Biological Resources Assessment

Burns Valley Development Project

Lake County, California

March 11, 2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
BA	Biological Assessment
BCC	Birds of Conservation Concern
BIOS	Biogeographic Information and Observation System
BO	Biological Opinion
BRA	Biological Resources Assessment
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of Clearlake
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DPS	Distinct population segment
ESA	Endangered Species Act
HCP	Habitat conservation plan
ITP	Incidental Take Permit
LSA	Lake or Streambed Alteration
MBTA	Migratory Bird Treaty Act
MSL	Mean sea level
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
Plan	City of Clearlake 2040 General Plan Update
Project	Burns Valley Development Project
RPZ	Root Protection Zone
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement

LIST OF ACRONYMS AND ABBREVIATIONS

SSC	Species of Special Concern
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group

1.0 INTRODUCTION

On behalf of the City of Clearlake (City), ECORP Consulting, Inc. conducted a Biological Resources Assessment (BRA) for the Burns Valley Development Project (Project) located in Lake County, California. The purpose of the assessment was to collect information on the biological resources present and evaluate the potential for special-status species and their habitats to occur in the Study Area; assess potential biological impacts related to Project activities; and identify potential mitigation measures to inform the Project's California Environmental Quality Act (CEQA) documentation for biological resources.

1.1 Project Location

The approximately 30.65-acre Study Area includes the impact limits of the Project and is located southwest of the intersection of Burns Valley Road and Rumsey Road, in the city of Clearlake in Lake County, California (Figure 1. *Study Area Location and Vicinity*). The Study Area corresponds to a portion of Section 21, Township 13 North, Range 07 West (Mount Diablo Base and Meridian) within the "Clearlake Highlands, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1993). The approximate center of the Study Area is located at latitude 38.96391 ° and longitude -122.634884° (NAD83) within the Upper Cache watershed (Hydrologic Unit Code #18020116) (Natural Resources Conservation Service [NRCS] et al. 2016).

1.2 Project Description

The Project proposes a multi-use land plan for approximately 29 acres of property with Accessor's Parcel Numbers 010-026-290, 010-026-400, and 039-570-180.

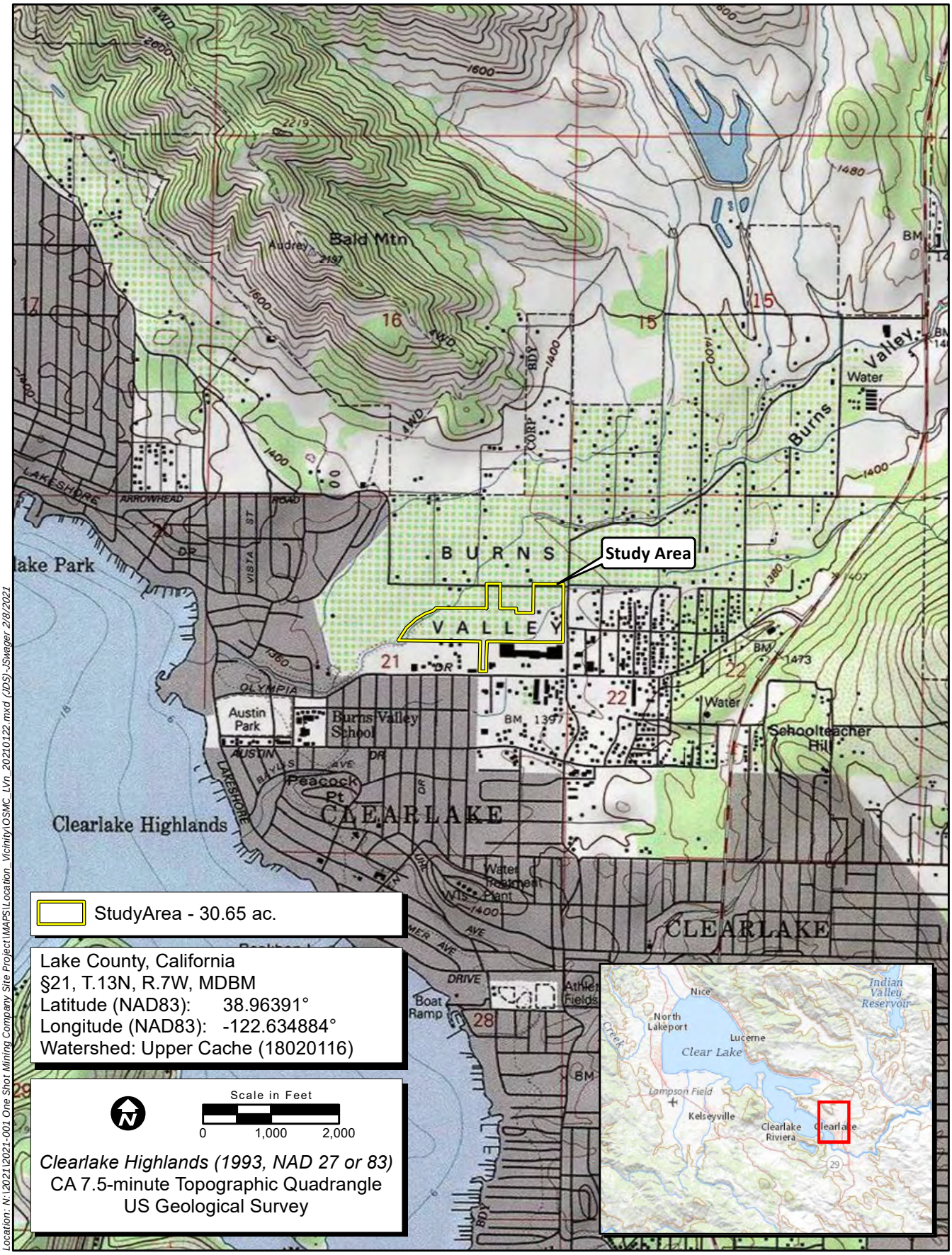
The eastern section of the property will be dedicated to a multi-family development of approximately 4.4 acres and a continuation of commercial-retail development of approximately 1.7 acres. The multi-family development will be located at the northeast corner of the property and the commercial-retail development will be located adjacently to the south along Burns Valley Road.

The mid-portion of the property is dedicated public use and will be active recreational uses such as Little League® Baseball, softball, and soccer fields. These facilities will be served with standard support services such as restrooms, concessions, and parking.

The western portion of the property is dedicated to the development of a public works facility, which includes a large graded area, covered equipment parking, public works shop, material storage bays, and a covered fuel and wash island.

Access and circulation will be provided to the development from three locations: Burns Valley Road traveling east-west, Burns Valley Road traveling north-south, and Olympic Drive.

The Project will not impact Burns Valley Creek or its riparian corridor.



Location: N:\2021\2021-001 One Shot Mining Company Site Project\MAPS\Location_Vicinity\OSMC_LVn_20210122.mxd (JDS) -JSwager 2/8/2021

Map Date: 2/8/2021

Sources:

Figure 1. Study Area Location and Vicinity

2021-001 Burns Valley Development Project

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1.3 Purpose of this Biological Resources Assessment

The purpose of this BRA is to assess the potential for occurrence of special-status plant and animal species or their habitat, and sensitive habitats such as wetlands within the Study Area. 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 the available literature and site reconnaissance.

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 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" (California Rare Plant Rank [CRPR] 1 and 2), plants listed by CNPS as species about which more information is needed to determine their status (CRPR 3), and plants of limited distribution (CRPR 4);
- are plants listed as rare under the California Native Plant Protection Act (NPPA; California Fish and Game Code, § 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, §§ 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

Only species that fall into one of the above-listed groups were considered for this assessment. Other species without special status that are sometimes found in database or literature searches were not included in this analysis.

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 and 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, this statute

governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16 U.S. Code [USC] 1538). Under Section 7 of the 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 critical habitat. 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.

Section 7

Section 7 of the ESA mandates that all federal agencies consult with USFWS and/or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify Critical Habitat for listed species. If adverse effects to a species or its Critical Habitat are likely, the applicant must conduct a biological assessment (BA) for the purpose of analyzing the potential effects of the project on listed species and critical habitat to establish and justify an "effect determination." The federal agency reviews the BA; if it concludes that the project may adversely affect a listed species or its habitat, it prepares a biological opinion (BO). Through consultation and the issuance of a BO, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. The BO may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat. If direct and/or indirect effects will occur to Critical Habitat that appreciably diminish the value of Critical Habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS.

Section 10

When no discretionary action is being taken by a federal agency but a project may result in the take of listed species, an incidental take permit (ITP) under Section 10 of the ESA is necessary. The purpose of the ITP is to authorize the take of federally listed species that may result from an otherwise lawful activity, not to authorize the activities themselves. In order to obtain an ITP under Section 10, an application must be submitted that includes an HCP. In some instances, applicants, USFWS, and/or NMFS may determine that an HCP is necessary or prudent, even if a discretionary federal action will occur. The purpose of the HCP planning process associated with the permit application is to ensure that adequate minimization and mitigation for impacts to listed species and/or their habitat will occur.

Critical Habitat

Critical Habitat is defined in Section 3 of the 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, the physical or biological features needed for life processes. Physical and biological features that are essential to the conservation of the species may require special management considerations or protection. These include but are not limited to:

- 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; or
- habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. 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. As authorized by the MBTA, the USFWS issues permits to qualified applicants 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. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.3 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). "Discharges of fill material" is defined as the addition of fill material into Waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 CFR § 328.2(f)]. In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to Waters of the U.S. (more than 0.5 acre of impact) may require an individual permit. Projects that only minimally affect Waters of the U.S. (less than 0.5 acre of impact) 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).

2.1.4 Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the USACE, for the construction of any structure in or over any navigable Waters of the U.S. Structures or work outside the limits defined for navigable Waters of the U.S. require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable Water of the U.S., and applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. The alteration of a USACE-federally authorized civil works project requires a permit pursuant to Section 14 of the Act, as amended and codified in 33 USC 408. Projects with minimal impacts require approval by the USACE Sacramento District Construction Operations Group; however, projects with more substantial impacts may require USACE Headquarters review. Coordination with the Central Valley Flood Protection Board, who serve as the Non-Federal Sponsor, is required as a part of the process of obtaining a Section 408 permit.

2.2 State Regulations

2.2.1 California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050-2116) protects species of fish, wildlife, and plants listed by the State as endangered or threatened. Species identified as candidates for listing may also receive protection. Section 2080 of the California ESA prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit. 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." The California ESA allows for take incidental to otherwise lawful projects under permits issued by CDFW.

