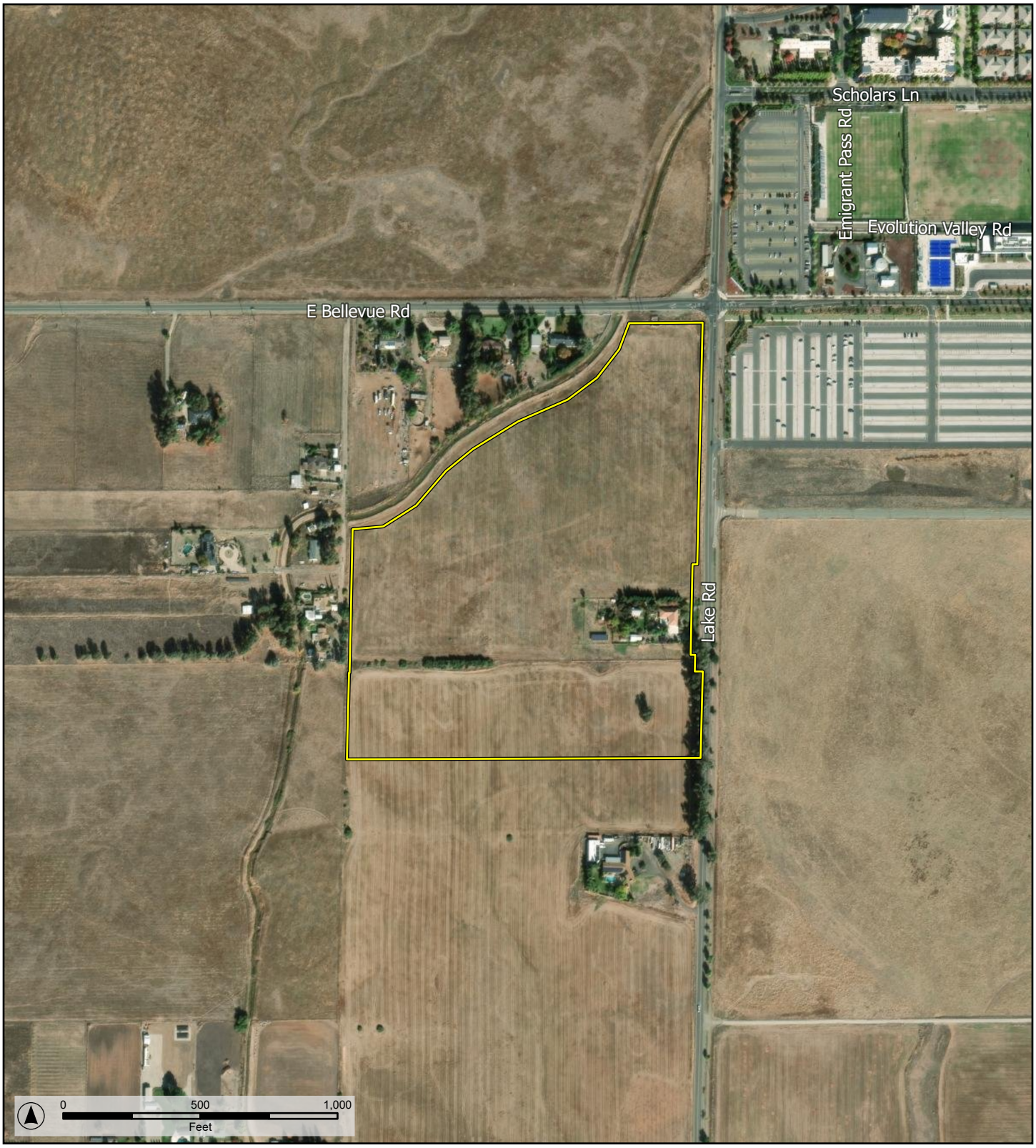
ECORP Consulting, Inc. (ECORP) has conducted a Biological Resources Assessment (BRA) at the request of the City of Merced, for the proposed UC Villages Project (Project) located in Merced County, California. The results of this assessment will support environmental review of the Project in accordance with the California Environmental Quality Act (CEQA) and provide the basis for identifying appropriate measures to lessen or avoid significant impacts to biological resources.

1.1 Project Location and Description

The Project is located at the southwestern quadrant of the Bellevue Road and Lake Road intersection (Figure 1). The Project Area is currently composed of undeveloped pasture/farmland and a rural residence.

1.2 Biological Study Area

The Biological Study Area (BSA) includes all areas where Project-related activities may result in impacts to biological resources. The 35.86-acre BSA corresponds to a portion of Sections 3 and 4, Township 07 South, and Range 14 East (Mount Diablo Base and Meridian) of the "Merced, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1961, photorevised 1987). The approximate center of the BSA is located at latitude 37.358425° and longitude -120.43438° (NAD83) within the Middle San Joaquin-Lower Chowchilla watershed (Hydrological Unit Code 18040001, Natural Resources Conservation Service [NRCS] et al., 2016).



Legend

Study Area - 35.86 ac.

UC VILLAGES

Figure 1. Project Location and Vicinity

Sources: USGS Roads Database; Merced County GIS; MAXAR Imagery 11/23/2023.
Map date: May 21, 2024.

1.3 Purpose of this Biological Resources Assessment

The purpose of this BRA is to document existing biological resources in the BSA and assess the potential for occurrence of special-status plant and animal species or their habitats, and sensitive or protected resources such as migratory birds, sensitive natural communities, riparian habitat, oak woodlands, and potential Waters of the U.S. or state, including wetlands, within the BSA. This assessment does not include determinate field surveys conducted according to agency-promulgated protocols. The conclusions and recommendations presented in this report are based upon a review of available literature and the results of site reconnaissance field surveys.

For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under Section 15380 of the CEQA Guidelines;
- are identified as a Species of Special Concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- are birds identified as Birds of Conservation Concern (BCC) by the U.S. Fish and Wildlife Service (USFWS);
- are plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California," "rare, threatened, or endangered in California but more common elsewhere," "more information needed, review list,: or "limited distribution, watch list" (California Rare Plant Ranks [CRPR] 1, 2, 3, and 4);
- are plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, Sections 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

2.0 REGULATORY SETTING

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The federal ESA protects plants and animals that are listed as endangered or threatened by the USFWS or the National Marine Fisheries Service (NMFS). Section 9 of the ESA prohibits the taking of listed wildlife, where take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, the ESA prohibits removing or possessing any listed plant on federal land, maliciously damaging or destroying any listed plant in any area, or removing, cutting, digging up, damaging, or destroying any such species in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its designated Critical Habitat. Through consultation and the issuance of a Biological Opinion, the USFWS may issue an incidental take statement allowing take of a listed species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a Habitat Conservation Plan (HCP) is developed.

2.1.2 Critical Habitat

Critical Habitat is defined in Section 3 of ESA as:

1. the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and
2. specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features that are essential to the conservation of the species. Critical habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (i.e., areas on which the primary constituent elements are found). Primary constituent elements are the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include, but are not limited to, the following:

- Space for individual and population growth and for normal behavior;
- Food, water, air, light, minerals, or other nutritional or physiological requirements;
- Cover or shelter;

- Sites for breeding, reproduction, or rearing (or development) of offspring; and
- Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.

Excluded essential habitat is defined as areas that were found to be essential habitat for the survival of a species and assumed to contain at least one of the primary constituent elements for the species but were excluded from the Critical Habitat designation. The USFWS has stated that any action within the excluded essential habitat that triggers a federal nexus will be required to undergo the Section 7(a)(1) process, and the species covered under the specific critical habitat designation would be afforded protection under Section 7(a)(2) of ESA.

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The protections of the MBTA extend to disturbances that result in abandonment of a nest with eggs or young. The USFWS may issue permits to qualified applicants as authorized by the MBTA for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits.

2.1.4 Federal Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas:

> …that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3 7b).

The U.S. Environmental Protection Agency also has authority over wetlands and may override a USACE permit.

Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

2.2 State or Local Regulations

2.2.1 California Fish and Game Code

2.2.1.1 California Endangered Species Act

The California ESA (California Fish and Game Code Sections 2050-2116) generally parallels the main provisions of the federal ESA, but unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called *candidates* by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. *Take* is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Section 2081 allows CDFW to authorize incidental take permits if species-specific minimization and avoidance measures are incorporated to fully mitigate the impacts of the project.

2.2.1.2 Fully Protected Species

The State of California first began to designate species as *fully protected* prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the state and/or federal ESAs. Previously, the regulations that implement the Fully Protected Species Statute (California Fish and Game Code Sections 4700 for mammals, 3511 for birds, 5050 for reptiles and amphibians, and 5515 for fish) provided that fully protected species may not be taken or possessed at any time. However, on July 10, 2023, Senate Bill 147 was signed into law, authorizing CDFW to issue take permits under the California ESA for fully protected species for qualifying projects through 2033. Qualifying projects include:

- a maintenance, repair, or improvement project to the State Water Project, including existing infrastructure, undertaken by the Department of Water Resources;
- a maintenance, repair, or improvement project to critical regional or local water agency infrastructure;
- a transportation project, including any associated habitat connectivity and wildlife crossing project, undertaken by a state, regional, or local agency, that does not increase highway or street capacity for automobile or truck travel;
- a wind project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the State to a point of junction with any California based balancing authority; or

- a solar photovoltaic project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the State to a point of junction with any California-based balancing authority.

CDFW may also issue licenses or permits for take of these species for necessary scientific research or live capture and relocation, and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

2.2.1.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW and provided in California Fish and Game Code Sections 1900-1913. The Fish and Wildlife Commission has the authority to designate native plants as *endangered* or *rare* and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code Sections 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.1.4 Special Protections for Birds

Sections 3503, 3513, and 3800 of the California Fish and Game Code specifically protect birds. Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 prohibits the take, possession, or destruction of any birds in the orders Strigiformes (owls) or Falconiformes (hawks and eagles), as well as their nests and eggs. Section 3513 prohibits the take or possession of any migratory nongame bird as designated in the MBTA. Section 3800 states that, with limited exceptions, it is unlawful to take any nongame bird, defined as all birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds. These provisions, along with the federal MBTA, serve to protect all nongame birds and their nests and eggs, except as otherwise provided in the code.

2.2.1.5 Lake or Streambed Alteration Agreements

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The notification must incorporate proposed measures to protect affected fish and wildlife resources. CDFW may suggest additional protective measures during their review. A Lake or Streambed Alteration Agreement (LSAA) is the final proposal mutually agreed upon by CDFW and the applicant. Projects that require an LSAA often also require a permit from the USACE under Section 404 of the CWA. The conditions of the Section 404 permit and the LSAA frequently overlap in these instances.

2.2.2 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction

Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb 1 or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB also regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code 13260(a)). Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

2.2.3 California Environmental Quality Act

Per CEQA Guidelines Section 15380, a species not protected on a federal or state list may be considered rare or endangered if the species meets certain specified criteria. These criteria follow the definitions in the federal and California ESAs, and Sections 1900-1913 of the California Fish and Game Code, which deal with rare or endangered plants or animals. Section 15380 was included in the CEQA Guidelines primarily to deal with situations where a project under review may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW.

2.2.3.1 CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (i.e., rare, threatened, or endangered) species are considered significant. Assessment of *impact significance* to populations of non-listed species (e.g., SSC) usually considers the proportion of the species' range that will be affected by a project, impacts to habitat, and the regional and population level effects.

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Pursuant to Appendix G, impacts to biological resources would normally be considered significant if 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, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on federally protected Waters of the U.S. including wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;

- interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA because although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis.

2.2.3.2 Species of Special Concern

Species of Special Concern (SSC) are defined by the CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the ESA, the California ESA or the California Fish and Game Code, but currently satisfy one or more of the following criteria:

- The species has been completely extirpated from the State or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not State) threatened or endangered, and meets the state definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status.
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

SSC are typically associated with threatened habitats. Projects that result in substantial impacts to SSC may be considered significant under CEQA.

2.2.3.3 USFWS Bird of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the USFWS "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA." To meet this requirement, the USFWS published a list of BCC (USFWS 2021) for the U.S. The list identifies the migratory and nonmigratory bird species

(beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

2.2.3.4 California Rare Plant Ranks

The CNPS maintains the *Rare Plant Inventory* (CNPS 2024a), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, or low populations. Plant species meeting one of these criteria are assigned to one of six CRPRs. The rank system was developed in collaboration with government, academic, non-governmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

- Rare Plant Rank 1A – presumed extirpated in California and either rare or extinct elsewhere
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere
- Rare Plant Rank 2A – presumed extirpated in California, but more common elsewhere
- Rare Plant Rank 2B – rare, threatened, or endangered in California but more common elsewhere
- Rare Plant Rank 3 – a review list of plants about which more information is needed
- Rare Plant Rank 4 – a watch list of plants of limited distribution

Additionally, the CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 0.1 through 0.3, with 0.1 being the most threatened and 0.3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat)
- Threat Rank 0.2 – Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; and differences in Threat Ranks do not constitute additional or different protection (CNPS 2024a). Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, 2A, or 2B are typically considered significant under CEQA Guidelines Section 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 3 or 4.

2.2.3.5 Sensitive Natural Communities

Sensitive natural communities are vegetation communities that are imperiled or vulnerable to environmental effects of projects. CDFW maintains the California Natural Community List (CDFW 2022), which provides a list of vegetation alliances, associations, and special stands as defined in *A Manual of California Vegetation Online* (MCV; CNPS 2024b), along with their respective state and global rarity ranks, if applicable. Natural communities with a state rarity rank of S1, S2, or S3 are considered sensitive natural communities. Depending on the policy of the lead agency, impacts to sensitive natural communities may be considered significant under CEQA.

2.2.3.6 Wildlife Movement Corridors and Nursery Sites

Impacts to wildlife movement corridors or nursery sites may be considered significant under CEQA. As part of the California Essential Habitat Connectivity Project, CDFW and California Department of Transportation maintain data on Essential Habitat Connectivity areas. This data is available in the CNDDB. The goal of this project is to map large intact habitat or natural landscapes and potential linkages that could provide corridors for wildlife. In urban settings, riparian vegetated stream corridors can also serve as wildlife movement corridors. Nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries and mule deer critical fawning areas. These data are available through CDFW's Biogeographic Information and Observation System database or as occurrence records in the CNDDB and are supplemented with the results of the field reconnaissance.

