Appendix B
Biological Resources Assessment

5200 Lone Tree Way Gas Station Project

Biological Resources Technical Report

July 2021

Prepared for:

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1.0 INTRODUCTION

This Biological Resources Technical Report (BRTR) has been prepared to evaluate the potential effects on sensitive biological resources that may occur for the proposed 5200 Lone Tree Way Gas Station Project (Project). The Project includes development of a new United Pacific convenience store, attached car wash, a fuel canopy with eight fuel dispensers, two underground storage tanks, and related site improvements and landscaping.

The proposed Project is located within the City of Antioch, in Contra Costa County. The Project site is bordered by Lone Tree Way, Vista Grande Drive, and single-family homes. The Assessor's Parcel Number (APN) is 056-270-059 (Figure 1). The approximate center of the Project is located at coordinates; 37°57'40.02"N, 121°45'19.41"W.

This BRTR is based on information gathered from a review of desktop resources including existing literature, data, and maps; and from a reconnaissance-level field survey of the Project area performed by Stantec Consulting Services Inc. (Stantec) biologists. The Project area for this BRTR encompasses approximately 2 acres and consists of the proposed Project footprint (Figure 1).

The overall purpose of this BRTR is to:

- Characterize the habitat and vegetation communities present;
- Evaluate the potential for special-status plant and animal species to occur.

2.0 PROJECT DESCRIPTION

The proposed Project consists of a new United Pacific convenience store of 3,200 square feet, attached car wash of 1,125 square feet, a fuel canopy with eight fuel dispensers, three underground storage tanks, and related site improvements and landscaping on an approximately 2.0-acre lot. The proposed Project proposes right-in/right-out ingress and egress from Lone Tree Way and Vista Grande Drive. The proposed Project would provide nineteen parking stalls and landscaping which will consist of drought-tolerant species, including shade canopy trees. The car wash drive lane would provide adequate stacking away from areas of ingress/egress from public right-of-way.

3.0 METHODS

The analysis presented in this BRTR includes a review of existing information about sensitive biological resources known to occur in the vicinity of the proposed Project as well as the reconnaissance-level field survey conducted to determine whether the biological resources are absent, present, and/or are likely to be present.

3.1 DEFINITIONS

3.1.1 Special-Status Species and Sensitive Communities

For the purpose of this evaluation, "special-status" plant species include plants that are: 1) listed as threatened or endangered under the California Endangered Species Act (CESA) and/or Federal Endangered Species Act (FESA); 2) proposed for federal listing as threatened or endangered; 3) State or federal candidate species; 4) designated as rare by the California Department of Fish and Wildlife (CDFW); or 5) California Rare Plant Rank (CRPR) 1A, 1B, 2A or 2B species. Special-status animal species include species that are: 1) listed as threatened or endangered under the CESA and/or FESA; 2) proposed for federal listing as threatened or endangered; 3) State and/or federal candidate species; or 4) identified by the CDFW as species of special concern or fully protected species.

Sensitive natural communities are those communities that are of highly limited distribution, and may or may not contain rare, threatened, or endangered species. The California Natural Diversity Database (CNDDB) ranks natural communities according to their rarity and endangerment in California. Habitats are considered "sensitive" if they are identified on the CDFW List of Vegetation Alliances and Associations as being highly imperiled or classified by CDFW in the CNDDB as natural communities of special concern – Ranks S1 to S3.

3.1.2 Potential to Occur

The potential for special-status species to occur within the Project area, was classified under one of five categories as described below. Only those special-status species with an occurrence potential of "Moderate" or greater are evaluated in detail as those species are most likely to occur.

- **Present:** The species is known to be present or has been recently observed in the Project area.
- **High:** The species has been observed and documented within five miles of the Project area within the last five years and suitable habitat for the species is present.
- **Moderate:** The proposed Project is located within the range of the species, there are documented occurrences within five miles of the Project area, and/or suitable habitat for the species exists in the Project area.
- **Low:** The proposed Project is located within the range of the species and low-quality (e.g., disturbed, agricultural) habitat is present.
- **Absent:** The proposed Project area is located outside of the species range and/or potential habitat to support the species is not present in the Project area.

3.2 LITERATURE AND DATABASE REVIEW

Information about habitat types and special-status species that could occur in the Project area was obtained from the following sources:

- CDFW CNDDB plant and animal records (CDFW 2021a) (Appendix A);
- California Native Plant Society (CNPS) online *Inventory of Rare and Endangered Plants* (CNPS 2021) (Appendix A);
- Calflora (2021);
- United States Fish and Wildlife Service (USFWS) list of endangered and threatened species that may occur in the Project area (USFWS 2021a) (Appendix A); and
- USFWS Designated Critical Habitat within the Project area (USFWS 2021a).

The Project area is within the *Antioch South* U.S. Geological Survey (USGS) 7.5-minute quadrangle. A CNDDB and CNPS database search for special-status species included the USGS 7.5-minute quadrangles within a 5-mile radius of the Project site. In this case, the *Antioch North*, *Antioch South*, *Jersey Island*, and *Brentwood* topographic quadrangles were queried. A 5-mile radius quadrangle search was conducted based on habitat types and migration distances for potential special-status species that could occur within the Project area. The USFWS database of endangered species was also utilized to query all federally endangered, threatened, candidate, and proposed animal and plant species, as well as designated critical habitat with known occurrences in the Project quadrangle and the adjacent quadrangles. Calflora and CNPS' Online Inventory databases were used to obtain more information on the habitat requirements of rare plants.

Other information sources consulted to determine which special-status species could potentially occur in the Project area included:

- USGS California 7.5-minute topographic quadrangles for *Antioch North*, *Antioch South*, *Jersey Island*, and *Brentwood*;
- Aerial photographs of the Project area and surrounding vicinity (Google Earth 2021);
- USFWS National Wetlands Inventory (USFWS 2021b);
- *Special Animals List* (CDFW 2021b);
- *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2021c);
- *State and Federally Listed Endangered, Threatened and Rare Plants of California* (CDFW 2021d);
- *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2021e);
- California Wildlife Habitat Relationships System (WHRS) (CDFW 2014); and
- Other pertinent databases and literature, including *The Jepson Manual: Vascular Plants of California*, *Second Edition* (Baldwin et. al. 2012).

Based on this background research, a list of special-status species that have the potential to occur or are known to occur in the Project area and vicinity was developed. The list was refined based on a reconnaissance-level biological field survey to determine the potential for those species to occur in the Project area.

3.3 FIELD SURVEYS CONDUCTED

A biological survey for special-status species and sensitive natural communities was conducted by Stantec Biologist Scott Elder on June 25, 2021. The biological survey was performed by walking meandering transects throughout the entire Project area to characterize habitats, identify any aquatic resources that may be subject to regulatory agency jurisdiction (e.g., United States Army Corps of Engineers [USACE], Regional Water Quality Control Board (RWQCB) and CDFW), assess potential for special-status species to occur, and to record observed species. To better focus the field survey efforts on those plant and animal special-status species that may occur in the Project area, a target list of potentially occurring species was developed during the literature and database review process. Plant taxonomy for the botanical survey was determined using the Jepson Manual (Baldwin et al. 2012).

4.0 REGULATORY CONTEXT

4.1 FEDERAL REGULATORY REQUIREMENTS

4.1.1 Federal Endangered Species Act

The FESA of 1973 was established to protect and recover endangered and threatened species and the ecosystems upon which they depend. According to the FESA "endangered" indicates a species is in danger of extinction throughout all or a significant portion of its range. In addition, the FESA defines a species as "threatened" if that species is likely to become endangered within the foreseeable future. The USFWS maintains a list of endangered and threatened species. The USFWS and the National Marine Fisheries Service (NMFS) administer FESA and are responsible for consulting with other federal agencies pursuant to FESA. Consultation with the USFWS would be necessary if a proposed Project action has the potential to affect federally listed species, their habitat, as well as areas of Designated Critical Habitat (DCH). This consultation would proceed under Section 7 of the FESA if a federal action is required for the Project or it would proceed through Section 10 of the FESA if no such federal nexus were available.