2.2.2 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 federal and/or California ESAs. Fully protected species are identified in the California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish.

These sections of the California Fish and Game Code provide that fully protected species may not be taken or possessed at any time, including prohibition of CDFW from issuing incidental take permits for fully protected species under the California ESA. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

2.2.3 Native Plant Protection Act

The NPPA of 1977 (California Fish and Game Code §§ 1900-1913) was established with the intent to "preserve, protect and enhance rare and endangered plants in this state." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as "endangered" or "rare." The NPPA prohibits the take of plants listed under the NPPA, though the NPPA contains exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the California ESA brought under its protection all plants previously listed as endangered under NPPA. Plants listed as rare under NPPA are not protected under the California ESA but are still protected under the provisions of NPPA. The Fish and Game Commission no longer lists plants under NPPA, reserving all listings to the California ESA.

2.2.4 California Fish and Game Code Special Protections for Birds

In addition to protections contained within the California ESA and California Fish and Game Code § 3511 described above, the California Fish and Game Code includes a several sections that specifically protect certain birds:

- Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.
- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests.
- Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic nonnative species, or any part of these birds.
- Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

2.2.5 Lake or Streambed Alteration Agreements

Section 1602 of the California Fish and Game Code requires individuals or agencies to provide a Notification of Lake or Streambed Alteration (LSA) 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." CDFW reviews the proposed actions and, if necessary, proposed measures to protect affected fish and wildlife resources. The final proposal mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alternation Agreement (SAA).

2.2.6 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the State 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 one 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 regulates actions that would involve "discharging waste, or proposing to discharge waste, with 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.

2.2.7 California Environmental Quality Act

In accordance with CEQA Guidelines § 15380, a species or subspecies not specifically protected under the federal or California ESAs or NPPA may be considered endangered, rare, or threatened for CEQA review purposes if the species meets certain criteria specified in the Guidelines. These criteria parallel the definitions used in the ESA, California ESA, and NPPA. Section 15380 was included in the CEQA Guidelines primarily to address situations in which a project under review may have a significant effect on a species that has not been listed under the ESA, California ESA, or NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as SSC by CDFW, birds identified as BCC by USFWS, and plants identified by the CNPS as rare, threatened, or endangered may meet the CEQA definition of rare or endangered.

Species of Special Concern

SSC are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the federal ESA, California ESA, or California Fish and Game Code, but currently satisfies 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 or 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 habitats that are threatened.

Depending on the policy of the lead agency, projects that result in substantial impacts to SSC may be considered significant under CEQA.

USFWS Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates 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, USFWS published a list of BCC (USFWS 2008) 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.

Sensitive Natural Communities

The CDFW maintains the *California Natural Community List* (CDFW 2021a), which provides a list of vegetation alliances, associations, and special stands as defined in the *Manual of California Vegetation* (Sawyer et al. 2009), along with their respective state and global rarity ranks. 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.

California Rare Plant Ranks

The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2021), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, and/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, academia, 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, 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 1 through 3, with 1 being the most threatened and 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 (more 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 percent 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 2021).

Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, 2, and 3 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 4 and at the discretion of the CEQA lead agency.

CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (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.

Specifically, § 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, which provides examples of impacts that would normally be considered significant.

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 under CEQA. The reason for this is that 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.

2.3 Local Plans and Ordinances

2.3.1 City of Clearlake General Plan

The City of Clearlake 2040 General Plan Update (Plan) is the governing document for all planning and development related decisions within City limits (City of Clearlake 2016a). The Environmental Impact Report for the Plan (City of Clearlake 2016b) summarizes mitigation measures for biological resources the City must follow when implementing the Plan.

The Conservation Element of the Plan generally outlines goals, objectives, policies, and programs related to the protection of water quality, listed species, sensitive habitats, and wildlife movement.

2.3.2 City of Clearlake Municipal Code

Subsection 18-1.4.435 (Native Tree Protection and Removal Permits) of the City of Clearlake Municipal Code (City of Clearlake 2020) establishes the procedures for protecting certain native trees, and requires a native tree protection and removal permit for the following:

- Blue oak (*Quercus douglasii*),
- Valley oak (*Quercus lobata*),
- Interior live oak (*Quercus wislizeni*),
- California black oak (*Quercus kelloggii*),
- Canyon live oak (*Quercus chrysolepis*),
- Oregon white oak (*Quercus garryana*), and
- Any other tree designated by the City Council as a "Heritage Tree".

As described in Subsection 18-51404 (Tree Protection Regulations) any disturbances which might cause harm to a protected tree, are strictly prohibited within the root protection zone (RPZ) of that tree. The RPZ is defined as a circular area around the trunk of the tree with the radius equal to the largest radius of the tree's drip line. Any activities within the RPZ of a protected tree requires a tree removal permit.

As described in Subsection 18-5.1405 (Removal Regulations), tree removal permits require preparation of a Tree Replacement Plan. Mitigation or compensation for protected trees that are felled and/or removed includes either onsite or offsite planting or an equivalent compensatory payment into a fund established by the City to plant and maintain trees.

3.0 METHODS

3.1 Literature Review

The following resources were reviewed to determine the special-status species that have been documented within or in the vicinity of the Study Area.

- CDFW CNDDB data for the "Clearlake Highlands, California" 7.5-minute USGS quadrangle and the nine surrounding USGS quadrangles (CDFW 2021a).
- USFWS Information, Planning, and Consultation System Resource Report List for the Study Area (USFWS 2021a).
- CNPS' electronic Inventory of Rare and Endangered Plants of California was queried for the "Clearlake Highlands, California" 7.5-minute USGS quadrangles and the nine surrounding quadrangles (CNPS 2021).
- NMFS Resources data for the "Clearlake Highlands, California" 7.5-minute USGS quadrangle (National Oceanic and Atmospheric Administration [NOAA] 2021a).

The results of the database queries are included in Attachment A.

Aerial imagery and site or species-specific background information, as cited throughout this document, were reviewed to determine the potential for occurrence of sensitive biological resources within or in the vicinity of the Study Area.

3.2 Field Surveys Conducted

ECORP Biologist Hannah Stone conducted a reconnaissance-level field survey for the Study Area on January 29, 2021. The Study Area was systematically surveyed on foot using an Eos Arrow Global Positioning System unit with sub-meter accuracy, topographic maps, and aerial imagery to ensure total site coverage. Special attention was given to identifying those portions of the Study Area with the potential to support special-status species and sensitive habitats. During the field survey, biological communities occurring onsite were characterized and the following biological resource information was collected:

- Potential aquatic resources.
- Vegetation communities.
- Plant and animal species directly observed.
- Animal evidence (e.g., scat, tracks).

- Existing active raptor nest locations.
- Special habitat features.
- Representative photographs.

3.3 Special-Status Species Considered for the Study Area

Based on database queries, a list of special-status species that are considered to have the potential to occur within the vicinity of the Study Area was generated (Table 1). Each of the species was evaluated for its potential to occur within the Study Area through the literature review and field observations, and categorized based on the following criteria:

- **Present** - Species was observed during the site visit or is known to occur within the Study Area based on documented occurrences within the CNDDB or other literature.
- **Potential to Occur** - Habitat (including soils and elevation requirements) for the species occurs within the Study Area.
- **Low Potential to Occur** - Marginal or limited amounts of habitat occurs and/or the species is not known to occur within the vicinity of the Study Area based on CNDDB records and other available documentation.
- **Absent** - No suitable habitat (including soils and elevation requirements) and/or the species is not known to occur within the vicinity of the Study Area based on CNDDB records and other documentation.

4.0 RESULTS

4.1 Existing Condition

4.1.1 Site Characteristics and Land Use

The Study Area is located within relatively flat to gently rolling terrain situated at an elevational range of approximately 1,350 to 1,365 feet above mean sea level (MSL) in the Inner North Coast Ranges District of the California floristic province (Baldwin et al. 2012). The average winter low temperature in the vicinity of the Study Area is 44.2 degrees Fahrenheit (˚F) and the average summer high temperature is 70.9˚F. Average annual precipitation is approximately 31.42 inches, which falls as rain (NOAA 2021b).

The majority of the Study Area is an English walnut (*Juglans regia*) orchard that appears to be nonoperational and unmaintained except for occasional discing. A residential structure was located near the middle of the eastern Study Area boundary, but has since been mostly demolished. Building foundations, portions of the driveway and parking areas, and cultivated vegetation including a small pomegranate (*Punica granatum*) orchard, are remnant of the old residence. The eastern portion of the Study Area appears to receive regular use by the neighboring community. Native surface trails are common throughout this area and appear to be used mostly by pedestrians, although a dirt biker was observed using the trails during the site reconnaissance. Bags of trash and other miscellaneous materials

are dumped and scattered throughout this portion of the Study Area, and there are signs of abandoned encampments. A few small areas of the Study Area were observed to be recently burned.

Representative photographs of the Study Area are included in Attachment B.

4.1.2 Soils

According to the Web Soil Survey (NRCS 2021a), two soil units, or types, have been mapped within the Study Area (Figure 2. *Natural Resources Conservation Service Soils Types*):

- 124 – Cole variant clay loam
- 158 – Lupoyoma silt loam, protected

The Cole series consists of very deep, somewhat poorly drained soils that formed in alluvium from mixed sources. Cole soils are on stream terraces, flood-plain steps, and alluvial fans with slopes of 0 to 5 percent (NRCS 2021a).

The Lupoyoma series consists of very deep, moderately well drained soils formed in alluvium derived from mixed rock sources, dominantly sandstone and shale. Lupoyoma soils are on floodplains and have slopes of 0 to 2 percent (NRCS 2021a).