2.2.4 Merced Vision 2030 General Plan

As set forth in state law, the Open Space, Conservation, and Recreation Chapter of the Merced Vision 2030 General Plan establishes goals, policies and actions that relate to the preservation of open space and the conservation of resources. The following goals and policies may be pertinent to Project development:

Goal Area OS-1 – Open Space for the Preservation of Natural Resources.

Goals:

- *Maintenance of Merced's Biological Resources*

  Policies:

  - *OS-1.1 – Identify and mitigate impacts to wildlife habitats which support rare, endangered, or threatened species.*

2.2.5 2030 Merced County General Plan

The following Merced County General Plan goal and policies address protection, preservation, and enhancement of biological resources that may be pertinent for Project development.

Goal NR-1 – Preserve and protect, through coordination with the public and private sectors, the biological resources of the County.

Policy NR-1.2 – Protected Natural Lands-Identify and support methods to increase the acreage of protected natural lands and special habitats, including but not limited to, wetlands, grasslands, and vernal pools, potentially through the use of conservation easements.

Policy NR-1.4 – Important Vegetative Resources Protection-Minimize the removal of vegetative resources which stabilize slopes, reduce surface water runoff, erosion, and sedimentation.

Policy NR-1.15 – Urban Forest Protection and Expansion-Protect existing trees and encourage the planting of new trees in existing communities. Adopt an Oak Woodland Ordinance that requires trees larger than a specific diameter that are removed to accommodate development be replaced at a set ratio.

Policy NR-1.17 – Agency Coordination-Coordinate with private, local, state and Federal agencies to assist in the protection of biological resources and prevention of degradation, encroachment, or loss of resources managed by these agencies.

3.0 METHODS

3.1 Literature Review

ECORP biologists performed a review of existing available information for the BSA. Literature sources included current and historical aerial imagery, previous biological studies conducted for the area, topographic mapping, soil survey mapping available from the NRCS *Web Soil Survey*, USFWS National Wetlands Inventory (NWI) mapping, USFWS Critical Habitat Mapper, NMFS Essential Fish Habitat Mapper, and other relevant literature as cited throughout this document. ECORP reviewed the following resources to identify special-status plant and wildlife species that have been documented in or near the BSA:

- CDFW's CNDDB data for the "Merced, California" 7.5-minute quadrangle and the surrounding eight quadrangles (CDFW 2024);
- CNPS Rare Plant Inventory data for the "Merced, California" 7.5-minute quadrangle and the surrounding eight quadrangles (CNPS 2024a);
- USFWS Information for Planning and Consultation (IPaC) Resource Report List for the BSA (USFWS 2024); and
- NMFS Resources data for the "Merced, California" 7.5-minute quadrangle (National Oceanic and Atmospheric Administration [NOAA] 2022).

The results of the database queries are provided in Appendix A. Each special-status species identified in the literature review is evaluated for its potential to occur in the BSA in Section 4 based on available information concerning species habitat requirements and distribution, occurrence data, and the findings of the site reconnaissance.

3.2 Site Reconnaissance

ECORP senior biologist Keith Kwan conducted the site reconnaissance visit on May 13, 2024. The biologist visually assessed the BSA while walking meandering transects through all portions of the site, using binoculars to scan inaccessible areas. The biologist(s) collected the following biological resource information:

- Characteristics and approximate boundaries of vegetation communities and other land cover types
- Plant and animal species or their sign directly observed
- Incidental observations of special habitat features such as burrows, active raptor nests, potential bat roost sites

The biologists qualitatively assessed and mapped vegetation communities based on dominant plant composition. Vegetation community classification was based on the classification systems presented in the MCV, paying special attention to identifying those portions of the BSA with the potential to support special-status species or sensitive habitats. Data were recorded on a Global Positioning System unit, field notebooks, and/or maps. Photographs were taken during the survey to provide visual representation of the conditions within the BSA.

4.0 RESULTS

4.1 Site Characteristics and Land Use

The BSA is located on gently rolling terrain in a rural area adjacent to the University of California, Merced (UC Merced) campus. The BSA is situated at an elevational range of approximately 210 to 250 feet above mean sea level (AMSL) in the San Joaquin Valley subregion of the Great Central Valley region of the California floristic province (Jepson eFlora 2023). The average winter temperature is 47.6 degrees Fahrenheit (˚F) and the average summer temperature is 77˚F; the average annual precipitation is approximately 11.80 inches at the Merced Airport station, which is approximately 7 miles west of the BSA (NOAA 2024a).

The BSA is currently made up of undeveloped farmland/pasture and a rural residence. The farmland/pasture was fallow at the time of the site reconnaissance but appears to be periodically planted and harvested for hay crops. The rural residence includes a residential unit with associated outbuildings and fenced enclosures. There is one vegetation community present with the BSA, non-native annual grassland, and one land cover type, rural residential. Vegetation communities and plant species composition are described in further detail below.

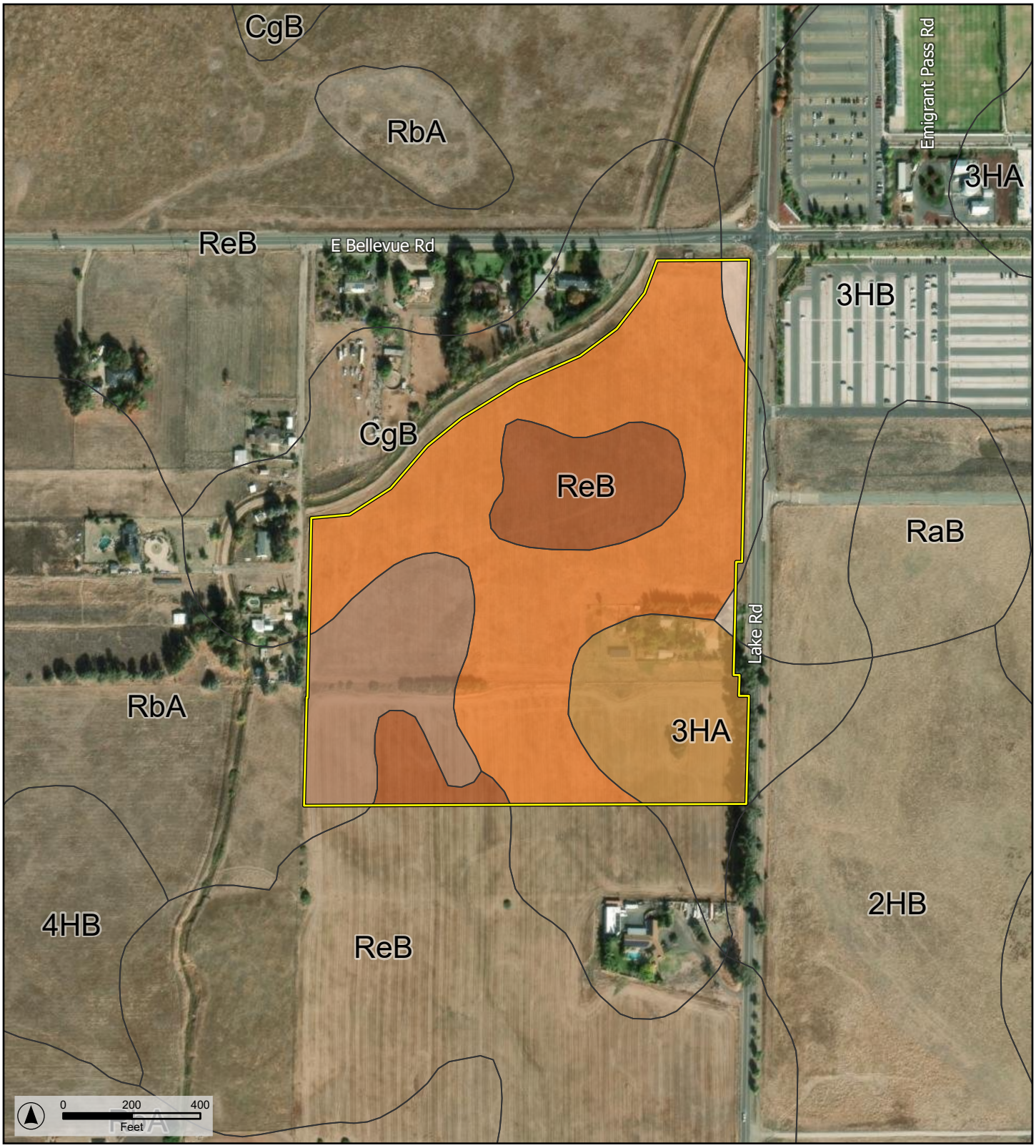
Land uses and land cover types surrounding the BSA include undeveloped grassland, rural residences, and the UC Merced campus.

Representative photographs of the BSA are provided in Appendix B.

4.2 Soils and Geology

ECORP staff obtained soil survey mapping for the BSA from the NRCS *Web Soil Survey* accessed on May 2024 (Figure 2).

Table 1 provides an overview of the soil series mapped within the BSA and key features of the soil series, such as hydric rating or presence of serpentine or gabbroic soil material.



Legend

Study Area - 35.86 ac.

NRCS Soil Types Within Study Area

- 3HA - Hopeton clay loam, 0 to 3 percent slopes
- 3HB - Hopeton clay loam, 3 to 8 percent slopes
- CgB - Corning gravelly loam, 0 to 8 percent slopes
- RbA - Raynor cobbly clay, 0 to 3 percent slopes
- ReB - Redding gravelly loam, 0 to 8 percent slopes, dry

UC VILLAGES

Figure 2. Natural Resources Conservation Service Soils

Sources: USDA NRCS SSURGO 2019; USGS Roads Database; Merced County GIS; MAXAR Imagery 11/23/2023.
Map date: May 22, 2024.

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Table 1. Soil Series Mapped in the BSA			
Map unit symbol	**Map unit name**	**Description**	**Hydric Soil Rating**
3HA	Hopeton clay loam, 0 to 3 percent slopes	Alluvium	No
3HB	Hopeton clay loam, 3 to 8 percent slopes	Alluvium	No
CgB	Corning gravelly loam, 0 to 8 percent slopes	Gravelly alluvium derived from igneous, metamorphic and sedimentary rock	No
RbA	Raynor cobbly clay, 0 to 3 percent slopes	Residuum weathered from sedimentary rock	No
ReB	Redding gravelly loam, 0 to 8 percent slopes, dry	Loamy alluvium derived from igneous, metamorphic and sedimentary rock over clayey alluvium derived from igneous, metamorphic and sedimentary rock over cemented alluvium derived from igneous, metamorphic and sedimentary rock	No

Note: BSA = Biological Study Area

4.3 Vegetation Communities and Land Cover Types

The following sections describe vegetation communities and land cover types within the BSA as observed during the site reconnaissance. A list of plants observed onsite can be found in Appendix C. The approximate extent of vegetation communities and land cover types are depicted in Figure 3.

4.3.1 Non-Native Annual Grassland

The non-native annual grassland community is found throughout the BSA. This vegetation community has been farmed recently as evidenced by plow signatures on Google Earth© aerial photographs. The grassland onsite is dominated by nonnative annual grasses and forbs including wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), Italian ryegrass (*Festuca perennis*), filaree (*Erodium botrys*), prickly lettuce (*Lactuca serriola*), and field bindweed (*Convolvulus arvensis*). The grassland is bordered along a portion of Lake Road by blue gum (*Eucalyptus globulus*) trees, and a row of olive (*Olea europaea*) trees are found along a fence separating fields.

The annual grassland onsite can be characterized as the *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance (CNPS 2024a). Semi-natural alliances are strongly dominated by nonnative plants that have become naturalized in the State, do not have state rarity rankings, and are not considered sensitive natural communities.

Legend

Study Area - 35.86 ac.

Vegetation Communities and Land Cover Types

Annual Grassland (Farmed) - 33.55 ac.

Disturbed/Developed - 2.31 ac.

UC VILLAGES

Figure 3. Vegetation Communities and Land Cover Types

Sources: USGS Roads Database; Merced County GIS; MAXAR Imagery 11/23/2023.
Map date: May 22, 2024.

4.3.2 Disturbed/Developed

The disturbed or developed land cover type is associated with the rural residence within the BSA and is composed of a residential unit, associated outbuildings, landscaped grounds, hardscape surfaces, solar panels, and fenced animal enclosures. Scattered non-native and cultivar trees are scattered around the rural residence, including blue gum. Other areas classified as disturbed or developed are either devoid of vegetation or dominated by nonnative ruderal weedy plants species, including wild oats, Italian ryegrass, Italian thistle (*Carduus pycnocephalus*), prickly lettuce, and ripgut brome.