4.1.2 Clean Water Act

The objective of the Clean Water Act (CWA) of 1977, as amended, is to maintain and restore the chemical, physical, and biological integrity of the nation's waters. The discharge of dredged or fill material into Waters of the US (WOTUS), including jurisdictional wetlands, is regulated under Section 404 of the CWA by the USACE via a permitting process. Surface water quality is further regulated by the United States Environmental Protection Agency (USEPA); in California this authority is delegated to the State Water Resources Control Board (SWRCB) or the RWQCB. Applicants for Section 404 permits are also required to comply with Section 401 of the CWA by obtaining Water Quality Certification (WQC) through the State.

4.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. This treaty prohibits "take," which has been variously defined to include harming any migratory bird listed under the MBTA, including nests, eggs, and/or young.

4.1.4 Executive Orders

Federal agencies are required to demonstrate that their actions comply with Presidential Executive Orders established to protect the environment. Relevant Executive Orders include the following:

- **Executive Order 11990 (Wetlands):** For Projects that could affect wetlands, federal agencies are required to demonstrate that no practicable alternative exists to avoid the wetland(s) and that all practicable avoidance, mitigation, and/or preservation measures have been incorporated into a project to minimize impacts to wetlands. Federal agencies are also required to provide opportunity for early public review of any plans or proposals for new construction in wetlands.

- **Executive Order 11988 (Floodplain Management):** For projects that may be located in a floodplain, federal agencies are required to evaluate the effects of the action on the floodplain and identify practicable alternatives or measures to avoid long- and short-term adverse impacts associated with the occupancy and modification of the floodplain and to avoid incompatible development in the floodplain.
- **Executive Order 13112 (Invasive Species):** Federal agencies are required to prevent the introduction of invasive species and not authorize actions that could cause or promote the introduction or spread of invasive species. Federal agencies need to identify feasible and prudent measures to minimize the risk of harm caused by invasive species.
- **Executive Order 13186 (Migratory Birds):** Federal agencies are required to evaluate the effects of their actions on migratory birds, with emphasis on species of concern, and to minimize the take of migratory birds through development of procedures for evaluating such take and conservation efforts in coordination with the USFWS. This Executive Order further implements the MBTA and requires coordination between the USFWS and federal agencies.

4.2 CALIFORNIA REGULATORY REQUIREMENTS

4.2.1 California Endangered Species Act

The CESA prohibits “take” of plants or animals listed as endangered or threatened and protects native species of fish, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, that are threatened with extinction or experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation. “Take” is defined in Section 86 of the California Fish and Game Code (FGC) as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA authorizes the CDFW to issue incidental take permits for state-listed species, when specific criteria are met.

4.2.2 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne), Section 1601 to 1602 of the California FGC, authorizes the SWRCB to oversee water rights and water quality policy, and as such has established nine RWQCBs to protect and enhance water quality at the regional and local levels. In addition to preparing WQCs to designate beneficial uses of water bodies in each region, the RWQCBs issue a permit, referred to as a Waste Discharge Requirement (WDR), for activities that result in pollutant or nuisance discharges that may affect surface or groundwater, including isolated wetlands not subject to the jurisdiction of the USACE.

4.2.3 California Fish and Game Code

The California FGC has several provisions for the protection of Waters of the State (WOTS), and special-status plant, fish, and wildlife resources, including their habitat. The applicable California FGCs are as follows:

- **Sections 1600-1616 (Streambed Alteration):** The CDFW is responsible for the protection and conservation of fish and wildlife resources in California. Under Section 1602, CDFW has the authority to issue Lake or Streambed Alteration Agreements (LSAA) for construction activities that substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the CDFW as providing resources for fish or wildlife.

- **Sections 1900-1913 (Native Plant Protection Act):** The Native Plant Protection Act (NPPA) of 1977 prohibits the taking, possessing, or sale within the State of any plants that the CDFW has determined are rare, threatened, or endangered. The CDFW has the authority to enforce the provisions of this act and authorize measures to salvage native plants that may otherwise be affected by project activities, if deemed appropriate.
- **Sections 3500-3516 (Game Birds and Birds of Prey):** The CDFW protects game birds, birds of prey, migratory birds, and fully protected birds and their nests, eggs, and young from take or possession, except as otherwise provided by the code (e.g., incidental take under CESA).
- **Sections 3511, 4700, 5050, and 5515 (Fully Protected Species):** California statutes accord a "fully protected" status to specific birds, mammals, reptiles, amphibians, and fish. These species cannot be "taken," and no process exists for issuance of incidental take permits for fully protected species.

5.0 ENVIRONMENTAL SETTING

5.1 SITE CONDITIONS AND LAND USE

5.1.1 Local Setting and Existing Land Use

The Project site is a square shaped parcel that is currently developed with multiple buildings including a single-family home, multi-car garage, and an old barn. Other developed areas include paved asphalt and gravel/dirt areas with various vehicles, trailers, and storage containers placed throughout the southwest portion of the Project area.

The Project site is completely surrounded by urban development, including the following land uses:

- **North:** Lone Tree Way and commercial offices.
- **East:** Vista Grande Drive and multi-family residential apartments.
- **South and West:** Residential development including single-family homes.

5.1.2 Physical Conditions

The topography of the Project area is relatively flat, with the terrain slightly sloping south to north. The Project area occurs at elevations between 137 and 134 feet above mean sea level. Regionally, the Project area has a Mediterranean climate characterized by hot, dry summers and moderate winters, with average temperatures ranging seasonally from 73.7 to 49.4 degrees Fahrenheit (°F). Historical data used to describe the climate was collected at the Antioch Pump Plant 3, California National Oceanic and Atmospheric Administration (NOAA) Coop Station, approximately 1.5 miles north of the Project area (NOAA Regional Climate Centers 2021). Precipitation in the Project area occurs as rain. Average annual rainfall is 12.75 inches and occurs primarily from October through May. The growing season (i.e., 50 percent probability of air temperature 32ºF or higher) in the survey area is around 304 days and occurs between early February and December (NOAA Regional Climate Centers 2021).

5.2 BIOTIC HABITATS

5.2.1 Vegetation Communities

Vegetation types in the Project area were classified based on descriptions provided in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988), as well as the *California Natural Community List* (CDFW 2021f), which is adapted from the technical approach and vegetation alliance classification system described in *A Manual of California Vegetation* (Sawyer et al. 2009). The vegetation communities present in the Project area are primarily barren and ruderal with urban development. There are no aquatic vegetation communities within the Project area. Descriptions of the vegetation communities within the Project area are provided below. Representative photographs are provided in Appendix B, and a complete list of plant and wildlife species observed is provided in Appendix C.

Upland Habitat Types

Barren and Ruderal

Barren and ruderal habitat occur within a majority of the Project area. This community has a gravel/dirt substrate with opportunistic non-native and invasive ruderal forb species growing throughout. These species include prickly Russian thistle (*Salsola tragus*), prickly lettuce (*Lactuca serriola*), common sow thistle (*Sonchus oleraceus*), and foxtail barley (*Hordeum murinum*).

Urban/Developed

This land use type does not describe any specific vegetation type under Sawyer et al. (2009) but encompasses land that has been anthropogenically modified with structures and facilities, including roads and buildings. Ornamental plantings and ruderal vegetation may be present within and/or on the margins of developed areas. There are small sections within the Project area that include various landscape tree species and have been maintained by the property owner. These areas are adjacent to the existing buildings on site.

Annual Grassland

Annual grassland habitat occurs within the northeast portion of the Project area. This habitat is characterized as a moderate herbaceous layer and a limited overstory canopy. Dominant plant species within the annual grassland habitat includes foxtail barley, alkali mallow (*Malvella leprosa*), and Italian rye grass (*Festuca perennis*). This habitat is highly disturbed with vehicle tire tracks throughout the grassland. A handful of large burrows were observed within the grassland habitat; however, these burrows were full leaves and spider webs and were not actively being used.