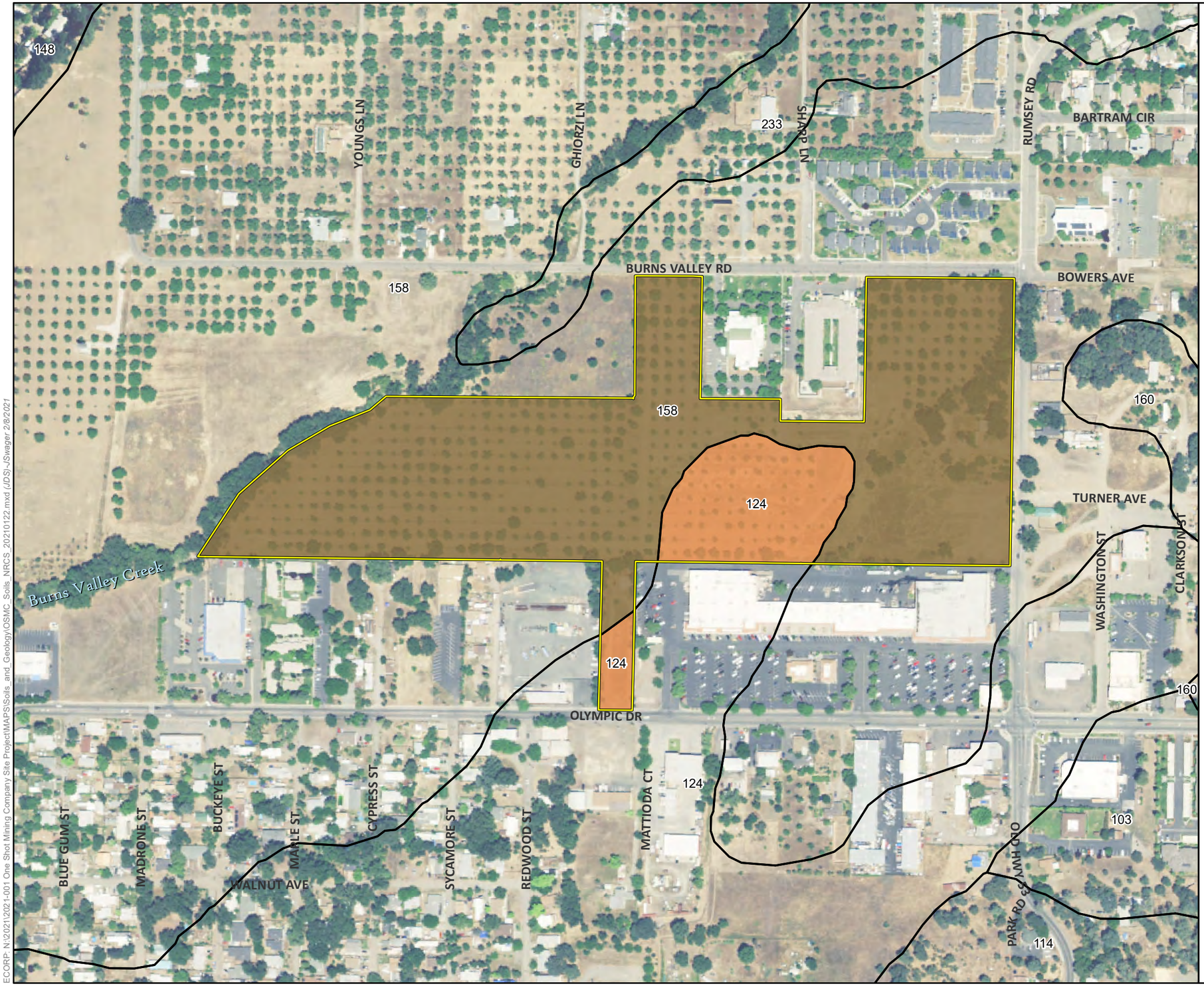
The Cole variant clay loam map unit and the Lupoyoma silt loam, protected map unit each contain one minor component listed as hydric: Clear Lake and Xerofluvents, respectively (NRCS 2021b).

No soil units derived from serpentinite or other ultramafic parent materials have been reported to occur within the Study Area or its immediate vicinity (NRCS 2021a; Jennings et al. 1977; Horton 2017).

4.1.3 Vegetation Communities and Land Cover Types

Vegetation communities or land cover types observed within the Study Area include English walnut orchard, valley oak woodland, Harding grass (*Phalaris aquatica*) sward, yellow star-thistle (*Centaurea solstitialis*) field, and developed/disturbed areas.

Figure 3. *Vegetation Communities and Land Cover Types* generally depicts the locations of the land cover types and vegetation communities; descriptions are provided in the following sections. The reconnaissance site visit was not conducted during the optimum identifiable period for most plant species. However, many plants commonly present within the Study Area were identifiable from characteristics of dead vegetation from the previous growing season.



Map Features

Study Area - 30.65 ac.

NRCS Soils

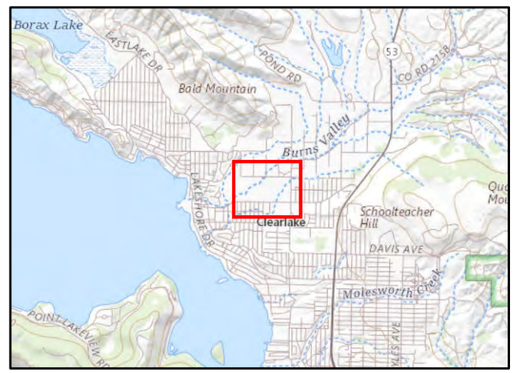
Series Number - Series Name

124 - Cole variant clay loam

158 - Lupoyoma silt loam, protected

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Lake County, CA

Sources: ESRI, USGS, NAIP (2020), CEC



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Map Date: 2/8/2021

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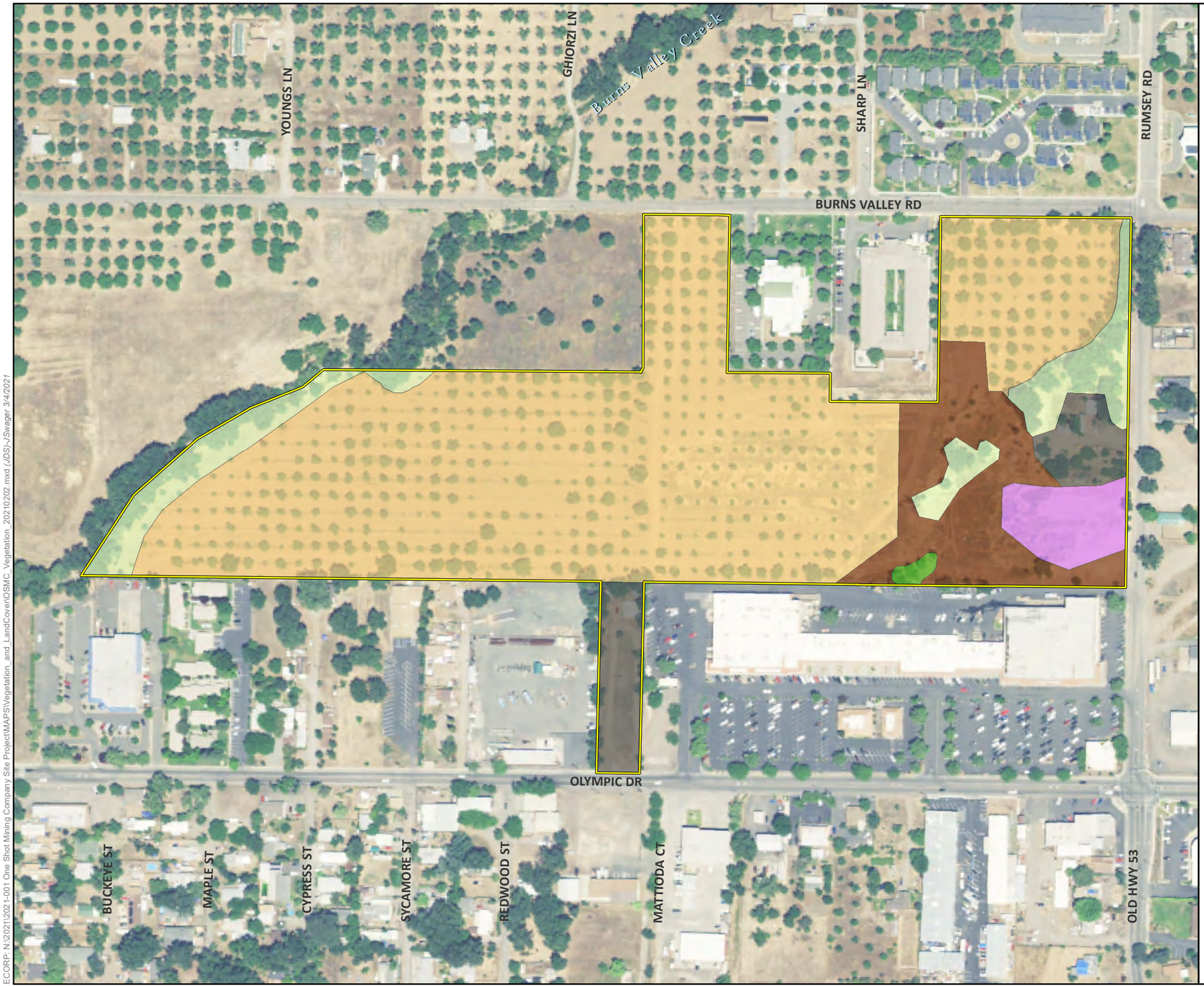
Scale in Feet
0 300

Figure 2. Natural Resources Conservation Service Soil Types

2021-001 Burns Valley Development Project



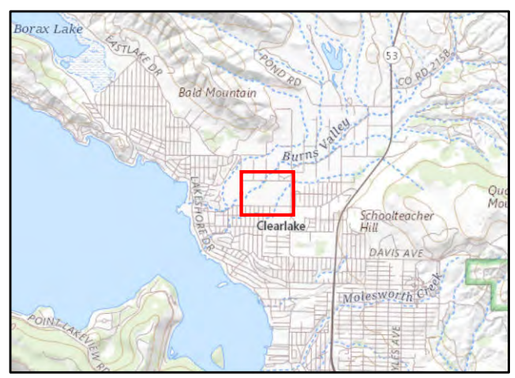
Map Features

- Study Area - 30.65 ac.

Vegetation Communities and Land Cover Types

- Fremont Cottonwood Patch - 0.11 ac.
- Valley Oak Woodland - 2.74 ac.
- Harding Grass Grassland - 3.26 ac.
- English Walnut Orchard - 21.63 ac.
- Yellow Star-thistle Field - 1.09 ac.
- Developed/Disturbed - 1.81 ac.

Sources: ESRI, USGS, NAIP (2020), CEC



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Map Date: 3/4/2021

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Scale in Feet
0 200

Figure 3. Vegetation Communities and Land Cover Types

2021-001 Burns Valley Development Project

English Walnut Orchard

An English walnut orchard makes up most of the Study Area, covering the majority of land west of the unnamed stream which runs northeast-southwest through the eastern portion of the Study Area. The orchards are characterized by evenly spaced rows of black walnuts with patchy ruderal vegetation growing on mechanically tilled soils between the walnuts. At the time of the reconnaissance field survey, yellow star-thistle was dominant in the understory, patches of short-pod mustard (*Hirschfeldia incana*) were scattered throughout and seedlings of unidentifiable annual grasses and annual herbs including red-stemmed filaree (*Erodium cicutarium*), hairy hawkbit *(Leontodon saxatilis*), and miner's lettuce (*Claytonia* sp.) carpeted the soils.