4.4 Aquatic Resources

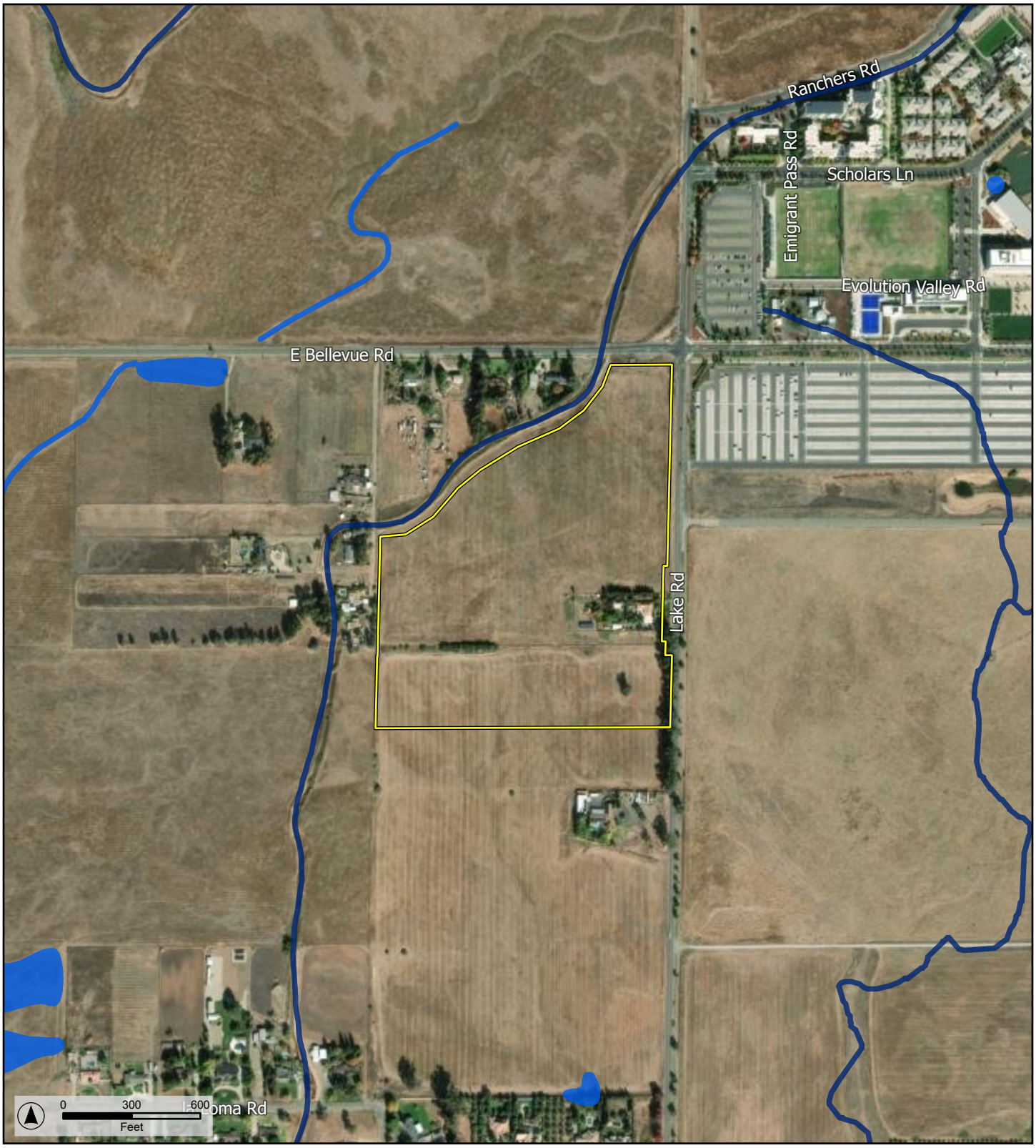
No aquatic features, such as wetlands or other waters, were found onsite during the site reconnaissance and none were previously mapped on the NWI within the BSA (Figure 4).

Waters of the U.S. were previously delineated within the BSA and conditionally authorized for fill in 2007 (USACE Regulatory #200600815, formerly 200000496). The BSA appears to have been farmed extensively since that time according to historical aerial photographs available on Google Earth©.

Note that the NWI inventory mapping is based on data prepared from the analysis of high-altitude imagery in conjunction with collateral data sources and field work. A margin of error is inherent in the use of imagery; thus, on-the-ground inspection of any particular site is needed to confirm wetland boundaries and classifications.

4.5 Wildlife

Wildlife species observed during the site reconnaissance visit included species typical for the vegetation community and land cover types present in the BSA. A list of wildlife species observed in the BSA is provided in Appendix D. The vegetation communities in the BSA provide habitat for a variety of wildlife species, particularly for nesting birds. Birds observed onsite during the site reconnaissance field visit included Eurasian collared-doves (*Streptopelia decaocto*), mourning dove, western kingbird (*Tyrannus verticalis*), northern mockingbird (*Mimus polyglottos*), house sparrow (*Passer domesticus*), and great-tailed grackle (*Quiscalus mexicanus*), among others. Two special-status birds, Swainson's hawk (*Buteo swainsoni*) and Bullock's oriole (*Icterus bullockii*) were observed. The Swainson's hawk was observed soaring over the BSA, and the Bullock's oriole was heard from within the row of trees along Lake Road near the rural residence. California ground squirrels (*Otospermophilus beecheyi*) and burrows were observed throughout the BSA but were generally near the Yosemite Lateral Canal along the northwestern boundary of the BSA.



Legend

Study Area - 35.86 ac.

NWI Types

Freshwater Emergent Wetland

Riverine

UC VILLAGES

Figure 4. National Wetlands Inventory

Sources: USFWS NWI May 2022; USGS Roads Database; Merced County GIS; MAXAR Imagery 11/23/2023.
Map date: May 21, 2024.

4.6 Special-Status Species

Table 2 presents the list of special-status plant and animal species identified through the literature review. For each species, the table provides the listing status, a brief description of habitat requirements and/or species ecology, a determination of the potential to occur within the BSA, and the rationale for that determination. The potential for each species to occur onsite was assessed using the following criteria:

- **Present** – Species was observed during the site visit or is known to occur within the BSA based on recent documented occurrences within the CNDDB or other literature.
- **Potential to Occur** – Suitable habitat (including soils and elevation requirements) occurs in the BSA and the species is known or expected to occur in the Project vicinity based on available data sources or professional knowledge/experience.
- **Low Potential to Occur** – Marginal or limited amounts of habitat occur or the species is not known to occur in the vicinity of the Project based on CNDDB records and other available information.
- **Absent** – No suitable habitat (including soils and elevation requirements) or the species is not known to occur within the vicinity of the Project based on CNDDB records and other documentation.

Following the table is a brief discussion of the plants and animals that are state or federally listed, candidates for listing, or proposed for listing and have potential to occur in the BSA.