5.2.2 Habitat Connectivity

Habitat corridors are segments of land that provide linkages for wildlife movement between different habitats while also providing cover. Corridors also function as avenues along which plants can propagate, genetic interchange can occur, populations can move in response to environmental changes and natural disasters, and populations can be replenished from other areas. Habitat corridors often consist of riparian areas along streams, rivers, or other natural features. Habitat corridors have been recognized by federal agencies, such as the USFWS, and the state as important habitats worthy of conservation. In general, movement corridors consist of areas of undisturbed land cover that connect larger, contiguous habitats. The Project site does not act as a corridor for species dispersal or provide migration habitat connectivity to adjacent habitat and is not part of any defined essential connectivity areas as identified in the California Essential Habitat Connectivity Project (Spencer et al. 2010).

5.2.3 Invasive Species

Invasive plants (i.e., noxious weeds) are undesirable, non-native plants that commonly invade disturbed sites. Most species were introduced from Europe and Asia and many are known to negatively affect native wildlife habitat and plant communities. When disturbance results in the creation of habitat openings or in the loss of intact native vegetation, invasive plants may colonize the site and spread, often out-competing native species. Once established, they are very difficult to eradicate.

All pertinent non-native plant species were reviewed to determine their status as invasive plants according to the ratings in the California Invasive Plant Inventory produced by California Invasive Plant Council (Cal-IPC) (Cal-IPC 2021). Cal-IPC categorizes non-native invasive plants into three categories of overall negative ecological impact in

California as “high”, “moderate”, and “limited”. No invasive species with a Cal-IPC rating of “high” were observed in the Project area.

5.2.4 Sensitive Natural Communities and Aquatic Habitats

Habitats are considered “sensitive” by CDFW if they are identified on the List of Vegetation Alliances and Associations as being highly imperiled or classified by CDFW in the CNDDB as natural communities of special concern – Ranks S1 to S3. No sensitive natural communities were documented in the Project area during the reconnaissance-level biological field survey. No other natural communities of concern identified by the USACE, RWQCB, and CDFW, including wetlands and other aquatic habitats, were observed within or adjacent to the Project area.

5.2.5 Special-Status Plant Species

Regionally occurring special-status plant species were identified based on a review of pertinent literature, the USFWS species list, CNDDB, and CNPS database records, and the reconnaissance-level biological field survey results. CNDDB special-status plant species occurrences within five miles of the Project area are illustrated in Figure 2. For each species, habitat requirements were assessed and compared to the habitats in the Project area and immediate vicinity to determine if potential habitat occurs in the Project area. For the purposes of this review, all regionally occurring plant species listed under the FESA, CESA and CNPS are included in Table 1, regardless of whether the Project area provides potential habitat. Based on database records, 37 special-status plants were evaluated for their potential to occur within the Project area. Of these 37 species, 17 were determined to be absent and 20 have a low potential to occur. None were found to have a high or moderate potential to occur as discussed in Table 1.

Table 1. Special-Status Plant Species with Potential to Occur in the Project area

Common Name Scientific Name	Listing Status[1] (Fed/State/CRPR)	Known Habitat and Elevation Range (Feet)	Blooming Period	Potential for Occurrence
Large-flowered fiddleneck *Amsinckia grandiflora*	FE/SE/1B.1	Cismontane woodland and valley and foothill grassland. Elev. 885-1805 ft.	Apr-May	**Low**. The Project area does not contain woodland habitat. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Mt. Diablo manzanita *Arctostaphylos auriculata*	-/-/1B.3	Chaparral in sandstone soil or cismontane woodland. Elev. 440-2135 ft.	Jan-Mar	**Absent**. The Project area does not contain chaparral or woodland habitat and this species was not observed during the reconnaissance survey.
Contra Costa manzanita *Arctostaphylos manzanita* ssp. *laevigata*	-/-/1B.2	Rocky soils in chaparral. Elev. 1410-3610 ft.	Jan-Mar	**Absent**. The Project area does not contain chaparral habitat and this species was not observed during the reconnaissance survey.
Alkali milk-vetch *Astragalus tener* var. *tener*	-/-/1B.2	Valley and foothill grassland in adobe clay soil; playas and vernal pools with alkaline soil. Elev. 0-200 ft.	Mar-Jun	**Absent.** The Project area does not contain adobe clay soils, playas or vernal pools with alkaline soils and this species was not observed during the reconnaissance survey.
Brittlescale *Atriplex depressa*	-/-/1B.2	Alkaline and clay soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pools. Elev. 0-1050 ft.	Apr-Oct	**Low.** The Project area does not contain chenopod scrub, meadows and seeps, playas, or vernal pools. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Big tarplant *Blepharizonia plumosa*	-/-/1B.1	Usually clay soils in valley and foothill grassland. Elev. 100-1660 ft.	July-Oct	**Low**. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.

Common Name Scientific Name	Listing Status[1] (Fed/State/CRPR)	Known Habitat and Elevation Range (Feet)	Blooming Period	Potential for Occurrence
Mt. Diablo fairy-lantern *Calochortus pulchellus*	-/-/1B.2	Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland. Elev. 100-2755 ft.	Apr-Jun	**Low**. The Project area does not contain chaparral or woodland. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	-/-/1B.1	Valley and foothill grassland in alkaline soils. Elev. 0-755 ft.	May-Oct	**Low.** The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Soft salty bird's-beak *Chloropyron molle* ssp. *molle*	FE/SR/1B.2	Coastal salt marshes and swamps. Elev. 0-10 ft.	Jun-Nov	**Absent.** The Project area does not contain coastal salt marshes or swamps (salt grass/pickleweed marshes) and this species was not observed during the reconnaissance survey.
Bolander's water-hemlock *Cicuta maculata* var. *bolanderi*	-/-/2B.1	Coastal fresh or brackish water marshes and swamps. Elev. 0-660 ft.	Jul-Sep	**Absent.** Project area does not contain coastal fresh or brackish marshes or swamps and this species was not observed during the reconnaissance survey.
Hoover's cryptantha *Cryptantha hooveri*	-/-/1A	Inland dunes and valley and foothill grassland in sandy soils. Elev. 30-490 ft.	Apr-May	**Low**. The Project area does not contain inland dune habitat. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Dwarf downingia *Downingia pusilla*	-/-/2B.2	Valley and foothill grassland in mesic habitats and vernal pools. Elev. 5-1460 ft.	Mar-May	**Low**. The Project area does not contain vernal pools. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.

Common Name Scientific Name	Listing Status[1] (Fed/State/CRPR)	Known Habitat and Elevation Range (Feet)	Blooming Period	Potential for Occurrence
Antioch Dunes buckwheat *Eriogonum nudum* var. *psychicola*	-/-/1B.1	Inland dunes. Elev. 0-65 ft.	Jul-Oct	**Absent.** Project area does not contain inland dunes and this species was not observed during the reconnaissance survey.
Mt. Diablo buckwheat *Eriogonum truncatum*	-/-/1B.1	Sandy soils in chaparral, coastal scrub, and valley and foothill grassland. Elev. 10-1150 ft.	Apr-Sep	**Low.** The Project area does not contain chaparral or coastal scrub habitat. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Jepson's coyote-thistle *Eryngium jepsonii*	-/-/1B.2	Valley and foothill grassland, vernal pools in clay soil. Elev. 10-985 ft.	Apr-Aug	**Low**. The Project area does not contain vernal pools. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Contra Costa wallflower *Erysimum capitatum* var. *angustatum*	FE/SE/1B.1	Inland dunes. Elev. 10-70 ft.	Mar-Jul	**Absent.** Project area does not contain inland dunes and this species was not observed during the reconnaissance survey.
Diamond-petaled California poppy *Eschscholzia rhombipetala*	-/-/1B.1	Valley and foothill grassland in alkaline and clay soils. Elev. 0-3200 ft.	Mar-Apr	**Low.** The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
San Joaquin spearscale *Extriplex joaquinana*	-/-/1B.2	Chenopod scrub, meadows and seeps, playas, and valley and foothill grassland in alkaline soil. Elev. 0-2740 ft.	Apr-Oct	**Low.** The Project area does not contain chenopod scrub or meadows and seeps. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.