Valley Oak Woodland

Strips of valley oak woodland are located along Burns Valley Creek, which borders the western Study Area boundary, and along the unnamed stream that runs northeast-southwest through the eastern portion of the Study Area. At the time of the reconnaissance field survey, valley oak was dominant in the canopy, and the understory included patches of rush (*Carex* sp.), Himalayan blackberry (*Rubus armeniacus*) and rose (*Rosa* sp.) near the stream, and oats (*Avena* sp.) and vetch (*Vicia* sp.) in upland areas.

Valley oak woodland within the Study Area is consistent with the Valley Oak Forest and Woodland Alliance (Sawyer et al. 2009), which has a state rarity ranking of S3 and is considered a sensitive natural community.

Harding Grass Grassland

The majority of the non-riparian areas that are not planted as orchards are characterized as Harding Grass grasslands. At the time of the reconnaissance field survey, Harding grass was dominant and prickly lettuce (*Lactuca serriola*) and curly dock (*Rumex crispus*) were scattered throughout. A small patch of Fremont cottonwood was located within the Harding Grass Grassland.

This vegetation type is consistent with the Harding grass – Reed Canary grass (*Phalaris arundinacea*) swards Semi-Natural Alliance (Sawyer et al. 2009).

Yellow Star-Thistle Field

A yellow star-thistle field is located between the Harding grass grassland and Burns Valley Road in the southeastern portion of the Study Area. This area appears to have been disturbed in the past by vehicle traffic and potentially grading. At the time of the reconnaissance field survey, yellow star-thistle was dominant and short-pod mustard and vetch were scattered throughout.

This vegetation type is consistent with the Yellow Star-thistle Herbaceous Semi Natural Alliance (Sawyer et al. 2009).

Developed/Disturbed

The developed/disturbed land cover type within the Study Area was observed in two areas bordering Burns Valley Road on the east side of the Study Area. One area is a former residential development that

has been demolished. Remnants of that development include foundations for structures, driveways, parking areas, and cultivated vegetation including a small pomegranate orchard, a Coast redwood (*Sequoia sempervirens*), and a European olive (*Olea europaea*). Large valley oaks are also located within this area near the foundations.

4.1.4 Aquatic Resources

A preliminary aquatic resources assessment to identify potential Waters of the U.S./State was conducted within the Study Area concurrent with the reconnaissance-level field survey. The Study Area does not include any portion of Burns Valley Creek, which is directly adjacent to the western boundary of the Study Area. However, the current mapped boundary for the Study Area may inadvertently include a portion of the creek (Figure 4. *Preliminary Aquatic Assessment*). An aquatic resources delineation would be necessary to determine the boundary for Burns Valley Creek in order to completely exclude it from the Study Area.

One aquatic resource was identified, a drainage channel which enters the Study Area through a culvert in the northeast corner of the site and flows southwest to another culvert located near the southern boundary of the Study Area (Figure 4). At the time of the site reconnaissance, the majority of the channel was dry despite recent storms. Some ponding was observed along segments of the channel. An area of ponding caused by human disturbance to the channel was observed approximately midway between the inlet and outlet culverts. The channel was no longer distinctly incised south of this location. Small constructed earthen berms and walking trails appear to have affected the flow path beyond this point and little indication of hydrology or an ordinary high water mark (OHWM) was observed beyond the berms. However, the drainage was mapped to the outlet culvert following the most likely flow path. An aquatic resources delineation would be required to determine the actual extent and location of the drainage, especially in the southern portion where hydrology was not clear. The drainage appears to be ephemeral, and likely only flows during larger storm events.

In the current definition of Waters of the U.S. under the Navigable Waters Protection Rule, ephemeral features and features that are not adjacent to existing Waters of the U.S. are generally not jurisdictional. Based on anecdotal observations, the channel onsite appears to be ephemeral, but this would need to be analyzed using historic precipitation data and verified by the USACE. Regardless of federal jurisdictional, the channel could be considered a Water of the State under the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Water Resources Control Board [SWRCB] 2019). `

4.1.5 Wildlife Observations

Wildlife observed within or flying over the Study Area during the site reconnaissance includes American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), Eurasian collared-dove (*Streptopelia decaocto*), red-shouldered hawk (*Buteo lineatus*), Anna's hummingbird (*Calypte anna*), white-crowned sparrow (*Zonotrichia leucophrys*), American goldfinch (*Spinus tristis*), California scrub-jay (*Aphelocoma californica*), and Nuttall's woodpecker (*Dryobates nuttallii*).

Map Features

Study Area - 30.65 ac.

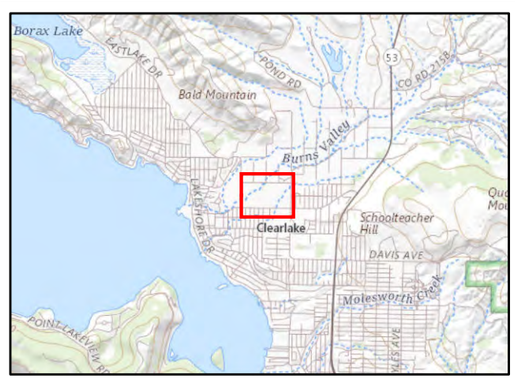
Potential Aquatic Resources*

[1] Drainage - 0.06 ac.

[1] *The information depicted on this graphic represents a preliminary wetland assessment. The assessment was not conducted in accordance with the Corps of Engineers Wetland Delineation Manual and San Francisco District Minimum Standards. The project boundaries, wetland boundaries, and acreage values are approximate.*

** The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.*

Sources: ESRI, USGS, NAIP (2020), CEC



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Map Date: 2/8/2021

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Scale in Feet
0 200

Figure 4. Preliminary Wetland Assessment

2021-001 Burns Valley Development Project

4.2 Evaluation of Species Identified in the Literature Search

Table 1 lists all the special-status plant and wildlife species (as defined in Section 1.3) identified in the literature review as potentially occurring within the vicinity of the Study Area. Included in this table are the listing status for each species, a brief habitat description, and an evaluation on the potential for each species to occur within the Study Area.