Table 2. Special–Status Species

Common Name *(Scientific Name)*	Status			Habitat Description/ Species Ecology	Potential to Occur Onsite
	ESA	CESA/ NPPA	Other		
Plants					
Henderson's bent grass *(Agrostis hendersonii)*	–	–	3.2	Vernal pools and mesic areas in valley and foothill grasslands. Elevation: 230'–1,000' Bloom Period: April–June	Presumed Absent. There are 3 CNDDB occurrences within 5 miles of the Project Area; however. there is no suitable habitat onsite.
Heartscale *(Atriplex cordulata* var. *cordulata)*	–	–	1B.2	Alkaline or saline valley and foothill grasslands, meadows and seeps, and chenopod scrub communities. Elevation: 0'–1,835' Bloom Period: April–October	Presumed Absent. There is no suitable habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Lesser saltscale *(Atriplex minuscula)*	–	–	1B.1	Alkaline, sandy soils in chenopod scrub, playas, and valley and foothill grassland. Elevation: 50'–655' Bloom Period: May–October	Presumed Absent. There is no suitable habitat onsite.
Vernal pool smallscale *(Atriplex persistens)*	–	–	1B.2	Alkaline vernal pools. Elevation: 35'–375' Bloom Period: June–October	Presumed Absent. There is no suitable habitat onsite.
Subtle orache (*Atriplex subtilis*)	–	–	1B.2	Alkaline valley and foothill grasslands. Elevation: 130'–330' Bloom Period: June–September	Presumed Absent. There is no suitable habitat onsite.
Watershield *(Brasenia schreberi)*	–	–	2B.3	Freshwater marshes and swamps. Elevation: 100'–7,220' Bloom Period: June–September	Presumed Absent. There is 1 CNDDB occurrence within 5 miles of the Project Area; however, there is no suitable habitat onsite.
Hoover's calycadenia *(Calycadenia hooveri)*	–	–	1B.3	Rocky soils in cismontane woodland and valley and foothill grassland. Elevation: 215'–985' Bloom Period: July–September	Low Potential to Occur. The cobbly soil onsite provides marginally suitable habitat.
Succulent owl's clover *(Castilleja campestris* ssp. *succulenta)*	FT	CE	1B.2	Vernal pools, often in acidic environments. Elevation: 165'–2,460' Bloom Period: April–May	Presumed Absent. There are 20 CNDDB occurrences within 5 miles of the Project Area; however, there is no suitable habitat onsite.
Parry's rough tarplant *(Centromadia parryi* ssp. *rudis)*	–	–	4.2	Alkaline, vernally mesic areas, and seeps in valley and foothill grassland and vernal pools, sometimes found on roadsides. Elevation: 0'–330' Bloom Period: May–October	Presumed Absent. There is no suitable habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Beaked clarkia *(Clarkia rostrata)*	–	–	1B.3	Cismontane woodland and valley and foothill grassland. Elevation: 195'–1,640' Bloom Period: April–May	Low Potential to Occur. The non-native grassland onsite provides marginally suitable habitat.
Small-flowering morning-glory *(Convolvulus simulans)*	–	–	4.2	Clay, serpentine seeps within chaparral, coastal scrub, and valley and foothill grassland. Elevation: 100'–2,430' Bloom Period: March–July	Presumed Absent. There is no suitable habitat onsite.
Ewan's larkspur *(Delphinium hansenii* ssp. *ewanianum)*	–	–	4.2	Rocky soils in cismontane woodland, and valley and foothill grassland. Elevation: 195'–1,970' Bloom Period: March–May	Low Potential to Occur. The cobbly soil onsite provides marginally suitable habitat.
Recurved larkspur *(Delphinium recurvatum)*	–	–	1B.2	Alkaline habitats within chenopod scrub, cismontane woodland, and valley and foothill grasslands. Elevation: 10'–2,590' Bloom Period: March–June	Presumed Absent. There is no suitable habitat onsite.
Dwarf downingia *(Downingia pusilla)*	–	–	2B.2	Mesic areas in valley and foothill grassland, and vernal pools. Species has also been found in disturbed areas such as tire ruts and scraped depressions (CDFW 2024). Elevation: 5'–1,460' Bloom Period: March–May	Presumed Absent. There are 2 CNDDB occurrences within 5 miles of the Project Area; however, there is no suitable habitat onsite.
Delta button-celery *(Eryngium racemosum)*	–	CE	1B.1	Vernally mesic clay depressions in riparian scrub communities. Elevation: 10'–100' Bloom Period: June–October	Presumed Absent. There is no suitable habitat onsite.
Spiny-sepaled button-celery *(Eryngium spinosepalum)*	–	–	1B.2	Swales, roadside ditches (Preston et al. 2023), vernal pools and valley and foothill grassland. Elevation: 260'–3,200' Bloom Period: April–June	Presumed Absent. There are 5 CNDDB occurrences within 5 miles of the Project Area; however, there is no suitable habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Stinkbells *(Fritillaria agrestis)*	–	–	4.2	Clay and sometimes serpentine soils in chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland. Elevation: 35'–5,100' Bloom Period: March–June	Low Potential to Occur. The non-native grassland onsite provides marginally suitable habitat.
Boggs Lake hedge-hyssop *(Gratiola heterosepala)*	–	CE	1B.2	Clay substrates of marshes and swamps (lake margins) and vernal pools. Elevation: 35'–7,790' Bloom Period: April–August	Presumed Absent. There is no suitable habitat onsite.
Hogwallow starfish *(Hesperevax caulescens)*	–	–	4.2	Mesic areas with clay soil within valley and foothill grassland, shallow vernal pools, and sometimes alkaline areas. Elevation: 0'–1,655' Bloom Period: March–June	Presumed Absent. There is no suitable habitat onsite.
Forked hare-leaf *(Lagophylla dichotoma)*	–	–	1B.1	Cismontane woodland or valley and foothill grassland. Elevation: 150'–1,100' Bloom Period: April–May	Low Potential to Occur. There is 1 CNDDB occurrence within 5 miles of the Project Area. The non-native grassland onsite provides marginally suitable habitat.
Alkali-sink goldfields (*Lasthenia chrysantha*)	–	–	1B.1	Alkaline vernal pools. Elevation: 0'–655' Bloom Period: February–April	Presumed Absent. There is no suitable habitat onsite.
Lassics lupine (*Lupinus constancei*)	FE	CE	1B.1	Lower montane coniferous forest (serpentinite). Elevation: 4,920'-6,560' Bloom Period: July	Presumed Absent. There is no suitable habitat onsite and the Project Area is outside of the known elevation range for this species.
Pincushion navarretia *(Navarretia myersii* ssp. *myersii)*	–	–	1B.1	Often acidic soils in vernal pools. Elevation: 65'–1,085' Bloom Period: April–May	Presumed Absent. There is no suitable habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Shining navarretia *(Navarretia nigelliformis* ssp. *radians)*	–	–	1B.2	Vernal pools within cismontane woodland and valley or foothill grassland. Elevation: 215'–3,280' Bloom Period: April–July	Presumed Absent. There are 23 CNDDB occurrences withing 5 miles of the Project Area; however, there is no suitable habitat onsite.
Colusa grass *(Neostapfia colusana)*	FT	CE	1B.1	Large vernal pools with adobe soils. Elevation: 15'–655' Bloom Period: May–August	Presumed Absent. There are 16 CNDDB occurrences withing 5 miles of the Project Area; however, there is no suitable habitat onsite.
San Joaquin Valley Orcutt grass *(Orcuttia inaequalis)*	FT	CE	1B.1	Vernal pools. Elevation: 35'–2,475' Bloom Period: April–September	Presumed Absent. There are 8 CNDDB occurrences withing 5 miles of the Project Area; however, there is no suitable habitat onsite
Hairy Orcutt grass *(Orcuttia pilosa)*	FE	CE	1B.1	Vernal pools. Elevation: 150'–655' Bloom Period: May–September	Presumed Absent. There is 1 CNDDB occurrence withing 5 miles of the Project Area; however, there is no suitable habitat onsite.
Merced phacelia *(Phacelia ciliata* var. *opaca)*	–	–	3.2	Valley or foothill grassland containing clay soils and sometimes on alkaline soils. Elevation: 195'–490' Bloom Period: February–May	Low Potential to Occur. There are 3 CNDDB occurrences within 5 miles of the Project Area. The non-native grassland onsite provides marginally suitable habitat.
Hartweg's golden sunburst *(Pseudobahia bahiifolia)*	FE	CE	1B.1	Clay, often acidic soils in cismontane woodland, valley and foothill grasslands. Elevation: 50'–490' Bloom Period: March–April	Low Potential to Occur. The non-native grassland onsite provides marginally suitable habitat.
California alkali grass (*Puccinellia simplex*)	–	–	1B.2	Alkaline, vernally mesic areas and sinks, flats and lake margins in chenopod scrub, meadows and seeps, valley and foothill grassland, and vernal pools. Elevation: 5'–3,050' Bloom Period: March–May	Presumed Absent. There is no suitable habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Sanford's arrowhead *(Sagittaria sanfordii)*	–	–	1B.2	Shallow marshes and freshwater swamps. Elevation: 0'–2,135' Bloom Period: May–October	Presumed Absent. There are 2 CNDDB occurrences within 5 miles of the Project Area; however, there is no suitable habitat onsite.
Keck's checkerbloom *(Sidalcea keckii)*	FE	–	1B.1	Serpentine and clay soils within cismontane woodland and valley and foothill grasslands. Elevation: 245'–2,135' Bloom Period: April–May	Low Potential to Occur. There are 2 CNDDB occurrences within 5 miles of the Project Area. The non-native grassland onsite provides marginally suitable habitat.
Greene's tuctoria *(Tuctoria greenei)*	FE	CR	1B.1	Vernal pools. Elevation: 100'–3,510' Bloom Period: May–July	Presumed Absent. There is no suitable habitat onsite.
Invertebrates					
Crotch bumble bee *(Bombus crotchii)*	–	CC	–	Primarily nests underground in open grassland and scrub habitats from the California coast east to the Sierra Cascade and south to Mexico. Survey Period: March-September	Low potential. The farmed/annual grasslands in the BSA provide marginally suitable nesting, overwintering, and/or foraging habitat for this species.
Conservancy fairy shrimp (*Branchinecta conservatio)*	FE	–	–	Vernal pools/wetlands. Survey Period: November-April when surface water is present.	Presumed Absent. There is no suitable habitat onsite.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	–	–	Vernal pools/wetlands. Survey Period: November–April when surface water is present.	Presumed Absent. There is no suitable habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Monarch butterfly (*Danaus plexippus*)	FC	–	–	Overwinters along coastal California in wind-protected groves of eucalyptus, Monterey pine and cypress with nearby nectar and water sources; disperses in spring throughout California. Adults breed and lay eggs during the spring and summer, feeding on a variety of nectar sources; eggs are laid exclusively on milkweed plants.	Presumed Absent. There is no suitable habitat onsite.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	–	–	Found exclusively on its host plant, the elderberry shrub, in riparian and oak woodland/ oak savannah habitats of California's Central Valley from Shasta to Madera counties.	Presumed Absent. There is no suitable habitat onsite.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	–	–	Vernal pools/wetlands. Survey Period: November-April when surface water is present.	Presumed Absent. There is no suitable habitat onsite.
Fish					
Hardhead (*Mylopharodon conocephalus*)	–	–	SSC	Relatively undisturbed streams at low to mid elevations in the Sacramento-San Joaquin and Russian River drainages. In the San Joaquin River, scattered populations found in tributary streams, but only rarely in the valley reaches of the San Joaquin River. Survey Period: N/A	Presumed Absent. There is no suitable habitat onsite.
Steelhead (CA Central Valley DPS) (*Oncorhynchus mykiss irideus*)	FT	–	–	Fast-flowing, well-oxygenated rivers and streams below dams in the Sacramento and San Joaquin River systems. Survey Period: N/A	Presumed Absent. There is no suitable habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Amphibians					
Western spadefoot (Northern DPS) (*Spea hammondii*)	FPT	–	SSC	California endemic species of vernal pools, swales, and seasonal wetlands in grassland, scrub and woodland habitats throughout the Central Valley and South Coast Ranges. Prefers open areas with sandy or gravelly soils. Survey Period: Winter-Spring.	Low Potential to Occur. There is no aquatic breeding habitat onsite but potential upland dispersal habitat is present.
California tiger salamander (Central California DPS) (*Ambystoma californiense*)	FT	CT	WL	Breeds in vernal pools and seasonal wetlands in grassland or oak woodland habitats; adults are terrestrial using underground refuges such as ground squirrel or gopher burrows. Central Valley and Inner Coast Range. Survey Period: Winter-Spring.	Low Potential to Occur. There is no aquatic breeding habitat onsite but potential upland dispersal habitat is present.
Reptiles					
Northwestern pond turtle (*Actinemys marmorata*)	FPT	–	SSC	Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches. Survey Period: April-September	Low potential to occur. The Yosemite Lateral Canal provides marginally suitable aquatic habitat and the BSA provides potential upland habitat.
Blunt-nosed leopard lizard (*Gambelia silus*)	FE	CE	CFP	Occurs in sparsely vegetated alkali scrub habitats in the southern San Joaquin Valley. Uses mammal burrows, shrubs and other structures for shade. Survey Period: April - July	Presumed Absent. There is no suitable habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Giant garter snake (*Thamnophis gigas*)	FT	CT	–	Freshwater ditches, sloughs, and marshes in the Central Valley. Almost extirpated from the southern parts of its range. Survey Period: April-October	Presumed Absent. The BSA is located outside of the current geographical range of this species.
Birds					
Western grebe *(Aechmophorus occidentalis)*	–	–	BCC	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Nests on freshwater lakes and marshes with open water bordered by emergent vegetation. Nesting: June-August	Presumed Absent. There is no suitable nesting habitat onsite.
Clark's grebe *(Aechmophorus clarkii)*	–	–	BCC	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Breeds on freshwater to brackish marshes, lakes, reservoirs and ponds, with a preference for large stretches of open water fringed with emergent vegetation. Nesting: June-August	Presumed Absent. There is no suitable nesting habitat onsite.
Mountain plover (*Charadrius montanus*)	–	–	BCC, SSC	Breeds in the Great Plains/Midwestern US; winters in California, Arizona, Texas, and Mexico; wintering habitat in California includes tilled fields, heavily grazed open grassland, burned fields, and alfalfa fields. Wintering: September-March	Presumed Absent. There is no suitable wintering habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Short-billed Dowitcher *(Limnodromus griseus)*	–	–	BCC	Nests in Canada, southern Alaska; winters in coastal California south to South America; wintering habitat includes coastal mudflats and brackish lagoons. Migrant/Wintering: late-August-May	Presumed Absent. There is no suitable habitat onsite.
California gull (nesting colony) *(Larus californicus)*	–	–	BCC, CDFW WL	Nesting occurs in the Great Basin, Great Plains, Mono Lake, and south San Francisco Bay. Breeding colonies located on islands on natural lakes, rivers, or reservoirs. Winters along Pacific Coast from southern British Columbia south to Baja California and Mexico. In California, winters along coast and inland (Central Valley, Salton Sea). Nesting: April-August	Presumed Absent. There is no suitable nesting habitat onsite.
White-tailed kite (*Elanus leucurus*)	–	–	CFP	Nesting occurs within trees in low elevation grassland, agricultural, wetland, oak woodland, riparian, savannah, and urban habitats. Nesting: March-August	Potential to Occur. There is potentially suitable nesting habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Golden eagle (*Aquila chrysaetos*)	–	–	CFP, CDFW WL	Nesting habitat includes mountainous canyon land, rimrock terrain of open desert and grasslands, riparian, oak woodland/ savannah, and chaparral. Nesting occurs on cliff ledges, river banks, trees, and human-made structures (e.g., windmills, platforms, and transmission towers). Breeding occurs throughout California, except the immediate coast, Central Valley floor, Salton Sea region, and the Colorado River region, where they can be found during Winter. Nesting: February-August	Presumed Absent. There is no suitable nesting habitat onsite.
Northern harrier (*Circus hudsonius*)	–	–	BCC, SSC	Nests on the ground in open wetlands, marshy meadows, wet/lightly grazed pastures, (rarely) freshwater/brackish marshes, tundra, grasslands, prairies, croplands, desert, shrub-steppe, and (rarely) riparian woodland communities. Nesting: April-September	Presumed Absent. There is no suitable nesting habitat onsite.
Cooper's hawk *(Accipiter cooperii)*	–	–	CDFW WL	Nests in trees in riparian woodlands in deciduous, mixed and evergreen forests, as well as urban landscapes. Rosenfield et al. 2020. Nesting: March-July	Potential to Occur. There is potentially suitable nesting habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Bald eagle (*Haliaeetus leucocephalus*)	De-listed	CE	CFP	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands. Nesting: February-September	Presumed Absent. There is no suitable nesting habitat onsite.
Swainson's hawk (*Buteo swainsoni*)	–	CT	–	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during disking/harvesting, irrigated pastures. Nesting: March-August	Present. There are 2 CNDDB occurrences of Swainson's hawk within 5 miles of the BSA. One Swainson's hawk was observed soaring over BSA during initial site reconnaissance visit on 5/13/24. There is potentially suitable nesting and foraging habitat onsite.
Ferruginous hawk (*Buteo regalis*)	–	–	BCC, CDFW WL	Rarely breeds in California (Lassen County); winter range includes grassland and shrubsteppe habitats from Northern California (except northeast and northwest corners) south to Mexico and east to Oklahoma, Nebraska, and Texas. Wintering: September-March	Potential to Occur. There is potentially suitable winter foraging habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Burrowing owl *(Athene cunicularia)*	–	–	BCC, SSC	Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g., prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds. Nesting: February-August	Potential to Occur. There is potentially suitable burrow habitat onsite.
Nuttall's woodpecker *(Dryobates nuttallii)*	–	–	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands. Nesting: April-July	Presumed Absent. There is no suitable nesting habitat onsite.
Merlin *(Falco columbarius)*	–	–	CDFW WL	Breeds in Oregon, Washington north into Canada. Winters in southern Canada to South America, including California. Breeds near forest openings, fragmented woodlots, and riparian areas. Wintering habitat includes wide variety, open forests, grasslands, tidal flats, plains, and urban settings. Wintering in the Central Valley: September-April; does not breed in California.	Presumed Absent. There is no suitable wintering habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Olive-sided flycatcher *(Contopus cooperi)*	–	–	SSC, BCC	Nests in montane and northern coniferous forests, in forest openings, forest edges, semiopen forest stands. In California, nests in coastal forests, Cascade and Sierra Nevada region. Winters in Central to South America. Nesting: May-August	Presumed Absent. There is no suitable nesting habitat onsite.
Yellow-billed magpie (*Pica nuttallii*)	–	–	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings. Nesting: April-June	Potential to Occur. There is potentially suitable nesting habitat onsite.
Oak titmouse (*Baeolophus inornatus*)	–	–	BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree). Nesting: March-July	Presumed Absent. There is no suitable nesting habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Lawrence's goldfinch (*Spinus lawrencei*)	–	–	BCC	Breeds in Sierra Nevada and inner Coast Range foothills surrounding the Central Valley and the southern Coast Range to Santa Barbara County east through southern California to the Mojave Desert and Colorado Desert into the Peninsular Range. Nests in arid and open woodlands with chaparral or other brushy areas, tall annual weed fields, and a water source (e.g., small stream, pond, lake), and to a lesser extent riparian woodland, coastal scrub, evergreen forests, pinyon-juniper woodland, planted conifers, and ranches or rural residences near weedy fields and water. Nesting: March-September	Presumed Absent. There is no suitable nesting habitat onsite.
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	–	CE	BCC	Resident coastally from Point Conception south into Baja California; coastal salt marsh. Year-round resident; nests March-August	Presumed Absent. There is no suitable nesting habitat onsite.
Santa Barbara song sparrow (*Melospiza melodia graminea*)	–	–	BCC	Breeding habitat includes dense shrubs and thickets of giant coreopsis (*Coreopsis gigantea*), grasslands with scattered shrubs, Artemisia-Opuntia grass associations, and dense grasslands. Resident on California Channel Islands (San Clemente, San Miguel, Santa Cruz, Santa Rosa, Anacapa) and Isla Los Coronados, Baja California.	Presumed Absent. This subspecies is endemic to the Channel Islands.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Tricolored blackbird (*Agelaius tricolor*)	–	CT	BCC, SSC	Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta counties south to San Bernardino, Riverside and San Diego counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields. Nesting: March-August	Presumed Absent. There is no suitable nesting habitat onsite.
Bullock's oriole (*Icterus bullockii*)	–	–	BCC	Breeding habitat includes riparian and oak woodlands. Nesting: March-July	Present. Observed onsite during initial site reconnaissance on 5/13/24. There is potentially suitable nesting habitat onsite.
Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)	–	–	BCC, SSC	Breeds in salt marshes of San Francisco Bay; winters San Francisco south along coast to San Diego County. Nesting: March-July	Presumed Absent. There is no suitable nesting habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
Mammals					
Pallid bat *(Antrozous pallidus)*	–	–	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns, porches, bat boxes, and human occupied as well as vacant buildings (WBWG 2024). Survey Period: April-September	Presumed Absent. There is no suitable roosting habitat onsite.
Western mastiff bat (*Eumops perotis californicus*)	–	–	SSC	Primarily a cliff-dwelling species, found in similar crevices in large boulders and buildings (WBWG 2024). Survey Period: April-September	Presumed Absent. There is no suitable roosting habitat onsite.
Western red bat (*Lasiurus frantzii*)	–	–	SSC	Roosts in foliage of trees or shrubs; day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2024). Survey Period: April-September	Low Potential to Occur. The eucalyptus trees adjacent to the Yosemite Lateral Canal provide marginally suitable roosting habitat.
American badger *(Taxidea taxus)*	–	–	SSC	Drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Survey Period: Any season	Presumed Absent. There is no suitable burrow habitat onsite.

Table 2. Special–Status Species					
Common Name *(Scientific Name)*	**Status**			**Habitat Description/ Species Ecology**	**Potential to Occur Onsite**
	ESA	**CESA/ NPPA**	**Other**		
San Joaquin kit fox *(Vulpes macrotis mutica)*	FE	CT	–	Grasslands, sagebrush scrub. Survey Period: April 15 - July 15, September 1 - December 1	Low Potential to Occur. The BSA supports marginally suitable dispersal habitat.