Common Name Scientific Name	Listing Status[1] (Fed/State/CRPR)	Known Habitat and Elevation Range (Feet)	Blooming Period	Potential for Occurrence
Fragrant fritillary *Fritillaria liliacea*	-/-/1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland often in serpentinite soil. Elev. 10-1345 ft.	Feb-Apr	**Low**. The Project area does not contain woodland, prairie, or scrub habitat. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Diablo helianthella *Helianthella castanea*	-/-/1B.2	Usually rocky, axonal soils, often in partial shade in broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Elev. 195-4265 ft.	Mar-Jun	**Low.** The Project area does not contain forest, woodland, chaparral, or coastal scrub habitat. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Brewer's western flax *Hesperolinon breweri*	-/-/1B.2	Usually serpentinite soils in chaparral, cismontane woodland, valley and foothill grassland. Elev. 100-3100 ft.	May-Jul	**Low.** The Project area does not contain woodland or chaparral habitat. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Woolly rose-mallow *Hibiscus lasiocarpos* var. *occidentalis*	-/-/1B.2	Freshwater marshes and swamps, often in riprap on sides of levees. Elev. 0-395 ft.	Jun-Sep	**Absent.** The Project area does not contain freshwater marshes and swamps and this species was not observed during the reconnaissance survey.
Contra Costa goldfields *Lasthenia conjugens*	FE/-/1B.1	Cismontane woodland, playas in alkaline soil, mesic valley and foothill grassland, and vernal pools in mesic areas. Elev. 0-1545 ft.	Mar-Jun	**Low.** The Project area does not contain woodland or playas. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Delta tule pea *Lathyrus jepsonii* var. *jepsonii*	-/-/1B.2	Freshwater and brackish marshes and swamps. Elev. 0-20 ft.	May-Sep	**Absent.** The Project area does not contain freshwater or brackish marshes and swamps and this species was not observed during the reconnaissance survey.

Common Name Scientific Name	Listing Status[1] (Fed/State/CRPR)	Known Habitat and Elevation Range (Feet)	Blooming Period	Potential for Occurrence
Mason's lilaeopsis *Lilaeopsis masonii*	-/SR/1B.1	Wetlands, riparian, freshwater marsh, brackish marsh, and wetland riparian. Elev. 0-32 ft.	Apr-Nov	**Absent.** The Project area does not contain freshwater or brackish marshes, wetlands, or riparian wetlands and this species was not observed during the reconnaissance survey.
Delta mudwort *Limosella australis*	-/-/2B.1	Riparian scrub, freshwater or brackish marshes and swamps, usually on mud banks. Elev. 0-10 ft.	May-Aug	**Absent.** The Project area does not contain freshwater or brackish marshes or riparian scrub habitat and this species was not observed during the reconnaissance survey.
Showy golden madia *Madia radiata*	-/-/1B.1	Cismontane woodland and valley and foothill grassland. Elev. 80-3985 ft.	Mar-May	**Low.** The Project area does not contain woodland habitat. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Hall's bush-mallow *Malacothamnus hallii*	-/-/1B.2	Chaparral and coastal scrub. Elev. 30-2500 ft.	May-Oct	**Absent.** The Project area does not contain chaparral or coastal scrub habitat and this species was not observed during the reconnaissance survey.
Shining navarretia *Navarretia nigelliformis* ssp. *radians*	-/-/1B.2	Sometimes clay soils in cismontane woodland, valley and foothill grassland, and vernal pools. Elev. 210-3280 ft.	Apr-Jul	**Low.** The Project area does not contain woodland or vernal pools. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Antioch Dunes evening-primrose *Oenothera deltoides* ssp. *howellii*	FE/SE/1B.1	Inland dunes. Elev. 0-100 ft.	Mar-Sep	**Absent.** The Project area does not contain inland dunes and this species was not observed during the reconnaissance survey.

Common Name Scientific Name	Listing Status[1] (Fed/State/CRPR)	Known Habitat and Elevation Range (Feet)	Blooming Period	Potential for Occurrence
Bearded popcornflower *Plagiobothrys hystriculus*	-/-/1B.1	Often in vernal swales in mesic valley and foothill grassland and vernal pool margins. Elev. 0-900 ft.	Apr-May	**Low.** The Project area does not contain vernal pools. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Eel-grass pondweed *Potamogeton zosteriformis*	-/-/2B.2	Freshwater marshes and swamps. Elev. 0-6100 ft.	Jun-Jul	**Absent.** The Project area does not contain freshwater marshes and swamps and this species was not observed during the reconnaissance survey.
Chaparral ragwort *Senecio aphanactis*	-/-/2B.2	Sometimes in alkaline soils in chaparral, cismontane woodland, and coastal scrub. Elev. 45-2625 ft.	Jan-May	**Absent.** The Project area does not contain chaparral, woodland, or coastal scrub habitat and this species was not observed during the reconnaissance survey.
Keck's checkerbloom *Sidalcea keckii*	FE/-/1B.1	Serpentinite and clay soils in cismontane woodland and valley and foothill grassland. Elev. 245-2130 ft.	Apr-May	**Low.** The Project area does not contain woodland habitat. The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Suisun Marsh aster *Symphyotrichum lentum*	-/-/1B.2	Brackish and freshwater marshes and swamps. Elev. 0-10 ft.	Apr-Nov	**Absent.** The Project area does not contain freshwater or brackish marshes or swamps and this species was not observed during the reconnaissance survey.
Caper-fruited tropidocarpum *Tropidocarpum capparideum*	-/-/1B.1	Valley and foothill grassland (alkaline hills) Elev. 0-1495 ft.	Mar-Apr	**Low.** The Project area does contain annual grassland; however, the grassland is highly disturbed and provides only marginal habitat for this species.
Oval-leaved viburnum *Viburnum ellipticum*	-/-/2B.3	Chaparral, cismontane woodland, and lower montane coniferous forest. Elev. 705-4595 ft.	May-Jun	**Absent**. The Project area does not contain chaparral, woodland, or forest habitat and this species was not observed during the biological survey.

[1]Federal and State Status Codes
- = No status, or not applicable

FE = Listed as endangered under the Federal Endangered Species Act (FESA); FT = Listed as threatened under FESA
SE = Listed as endangered under the California Endangered Species Act (CESA); SR = Listed as rare under CESA; ST = Listed as threatened under CESA

CNPS Ranking
1A = Presumed extinct in California and either rare or extinct elsewhere.
1B = Rare, threatened, or endangered in California and elsewhere.
2A = Presumed extinct in California but common elsewhere.
2B = Rare, threatened, or endangered in California but more common elsewhere.

Threat Ranks
0.1 = Seriously threatened in California (more than 80% of occurrences threatened/high degree and immediacy of threat).
0.2 = Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat).
0.3 = Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

5.2.6 Special-Status Animal Species

Regionally occurring special-status animal species were identified based on a review of pertinent literature, the USFWS species list, CNDDB database records, a query of the California WHRS (CDFW 2014), and the reconnaissance-level biological field survey results. CNDDB special-status animal species occurrences within five miles of the Project area are illustrated in Figure 3. For each species, habitat requirements were assessed and compared to the habitats in the Project area and immediate vicinity to determine the species' potential to occur in or near the Project area. For the purposes of this review, all regionally occurring wildlife species listed under the FESA or CESA are included in Table 2, regardless of whether the Project area provides potential habitat. The literature and database review identified 36 special-status wildlife species with suitable habitat or known to occur in or near the Project area. Based on initial assessment of wildlife habitats conducted during the biological survey, 31 of these species were determined to be absent and 5 have a low potential to occur. None of these species were determined to be present or have a high or moderate potential to occur.