Following the table is a brief description and discussion of each special-status species that was determined to have potential to occur onsite.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Plants						
Bent-flowered fiddleneck (*Amsinckia lunaris*)	-	–	1B.2	Cismontane woodland, coastal bluff scrub, and valley and foothill grasslands (10'–1,640').	March–June	Potential to occur. Suitable habitat within Study Area.
Dimorphic snapdragon (*Antirrhinum subcordatum*)	–	–	4.3	Chaparral and lower montane coniferous forest; sometimes on serpentine substrates (606'–2,625')	April–July	Absent. No suitable habitat within Study Area.
Twig-like snapdragon (*Antirrhinum virga*)	–	–	4.3	Rocky soils, openings, and often serpentinite in chaparral and lower montane coniferous forest (328'–6,611').	June–July	Absent. No suitable habitat within Study Area.
Coast rockcress *(Arabis blepharophylla)*	–	–	4.3	Rocky soils in broadleaf upland forest, coastal bluff scrub, coastal prairie, and coastal scrub (10'–3,609').	February–May	Low potential to occur. Marginally suitable habitat (woodland) within Study Area.
Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*)	–	–	1B.3	Volcanic substrates of chaparral, cismontane woodland, and lower montane coniferous forest (1,295'–5,299').	March–May	Absent. No suitable habitat within Study Area.
Raiche's manzanita (*Arctostaphylos stanfordiana* ssp. *raichei*)	–	–	1B.1	Rocky, often serpentine soils of chaparral and lower montane coniferous forest openings (1,476'–3,396').	February–April	Absent. No suitable habitat within Study Area.
Serpentine milkweed (*Asclepias solanoana*)	–	–	4.2	Serpentine substrates of chaparral, cismontane woodland, and lower montane coniferous forest (754'–6,103').	May–July	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Brewer's milk-vetch (*Astragalus breweri)*	–	–	4.2	Often serpentine and volcanic substrates of chaparral, cismontane woodland, meadows and seeps, and open gravelly openings of valley and foothill grassland (295'–2,395').	April–June	Low potential to occur. Marginally suitable habitat (woodland and grassland) within Study Area.
Cleveland's milk-vetch (*Astragalus clevelandii)*	–	–	4.3	Serpentine seeps of chaparral, cismontane woodland, and riparian forest (656'–4,922').	June–September	Absent. No suitable habitat within Study Area.
Jepson's milk-vetch (*Astragalus rattanii* var. *jepsonianus)*	–	–	1B.2	Chaparral, cismontane woodland, and valley and foothill grassland; often on serpentine substrates (968'–2,297').	March–June	Low potential to occur. Marginally suitable habitat (non-serpentine woodland and grassland) within Study Area.
Mexican mosquito fern *(Azolla microphylla)*	–	–	4.2	Marshes and swamps, ponds or slow-moving bodies of water (98'–328').	August	Absent. No suitable habitat within Study Area.
Watershield *(Brasenia schreberi)*	–	–	2B.3	Freshwater marshes and swamps (98'–7,218').	June–September	Absent. No suitable habitat within Study Area.
Indian Valley brodiaea (*Brodiaea rosea* ssp. *rosea*)	–	CE	3.1	Serpentinite substrates of closed-cone coniferous forest, chaparral, cismontane woodland, and valley and foothill grassland (1,099'–4,758').	May–June	Absent. No suitable habitat within Study Area.
Serpentine reed grass (*Calamagrostis ophitidis*)	–	–	4.3	Rocky, serpentinite substrates of chaparral (open, often north-facing slopes), lower montane coniferous forest, meadows and seeps, and valley and foothill grassland (295'–3,495').	April–July	Absent. No suitable habitat within Study Area.
Pink star-tulip (*Calochortus uniflorus*)	–	–	4.2	Coastal prairie, coastal scrub, meadows and seeps, and North Coast coniferous forest (32'–3,511').	April–June	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Four-petaled pussypaws (*Calyptridium quadripetalum*)	–	–	4.3	Sandy or gravelly soils of chaparral and lower montane coniferous forest; often on serpentinite substrates (1,033'–6,693').	April–June	Absent. No suitable habitat within Study Area.
Mt. Saint Helena morning-glory (*Calystegia collina* ssp. *oxyphylla)*	–	–	4.2	Serpentinite substrates of chaparral, lower montane coniferous forest, and valley and foothill grassland (915'–3,314').	April–June	Absent. No suitable habitat within Study Area.
Three-fingered morning-glory (*Calystegia collina* ssp. *tridactylosa)*	–	–	1B.2	Rocky, gravelly openings on serpentine substrates of chaparral and cismontane woodland (0'–1,969').	April–June	Absent. No suitable habitat within Study Area.
Northern meadow sedge (*Carex praticola*)	–	–	2B.2	Mesic meadows and seeps (0'–10,499').	May–July	Absent. No suitable habitat within Study Area.
Pink creamsacs *(Castilleja rubicundula* var. *rubicundula)*	–	–	1B.2	Serpentinite substrates in chaparral openings, cismontane woodland, meadows and seeps, and valley and foothill grassland (66'–2,986').	April–June	Absent. No suitable habitat within Study Area.
Rincon Ridge ceanothus (*Ceanothus confusus*)	–	–	1B.1	Volcanic or serpentine soils in closed-cone coniferous forest, chaparral, and cismontane woodland communities (246'–3,494').	February–June	Absent. No suitable habitat within Study Area.
Calistoga ceanothus (*Ceanothus divergens*)	–	–	1B.2	Serpentinite or rocky volcanic substrates in chaparral (558'–3,117').	February–April	Absent. No suitable habitat within Study Area.
Dwarf soaproot *(Chlorogalum pomeridianum* var. *minus)*	–	–	1B.2	Serpentine soils within chaparral (1,001'–3,281').	May–August	Absent. No suitable habitat within Study Area.
Tracy's clarkia *(Clarkia gracilis* ssp. *tracyi)*	–	–	4.2	Openings, usually with serpentine soils, in chaparral (213'–2,132).	April–July	Absent. No suitable habitat within Study Area.
Serpentine collomia (*Collomia diversifolia*)	–	–	4.3	Rocky or gravelly serpentinite substrates (Safford and Miller 2020) in chaparral and cismontane woodland (656'–1,969').	May–June	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Serpentine bird's-beak *(Cordylanthus tenuis* ssp. *brunneus)*	–	–	4.3	Usually serpentinite soils of closed–cone coniferous forest, chaparral, and cismontane woodland (1,001'–3,002').	July–August	Low potential to occur. Marginally suitable habitat (woodland) within Study Area
Serpentine cryptantha *(Cryptantha dissita)*	–	–	1B.2	Serpentine in chaparral (1,295'–1,903').	April–June	Absent. No suitable habitat within Study Area.
Swamp larkspur *(Delphinium uliginosum)*	–	–	4.2	Serpentinite seeps in chaparral and valley and foothill grassland (1,115'–2,001').	May–June	Absent. No suitable habitat within Study Area.
Cascade downingia (*Downingia willamettensis*)	–	–	2B.2	Lake margins of cismontane woodland and valley and foothill grassland; vernal pools (49'–3,642').	June–July	Absent. No suitable habitat within Study Area.
Brandegee's eriastrum (*Eriastrum brandegeeae*)	–	–	1B.1	Volcanic, sandy substrates of chaparral and cismontane woodland (1,394'–2,756').	April–August	Absent. No suitable habitat within Study Area.
Greene's narrow-leaved daisy *(Erigeron greenei)*	–	–	1B.2	Serpentine or volcanic soils in chaparral (262'–3,298').	May–September	Absent. No suitable habitat within Study Area.
Snow Mountain buckwheat (*Eriogonum nervulosum*)	–	–	1B.2	Serpentine chaparral communities (984'–6,906').	June–September	Absent. No suitable habitat within Study Area.
Loch Lomond button-celery *(Eryngium constancei)*	FE	CE	1B.1	Vernal pools (1,509'–2,805').	April–June	Absent. No suitable habitat within Study Area.
Adobe lily *(Fritillaria pluriflora)*	–	–	1B.2	Adobe soils in chaparral, cismontane woodland, and valley and foothill grassland (197'–2,313').	February–April	Absent. No suitable habitat within Study Area.
Boggs Lake hedge-hyssop *(Gratiola heterosepala)*	–	CE	1B.2	Marshes, swamps, lake margins, and vernal pools (33'–7,792').	April–August	Absent. No suitable habitat within Study Area.
Toren's grimmia (*Grimmia torenii*)	–	–	1B.3	Openings, rocky substrates, boulder and rock walls, carbonate substrates, and volcanic substrates in chaparral, cismontane woodland, and lower montane coniferous forest (1,066'–3,806').	Any season	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Hall's harmonia (*Harmonia hallii*)	–	–	1B.2	Serpentinite substrates of chaparral (1,000'–3,199').	April–June	Absent. No suitable habitat within Study Area.
Congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*)	–	–	1B.2	Valley and foothill grassland; sometimes roadsides (66'–1,837').	April–November	Potential to occur. Suitable habitat within Study Area.
Glandular western flax *(Hesperolinon adenophyllum)*	–	–	1B.2	Serpentinite soils (Safford and Miller 2020) in chaparral, cismontane woodland, and valley and foothill grassland (492'–4,314').	May–August	Absent. No suitable habitat within Study Area.
Two-carpellate western flax (*Hesperolinon bicarpellatum*)	–	–	1B.2	Serpentinite soils of chaparral (196'–3,298').	May–July	Absent. No suitable habitat within Study Area.
Lake County western flax (*Hesperolinon didymocarpum*)	–	CE	1B.2	Serpentinite substrates of chaparral, cismontane woodland, and valley and foothill grassland (1,082'–1,198).	May–July	Absent. No suitable habitat within Study Area.
Sharsmith western flax (*Hesperolinon sharsmithiae*)	–	–	1B.2	Serpentinite soils of chaparral (885'–985').	May–July	Absent. No suitable habitat within Study Area.
Bolander's horkelia (*Horkelia bolanderi*)	–	–	1B.2	Within and on edges of vernally mesic areas in chaparral, lower montane coniferous forest, meadows and seeps, and valley and foothill grassland (1,476'–3,938').	June–August	Low potential to occur. Marginally suitable habitat (drainage) within Study Area.
California satintail *(Imperata brevifolia)*	–	–	2B.1	Mesic areas in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali) and riparian scrub (0'–3,986').	September–May	Absent. No suitable habitat within Study Area.
Burke's goldfields *(Lasthenia burkei)*	FE	CE	1B.1	Mesic sites within meadows and seeps and vernal pools (49'–1,969').	April–June	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Colusa layia *(Layia septentrionalis)*	–	–	1B.2	Sandy or serpentinite soils in chaparral, cismontane woodland, and valley and foothill grasslands (328'–3,593').	April–May	Low potential to occur. Marginally suitable habitat (woodland and grassland without sandy or serpentinite substrates) within Study Area.
Legenere *(Legenere limosa)*	–	–	1B.1	Various seasonally inundated areas including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages (USFWS 2005) (3'–2,887').	April–June	Low potential to occur. Marginally suitable habitat (drainage) within Study Area.
Bristly leptosiphon (*Leptosiphon acicularis*)	–	–	4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland (180'–4,921').	April–July	Potential to occur. Suitable habitat within Study Area.
Jepson's leptosiphon (*Leptosiphon jepsonii*)	–	–	1B.2	Usually volcanic soils of chaparral, cismontane woodland, valley and foothill grasslands (328'–1,640').	March–May	Low potential to occur. Marginally suitable habitat (non-volcanic woodland and grassland) within Study Area.
Woolly meadowfoam *(Limnanthes floccosa* ssp. *floccosa)*	–	–	4.2	Vernally mesic areas in chaparral, cismontane woodland, valley and foothill grassland, and vernal pools (197'–4,380').	March–May	Low potential to occur. Marginally suitable habitat (drainage) within Study Area.
Napa lomatium (*Lomatium repostum*)	–	–	4.3	Serpentinite soils of chaparral and cismontane woodland (295'–2,724').	March–June	Absent. No suitable habitat within Study Area.
Anthony Peak lupine (*Lupinus antoninus*)	–	–	1B.2	Rocky substrates in lower montane and upper montane coniferous forest (4,002–7,497').	May–July	Absent. No suitable habitat within Study Area.
Cobb Mountain lupine (*Lupinus sericatus*)	–	–	1B.2	Broadleaf upland forest, chaparral, cismontane woodland, and lower montane coniferous forest (902'–5,004').	May–June	Potential to occur. Suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Heller's bush-mallow (*Malacothamnus helleri*)	–	–	3.3	Sandstone substrates of chaparral and gravelly substrates of riparian woodland (1,000'–2,084').	May–July	Low potential to occur. Marginally suitable habitat (woodland without sandstone or gravelly substrates) within Study Area.
Mt. Diablo cottonweed (*Micropus amphibolus*)	–	–	3.2	Rocky soils in broad–leafed upland forest, chaparral, cismontane woodland, valley and foothill grassland (148'–2,707').	March–May	Low potential to occur. Marginally suitable habitat (woodland without rocky soils) within Study Area.
Elongate copper moss (*Mielichhoferia elongata*)	–	–	4.3	Metamorphic rock, usually acidic, usually vernally mesic, often roadsides, sometimes carbonate in broadleaf upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, and subalpine coniferous forest (0'–6,430').	Any Season	Absent. No suitable habitat within Study Area.
Little mousetail *(Myosurus minimus* ssp. *apus)*	–	–	3.1	Mesic areas (USACE 2020) of valley and foothill grassland and alkaline vernal pools (66'–2,100').	March–June	Low potential to occur. Marginally suitable habitat (drainage) within Study Area.
Cotula navarretia (*Navarretia cotulifolia*)	–	–	4.2	Adobe soils of chaparral, cismontane woodland, and valley and foothill grassland (13'–6,004').	May–June	Absent. No suitable habitat within Study Area.
Jepson's navarretia (*Navarretia jepsonii*)	–	–	4.3	Serpentinite substrates of chaparral, cismontane woodland, and valley and foothill grassland (574'–2,806).	April–June	Absent. No suitable habitat within Study Area.