Status Codes:

ESA	Federal Endangered Species Act
CESA	California Endangered Species Act
FE	ESA listed, Endangered
FT	ESA listed, Threatened
FPT	Formally Proposed for ESA listing as Threatened
FC	Candidate for ESA listing as Threatened or Endangered
Fd	Formally Delisted (delisted species are monitored for 5 years)
BCC	USFWS Bird of Conservation Concern (USFWS 2021)
CE	CESA- or NPPA listed, Endangered
CT	CESA- or NPPA-listed, Threatened
CR	CESA- or NPPA-listed, Rare
CC	Candidate for CESA listing as Endangered or Threatened
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5050-reptiles/amphibians)
SSC	CDFW Species of Special Concern
CDFW WL	CDFW Watch List
1B	CRPR/Rare or Endangered in California and elsewhere
2B	CRPR/Plants rare, threatened, or endangered in California but more common elsewhere
3	CRPR/Plants About Which More Information is Needed – A Review List
4	CRPR/Plants of Limited Distribution – A Watch List
0.1	Threat Rank/Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2	Threat Rank/Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
0.3	Threat Rank/Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)
Delisted	Formally Delisted
NPPA	California Native Plant Protection Act
DPS	Distinct Population Segment
CNDDB	Species that is tracked by CDFW's CNDDB but does not have any of the above special-status designations otherwise
WBWG	Western Bat Working Group

4.6.1 Plants

The BSA supports marginally suitable habitat for seven special-status plants, including Hoover's calycadenia (*Calycadenia hooveri*), beaked clarkia (*Clarkia rostrata*), Ewan's larkspur (*Delphinium hansenii* ssp. *ewanianum*), stinkbells (*Fritillaria agrestis*), forked hare-leaf (*Lagophylla dichotoma*), Merced phacelia (*Phacelia ciliata* var. *opaca*), Hartweg's golden sunburst (*Pseudobahia bahiifolia*), and Keck's checkerbloom (*Sidalcea keckii*). The vegetation communities within the BSA are considered marginally suitable for these special-status plants due to the disturbances from historic farming onsite. Of these, two are state or

federally listed, Hartweg's golden sunburst and Keck's checkerbloom. A brief discussion of these listed plants follows.

4.6.1.1 Hartweg's Golden Sunburst

Hartweg's golden sunburst is listed as endangered pursuant to both the federal and California ESAs, and is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs on clay soils that are often acidic in cismontane woodlands, and valley and foothill grasslands. Hartweg's golden sunburst blooms from March through April and is known to occur at elevations ranging from 50 to 490 feet above AMSL. Hartweg's golden sunburst is endemic to California; the current range of this species includes Fresno, Madera, Merced, Stanislaus, Sutter, Tuolumne, and Yuba counties. This species is believed to be extirpated from Yuba County (CNPS 2024a).

There are no CNDDB occurrences of Hartweg's golden sunburst within 5 miles of the BSA (CDFW 2024a). The non-native annual grassland vegetation community within the BSA represents marginally suitable habitat for this species. Hartweg's golden sunburst has low potential to occur within the BSA.

4.6.1.2 Keck's Checkerbloom

Keck's checkerbloom is listed as endangered pursuant to the federal ESA, is not listed pursuant to the California ESA, and is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in serpentinite and clay soils in cismontane woodlands and valley and foothill grasslands. Keck's checkerbloom blooms from April through May and is known to occur at elevations ranging from 245 to 2,135 feet AMSL. Keck's checkerbloom is endemic to California; the current range of this species includes Colusa, Fresno, Glenn, Lake, Merced, Napa, Solano, Tulare, and Yolo counties. It is possibly extirpated in Colusa, Napa, Solano, and Yolo counties (CNPS 2024a).

There are two CNDDB occurrences of Keck's checkerbloom within 5 miles of the BSA (CDFW 2024a). The non-native annual grassland vegetation community within the BSA represents marginally suitable habitat for this species. Hartweg's golden sunburst has low potential to occur within the BSA.

4.6.2 Invertebrates

The BSA supports marginally suitable habitat for one special-status invertebrate species, the Crotch bumble bee (*Bombus crotchii*). The vegetation communities within the BSA are considered marginally suitable for this special-status invertebrate due to the disturbances from historic farming onsite. A brief discussion of this candidate for state listing follows.

4.6.2.1 Crotch Bumble Bee

The Crotch bumble bee is a candidate for listing as endangered under the California ESA. The historic range of the Crotch bumble bee extends from coastal areas east to the edges of the desert in central California south to Baja California del Norte, Mexico, excluding mountainous areas (Thorpe et al. 1983, Williams et al. 2014). The species was historically common throughout the southern two-thirds of its range

but is now largely absent from much of that area and is nearly extirpated from the center of its historic range, the Central Valley (Hatfield et al. 2014).

The Crotch bumble bee inhabits open grassland and scrub habitats (Williams et al. 2014). The species visits a wide variety of flowering plants, although it's very short tongue makes it best suited to forage at open flowers with short corollas (Xerces Society 2018). Plant families most commonly associated with Crotch bumble bee include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (Xerces Society 2018). The species primarily nests underground (Williams et al. 2014). Little is known about overwintering sites for the species, but bumble bees generally overwinter in soft, disturbed soils or under leaf litter or other debris (Goulson 2010, Williams et al. 2014). The flight period for Crotch bumble bee queens in California is from late February to late October, peaking in early April with a second pulse in July (Thorp et al. 1983). The flight period for workers and males is California is from late March through September with peak abundance in early July (Thorp et al. 1983).

There are no CNDDB occurrences of Crotch bumble bee within 5 miles of the BSA (CDFW 2024a). The farmed non-native annual grassland vegetation community within the BSA represents marginally suitable habitat for this species. Crotch's bumble bee has low potential to occur within the BSA.

4.6.3 Amphibians

The BSA supports marginally suitable habitat for two special-status amphibians, western spadefoot (*Spea hammondii*) and California tiger salamander (*Ambystoma californiense*). There is no aquatic breeding habitat for either of these species within the BSA, but there are known occurrences in close proximity to the BSA. The vegetation communities within the BSA are considered marginally suitable upland habitat for these special-status amphibians due to the disturbances from historic farming onsite and the presence of possible barriers to movement, including paved roadways and the canal. A brief discussion of these species follows.

4.6.3.1 Western Spadefoot

The western spadefoot is proposed to be listed as threatened pursuant to the federal ESA, is not listed pursuant to the California ESA but is designated as a CDFW SSC. Necessary habitat components of the western spadefoot include loose friable soils in which to burrow in upland habitats and nearby breeding ponds. Breeding sites include temporary rain pools, such as vernal pools and seasonal wetlands, or pools within portions of intermittent drainages (Jennings and Hayes 1994). Spadefoots spend most of their adult life within underground burrows or other suitable refugia, such as rodent burrows. In California, western spadefoot toads are known to occur from the Redding area in Shasta County southward to northwestern Baja California, at elevations below 4,475 feet (Jennings and Hayes 1994).

There is one CNDDB occurrence of western spadefoot within 5 miles of the BSA (CDFW 2024a). There is no suitable aquatic breeding habitat for this species onsite, but there is potentially suitable aquatic breeding habitat on adjacent properties to the east of the BSA. The farmed non-native annual grassland vegetation community within the BSA represents marginally suitable upland habitat for this species. Western spadefoot has low potential to occur within the BSA.

4.6.3.2 California Tiger Salamander

The Central Valley Distinct Population Segment (DPS) of California tiger salamander is listed as threatened under the federal ESA. It is most commonly associated with annual grassland habitats but may also occur within open woodland areas of low hills and valleys. The California tiger salamander occurs from Yolo County (Dunnigan area) south through the Central Valley to Kern County, and discontinuously from Santa Barbara County north through the inner coast range to Sonoma County (USFWS 2003; 2015). Necessary habitat components include extensive uplands and breeding ponds. Tiger salamanders spend most of their adult life within underground refugia, such as California ground squirrel or Botta's pocket gopher (*Thomomys bottae*) burrows. Breeding sites include vernal pools, seasonal wetlands, stock ponds, or slow-moving streams that do not support fish, although streams are rarely used for reproduction. This species may use permanent man-made ponds for reproduction if predatory species (e.g., fish, crayfish) are absent. Adult tiger salamanders, which are generally nocturnal, may migrate over long distances (up to 1.8 mile) from underground refuges to breeding ponds (USFWS 2003). Adults and post-metamorphic tiger salamanders spend most of the year underground, especially in burrows of California ground squirrels, gophers, and other small mammals, and will occasionally use manufactured structures (Shaffer et al. 1993; Stebbins 1972).

There are 22 CNDDB occurrences of California tiger salamander within 5 miles of the BSA, including two occurrences that were documented on adjacent properties to the north and east of the BSA (CDFW 2024a). There is no suitable aquatic breeding habitat for this species onsite, but there is potentially suitable aquatic breeding habitat on adjacent properties to the east of the BSA. The farmed non-native annual grassland vegetation community within the BSA represents marginally suitable upland habitat for this species. California tiger salamander has low potential to occur within the BSA.

4.6.4 Reptiles

The BSA supports marginally suitable habitat for one special-status reptile, northwestern pond turtle (*Actinemys marmorata*). There is no aquatic habitat for this species within the BSA, but the adjacent Yosemite Lateral Canal represents potentially suitable aquatic habitat and the farmed non-native annual grassland onsite represents marginally suitable upland habitat. A brief discussion of this species follows.

4.6.4.1 Northwestern Pond Turtle

The northwestern pond turtle is proposed for listing as threatened pursuant to the federal ESA and is considered an SSC by CDFW. The range of the northwestern pond turtle in California extends from the Coast Ranges on the Oregon border southward to Marin County, throughout the lower elevations and foothills of the southern Cascades and Sierra Nevada Mountains, and within the Sacramento and San Joaquin Valleys (Thomson et al. 2016). They can occur in a variety of waters including ponds, lakes, streams, reservoirs, rivers, settling ponds of wastewater treatment plants, and other permanent and ephemeral wetlands (Bury et al. 2012). However, in streams and other lotic features they generally require slack- or slow-water aquatic microhabitats (Jennings and Hayes 1994). Northwestern pond turtles also require basking areas such as logs, rocks, banks, and brush piles for thermoregulation (Bury et al. 2012). Nesting sites for pond turtles are typically located in annual grasslands adjacent to a watercourse with

little slope and hard, dry soil (Ashton et al. 1997). Nesting habitat soils typically display high clay or silt fraction, with few nests located in sandy soils. Nests are usually within 400 meters of a watercourse, with the majority being within 50 meters of the water's edge (Holland 1994).

There are no CNDDB occurrences of northwestern pond turtle within 5 miles of the BSA (CDFW 2024a). There is no suitable aquatic breeding habitat for this species onsite but the adjacent Yosemite Lateral Canal represents potentially suitable aquatic habitat and the farmed non-native annual grassland vegetation community within the BSA represents marginally suitable upland habitat for this species. Northwestern pond turtle has low potential to occur within the BSA.

4.6.5 Birds

The BSA supports potentially suitable habitat for seven special-status birds, white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), Swainson's hawk (*Buteo swainsoni*), ferruginous hawk (*Buteo regalis*), burrowing owl (*Athene cunicularia*), yellow-billed magpie (*Pica nuttallii*), and Bullock's oriole (*Icterus bullockii*). The habitats and vegetation communities within the BSA represent potentially suitable nesting and/or foraging habitat for these special-status birds. Of these potentially occurring special-status birds, only the Swainson's hawk is listed and protected under either CESA or ESA. A brief discussion of this species follows.

4.6.5.1 Swainson's Hawk

The Swainson's hawk is listed as a threatened species and is protected pursuant to the California Endangered Species Act. This species nests in North America (Canada, western U.S., and Mexico) and typically winters from South America north to Mexico. However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta (Bechard et al. 2020). In California, the nesting season for Swainson's hawk ranges from mid-March to late August.

Swainson's hawks nest in tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole (*Microtus californicus*), California ground squirrel (*Otospermophilus beecheyi*), ring-necked pheasant (*Phasianus colchicus*), many passerine birds, and grasshoppers (*Melanoplus* species). Swainson's hawks are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, discing, and irrigating (Estep 1989). The removal of vegetative cover by such farming activities results in more readily available prey items for this species.

A Swainson's hawk was observed soaring over the BSA during the site reconnaissance visit on May 13, 2024. There are two CNDDB occurrences of Swainson's hawk within 5 miles of the BSA (CDFW 2024a). An eBird report from the BSA vicinity documents a nest less than 5 miles away from 2022 with 1 fledgling (eBird 2024). The larger trees onsite represent potentially suitable nesting habitat, and the farmed non-native annual grassland vegetation community within the BSA represents suitable foraging habitat for Swainson's hawk.

4.6.6 Mammals

The BSA supports marginally suitable habitat for one listed mammal, the San Joaquin kit fox, and one non-listed special-status mammal, the western red bat (*Lasiurus frantzii*), which is considered an SSC by CDFW. The eucalyptus trees along Lake Road and adjacent to the Yosemite Lateral Canal provide marginally suitable roosting habitat for this species.

4.7 Listed Species, Critical Habitat and Essential Fish Habitat

The BSA is located within designated Critical Habitat for succulent (fleshy) owl's clover (*Castilleja campestris* ssp. *succulenta*), Colusa grass (*Neostapfia colusana*), San Joaquin Orcutt grass (*Orcuttia inaequalis*), Greene's tuctoria (*Tuctoria greenei*), Conservancy fairy shrimp (*Branchinecta conservatio*), and vernal pool fairy shrimp (*Branchinecta lynchi*). A Biological Opinion (BO) was issued by the USFWS for the "UC Villages Projects" (USFWS # 1-1-07-F-0061, USACE # 200600815) on February 2, 2007 addressing Project effects to vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, succulent owl's clover, and San Joaquin kit fox in accordance with Section 7 of the ESA. Impacts to waters of the U.S. were permitted under Nationwide Permit 39 (NWP) on March 2, 2007. The Project did not move forward at that time, but it is presumed that the wetlands onsite were filled as authorized under the BO and the NWP. Currently, the physical and biological features (or primary constituent elements) essential to the conservation of these federally listed species are not present within the BSA.