Table 2. Special-Status Animal Species within Potential to Occur in the Project area

Common Name Scientific Name	Listing Status[1] (Fed/State)	Known Habitat Requirements	Potential for Occurrence
Invertebrates			
Conservancy fairy shrimp *Branchinecta conservatio*	FE/-	Endemic to the grasslands of the northern two-thirds of the Central Valley. Inhabits astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	**Absent.** No astatic pool habitat occurs within the Project area.
Vernal pool fairy shrimp *Branchinecta lynchi*	FT/-	Vernal pools, swales, ephemeral freshwater habitats, often grass or mud-bottomed swales, earth slump or basalt-flow depression pools in grasslands.	**Absent.** No vernal pool habitat occurs within the Project area.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE/-	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands.	**Absent.** No vernal pool habitat occurs within the Project area.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT/-	Occurs in riparian scrub only in the Central Valley. Requires blue elderberry (*Sambucus mexicana*) for breeding. Lays eggs in elderberries 2 to 8 inches in diameter. Often prefers “stressed” elderberries.	**Absent.** No elderberry (*Sambucus* sp.) shrubs occur within the Project area.
Lange's metalmark butterfly *Apodemia mormo langei*	FE/-	Inhabits stabilized dunes along the San Joaquin River. Endemic to Antioch Dunes, Contra Costa County. Primary host plant is *Eriogonum nudum* var *auriculatum*; feeds on nectar of other wildflowers, as well as host plant.	**Absent.** The Project area lacks this species host plant. In addition, the Project area does not provide suitable foraging habitat due to the lack of wildflowers.
Crotch bumble bee *Bombus crotchii*	-/CE	Coastal California east to the Sierra-Cascade crest and south into Mexico. Found in open grassland and scrub habitats. Food plant genera include *Antirrhinum* spp., *Phacelia* spp., *Clarkia* spp., *Dendromecon* spp., *Eschscholzia* spp., and *Eriogonum* spp.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.

Common Name Scientific Name	Listing Status[1] (Fed/State)	Known Habitat Requirements	Potential for Occurrence
Western bumble bee *Bombus occidentalis*	-/CE	Meadows and grasslands with abundant floral resources throughout the mountains and northern coast of California. Nests in underground cavities including old rodent burrows in open west-southwest slopes bordered by trees.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.
Fish			
Steelhead – Central Valley DPS *Oncorhynchus mykiss irideus*	FT/-	Populations in the Sacramento and San Joaquin rivers and their tributaries.	**Absent.** The Project area does not provide suitable aquatic habitat for this species.
Delta Smelt *Hypomesus transpacificus*	FT/SE	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait & San Pablo Bay. Seldom found at salinities > 10 parts per thousand (ppt). Most often at salinities < 2ppt.	**Absent.** The Project area does not provide suitable aquatic habitat for this species.
Longfin smelt *Spirinchus thaleichthys*	C/ST	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt but can be found in completely freshwater to almost pure seawater.	**Absent.** The Project area does not provide suitable aquatic habitat for this species.
Sacramento perch *Archoplites interruptus*	-/SSC	Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley. Aquatic vegetation essential for young.	**Absent.** The Project area does not provide suitable aquatic habitat for this species.
Amphibians			
California tiger salamander *Ambystoma californiense*	FT/ST	Central Valley DPS federally listed as threatened. Santa Barbara County and Sonoma County DPS federally listed as endangered. Needs underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	**Absent.** The Project area does not provide suitable aquatic or terrestrial habitat for this species.

Common Name Scientific Name	Listing Status[1] (Fed/State)	Known Habitat Requirements	Potential for Occurrence
California red-legged frog *Rana draytonii*	FT/SSC	Requires perennial or near-perennial aquatic habitats, especially for breeding; often slow-moving streams, freshwater pools and ponds over 1-foot deep, often with overhanging vegetation; adjacent upland habitats are often used for temporary refuges or dispersal movements.	**Absent.** The Project area does not provide suitable aquatic or terrestrial habitat for this species.
Foothill yellow-legged frog *Rana boylii*	-/CT, SSC	Inhabits partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs cobble-sized substrate for egg-laying and at least 15 weeks of water to attain metamorphosis.	**Absent.** The Project area does not provide suitable aquatic or terrestrial habitat for this species.
Reptiles			
Northern California legless lizard *Anniella pulchra*	-/SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	**Absent.** The Project area does not provide suitable habitat for this species.
Alameda whipsnake *Masticophis lateralis euryxanthus*	FT/ST	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses.	**Absent.** Project area is outside the range of this species for this species.
California glossy snake *Arizona elegans occidentalis*	-/SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	**Absent.** The Project area does not provide suitable habitat for this species.
Giant gartersnake *Thamnophis gigas*	FT/ST	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the gartersnakes in California.	**Absent.** The Project area does not provide suitable aquatic habitat for this species.

Common Name Scientific Name	Listing Status[1] (Fed/State)	Known Habitat Requirements	Potential for Occurrence
Western pond turtle *Emys marmorata*	-/SSC	Slow water aquatic habitat with available basking sites. Hatchlings require shallow water with dense submergent or short emergent vegetation. Require an upland oviposition site near the aquatic site.	**Absent.** The Project area does not provide suitable aquatic habitat for this species.
Birds			
White-tailed kite *Elanus leucurus*	-/FP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Low.** Trees within the Project area do provide marginal nesting habitat. However, the site is surrounded by urban development with limited foraging habitat in the vicinity. No raptor nests were observed in the Project area or surrounding trees.
Swainson's hawk *Buteo swainsoni*	-/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranchlands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Low.** Trees within the Project area do provide marginal nesting habitat. However, the site is surrounded by urban development with limited foraging habitat in the vicinity. No raptor nests were observed in the Project area or surrounding trees.
California Ridgway's rail *Rallus obsoletus*	FE/SE, FP	Found in salt and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed but feeds away from cover on invertebrates from mud-bottomed sloughs.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.
California black rail *Laterallus jamaicensis coturniculus*	-/ST	Freshwater marshes, wet meadows and shallow margins of saltwater marshes boarding larger bays. Requires dense vegetation for nesting habitat.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.
California least tern *Sternula antillarum browni*	FE/SE, FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.

Common Name Scientific Name	Listing Status[1] (Fed/State)	Known Habitat Requirements	Potential for Occurrence
Burrowing owl *Athene cunicularia*	-/SSC	Grasslands and ruderal habitats. Uses mammal burrows or other suitable underground cavities.	**Low.** Burrows along the northern portion of the Project area provide marginal nesting habitat for this species. However, a majority of the burrows were filled in with leaves, trash, and spider webs. No signs of burrowing owl were identified.
Loggerhead shrike *Lanius ludovicianus*	-/SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	**Low.** The Project area does not provide suitable nesting habitat for this species. The Project area does provide marginal foraging habitat for this species. However, the site is highly disturbed and this species is not expected to occur.
Bank swallow *Riparia riparia*	-/ST	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	-/SSC	Resides in fresh and saltwater marshes and creeks of the San Francisco Bay region. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.
Song sparrow ("Modesto" population) *Melospiza melodia*	-/SSC	Endemic to California, where it resides only in the north-central portion of the Central Valley. Occurs in emergent freshwater marshes dominated by tules and cattails, riparian willow thickets, riparian forests of valley oak with sufficient understory of blackberry, and vegetated irrigation canals and levees. Prefers moderately dense vegetation for nesting and exposed ground or leaf litter for foraging.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.
Suisun song sparrow *Melospiza melodia maxillaris*	-/SSC	Resides in brackish-water marshes surrounding Suisun Bay. Inhabits cattails, tules, and other sedges, and Salicornia; also known to frequent tangles bordering sloughs.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.

Common Name Scientific Name	Listing Status[1] (Fed/State)	Known Habitat Requirements	Potential for Occurrence
Tricolored blackbird *Agelaius tricolor*	-/ST, SSC	Breeds near fresh water in dense emergent vegetation. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**Absent.** The Project area does not provide suitable nesting or foraging habitat for this species.
Mammals			
Pallid bat *Antrozous pallidus*	-/SSC	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	**Low.** The Project area includes a large old barn that may provide marginal roosting habitat for this species. However, the site is highly disturbed and this species is not expected to occur.
Western red bat *Lasiurus blossevillii*	-/SSC	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Absent.** The Project area does not provide suitable roosting or foraging habitat for this species.
San Joaquin kit fox *Vulpes macrotis mutica*	FE/ST	Found in annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose-textured sandy soils for burrowing, and suitable prey base.	**Absent.** The Project area does not provide suitable denning or foraging habitat for this species.
American badger *Taxidea taxus*	-/SSC	Most abundant in drier, open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Absent.** The Project area does provide marginal burrowing habitat along the northern portion of the Project area where existing burrows occur. However, the site is highly disturbed and surrounded by urban development and this species is not expected to occur.
Salt-marsh harvest mouse *Reithrodontomys raviventris*	FE/SE, FP	Occurs only in the saline emergent wetlands of San Francisco Bay and its tributaries. Primary habitat is pickleweed.	**Absent.** No saline emergent wetlands occur within the Project Area.