Baker's navarretia *(Navarretia leucocephala* ssp. *bakeri)*	–	–	1B.1	Vernal pools and mesic areas within cismontane woodlands, lower montane coniferous forests, meadows and seeps, and valley and foothill grasslands (16'–5,709').	April–July	Low potential to occur. Marginally suitable habitat (drainage) within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Few-flowered navarretia *(Navarretia leucocephala* ssp. *pauciflora)*	FE	CT	1B.1	Volcanic ash flow vernal pools (1,312'–2,805').	May–June	Absent. No suitable habitat within Study Area.
Many-flowered navarretia *(Navarretia leucocephala* ssp. *plieantha)*	FE	CE	1B.2	Volcanic ash flow vernal pools (98'–3,117').	May–June	Absent. No suitable habitat within Study Area.
Porter's navarretia (*Navarretia paradoxinota)*	–	–	1B.3	Vernally mesic openings and drainages on serpentine substrates in meadows and seeps (541'–2,756').	May–June	Absent. No suitable habitat within Study Area.
Slender Orcutt grass *(Orcuttia tenuis)*	FT	CE	1B.1	Vernal pools, often gravelly (115'–5,774').	May–September	Absent. No suitable habitat within Study Area.
Geysers panicum (*Panicum acuminatum* var. *thermale)*	–	CE	1B.2	Geothermically-altered soils and sometimes streamsides of closed-cone coniferous forest, riparian forest, and valley and foothill grassland (1,000'–8,104').	June–August	Absent. No suitable habitat within Study Area.
Lake County stonecrop (Parvisedum leiocarpum*)*	FE	CE	1B.1	Vernally mesic depressions in volcanic outcrops of cismontane woodland, valley and foothill grassland, and vernal pools (1,197'–2,592').	April–May	Absent. No suitable habitat within Study Area.
Sonoma beardtongue (*Penstemon newberryi* var. *sonomensis)*	–	–	1B.3	Rocky substrates of chaparral (2,296'–4,495').	April–August	Absent. No suitable habitat within Study Area.
Michael's rein orchid *(Piperia michaelii)*	–	–	4.2	Coastal bluff scrub, closed–cone coniferous forest, chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest (10'–3,002').	April–August	Potential to occur. Suitable habitat within Study Area.
Eel-grass pondweed *(Potamogeton zosteriformis)*	–	–	2B.2	Assorted freshwater marshes and swamps (0'–6,102').	June–July	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Lake County stonecrop *(Sedella leiocarpa)*	FE	CE	1B.1	Vernally mesic depressions in volcanic outcrops in cismontane woodland, valley and foothill grasslands, and vernal pools (1,198'–2,592').	April–May	Absent. No suitable habitat within Study Area.
Cleveland's ragwort (*Senecio clevelandii* var. *clevelandii*)	–	–	4.3	Serpentine seeps of chaparral (1,197'–2,953').	June–July	Absent. No suitable habitat within Study Area.
Marsh checkerbloom (*Sidalcea oregana* ssp. *hydrophila*)	–	–	1B.2	Mesic areas of meadows and seeps and riparian forest communities (3,608'–7,545').	July–August	Absent. Study Area is outside of the known elevational range for this species.
Bearded jewelflower (*Streptanthus barbiger)*	–	–	4.2	Serpentinite substrates of chaparral (492'–3,511').	May–July	Absent. No suitable habitat within Study Area.
Socrates Mine jewelflower (*Streptanthus brachiatus* ssp. *brachiatus*)	–	–	1B.2	Closed-cone coniferous forest and chaparral; usually on serpentinite substrates (1,788'–3,281').	May–June	Absent. No suitable habitat within Study Area.
Freed's jewelflower (*Streptanthus brachiatus* ssp. *hoffmanii)*	–	–	1B.2	Serpentinite substrates of chaparral and cismontane woodland (1,608'–4,003').	May–July	Absent. No suitable habitat within Study Area.
Hoffman's bristly jewelflower (*Streptanthus glandulosus* ssp. *hoffmanii*)	–	–	1B.3	Rocky substrates in chaparral, cismontane woodland, and often serpentinite substrates in valley and foothill grassland (393'–1,592').	March–July	Absent. No suitable habitat within Study Area.
Green jewelflower *(Streptanthus hesperidis)*	–	–	1B.2	Rocky, serpentinite substrates of chaparral openings and cismontane woodland (426'–2,494').	May–July	Absent. No suitable habitat within Study Area.
Three Peaks jewelflower (*Streptanthus morrisonii* ssp. *elatus)*	–	–	1B.2	Serpentinite substrates of chaparral (295'–2,674').	June–September	Absent. No suitable habitat within Study Area.
Kruckeberg's jewel flower (*Streptanthus morrisonii* ssp. *kruckebergii)*	–	–	1B.2	Serpentinite substrates of cismontane woodland (705'–3,396').	April–July	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Marsh zigadenus (*Toxicoscordion fontanum)*	–	–	4.2	Vernally mesic chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, and marshes and swamps; often on serpentinite substrates (49'–3,281').	April–July	Low potential to occur. Marginally suitable habitat (drainage) within Study Area.
Napa bluecurls (*Trichostema ruygtii*)	–	–	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, and vernal pools (98'–2,231').	June–October	Potential to occur. Suitable habitat within Study Area.
Saline clover *(Trifolium hydrophilum)*	–	–	1B.2	Marshes and swamps, vernal pools, and mesic alkaline areas in valley and foothill grassland (0'–984').	April–June	Absent. No suitable habitat within Study Area.
Oval-leaved viburnum *(Viburnum ellipticum)*	–	–	2B.3	Chaparral, cismontane woodland, and lower montane coniferous forest communities (705'–4,593').	May–June	Potential to occur. Suitable habitat within Study Area.
Fish						
Sacramento perch *(Archoplites interruptus)*	-	-	SSC	Ponds, rivers, backwaters, and lakes.	N/A	Absent. No suitable habitat within Study Area.
Clear Lake tule perch (*Hysterocarpus traskii lagunae*)	-	-	SSC	Endemic to Clear Lake, Lower Blue Lake, and Upper Blue Lake in Lake County. Requires cover and are usually found in small shoals in deep tule beds, among rocks, or among branches of fallen leaves (Moyle et al. 2015).	N/A	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Clear Lake hitch (*Lavinia exilicauda chi*)	-	CT	-	Found only in Clear Lake and associated ponds and streams in Lake County. Adults found in the limnetic zone. Juveniles found in the shallow-water habitat hiding in vegetation. Spawning occurs in streams flowing into Clear Lake (CDFW 2021a).	N/A	Absent. No suitable habitat within Study Area. Burns Valley Creek, which is directly adjacent to the Study Area to the west, represents marginally suitable spawning habitat for this species. However, the Study Area does not include Burns Valley Creek and the Project does not propose impacts to the creek or riparian corridor for the creek.
Delta smelt (*Hypomesus transpacificus*)	FT	CE	-	Sacramento-San Joaquin Delta.	N/A	Absent. Outside of geographic range and no suitable habitat within Study Area.
Steelhead (California Central Coast distinct population segment [DPS]) (*Oncorhynchus mykiss*)	FT	-	-	Undammed rivers, streams, creeks.	N/A	Absent. No suitable habitat within Study Area.
Amphibians						
Red-bellied newt (*Taricha rivularis*)	–	–	SSC	Terrestrial habitat. Juveniles generally stay underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate. Found in coastal drainages from Humboldt County south to Sonoma County, inland to Lake County with an isolated population in Santa Clara County.	January – April	Absent. Study Area is outside of the known geographical range for this species.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
California giant salamander (*Dicamptodon ensatus*)	–	–	SSC	Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes. Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County and east to Napa County.	Year round	Absent. No suitable habitat and Study Area is outside of the known geographical range for this species.
Foothill yellow-legged frog (*Northwest/North Coast Clade)* (*Rana boylii*)	-	-	SSC	Foothill yellow-legged frogs can be active all year in warmer locations but may become inactive or hibernate in colder climates. At lower elevations, foothill yellow-legged frogs likely spend most of the year in or near streams. Adult frogs, primarily males, will gather along main-stem rivers during spring to breed.	May - October	Absent. No suitable habitat within Study Area.
California red-legged frog (*Rana draytonii*)	FT	-	SSC	Lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Adults must have aestivation habitat to endure summer dry down.	May 1 - November 1	Absent. No suitable upland habitat within Study Area and species unlikely to occur in onsite aquatic habitat. There are no known occurrences or potential breeding ponds nearby and the site is within an urban/agricultural setting with a long history of disturbance.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Reptiles						
Northwestern pond turtle (*Actinemys marmorata*)	-	-	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.	April-September	Low potential to occur. Marginally suitable upland habitat within Study Area. The site is within an urban/ agricultural setting with a long history of disturbance.
Birds						
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.	June-August (breeding)	Absent. No suitable habitat within Study Area.
Yellow-billed cuckoo (*Coccyzus americanus*)	FT	CE	BCC	Breeds in California, Arizona, Utah, Colorado, and Wyoming. In California, they nest along the upper Sacramento River and the South Fork Kern River from Isabella Reservoir to Canebrake Ecological Reserve. Other known nesting locations include Feather River (Butte, Yuba, Sutter counties), Prado Flood Control Basin (San Bernardino and Riverside counties), Amargosa River and Owens Valley (Inyo County), Santa Clara River (Los Angeles County), Mojave River and Colorado River (San Bernardino County). Nests in riparian woodland. Winters in South America.	June 15-August 15	Absent. Study Area is outside of geographic range for this species.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Osprey *(Pandion haliaetus)*	-	-	CDFW WL	Nesting habitat requires close proximity to accessible fish, open nest site free of mammalian predators, and extended ice-free season. The nest in large trees, snags, cliffs, transmission/communication towers, artificial nest platforms, channel markers/buoys.	April-September	Absent. No suitable habitat within Study Area.
Golden eagle (*Aquila chrysaetos*)	-	-	BCC, CFP	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.	Nest (February-August); winter CV (October-February)	Absent. No suitable habitat within Study Area.
Bald eagle (*Haliaeetus leucocephalus*)	Delisted	CE	CFP, BCC	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	February – September (nesting); October-March (wintering)	Absent. No suitable habitat within Study Area.
Northern spotted owl *(Strix occidentalis caurina)*	FT	CC	SSC	Found from Marin County through coastal ranges north to British Columbia; breeds in old growth mature forest. They use forests with greater complexity and structure.	March-June	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
Nuttall's woodpecker (*Dryobates nuttallii*)	-	-	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands.	April-July	Potential to occur. Suitable nesting habitat within Study Area. Observed during reconnaissance site visit.
Purple martin (*Progne subis*)	-	-	SSC	In California, breeds along coast range, Cascade-northern Sierra Nevada region and isolated population in Sacramento. Nesting habitat includes montane forests, Pacific lowlands with dead snags; the isolated Sacramento population nests in weep holes under elevated highways/bridges. Winters in South America.	May-August	Absent. No suitable habitat within Study Area.
Oak titmouse (*Baeolophus inornatus*)	-	-	BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks aren't absent, they nest in juniper woodland and open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree).	March-July	Potential to occur. Suitable nesting habitat within Study Area.
Wrentit (*Chamaea fasciata*)	-	-	BCC	Coastal sage scrub, northern coastal scrub, chaparral, dense understory of riparian woodlands, riparian scrub, coyote brush and blackberry thickets, and dense thickets in suburban parks and gardens.	March-August	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	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.	March-September	Potential to occur. Suitable nesting habitat within Study Area.
Song sparrow "Modesto" (*Melospiza melodia heermanni*)	-	-	BCC, SSC	Resident in central and southwest California, including Central Valley; nests in marsh, scrub habitat.	April-June	Absent. No suitable habitat within Study Area.
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.	March-August	Absent. No suitable habitat within Study Area.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			
San Clemente spotted towhee (*Pipilo maculatus clementae*)	-	-	BCC, SSC	Resident on Santa Catalina and Santa Rosa islands; extirpated on San Clemente Island, California. Breeds in dense, broadleaf shrubby brush, thickets, and tangles in chaparral, oak woodland, island woodland, and Bishop pine forest.	Year-round resident; breeding season is April-July	Absent. Study Area is outside of the geographic range for this subspecies.
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.	March-July	Absent. No suitable habitat within Study Area.
Mammals						
Townsend's big-eared bat *(Corynorhinus townsendii)*	-	-	SSC	Caves, mines, buildings, rock crevices, trees.	April-September	Potential to occur. Suitable roosting and foraging habitat within Study Area.
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 (Western Bat Working Group [WBWG] 2021).	April-September	Potential to occur. Suitable roosting and foraging habitat within Study Area.