For the fleshy owl's clover, Colusa grass, San Joaquin Orcutt grass, and Greene's tuctoria these physical and biological features are:

- Topographic features characterized by isolated mound and intermound complex within a matrix of surrounding uplands that result in continuously, or intermittently, flowing surface water in the depressional features including swales connecting the pools described below, providing for dispersal and promoting hydroperiods of adequate length in the pools; and
- Depressional features including isolated vernal pools with underlying restrictive soil layers that become inundated during winter rains and that continuously hold water or whose soils are saturated for a period long enough to promote germination, flowering, and seed production of predominantly annual native wetland species and typically exclude both native and nonnative upland plant species in all but the driest years. As these features are inundated on a seasonal basis, they do not promote the development of obligate wetland vegetation habitats typical of permanently flooded emergent wetlands.

For the Conservancy fairy shrimp and vernal pool fairy shrimp, these physical and biological features are:

- Topographic features characterized by mounds and swales and depressions within a matrix of surrounding uplands that result in complexes of continuously, or intermittently, flowing surface water in the swales connecting the pools described below, providing for dispersal and promoting hydroperiods of adequate length in the pools;
- Depressional features including isolated vernal pools with underlying restrictive soil layers that become inundated during winter rains and that continuously hold water for a minimum of 19 (for

Conservancy fairy shrimp) or 18 (for vernal pool fairy shrimp) days, in all but the driest years; thereby providing adequate water for incubation, maturation, and reproduction. As these features are inundated on a seasonal basis, they do not promote the development of obligate wetland vegetation habitats typical of permanently flooded emergent wetlands;

- Sources of food, expected to be detritus occurring in the pools, contributed by overland flow from the pools' watershed, or the results of biological processes within the pools themselves, such as single-celled bacteria, algae, and dead organic matter, to provide for feeding; and
- Structure within the pools described above, consisting of organic and inorganic materials, such as living and dead plants from plant species adapted to seasonally inundated environments, rocks, and other inorganic debris that may be washed, blown, or otherwise transported into the pools, that provide shelter.

Based on the literature review, anadromous fish Essential Fish Habitat for Chinook salmon (*Oncorhynchus tshawytscha*) may be present in the "Merced, California" 7.5-minute quadrangle (NOAA 2022). However, there is no suitable anadromous fish habitat present within or adjacent to the BSA.

4.8 Wildlife Movement Corridors and Nursery Sites

The BSA has been heavily impacted by farming and is bordered by Bellevue Road and Lake Road and surrounded by rural residences and the UC Merced campus. Wildlife use is expected to be minimal onsite and the BSA is unlikely to serve as a significant wildlife movement corridor or to support nursery sites, such as deer fawning ground or waterbird rookeries, for these reasons. However, the trees onsite may provide suitable nesting habitat for a variety of common birds protected under the MBTA, special-status birds such as the state-listed Swainson's hawk, or roosting habitat for western red bat.

4.9 Protected Trees/Oak Woodlands

The trees in the BSA include a variety of non-native and planted cultivars along fence lines and around the rural residence and include olive and blue gum trees. There are no riparian or oak woodlands in the BSA.

5.0 IMPACT ASSESSMENT AND RECOMMENDATIONS

This section specifically addresses questions raised by the Biological Resources section of the Environmental Checklist Form in Appendix G of the CEQA Guidelines.

5.1 CEQA Checklist Criteria IV(a) – Special-Status Species

Would the Project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

5.1.1 Special-Status Plants

The BSA supports marginally suitable habitat for special-status plants, as identified in Table 2. No special-status plants were found during the initial reconnaissance field survey; however, protocol-level surveys have not been conducted. If a special-status plant is found onsite, Project impacts could include damage or loss of individual plants, loss of occupied habitat, and indirect impacts such as disturbance from human encroachment and changes in habitat quality due to alteration of hydrology, erosion, and transport of soil, debris, or pollutants into occupied habitat from adjacent Project areas.

The following measures are recommended to avoid or minimize potential impacts to special-status plants:

- Prior to ground-disturbing activities in the Project Area, the applicant shall perform special-status plant surveys according to CDFW, CNPS, and USFWS protocols (CDFW 2018; CNPS 2001; USFWS 2000). Surveys shall be conducted throughout all suitable habitat within the Project footprint and a 50-foot buffer, where accessible, to address potential direct and indirect impacts of the Project. Surveys shall be conducted by a qualified biologist and timed according to the identifiable period for target species (typically the blooming period). To the extent feasible, known reference populations will be visited prior to surveys to confirm target species are evident and identifiable at the time of the survey.
- If no special-status plants are found, no further measures pertaining to special-status plants are necessary.
- If special-status plants are identified onsite, the Project shall be modified to the extent feasible to prevent disturbance or loss of special-status plants. No-disturbance buffers shall be established around sensitive plant populations to be preserved in or adjacent to the Project Area. A 50-foot buffer should be maintained between project activities and sensitive plant populations, unless otherwise determined by a qualified biologist. Buffer distances may vary between species depending on listing status, rarity, and other factors. Buffer areas will be clearly demarcated in the field, and no construction or ground-disturbing activities will occur within the boundaries of the delineated area.

- If a special-status plant species is found and avoidance is not feasible, additional measures may be developed in consultation with CDFW and/or the CEQA Lead Agency. Appropriate measures should consider factors such as the listing status or rare plant rank of the species, degree of threat, local rarity, distribution and condition of occurrences, and vulnerability of those occurrences. Mitigation measures may include, but are not limited to, restoration or permanent preservation of habitat for the special-status plant species or translocation (via seed collection and/or transplantation) from planned impact areas to unaffected suitable habitat.
- If a state or federally listed threatened or endangered plant or a plant that is a candidate for state listing is found onsite, the applicant shall consult with CDFW and/or USFWS, as applicable, to determine appropriate avoidance and minimization measures. If the plants cannot be avoided, an incidental take permit and compensatory mitigation may be required.

5.1.2 Special-Status Wildlife

The BSA supports potential or marginally suitable habitat for several special-status animal species, including one invertebrate, two amphibians, one reptile, seven birds, and one mammal.

5.1.2.1 Crotch Bumble Bee

If Crotch bumble bees are present in the BSA, Project construction, including vegetation removal and ground disturbances, could result in the loss of individuals. The following measures are recommended to reduce avoid or minimize potential impacts to Crotch bumble bee:

- If the Crotch bumble bee is no longer a Candidate or formally Listed species under the California ESA at the time ground-disturbing activities occur, then no additional protection measures are required.
- If the Crotch bumble bee is legally protected under the California ESA as a Candidate or Listed species and ground-disturbing activities are scheduled to begin between February 1 and October 31, preconstruction surveys shall be conducted by a qualified biologist. Based on CDFW's Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023), it is recommended that three Crotch bumble bee surveys be conducted at two to four week intervals during the colony active period (April-August) if possible.
- If Crotch bumble bees are detected, any remaining surveys will focus on nest location. If no nests are found but the species is observed during preconstruction surveys, work crews should be informed of the possibility of Crotch bumble bees or their nests being present onsite. If a Crotch bumble bee is encountered during construction, work shall stop until the individual leaves of its own volition. If an active Crotch bumble bee nest is detected, an appropriate no disturbance buffer zone (including foraging resources and flight corridors essential for supporting the colony) shall be established around the nest to reduce the risk of disturbance or accidental take, and the designated biologist shall coordinate with CDFW to determine if an Incidental Take Permit under Section 2081 of the California ESA will be required. Nest avoidance buffers may be removed at the

completion of the flight season (October 31) and/or once the qualified biologist deems the nesting colony is no longer active.

- If initial grading is phased or delayed for any reason, preconstruction surveys will be repeated prior to ground-disturbing activities if nesting habitat is still present or has re-established and will be affected.

5.1.2.2 Western Spadefoot

There is no aquatic breeding habitat onsite, but the farmed non-native annual grassland supports marginally suitable upland dispersal and aestivation habitat. If western spadefoot are present in the BSA, Project construction, including vegetation removal and ground disturbances, could result in the loss of individuals. The following measures are recommended to reduce avoid or minimize potential impacts to western spadefoot:

- A qualified biologist shall conduct a preconstruction survey for western spadefoot within all suitable upland habitat in the Project work area 48 hours prior to the start of vegetation removal or ground disturbing activities.
- Any individuals discovered in the Project work area immediately prior to Project construction shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified biologist and relocated out of harm's way to the nearest suitable habitat at least 100 feet from the Project work area where they were found.
- If no western spadefoot are found during the preconstruction survey, no additional measures pertaining to this species are necessary.
- If no western spadefoots or California tiger salamanders are found during the preconstruction surveys, the Project applicant shall install exclusionary fencing around the entire Project footprint to prevent dispersing spadefoots and salamanders from entering.

5.1.2.3 California Tiger Salamander

There is no aquatic breeding habitat onsite, but the farmed non-native annual grassland supports marginally suitable upland dispersal and refugia habitat. If California tiger salamanders are present in the BSA, Project construction, including vegetation removal and ground disturbances, could result in the loss of individuals. The following measures are recommended to reduce avoid or minimize potential impacts to California tiger salamanders:

- A qualified biologist shall conduct a preconstruction survey for California tiger salamanders within all suitable upland habitat in the Project work area 48 hours prior to the start of vegetation removal or ground disturbing activities.
- If California tiger salamanders are found during the preconstruction survey, CDFW will be notified immediately and consultation will be initiated to develop appropriate actions before construction begins.

- If no California tiger salamanders are found during the preconstruction survey, no additional measures pertaining to this species are necessary.
- If no California tiger salamanders or western spadefoots are found during the preconstruction surveys, the Project applicant shall install exclusionary fencing around the entire Project footprint to prevent dispersing salamanders and spadefoots from entering.

5.1.2.4 Northwestern Pond Turtle

There is no aquatic habitat onsite, but the farmed non-native annual grassland supports marginally suitable upland dispersal and nesting habitat. If northwestern pond turtles are present in the BSA, Project construction, including vegetation removal and ground disturbances, could result in the loss of individuals. The following measures are recommended to reduce avoid or minimize potential impacts to northwestern pond turtle:

- A qualified biologist shall conduct a preconstruction survey for western spadefoot within all suitable upland habitat in the Project work area 48 hours prior to the start of vegetation removal or ground disturbing activities.
- Any individuals discovered in the Project work area immediately prior to Project construction shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified biologist and relocated out of harm's way to the nearest suitable habitat at least 100 feet from the Project work area where they were found.

5.1.2.5 White-Tailed Kite, Cooper's Hawk, and Other Protected Raptors

The BSA supports potential nesting habitat for special-status and other common raptors that are protected under the MBTA. Project implementation, such as tree removal, could result in the direct loss of individuals, active nests, eggs, and hatchlings. Project construction could impact nearby nests by disturbing and impacting the nesting behavior of the adults, which could lead to nest abandonment and the loss of eggs and nestlings. The following measures are recommended to avoid and minimize potential impacts to protected raptors:

- To the extent feasible, vegetation removal activities shall commence during the nonbreeding season (typically October 1 through January 31, as determined by a qualified biologist).
- No Project activity with potential to disturb nesting birds shall begin during the nesting season (typically February 1 through September 30, as determined by a qualified biologist) unless the following surveys are completed by a qualified wildlife biologist:
    - During the nesting season, a preconstruction nesting bird survey shall be conducted within 14 days prior to the commencement of Project-related activities to identify active nests that could be impacted by construction. The preconstruction nesting bird survey shall include accessible areas within 500 feet of the Project limits.

- If no active nests are found, the Applicant shall prepare a letter report of findings and submit it to City. No further measures pertaining to these species are required.
- If active nests are found, a no-disturbance buffer shall be established around the nest. A qualified biologist, in consultation with the CDFW, shall establish a buffer distance. The buffer shall be maintained until the nestlings have fledged, to be determined by a qualified biologist. No further measures are necessary once the young are independent of the nest or the nest is otherwise no longer occupied.

5.1.2.6 Swainson's Hawk

The BSA supports potential nesting and foraging habitat for the state-threatened Swainson's hawk. Project implementation, such as tree removal, could result in the direct loss of individuals, active nests, eggs, and hatchlings. Project construction could result in the loss of foraging habitat and impact nearby nests by disturbing and impacting the nesting behavior of the adults, which could lead to nest abandonment and the loss of eggs and nestlings. The following measures are recommended to avoid and minimize potential impacts to Swainson's hawk:

- Protocol Swainson's hawk surveys shall be conducted by a qualified biologist according to the *Recommended timing and methodology for Swainson's hawk nesting surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). The surveys shall be conducted for a 0.5-mile radius around the Project. At a minimum, a qualified biologist shall conduct surveys during Survey Periods II and III which will total 6 surveys (3 for each Survey Period).
- If no active Swainson's hawk nests are identified within 0.5-mile of the Project, the Applicant shall prepare a letter report of findings and submit it to the City. No further avoidance measures pertaining to this species are necessary.
- If active Swainson's hawk nests are identified within 0.5-mile of the Project, the Applicant, in, consultation with CDFW, shall determine if an Incidental Take Permit is required. In addition, the Applicant shall consult with CDFW to develop other avoidance and minimization measures, which could include avoidance buffers or seasonal restriction on project activities, among others.

In addition to potential impacts to nesting Swainson's hawk, the BSA supports potential foraging habitat. Project construction would result in the direct loss of Swainson's hawk foraging habitat, which is considered potentially significant by CDFW. In order to mitigate for the loss of Swainson's hawk foraging habitat, the following measures are recommended:

- An active nest was found less than 1 mile from the BSA as late as 2015 (CDFW 2024). The nest tree was subsequently removed during construction of the UC Merced campus. An eBird list from the vicinity documents a nest from 2022 with 1 fledgling (eBird 2024). However, based on the available data, it is unknown if this nest was less than 1 mile or between 1 to 5 miles from the BSA.

According to the Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo Swainsoni*) in the Central Valley of California (California Department of Fish and Game 1994), Projects within 1 miles of an active nest tree shall provide:

- One acre of Habitat Management (HM) land (at least 10% of the HM land requirements shall be met by fee title acquisition or a conservation easement allowing for the active management of the habitat, with the remaining 90% of the HM lands protected by a conservation easement [acceptable to the CDFW] on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk) for each acre of development authorized (1:1 ratio); or
- One-half acre of HM land (all of the HM land requirements shall be met by fee title acquisition or a conservation easement [acceptable to the CDFW] which allows for the active management of the habitat for prey production on the HM lands) for each acre of development authorized (0.5:1 ratio).