[1]Federal and State Status Codes

- = No status, or not applicable

FE = Listed as endangered under the Federal Endangered Species Act (FESA)

FT = Listed as threatened under FESA

SE = Listed as endangered under the California Endangered Species Act (CESA)

ST = Listed as threatened under CESA
SSC = Designated as a Species of Special Concern by CDFW under the California Environmental Quality Act (CEQA)
FP = Fully Protected under the California Fish and Game Code (F.G.C.)
C = Candidate for listing as either endangered or threatened under FESA
CE = Candidate for listing as endangered under CESA
CT = Candidate for listing as threatened under CESA

6.0 RESULTS: BIOLOGICAL RESOURCES AND IMPACTS

6.1 HABITATS AND NATURAL COMMUNITIES OF CONCERN

The Project area does not contain any sensitive natural communities as classified by the CDFW. In addition, no aquatic habitats were identified within or adjacent to the Project area that could be considered WOTUS and subject to the USACE and RWQCB jurisdiction under Sections 404 and 401 of the CWA, or subject to CDFW jurisdiction under Section 1600 of the California FGC.

6.1.1 Critical Habitat

The Project area is within USFWS designated critical habitat for delta smelt (*Hypomesus transpacificus*). The Project area does not provide suitable aquatic habitat for delta smelt; therefore, no impact to this species critical habitat will occur.

6.2 SPECIAL-STATUS PLANT SPECIES

There is no potential habitat in the Project area for special-status plant species with occurrences within a five-mile radius and no special-status plant species were observed during the reconnaissance-level biological survey conducted on June 25, 2021. The annual grassland habitat within the Project area is highly disturbed with vehicle tire tracks throughout the grassland. In addition, the site is dominated by non-native and invasive plant species including foxtail barley and Italian rye grass. Based on the lack of suitable habitat and no special-status plant species having a moderate or high potential to occur within the Project area, no impacts to special-status plant species are expected to occur.

6.3 SPECIAL-STATUS ANIMAL SPECIES

Although there are CNDDB occurrence records within 5 miles of the Project area for special-status wildlife species, the Project area does not provide suitable habitat (e.g., aquatic features, woodland) for potential special-status wildlife species to occur. No special-status animal species have a high or moderate potential to occur within the Project area. Five species, including white-tailed kite (*Elanus leucurus*), Swainson's hawk (*Buteo swainsoni*), burrowing owl (*Athene cunicularia*), Loggerhead shrike (*Lanius ludovicianus*), and pallid bat (*Antrozous pallidus*), have a low potential to occur in the Project area. Marginal nesting and roosting habitat for these species occurs within the Project area, however, the site is highly disturbed and surrounded by urban development with limited foraging habitat in the vicinity. The Project area does provide suitable nesting habitat for migratory birds and is discussed in detail below.

6.3.1 Migratory Nesting Birds

Trees within the Project area could provide suitable nesting habitat for migratory birds protected under the MBTA or California FGC. In addition, the old barn has a couple of boards missing on two sides, allowing for access inside the barn for potential nesting habitat. During the reconnaissance-level biological survey, whitewash was observed on structural wooden beams within the barn, however, no nesting activity was observed. The Project anticipates the

removal of all existing trees and the barn from the Project site. Removal of these features during the typical nesting season (February 1 through September 1) could have an impact to nesting migratory birds.

If tree removal occurs during the typical nesting season (February 1 through September 1), then the Project will implement avoidance and minimization measures to avoid impacts to migratory nesting birds. These measures include conducting a preconstruction nesting bird survey during the nesting season to document any nests on the Project site and implementation of protective buffers around documented nests during construction to minimize disturbance to nesting birds during construction.

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Figures

APPENDIX A

USFWS, CNDDB and CNPS Database Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Antioch North (3812117) OR Antioch South (3712187) OR Jersey Island (3812116) OR Brentwood (3712186))
 AND Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Amsinckia grandiflora large-flowered fiddleneck	PDBOR01050	Endangered	Endangered	G1	S1	1B.1
Anomobryum julaceum slender silver moss	NBMUS80010	None	None	G5?	S2	4.2
Arctostaphylos auriculata Mt. Diablo manzanita	PDERI04040	None	None	G2	S2	1B.3
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Atriplex depressa brittlescale	PDCHE042L0	None	None	G2	S2	1B.2
Blepharizonia plumosa big tarplant	PDAST1C011	None	None	G1G2	S1S2	1B.1
Calochortus pulchellus Mt. Diablo fairy-lantern	PMLIL0D160	None	None	G2	S2	1B.2
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T1T2	S1S2	1B.1
Chloropyron molle ssp. molle soft salty bird's-beak	PDSCR0J0D2	Endangered	Rare	G2T1	S1	1B.2
Cicuta maculata var. bolanderi Bolander's water-hemlock	PDAPI0M051	None	None	G5T4T5	S2?	2B.1
Cryptantha hooveri Hoover's cryptantha	PDBOR0A190	None	None	GH	SH	1A
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Eriogonum nudum var. psychicola Antioch Dunes buckwheat	PDPGN0849Q	None	None	G5T1	S1	1B.1
Eriogonum truncatum Mt. Diablo buckwheat	PDPGN085Z0	None	None	G1	S1	1B.1
Eryngium jepsonii Jepson's coyote-thistle	PDAPI0Z130	None	None	G2	S2	1B.2
Erysimum capitatum var. angustatum Contra Costa wallflower	PDBRA16052	Endangered	Endangered	G5T1	S1	1B.1
Eschscholzia rhombipetala diamond-petaled California poppy	PDPAP0A0D0	None	None	G1	S1	1B.1
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Fritillaria agrestis stinkbells	PMLIL0V010	None	None	G3	S3	4.2
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Helianthella castanea Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
Hesperolinon breweri Brewer's western flax	PDLIN01030	None	None	G2	S2	1B.2
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Lathyrus jepsonii var. jepsonii Delta tule pea	PDFAB250D2	None	None	G5T2	S2	1B.2
Lilaeopsis masonii Mason's lilaeopsis	PDAPI19030	None	Rare	G2	S2	1B.1
Limosella australis Delta mudwort	PDSCR10030	None	None	G4G5	S2	2B.1
Madia radiata showy golden madia	PDAST650E0	None	None	G3	S3	1B.1
Malacothamnus hallii Hall's bush-mallow	PDMAL0Q0F0	None	None	G2	S2	1B.2
Navarretia nigelliformis ssp. radians shining navarretia	PDPLM0C0J2	None	None	G4T2	S2	1B.2
Oenothera deltoides ssp. howellii Antioch Dunes evening-primrose	PDONA0C0B4	Endangered	Endangered	G5T1	S1	1B.1
Plagiobothrys hystriculus bearded popcornflower	PDBOR0V0H0	None	None	G2	S2	1B.1
Potamogeton zosteriformis eel-grass pondweed	PMPOT03160	None	None	G5	S3	2B.2
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Sidalcea keckii Keck's checkerbloom	PDMAL110D0	Endangered	None	G2	S2	1B.1
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Tropidocarpum capparideum caper-fruited tropidocarpum	PDBRA2R010	None	None	G1	S1	1B.1
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3