[1]Habitat descriptions for plant species are from the CNPS Inventory of Rare and Endangered Plants (CNPS 2021), unless otherwise stated.

Status Codes:

FESA	Federal Endangered Species Act
CESA	California Endangered Species Act
FE	FESA listed, Endangered.
FT	FESA listed, Threatened.
BCC	USFWS Bird of Conservation Concern
CE	CESA or NPPA listed, Endangered.
CT	CESA- or NPPA-listed, Threatened.
CC	Candidate for CESA listing as Endangered or Threatened.
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5 050-reptiles/amphibians).
CDFW WL	CDFW Watch List
SSC	CDFW Species of Special Concern (CDFW, updated July 2017).
1B	CRPR/Rare or Endangered in California and elsewhere.
2B	Plants rare, threatened, or endangered in California but more common elsewhere.

Table 1. Special-Status Species Evaluated for the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description[1]	Survey Period	Potential to Occur Onsite
	ESA	CESA	Other			

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 (delisted species are monitored for 5 years).

Plants

A total of 83 special-status plant species were identified as having the potential to occur in the vicinity of the Study Area based on the literature review (Table 1). Of those, 62 species were determined to be absent from the Study Area due to the lack of suitable habitat or due to the Study Area being outside of the known elevational range for the species (Table 1). No further discussion of those species is provided in this assessment. A brief description of the remaining 21 species that have the potential to occur within the Study Area is presented below.

Bent-Flowered Fiddleneck

Bent-flowered fiddleneck (*Amsinckia lunaris*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in cismontane woodland, coastal bluff scrub, and valley and foothill grasslands (CNPS 2021). Bent-flowered fiddleneck blooms from March through June and is known to occur at elevations ranging from 10 to 1,640 feet above MSL (CNPS 2021). This species is endemic to California; its current range includes Alameda, Contra Costa, Colusa, Lake, Marin, Napa, San Benito, Santa Clara, Santa Cruz, San Mateo, Sonoma, Sutter, and Yolo counties (CNPS 2021).

There is one CNDDB occurrence of bent-flowered fiddleneck within five miles of the Study Area (CDFW 2021a). The oak woodlands and grassland within the Study Area may provide suitable habitat for this species. Bent-flowered fiddleneck has potential to occur within the Study Area.

Coast Rockcress

Coast rockcress (*Arabis blepharophylla*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous perennial that occurs in rocky soils in broadleaf upland forest, coastal bluff scrub, coastal prairie, and coastal scrub (CNPS 2021). Coast rockcress blooms from February through May and is known to occur at elevations ranging from 10 to 3,609 feet above MSL (CNPS 2021). Coast rockcress is endemic to California; its current range includes Contra Costa, Lake, Monterey, Marin, Santa Cruz, San Francisco, San Mateo, and Sonoma counties; however, its presence is uncertain in Santa Cruz County (CNPS 2021).

The CNDDB does not often publish occurrence records for CRPR 4 species, and there are no published occurrences of coast rockcress. The oak woodlands within the Study Area may provide marginally suitable habitat for this species. Coast rockcress has low potential to occur within the Study Area.

Brewer's Milk-Vetch

Brewer's milk-vetch (*Astragalus breweri*) is not listed as pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species (CNPS 2021). This species is an herbaceous annual that occurs on volcanic and often serpentinite substrates in chaparral, cismontane woodland, meadows and seeps, and open, often gravelly areas of valley and foothill grassland. Brewer's milk-vetch blooms from April through June and is known to occur at elevations ranging from 295 to 2,395 feet above MSL (CNPS 2021). Brewer's milk-vetch is endemic to California; its current range includes Colusa, Lake, Mendocino, Marin, Napa, Sonoma, and Yolo counties (CNPS 2021).

The CNDDB does not often publish occurrence records for CRPR 4 species, and there are no published occurrences of Brewer's milk-vetch. The oak woodlands and grassland within the Study Area may provide marginally suitable habitat for this species. Brewer's milk-vetch has low potential to occur within the Study Area.

Jepson's Milk-Vetch

Jepson's milk-vetch (*Astragalus rattanii var. jepsonianus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that often occurs on serpentinite substrates in chaparral, cismontane woodland, and valley and foothill grassland (CNPS 2021). Jepson's milk-vetch blooms from March through June and is known to occur at elevations ranging from 968 to 2,297 feet above MSL (CNPS 2021). Jepson's milk-vetch is endemic to California; its current range includes Colusa, Glenn, Lake, Mendocino, Napa, San Benito, Sonoma, Tehama, and Yolo counties (CNPS 2021).

There are no CNDDB occurrences of Jepson's milk-vetch within five miles of the Study Area (CDFW 2021a). However, the grassland within the Study Area may provide marginally suitable habitat for this species. Jepson's milk-vetch has low potential to occur within the Study Area.

Serpentine Bird's-Beak

Serpentine bird's-beak (*Cordylanthus tenuis* ssp. *brunneus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is a hemiparasitic herbaceous annual that occurs usually in serpentinite soil within closed-cone coniferous forest, chaparral, and cismontane woodland (CNPS 2021). Serpentine bird's-beak blooms from July through August and is known to occur at elevations ranging from 1,001 to 3,002 feet above MSL (CNPS 2021). Serpentine bird's-beak is endemic to California; its current range includes Lake, Napa, and Sonoma counties (CNPS 2021).

There are no CNDDB occurrences of serpentine bird's-beak within five miles of the Study Area (CDFW 2021a). However, the oak woodlands within the Study Area may provide marginally suitable habitat for this species. Serpentine bird's-beak has low potential to occur within the Study Area.

Congested-Headed Hayfield Tarplant

Congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an annual herb that occurs in valley and foothill grassland and sometimes roadsides (CNPS 2021). Congested-headed hayfield tarplant blooms from April through November and is known to occur at elevations ranging from 66 to 1,837 feet above MSL (CNPS 2021). Congested-headed hayfield tarplant is endemic to California; the current range of this species includes Lake, Mendocino, Marin, San Francisco, San Mateo, and Sonoma counties (CNPS 2021).

There are no CNDDB occurrences of congested-headed hayfield tarplant within five miles of the Study Area (CDFW 2021a). However, the developed/disturbed areas and grassland within the Study Area may provide suitable habitat for this species. Congested-headed hayfield tarplant has potential to occur within the Study Area.

Bolander's Horkelia

Bolander's horkelia (*Horkelia bolanderi*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in and on edges of vernally mesic areas in chaparral, lower montane coniferous forest, meadows and seeps, and valley and foothill grassland (CNPS 2021). Bolander's horkelia blooms from June through August and is known to occur at elevations ranging from 1,476 to 3,938 feet above MSL (CNPS 2021). Bolander's horkelia is endemic to California; its current range includes Colusa, Lake, and Mendocino counties; however, it is presumed extirpated in Colusa County (CNPS 2021).

There are four CNDDB occurrences of Bolander's horkelia within five miles of the Study Area (CDFW 2021a). The drainage corridor within the Study Area may provide marginally suitable habitat for this species. Bolander's horkelia has low potential to occur within the Study Area.

Colusa Layia

Colusa layia (*Layia septentrionalis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in sandy or serpentinite soils in chaparral, cismontane woodland, and valley and foothill grasslands (CNPS 2021). Colusa layia blooms from April through May and is known to occur at elevations ranging from 328 to 3,593 feet above MSL (CNPS 2021). Colusa layia is endemic to California; the current range of this species includes Butte, Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties (CNPS 2021).

There is one CNDDB occurrence of Colusa layia within five miles of the Study Area (CDFW 2021a). The woodland and grassland within the Study Area may provide marginally suitable habitat for this species. Colusa layia has low potential to occur within the Study Area.

Legenere

Legenere (*Legenere limosa*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species (CNPS 2021). This species is an herbaceous annual that occurs in a variety of

seasonally inundated environments including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages (USFWS 2005). Legenere blooms from April through June and is known to occur at elevations ranging from three feet to 2,887 feet above MSL (CNPS 2021). Legenere is endemic to California; the current range of this species includes Alameda, Lake, Monterey, Napa, Placer, Sacramento, Santa Clara, San Joaquin, Shasta, San Mateo, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties; is believed to be extirpated from Stanislaus County (CNPS 2021).

There are no CNDDB occurrences of legenere within five miles of the Study Area (CDFW 2021a). However, the drainage corridor within the Study Area may provide marginally suitable habitat for this species. Legenere has low potential to occur within the Study Area.

Bristly Leptosiphon

Bristly leptosiphon (*Leptosiphon acicularis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an annual herb that occurs in chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland (CNPS 2021). Bristly leptosiphon blooms from April through July and is known to occur at elevations ranging from 180 to 4,921 feet above MSL (CNPS 2021). Bristly leptosiphon is endemic to California; the current range of this species includes Alameda, Butte, Contra Costa (distribution and presence is uncertain), Fresno, Humboldt, Lake, Mendocino, Marin, Napa, Santa Clara, San Mateo, and Sonoma counties (CNPS 2021).

There are no CNDDB occurrences of bristly leptosiphon within five miles of the Study Area (CDFW 2021a). However, the oak woodlands and grassland within the Study Area may provide suitable habitat for this species. Bristly leptosiphon has potential to occur within the Study Area.