Projects within 5 miles of an active nest tree but greater than 1 mile from the nest tree shall provide 0.75 acres of HM land for each acre of urban development authorized (0.75:1 ratio). All HM lands protected under this requirement may be protected through fee title acquisition or conservation easement (acceptable to the CDFW) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk.

5.1.2.7 Burrowing Owl

The BSA supports potential burrow habitat for burrowing owls. Project implementation, such ground disturbance, could result in the direct loss of individuals, active nests, eggs, and hatchlings. Project construction could impact nearby nests by disturbing and impacting the behavior of the adults, which could lead to nest abandonment and the loss of eggs and nestlings. The following measures are recommended to avoid and minimize potential impacts to burrowing owls:

- A preconstruction burrowing owl survey shall be conducted by a qualified biologist within 14 days of the commencement of ground disturbance, including vegetation removal. The survey shall be consistent with the take avoidance survey methods from the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).
- If no burrowing owls or evidence of burrowing owls are found, the Applicant shall prepare a letter report of findings and submit it to the City. No further measures pertaining to this species are necessary.
- If burrowing owls are detected during the preconstruction survey, an avoidance buffer of at least 200 meters shall be delineated during the breeding season, February 1 – August 31. No ground disturbing activities shall occur in this avoidance buffer, unless authorized by CDFW. During the non-breeding season, September 1 – January 31, the avoidance buffer shall be at least 50 meters around the occupied burrow(s).

- If avoidance of occupied burrows is not feasible, a Burrowing Owl Exclusion and Mitigation Plan shall be prepared. The Exclusion and Mitigation Plan shall be prepared in coordination with CDFW. Ground disturbing activities may not occur within 200 meters of the occupied burrow during the breeding season, February 1 – August 31, unless authorized by the CDFW.
- Upon CDFW approval, the Applicant shall implement the Burrowing Owl Exclusion and Mitigation Plan.

5.1.2.8 Yellow-Billed Magpie, Bullock's Oriole, and Other Nesting Birds (Non-Raptors)

The BSA supports potential nesting habitat for special-status and other common birds that are protected under the MBTA. Project implementation, such as ground disturbances and tree removal, could result in the direct loss of individuals, active nests, eggs, and hatchlings. Project construction could impact nearby nests by disturbing and impacting the nesting behavior of the adults, which could lead to nest abandonment and the loss of eggs and nestlings. The following measures are recommended to avoid and minimize potential impacts to special-status and other common MBTA birds:

- To the extent feasible, vegetation removal activities shall commence during the nonbreeding season (typically October 1 through January 31, as determined by a qualified biologist).
- No Project activity with potential to disturb nesting birds shall begin during the nesting season (typically February 1 through September 30) unless the following surveys are completed by a qualified wildlife biologist:
    - During the nesting season, a preconstruction nesting bird survey shall be conducted within 14 days prior to the commencement of Project-related activities to identify active nests that could be impacted by construction. The preconstruction nesting bird survey shall include accessible areas within 100 feet of the Project limits.
    - If no active nests are found, the Applicant shall prepare a letter of findings and submit it to the City. No further measures are required pertaining to nesting birds.
    - If active nests are found, a no-disturbance buffer shall be established around the nest. A qualified biologist, in consultation with the CDFW, shall establish a buffer distance. The buffer shall be maintained until the nestlings have fledged, to be determined by a qualified biologist. No further measures are necessary once the young are independent of the nest or the nest is otherwise no longer occupied.

5.1.2.9 Ferruginous Hawk

The ferruginous hawk does not nest in the region, but is found in the vicinity during winter and migration. The farmed non-native annual grassland onsite supports potentially suitable foraging habitat for this species. Project construction would result in the loss of foraging habitat, but is considered less than significant due to the abundance of suitable foraging habitat in the vicinity. Consequently, no avoidance or minimization measures are recommended pertaining to ferruginous hawks.

5.1.2.10 San Joaquin Kit Fox

The disturbed non-native annual grassland within the BSA represents marginally suitable dispersal habitat for San Joaquin kit fox. The following measures are recommended to avoid and minimize potential impacts to San Joaquin kit fox:

- A qualified biologist shall conduct a preconstruction survey within 7 days on the initiation of ground disturbance. If a kit fox or suitable burrow with sign of kit fox is observed onsite, the Applicant shall implement standardized measures adopted by CDFW or USFWS.
- If no kit fox or suitable burrows are found, the Applicant shall prepare a letter report of findings and submit it to City. No further measures pertaining to this species are required.

5.1.2.11 Western Red Bat

The BSA supports marginally suitable roosting habitat (e.g., trees bordering the fields, along the roadside and near the rural residence) for the western red bat. Project implementation, such as tree removal, could result in the direct loss of individuals. Construction activity near maternity roosts could result in abandonment and loss of offspring. The following measures are recommended to avoid and minimize potential impacts to western red bat:

- A western red bat roosting habitat assessment shall be conducted by a qualified bat biologist within 15 days of commencement of Project construction/tree removal. This assessment will focus on trees proposed for removal and within 50 feet of proposed construction activity. If no potential western red bat roosting sites are found, the Applicant shall prepare a letter report documenting findings and submit it to the City. No further measures pertaining to western red bat are required.
- If potential roosting sites are found, the Applicant shall conduct further surveys to determine whether roosting bats are present. If construction will occur during the maternity roosting season, and an active western red bat maternity roost is detected, a qualified biologist, in consultation with CDFW, shall delineate an avoidance buffer around the roost. The avoidance buffer shall be maintained until young are capable of flight. The avoidance buffer can be removed when a qualified biologist determines that the roost is no longer occupied.
- If a non-breeding roost is found, a qualified biologist shall delineate an avoidance buffer, if feasible. If avoidance of the occupied non-breeding roost is not feasible, a qualified biologist, in consultation with CDFW, shall develop an exclusion or tree removal plan. Removal of a tree with roosting bats will proceed only upon CDFW approval.

5.2 CEQA Checklist Criteria IV(b) – Sensitive Natural Communities

Would the Project:

b) 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

There are no sensitive natural communities in the BSA.

5.3 CEQA Checklist Criteria IV(c) – Aquatic Resources

Would the Project:

c) 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?

There are no aquatic resources or potential waters of the U.S./State in the BSA.

5.4 CEQA Checklist Criteria IV(d) – Movement Corridors and Nursery Sites

Would the Project:

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The BSA does not support a significant wildlife movement corridor or wildlife nursery sites.

5.5 CEQA Checklist Criteria IV(e) – Conflicts with Local Policies or Ordinances

Would the Project:

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Project will not conflict with local policies or ordinances protecting biological resources. There are currently no policies or ordinances specifically protecting trees in place for Merced County or the City of Merced.

5.6 CEQA Checklist Criteria IV(f) – Conflicts with Conservation Plans

Would the Project:

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

The Project will not conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional or state habitat conservation plan.

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LIST OF APPENDICES

APPENDIX A

Results of Database Queries

California Native Plant Society

Search Results

32 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3712024:3712034:3712033:3712043:3712044:3712023:3712025:3712035:3712045**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Agrostis hendersonii	Henderson's bent grass	Poaceae	annual herb	Apr-Jun	None	None	G2Q	S2	3.2		1974-01-01	 ©2005 Steve Matson
Atriplex cordulata var. *cordulata*	heartscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G3T2	S2	1B.2	Yes	1988-01-01	 © 1994 Robert E. Preston, Ph.D.
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	None	None	G2	S2	1B.1	Yes	1994-01-01	 © 2000 Robert E. Preston, Ph.D.
Atriplex persistens	vernal pool smallscale	Chenopodiaceae	annual herb	Jun-Oct	None	None	G2	S2	1B.2	Yes	2001-01-01	No Photo Available
Atriplex subtilis	subtle orache	Chenopodiaceae	annual herb	(Apr)Jun-Sep(Oct)	None	None	G1	S1	1B.2	Yes	1994-01-01	 © 2000 Robert E. Preston, Ph.D.

Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	None	None	G5	S3	2B.3		2010-10-27	 ©2014 Kirsten Bovee
Calycadenia hooveri	Hoover's calycadenia	Asteraceae	annual herb	Jul-Sep	None	None	G2	S2	1B.3	Yes	1980-01-01	No Photo Available
Castilleja campestris var. *succulenta*	succulent owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	(Mar)Apr-May	FT	CE	G4? T2T3	S2S3	1B.2	Yes	1984-01-01	No Photo Available
Centromadia parryi ssp. *rudis*	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	G3T3	S3	4.2	Yes	2007-05-22	 © 2019 John Doyen
Clarkia rostrata	beaked clarkia	Onagraceae	annual herb	Apr-May	None	None	G2G3	S2S3	1B.3	Yes	1974-01-01	No Photo Available
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	None	None	G4	S4	4.2		1994-01-01	No Photo Available
Delphinium hansenii ssp. *ewanianum*	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	None	None	G4T3	S3	4.2	Yes	1994-01-01	No Photo Available
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2	1B.2	Yes	1988-01-01	No Photo Available
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2		1980-01-01	 © 2013 Aaron Arthur
Eryngium racemosum	Delta button-celery	Apiaceae	annual/perennial herb	(May)Jun-Oct	None	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual/perennial herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	1980-01-01	No Photo Available

Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	Yes	1980-01-01	 © 2016 Aaron Schusteff
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2		1974-01-01	 ©2004 Carol W. Witham
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2017 John Doyen
Lagophylla dichotoma	forked hare-leaf	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.1	Yes	2012-03-13	 © 2010 Chris Winchell
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	Yes	2019-09-30	 © 2009 California State University, Stanislaus
Navarretia myersii ssp. *myersii*	pincushion navarretia	Polemoniaceae	annual herb	Apr-May	None	None	G2T2	S2	1B.1	Yes	1994-01-01	 © 2020 Leigh Johnson
Navarretia nigelliformis ssp. *radians*	shining navarretia	Polemoniaceae	annual herb	(Mar)Apr-Jul	None	None	G4T2	S2	1B.2	Yes	1994-01-01	No Photo Available
Neostapfia colusana	Colusa grass	Poaceae	annual herb	May-Aug	FT	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Poaceae	annual herb	Apr-Sep	FT	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Orcuttia pilosa	hairy Orcutt grass	Poaceae	annual herb	May-Sep	FE	CE	G1	S1	1B.1	Yes	1980-01-01	 © 2003 George W. Hartwell

Phacelia ciliata var. *opaca*	Merced phacelia	Hydrophyllaceae	annual herb	Feb-May	None	None	G5TH	SH	3.2	Yes	1980-01-01	No Photo Available
Pseudobahia bahiifolia	Hartweg's golden sunburst	Asteraceae	annual herb	Mar-Apr	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	None	None	G2	S2	1B.2		2015-10-15	 © 2017 Chris Winchell
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984-01-01	 ©2013 Debra L. Cook
Sidalcea keckii	Keck's checkerbloom	Malvaceae	annual herb	Apr-May(Jun)	FE	None	G2	S2	1B.1	Yes	1974-01-01	No Photo Available
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	FE	CR	G1	S1	1B.1	Yes	1974-01-01	 ©2008 F. Gauna

Showing 1 to 32 of 32 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 21 May 2024].

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Merced (3712034) OR El Nido (3712024) OR Planada (3712033) OR Haystack Mtn. (3712043) OR Yosemite Lake (3712044) OR Plainsburg (3712023) OR Sandy Mush (3712025) OR Atwater (3712035) OR Winton (3712045))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAA01181	***Ambystoma californiense pop. 1*** California tiger salamander - central California DPS	Threatened	Threatened	G2G3T3	S3	WL
AAABF02020	***Spea hammondii*** western spadefoot	Proposed Threatened	None	G2G3	S3S4	SSC
ABNKC10010	***Haliaeetus leucocephalus*** bald eagle	Delisted	Endangered	G5	S3	FP
ABNKC11011	***Circus hudsonius*** northern harrier	None	None	G5	S3	SSC
ABNKC19070	***Buteo swainsoni*** Swainson's hawk	None	Threatened	G5	S4	
ABNKC19120	***Buteo regalis*** ferruginous hawk	None	None	G4	S3S4	WL
ABNKD06030	***Falco columbarius*** merlin	None	None	G5	S3S4	WL
ABNNB03100	***Charadrius montanus*** mountain plover	None	None	G3	S2	SSC
ABNSB10010	***Athene cunicularia*** burrowing owl	None	None	G4	S2	SSC
ABPBXB0020	***Agelaius tricolor*** tricolored blackbird	None	Threatened	G1G2	S2	SSC
AFCHA0209K	***Oncorhynchus mykiss irideus pop. 11*** steelhead - Central Valley DPS	Threatened	None	G5T2Q	S2	SSC
AFCJB25010	***Mylopharodon conocephalus*** hardhead	None	None	G3	S3	SSC
AMACC01020	***Myotis yumanensis*** Yuma myotis	None	None	G5	S4	
AMACC05032	***Lasiurus cinereus*** hoary bat	None	None	G3G4	S4	
AMACC05080	***Lasiurus frantzii*** western red bat	None	None	G4	S3	SSC
AMACC10010	***Antrozous pallidus*** pallid bat	None	None	G4	S3	SSC
AMACD02011	***Eumops perotis californicus*** western mastiff bat	None	None	G4G5T4	S3S4	SSC
AMAFD01060	***Perognathus inornatus*** San Joaquin pocket mouse	None	None	G2G3	S2S3	
AMAFD03062	***Dipodomys heermanni dixoni*** Merced kangaroo rat	None	None	G4T2T3	S2	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AMAJA03041	***Vulpes macrotis mutica*** San Joaquin kit fox	Endangered	Threatened	G4T2	S3	
AMAJF04010	***Taxidea taxus*** American badger	None	None	G5	S3	SSC
ARAAD02030	***Emys marmorata*** western pond turtle	Proposed Threatened	None	G3G4	S3	SSC
ARACF07010	***Gambelia sila*** blunt-nosed leopard lizard	Endangered	Endangered	G1	S2	FP
ARADB36150	***Thamnophis gigas*** giant gartersnake	Threatened	Threatened	G2	S2	
CTT44110CA	***Northern Hardpan Vernal Pool*** Northern Hardpan Vernal Pool	None	None	G3	S3.1	
CTT44120CA	***Northern Claypan Vernal Pool*** Northern Claypan Vernal Pool	None	None	G1	S1.1	
ICBRA03010	***Branchinecta conservatio*** Conservancy fairy shrimp	Endangered	None	G2	S2	
ICBRA03030	***Branchinecta lynchi*** vernal pool fairy shrimp	Threatened	None	G3	S3	
ICBRA03150	***Branchinecta mesovallensis*** midvalley fairy shrimp	None	None	G2	S2S3	
ICBRA06010	***Linderiella occidentalis*** California linderiella	None	None	G2G3	S2S3	
ICBRA10010	***Lepidurus packardi*** vernal pool tadpole shrimp	Endangered	None	G3	S3	
IICOL4C030	***Lytta molesta*** molestan blister beetle	None	None	G2	S2	
IIHYM24260	***Bombus pensylvanicus*** American bumble bee	None	None	G3G4	S2	
IIHYM24480	***Bombus crotchii*** Crotch's bumble bee	None	Candidate Endangered	G2	S2	
PDAPI0Z0S0	***Eryngium racemosum*** Delta button-celery	None	Endangered	G1	S1	1B.1
PDAPI0Z0Y0	***Eryngium spinosepalum*** spiny-sepaled button-celery	None	None	G2	S2	1B.2
PDAST1P040	***Calycadenia hooveri*** Hoover's calycadenia	None	None	G2	S2	1B.3
PDAST5J070	***Lagophylla dichotoma*** forked hare-leaf	None	None	G2	S2	1B.1
PDAST5L030	***Lasthenia chrysantha*** alkali-sink goldfields	None	None	G2	S2	1B.1
PDAST7P010	***Pseudobahia bahiifolia*** Hartweg's golden sunburst	Endangered	Endangered	G1	S1	1B.1