Record Count: 38

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Antioch North (3812117) OR Antioch South (3712187) OR Jersey Island (3812116) OR Brentwood (3712186))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Ambystoma californiense California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Andrena blennospermatis Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S2	
Anniella pulchra Northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
Anthicus antiochensis Antioch Dunes anthicid beetle	IICOL49020	None	None	G1	S1	
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Apodemia mormo langei Lange's metalmark butterfly	IILEPH7012	Endangered	None	G5T1	S1	
Archoplites interruptus Sacramento perch	AFCQB07010	None	None	G2G3	S1	SSC
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
Branchinecta conservatio Conservancy fairy shrimp	ICBRA03010	Endangered	None	G2	S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Coelus gracilis San Joaquin dune beetle	IICOL4A020	None	None	G1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Efferia antiochi Antioch efferian robberfly	IIDIP07010	None	None	G1G2	S1S2	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eucerceris ruficeps redheaded sphecid wasp	IIHYM18010	None	None	G1G3	S1S2	
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
Helminthoglypta nickliniana bridgesi Bridges' coast range shoulderband	IMGASC2362	None	None	G3T1	S1S2	
Hygrotus curvipes curved-foot hygrotus diving beetle	IICOL38030	None	None	G1	S1	
Hypomesus transpacificus Delta smelt	AFCHB01040	Threatened	Endangered	G1	S1	
Idiostatus middlekauffi Middlekauff's shieldback katydid	IIORT31010	None	None	G1G2	S1	
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
Lasiurus blossevillii western red bat	AMACC05060	None	None	G4	S3	SSC
Lasiurus cinereus hoary bat	AMACC05030	None	None	G3G4	S4	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Lytta molesta molestan blister beetle	IICOL4C030	None	None	G2	S2	
Masticophis lateralis euryxanthus Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	
Melospiza melodia song sparrow ("Modesto" population)	ABPBXA3010	None	None	G5	S3?	SSC
Melospiza melodia maxillaris Suisun song sparrow	ABPBXA301K	None	None	G5T3	S3	SSC
Metapogon hurdi Hurd's metapogon robberfly	IIDIP08010	None	None	G1G2	S1S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Myrmosula pacifica Antioch multilid wasp	IIHYM15010	None	None	GH	SH	
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Perdita scitula antiochensis Antioch andrenid bee	IIHYM01031	None	None	G1T1	S1	
Perognathus inornatus San Joaquin pocket mouse	AMAFD01060	None	None	G2G3	S2S3	
Phalacrocorax auritus double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Philanthus nasalis Antioch specid wasp	IIHYM20010	None	None	G1	S1	
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sphecodogastra antiochensis Antioch Dunes halcitid bee	IIHYM78010	None	None	G1	S1	
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	

Record Count: 54

Inventory of Rare and Endangered Plants of California

Search Results

Back Export Results

49 matches found. Click on scientific name for details

Search Criteria: Quad is one of [**3812117,3712187,3712186,3812116**]

Scientific Name | Common Name | Family | Lifeform | Blooming Period | Fed List | State List | Global Rank | State Rank | CA Rare Plant Rank | General Habitats | Micro Habitats | Lowest Elevation | Highest Elevation | CA Endemic | Date Added | Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK
Amsinckia grandiflora	large-flowered fiddleneck	(Mar)Apr-May	FE	CE	1B.1
Anomobryum julaceum	slender silver moss		None	None	4.2
Arctostaphylos auriculata	Mt. Diablo manzanita	Jan-Mar	None	None	1B.3
Arctostaphylos manzanita ssp. *laevigata*	Contra Costa manzanita	Jan-Mar(Apr)	None	None	1B.2
Astragalus tener var. *tener*	alkali milk-vetch	Mar-Jun	None	None	1B.2
Atriplex coronata var. *coronata*	crownscale	Mar-Oct	None	None	4.2
Atriplex depressa	brittlescale	Apr-Oct	None	None	1B.2
Blepharizonia plumosa	big tarplant	Jul-Oct	None	None	1B.1
Calandrinia breweri	Brewer's calandrinia	(Jan)Mar-Jun	None	None	4.2
Calochortus pulchellus	Mt. Diablo fairy-lantern	Apr-Jun	None	None	1B.2
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	May-Oct(Nov)	None	None	1B.1
Chloropyron molle ssp. *molle*	soft salty bird's-beak	Jun-Nov	FE	CR	1B.2
Cicuta maculata var. *bolanderi*	Bolander's water-hemlock	Jul-Sep	None	None	2B.1
Convolvulus simulans	small-flowered morning-glory	Mar-Jul	None	None	4.2
Cryptantha hooveri	Hoover's cryptantha	Apr-May	None	None	1A
Downingia pusilla	dwarf downingia	Mar-May	None	None	2B.2
Eleocharis parvula	small spikerush	(Apr)Jun-Aug(Sep)	None	None	4.3
Eriogonum nudum var. *psychicola*	Antioch Dunes buckwheat	Jul-Oct	None	None	1B.1
Eriogonum truncatum	Mt. Diablo buckwheat	Apr-Sep(Nov-Dec)	None	None	1B.1
Eriophyllum jepsonii	Jepson's woolly sunflower	Apr-Jun	None	None	4.3
Eryngium jepsonii	Jepson's coyote-thistle	Apr-Aug	None	None	1B.2
Erysimum capitatum var. *angustatum*	Contra Costa wallflower	Mar-Jul	FE	CE	1B.1
Eschscholzia rhombipetala	diamond-petaled California poppy	Mar-Apr	None	None	1B.1
Extriplex joaquinana	San Joaquin spearscale	Apr-Oct	None	None	1B.2
Fritillaria agrestis	stinkbells	Mar-Jun	None	None	4.2

▲ SCIENTIFIC NAME	COMMON NAME	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK
Fritillaria liliacea	fragrant fritillary	Feb-Apr	None	None	1B.2
Galium andrewsii ssp. *gatense*	phlox-leaf serpentine bedstraw	Apr-Jul	None	None	4.2
Helianthella castanea	Diablo helianthella	Mar-Jun	None	None	1B.2
Hesperevax caulescens	hogwallow starfish	Mar-Jun	None	None	4.2
Hesperolinon breweri	Brewer's western flax	May-Jul	None	None	1B.2
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	Jun-Sep	None	None	1B.2
Lasthenia conjugens	Contra Costa goldfields	Mar-Jun	FE	None	1B.1
Lathyrus jepsonii var. *jepsonii*	Delta tule pea	May-Jul(Aug-Sep)	None	None	1B.2
Lilaeopsis masonii	Mason's lilaeopsis	Apr-Nov	None	CR	1B.1
Limosella australis	Delta mudwort	May-Aug	None	None	2B.1
Lupinus albifrons var. *abramsii*	Abrams' lupine	Apr-Jun	None	None	3.2
Madia radiata	showy golden madia	Mar-May	None	None	1B.1
Malacothamnus hallii	Hall's bush-mallow	(Apr)May-Sep(Oct)	None	None	1B.2
Navarretia heterandra	Tehama navarretia	Apr-Jun	None	None	4.3
Navarretia nigelliformis ssp. *radians*	shining navarretia	(Mar)Apr-Jul	None	None	1B.2
Oenothera deltoides ssp. *howellii*	Antioch Dunes evening-primrose	Mar-Sep	FE	CE	1B.1
Plagiobothrys hystriculus	bearded popcornflower	Apr-May	None	None	1B.1
Potamogeton zosteriformis	eel-grass pondweed	Jun-Jul	None	None	2B.2
Senecio aphanactis	chaparral ragwort	Jan-Apr(May)	None	None	2B.2
Senecio hydrophiloides	sweet marsh ragwort	May-Aug	None	None	4.2
Sidalcea keckii	Keck's checkerbloom	Apr-May(Jun)	FE	None	1B.1
Symphyotrichum lentum	Suisun Marsh aster	(Apr)May-Nov	None	None	1B.2
Tropidocarpum capparideum	caper-fruited tropidocarpum	Mar-Apr	None	None	1B.1
Viburnum ellipticum	oval-leaved viburnum	May-Jun	None	None	2B.3

Showing 1 to 49 of 49 entries

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2021-SLI-2152
Event Code: 08ESMF00-2021-E-06242
Project Name: 5200 Lone Tree Way Gas Station Project

June 23, 2021

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

To Whom It May Concern:

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

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

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

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

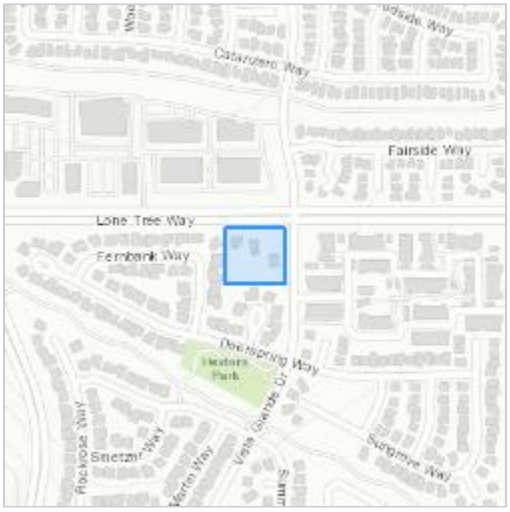
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-2152
Event Code: 08ESMF00-2021-E-06242
Project Name: 5200 Lone Tree Way Gas Station Project
Project Type: DEVELOPMENT
Project Description: The project proposes to build a gas station located at 5200 Lone Tree Way.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.96116805,-121.755386,14z



Counties: Contra Costa County, California

Endangered Species Act Species

There is a total of 14 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

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

Birds

NAME	STATUS
California Clapper Rail *Rallus longirostris obsoletus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii*	Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	
California Tiger Salamander *Ambystoma californiense*	Threatened
Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened
There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*	Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7850	

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio*	Endangered
There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8246	
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	
Vernal Pool Tadpole Shrimp *Lepidurus packardi*	Endangered
There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2246	

Flowering Plants

NAME	STATUS
Antioch Dunes Evening-primrose *Oenothera deltoides ssp. howellii*	Endangered
There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5970	
Contra Costa Goldfields *Lasthenia conjugens*	Endangered
There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7058	

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Final
https://ecos.fws.gov/ecp/species/321#crithab	

APPENDIX B

Representative Site Photos

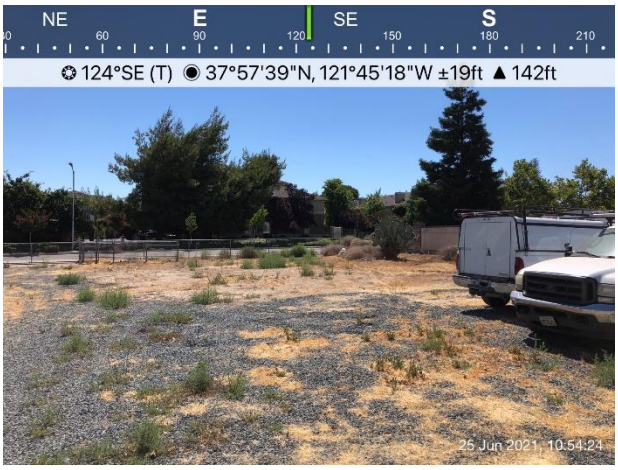

Photo 1. Ruderal habitat within the southeast portion of the Project area.

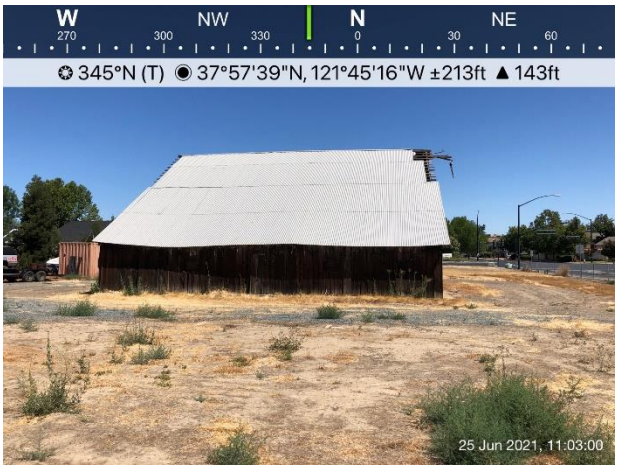

Photo 2. Old barn located between ruderal and annual grassland habitat.

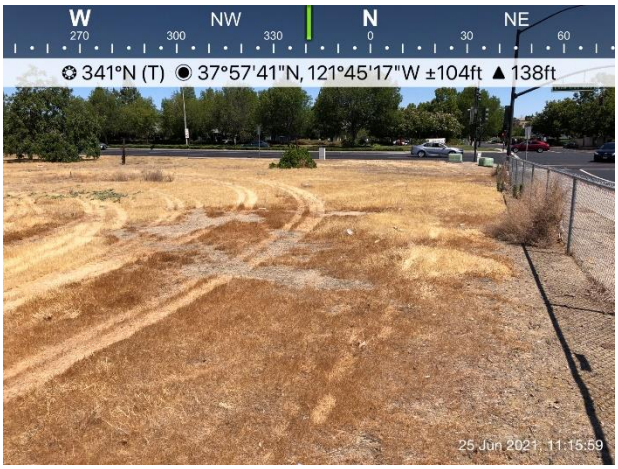

Photo 3. Annual grassland habitat within the northeast portion of the Project area. Multiple tire tracks observed.

Photo 4. Annual grassland north of the old barn.

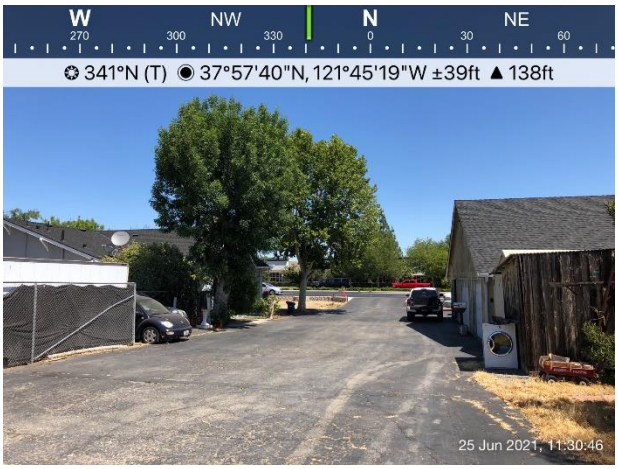

Photo 5. Urban habitat with landscaped trees and asphalt driveway.

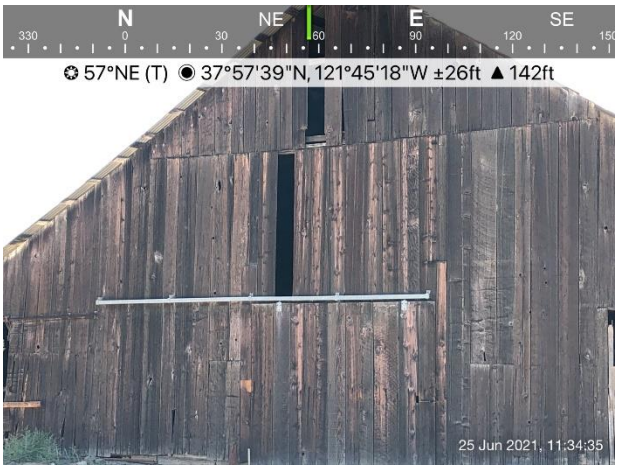

Photo 6. Missing boards on the west side of the old barn.

APPENDIX C

Observed Plant and Wildlife Species Tables

Table C1. Plant Species Observed on June 25, 2021

Scientific Name	Common Name	Native/Non-Native	Cal-IPC Level
Erigeron bonariensis	Flax-leaved horseweed	Non-native	
Festuca perennis	Italian rye grass	Non-native	Moderate
Heterotheca grandiflora	Telegraph weed	Native	
Hordeum murinum	Foxtail barley	Non-native	Moderate
Juglans hindsii	Northern California black walnut	Native	
Lactuca serriola	Prickly lettuce	Non-native	
Malvella leprosa	Alkali mallow	Native	
Platanus racemosa	California sycamore	Native	
Salsola tragus	Prickly Russian thistle	Non-native	Limited
Sonchus oleraceus	Common sow thistle	Non-native	
Vitis sp.	Grapevine sp.	Non-native	
--	Various landscape tree species	Non-native	

Table C2. Wildlife Observed on June 25, 2021

Scientific Name	Common Name
Reptiles	
Sceloporus occidentalis	Western fence lizard
Birds	
Corvus brachyrhynchos	American Crow
Mimus polyglottos	Northern Mockingbird
Passer domesticus	House Sparrow