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDCAB01010	***Brasenia schreberi*** watershield	None	None	G5	S3	2B.3
PDCAM060C0	***Downingia pusilla*** dwarf downingia	None	None	GU	S2	2B.2
PDCHE040B0	***Atriplex cordulata var. cordulata*** heartscale	None	None	G3T2	S2	1B.2
PDCHE042M0	***Atriplex minuscula*** lesser saltscale	None	None	G2	S2	1B.1
PDCHE042P0	***Atriplex persistens*** vernal pool smallscale	None	None	G2	S2	1B.2
PDCHE042T0	***Atriplex subtilis*** subtle orache	None	None	G1	S1	1B.2
PDHYD0C0S2	***Phacelia ciliata var. opaca*** Merced phacelia	None	None	G5TH	SH	3.2
PDMAL110D0	***Sidalcea keckii*** Keck's checkerbloom	Endangered	None	G2	S2	1B.1
PDONA050Y0	***Clarkia rostrata*** beaked clarkia	None	None	G2G3	S2S3	1B.3
PDPLM0C0J2	***Navarretia nigelliformis ssp. radians*** shining navarretia	None	None	G4T2	S2	1B.2
PDPLM0C0X1	***Navarretia myersii ssp. myersii*** pincushion navarretia	None	None	G2T2	S2	1B.1
PDRAN0B1J0	***Delphinium recurvatum*** recurved larkspur	None	None	G2?	S2	1B.2
PDSCR0D3Z1	***Castilleja campestris var. succulenta*** succulent owl's-clover	Threatened	Endangered	G4?T2T3	S2S3	1B.2
PDSCR0R060	***Gratiola heterosepala*** Boggs Lake hedge-hyssop	None	Endangered	G2	S2	1B.2
PMALI040Q0	***Sagittaria sanfordii*** Sanford's arrowhead	None	None	G3	S3	1B.2
PMPOA040K0	***Agrostis hendersonii*** Henderson's bent grass	None	None	G2Q	S2	3.2
PMPOA4C010	***Neostapfia colusana*** Colusa grass	Threatened	Endangered	G1	S1	1B.1
PMPOA4G040	***Orcuttia pilosa*** hairy Orcutt grass	Endangered	Endangered	G1	S1	1B.1
PMPOA4G060	***Orcuttia inaequalis*** San Joaquin Valley Orcutt grass	Threatened	Endangered	G1	S1	1B.1
PMPOA53110	***Puccinellia simplex*** California alkali grass	None	None	G2	S2	1B.2
PMPOA6N010	***Tuctoria greenei*** Greene's tuctoria	Endangered	Rare	G1	S1	1B.1

Record Count: 61

IPaC resource list

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

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

Location

Merced County, California

Local office

Sacramento Fish And Wildlife Office

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

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

Endangered species

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

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

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

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

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

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

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

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

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

Mammals

NAME	STATUS
San Joaquin Kit Fox *Vulpes macrotis mutica* Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Reptiles

NAME	STATUS

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

Amphibians

NAME	STATUS
California Tiger Salamander Ambystoma californiense	Threatened
There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	
Western Spadefoot Spea hammondii	Proposed Threatened
Wherever found. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5425	

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus	Candidate
Wherever found. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus	Threatened
Wherever found. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7850	

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio	Endangered
Wherever found. There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/8246	
Vernal Pool Fairy Shrimp Branchinecta lynchi	Threatened
Wherever found. There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/498	
Vernal Pool Tadpole Shrimp Lepidurus packardi	Endangered
Wherever found. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2246	

Flowering Plants

NAME	STATUS
Colusa Grass Neostapfia colusana Wherever found There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/5690	Threatened
Fleshy Owl's-clover Castilleja campestris ssp. succulenta Wherever found There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/8095	Threatened
Hairy Orcutt Grass Orcuttia pilosa Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2262	Endangered
Lassics Lupine Lupinus constancei There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7976	Endangered
San Joaquin Valley Orcutt Grass Orcuttia inaequalis Wherever found There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/5506	Threatened

Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME	TYPE
Colusa Grass Neostapfia colusana https://ecos.fws.gov/ecp/species/5690#crithab	Final
Conservancy Fairy Shrimp Branchinecta conservatio https://ecos.fws.gov/ecp/species/8246#crithab	Final
Fleshy Owl's-clover Castilleja campestris ssp. succulenta https://ecos.fws.gov/ecp/species/8095#crithab	Final
Greene's Tuctoria Tuctoria greenei For information on why this critical habitat appears for your project, even though Greene's Tuctoria is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/1573#crithab	Final

San Joaquin Valley Orcutt Grass Orcuttia inaequalis https://ecos.fws.gov/ecp/species/5506#crithab	Final
Vernal Pool Fairy Shrimp Branchinecta lynchi https://ecos.fws.gov/ecp/species/498#crithab	Final

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

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

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

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

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

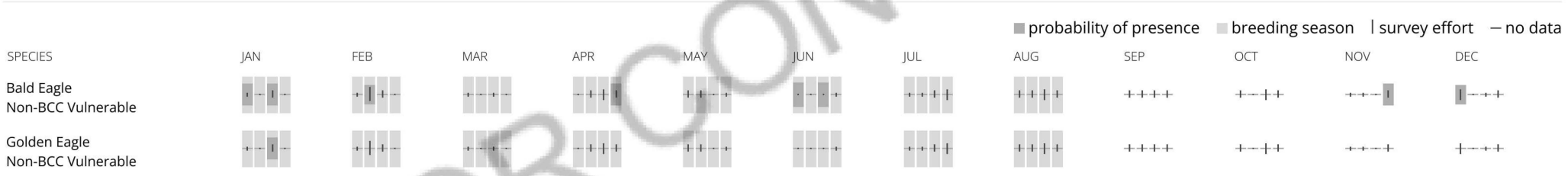
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

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

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

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



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

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

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

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

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

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

What if I have eagles on my list?

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

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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

Additional information can be found using the following links:

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

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

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31

Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch *Spinus lawrencei* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Northern Harrier *Circus hudsonius* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Nuttall's Woodpecker *Dryobates nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Santa Barbara Song Sparrow *Melospiza melodia graminea* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5

Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Western Grebe aechmophorus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

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

Probability of Presence (▪)

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

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

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

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

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

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

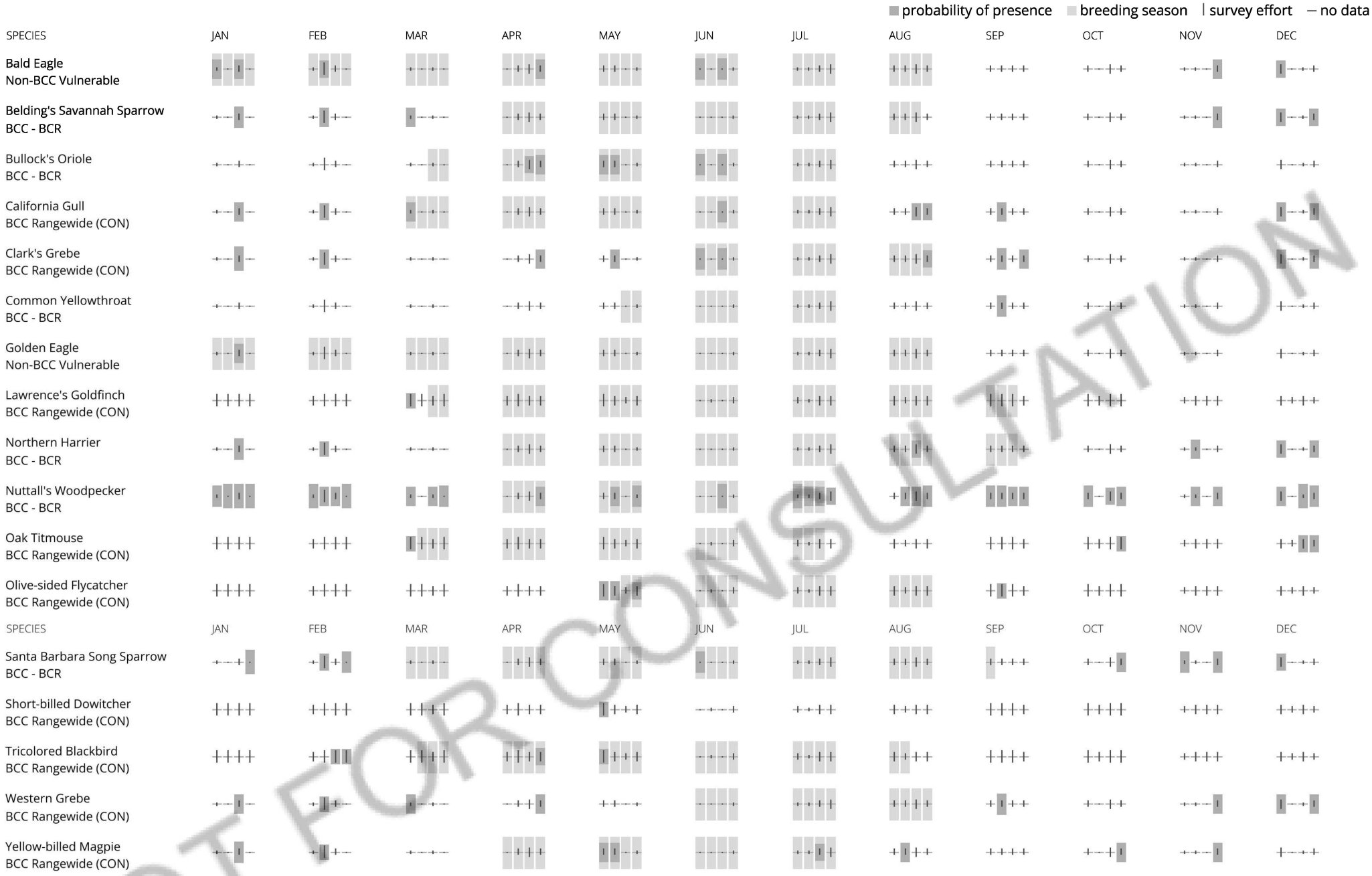
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

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

Survey Timeframe

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



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

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

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

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

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

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

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

This location did not intersect any wetlands mapped by NWI.

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

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

Quad Name **Merced**
Quad Number **37120-C4**

1.0 ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

2.0 ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

3.0 ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

4.0 ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

5.0 ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

6.0 ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

7.0 ESA Pinnipeds

Guadalupe Fur Seal (T) -

8.0 Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

9.0 MMPA Species (See list at left)
10.0 ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

APPENDIX B

Representative Photographs

Photo 1. Farmed non-native annual grassland

Photo 2. Olive trees in farmed non-native annual grassland

Photo 3. Rural residence

Photo 3. Western boundary of BSA with adjacent rural residences

APPENDIX C

Plant Species Observed

Scientific Name	**Common Name**
Holocarpha virgata	Narrow tarplant
*Lactuca serriola**	Prickly lettuce
Matricaria discoidea	Pineapple weed
*Hirschfeldia incana**	Shortpod mustard
*Convolvulus arvensis**	Field bindweed
*Trifolium hirtum**	Rose clover
*Erodium botrys**	Broadleaf filaree
*Ficus carica**	Common fig
*Eucalyptus globulus**	Blue gum
*Olea europaea**	European olive
*Avena fatua**	Wild oat
*Bromus diandrus**	Ripgut brome
*Bromus hordeaceus**	Soft brome
*Festuca myuros**	Rat-tail fescue
*Festuca perennis**	Italian ryegrass
*Hordeum murinum**	Foxtail barley
Populus fremontii	Fremont's cottonwood

Notes: * = non-native species

APPENDIX D

Wildlife Species Observed

Common Name	*Scientific Name*
Birds	
Eurasian Collared-Dove*	*Streptopelia decaocto*
Mourning Dove	*Zenaida macroura*
Killdeer	*Charadrius vociferus*
Great Blue Heron	*Ardea herodias*
Swainson's Hawk	*Buteo swainsoni*
Western Kingbird	*Tyrannus verticalis*
Northern Mockingbird	*Mimus polyglottos*
European Starling*	*Sturnus vulgaris*
House Sparrow*	*Passer domesticus*
House Finch	*Haemorhous mexicanus*
Lesser Goldfinch	*Spinus psaltria*
Bullock's Oriole	*Icterus bullockii*
Red-winged Blackbird	*Agelaius phoeniceus*
Great-tailed Grackle	*Quiscalus mexicanus*
Mammals	
California ground squirrel	*Otospermophilus beecheyi*

* Non-native Species