Jepson's Leptosiphon

Jepson's leptosiphon (*Leptosiphon jepsonii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an annual herb that usually occurs in volcanic soils of chaparral, cismontane woodland, and valley and foothill grasslands (CNPS 2021). Jepson's leptosiphon blooms from March through May and is known to occur at elevations ranging from 328 to 1,640 feet above MSL (CNPS 2021). Jepson's leptosiphon is endemic to California; the current range of this species includes Lake, Napa, Sonoma, and Yolo counties (CNPS 2021).

There are no CNDDB occurrences of Jepson's leptosiphon within five miles of the Study Area (CDFW 2021a). However, the oak woodlands and grassland within the Study Area may provide marginally suitable habitat for this species. Jepson's leptosiphon has low potential to occur within the Study Area.

Woolly Meadowfoam

Woolly meadowfoam (*Limnanthes floccosa* ssp. *floccosa*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs in vernally mesic chaparral, cismontane woodland, valley and foothill grassland, and vernal pools (CNPS 2021). Woolly meadowfoam blooms from March through May and is known to occur at elevations ranging from 196 to 4,380 feet above MSL (CNPS 2021). The current known range for this species in California includes Butte, Lake, Lassen, Napa, Shasta, Siskiyou, Tehama, and Trinity counties (CNPS 2021).

There are no CNDDB occurrences of woolly meadowfoam within five miles of the Study Area (CDFW 2021a). However, the drainage corridor within the Study Area may provide marginally suitable habitat for this species. Woolly meadowfoam has low potential to occur within the Study Area.

Cobb Mountain Lupine

Cobb Mountain lupine (*Lupinus sericatus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in broadleafed upland forest, chaparral, cismontane woodland, and lower montane coniferous forest (CNPS 2021). Cobb Mountain lupine blooms from March through June and is known to occur at elevations ranging from 902 to 5,004 feet above MSL (CNPS 2021). Cobb Mountain lupine is endemic to California; its current range includes Colusa, Lake, Napa, and Sonoma counties (CNPS 2021).

There are no CNDDB occurrences of Cobb Mountain lupine within five miles of the Study Area (CDFW 2021a). However, the oak woodland within the Study Area may provide marginally suitable habitat for this species. Cobb Mountain lupine has low potential to occur within the Study Area.

Heller's Bush-Mallow

Heller's bush-mallow (*Malacothamnus helleri*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3.3 species. This species is a perennial deciduous shrub that occurs in sandstone substrates in chaparral and gravel substrates of riparian woodland (CNPS 2021). Heller's bush-mallow blooms from May through July and is known to occur at elevations ranging from 1,000 to 2,084 feet above MSL (CNPS 2021). Heller's bush-mallow is endemic to California; its current range includes Colusa, Glenn, Lake, Napa, Tehama, and Yolo counties; however, its distribution or identity is uncertain in Glenn County (CNPS 2021).

There are no CNDDB occurrences of Heller's bush-mallow within five miles of the Study Area (CDFW 2021a). However, the oak woodland within the Study Area may provide marginally suitable habitat for this species. Heller's bush-mallow has low potential to occur within the Study Area.

Mt. Diablo Cottonweed

Mt. Diablo cottonweed (*Micropus amphibolus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3.2 species. This species is an herbaceous annual that occurs in rocky soils in broadleafed upland forest, chaparral, cismontane woodland, and valley and foothill grassland (CNPS 2021). Mt. Diablo cottonweed blooms from March through May and is known to occur at elevations ranging from 148 to 2,707 feet above MSL (CNPS 2021). Mt. Diablo cottonweed is endemic to California; the current range of this species includes Alameda, Contra Costa, Colusa, Lake, Monterey, Marin, Napa, Santa Barbara, Santa Clara, Santa Cruz, San Joaquin, Solano, and Sonoma counties (CNPS 2021).

The CNDDB does not often publish occurrence records for CRPR 3 species, and there are no published occurrences of Mt. Diablo cottonweed. The oak woodlands and grassland within the Study Area may provide marginally suitable habitat for this species. Mt. Diablo cottonweed has low potential to occur within the Study Area.

Little Mousetail

Little mousetail (*Myosurus minimus* ssp. *apus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3.1 species. This species is an herbaceous annual that occurs in mesic areas (USACE 2020) of valley and foothill grassland and alkaline vernal pools (CNPS 2021). Little mousetail blooms between March and June and is known to occur at elevations ranging from 66 to 2,100 feet above MSL (CNPS 2021). The current range for little mousetail in California includes Alameda, Contra Costa, Colusa, Lake, Merced, Riverside, San Bernardino, San Diego, Solano, Tulare, and Yolo counties (CNPS 2021).

There are no CNDDB occurrences of little mousetail within five miles of the Study Area (CDFW 2021a). However, the drainage corridor within the Study Area may provide marginally suitable habitat for this species. Little mousetail has low potential to occur within the Study Area.

Baker's Navarretia

Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in vernal pools and mesic areas within cismontane woodlands, lower montane coniferous forests, meadows and seeps, and valley and foothill grasslands (CNPS 2021). Baker's navarretia blooms from April through July and is known to occur at elevations ranging from 16 to 5,709 feet above MSL (CNPS 2021). Baker's navarretia is endemic to California; the current range of this species includes Colusa, Glenn, Lake, Lassen, Mendocino, Marin, Napa, Solano, Sonoma, Sutter, Tehama, and Yolo counties (CNPS 2021).

There are three CNDDB occurrences of Baker's navarretia within five miles of the Study Area (CDFW 2021a). The drainage corridor within the Study Area may provide marginally suitable habitat for this species. Baker's navarretia has low potential to occur within the Study Area.

Michael's Rein Orchid

Michael's rein orchid (*Piperia michaelii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous perennial that occurs in coastal bluff scrub, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest (CNPS 2021). Michael's rein orchid blooms from April through August and is known to occur at elevations ranging from 10 to 3,002 feet above MSL (CNPS 2021). Michael's rein orchid is endemic to California; its current range includes Alameda, Amador, Butte, Contra Costa, Fresno, Humboldt, Los Angeles Monterey, Marin, Santa Barbara, San Benito, Santa Clara, Santa Cruz, Santa Cruz Island, San Francisco, San Luis Obispo, San Mateo, Stanislaus, Tulare, Tuolumne, Ventura, and Yuba counties. It is presumed extirpated in Los Angeles County, and distribution is uncertain, but presumed extirpated if once present in Ventura County (CNPS 2021).

The CNDDB does not often publish occurrence records for CRPR 4 species, and there are no published occurrences of Michael's rein orchid. The oak woodlands within the Study Area may provide suitable habitat for this species. Michael's rein orchid has potential to occur within the Study Area.

Marsh Zigadenus

Marsh zigadenus (*Toxicoscordion fontanum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous bulbiferous perennial that occurs in vernally mesic and often on serpentinite substrates in chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, and marshes and swamps (CNPS 2021). Marsh zigadenus is known to occur at elevations ranging from 49 to 3,281 feet above MSL (CNPS 2021). Marsh zigadenus is endemic to California; its current range includes Lake, Mendocino, Monterey, Marin, Napa, San Benito, Santa Cruz, San Luis Obispo, San Mateo, and Sonoma counties (CNPS 2021).

The CNDDB does not often publish occurrence records for CRPR 4 species, and there are no published occurrences of marsh zigadenus. The drainage corridor within the Study Area may provide marginally suitable habitat for this species. Marsh zigadenus has low potential to occur within the Study Area.

Napa Bluecurls

Napa bluecurls (*Trichostema ruygtii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, and vernal pools (CNPS 2021). Napa bluecurls blooms from June through October and is known to occur at elevations ranging from 98 to 2,231 feet above MSL (CNPS 2021). Napa bluecurls is endemic to California; the current range of this species includes Lake, Napa, and Solano counties; however, it is possibly extirpated from Lake County (CNPS 2021).

There are no CNDDB occurrences of Napa bluecurls within five miles of the Study Area (CDFW 2021a). However, the oaks woodlands and grasslands within the Study Area may provide suitable habitat for this species. Napa bluecurls has potential to occur within the Study Area.

Oval-Leaved Viburnum

Oval-leaved viburnum (*Viburnum ellipticum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.3 species. This species is a perennial deciduous shrub that occurs in chaparral, cismontane woodland, and lower montane coniferous forest communities. Oval-leaved viburnum blooms from May through June and is known to occur at elevations ranging from 705 to 4,593 feet above MSL (CNPS 2021). The current range of this species in California includes Alameda, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Lake, Mendocino, Mariposa, Napa, Placer, Shasta, Solano, Sonoma, and Tehama counties (CNPS 2021).

There is one CNDDB occurrence of oval-leaved viburnum within five miles of the Study Area (CDFW 2021a). The oak woodlands and grassland within the Study Area may provide suitable habitat for this species. Oval-leaved viburnum has potential to occur within the Study Area.

4.2.1 Fish

Five special-status fish species were identified as having potential to occur in the vicinity of the Study Area based on the literature review (Table 1). However, upon further analysis and after the site visit, all five

species were considered to be absent from the Study Area due to the lack of suitable habitat and/or because the Study Area is outside of the known geographic range for these species. No further discussion of these species is provided within this assessment.

4.2.2 Amphibians

Four special-status amphibian species were identified as having potential to occur in the vicinity of the Study Area based on the literature review (Table 1). However, upon further analysis and after the site visit, all four species were considered to be absent from the Study Area due to the lack of suitable habitat and/or because the Study Area is outside of the known geographic range for these species. No further discussion of these species is provided within this assessment.

4.2.3 Reptiles

One special-status reptile species, northwestern pond turtle (*Actinemys marmorata*), was identified as having potential to occur in the vicinity of the Study Area based on the literature review (Table 1). Upon further analysis and after the reconnaissance site visit, Northwestern pond turtle was identified to have potential to occur in the Study Area. A brief description of this species is presented below.

Northwestern Pond Turtle

The northwestern pond turtle is not listed pursuant to either the federal or California ESAs; however, it is designated as a CDFW SSC. Northwestern pond turtles occur in a variety of fresh and brackish water habitats including marshes, lakes, ponds, and slow-moving streams (Jennings and Hayes 1994). This species is primarily aquatic; however, they typically leave aquatic habitats in the fall to reproduce and to overwinter (Jennings and Hayes 1994). Deep, still water with abundant emergent woody debris, overhanging vegetation, and rock outcrops is optimal for basking and thermoregulation. Although adults are habitat generalists, hatchlings and juveniles and hatchlings require shallow edgewater with relatively dense submergent or short emergent vegetation in which to forage. Northwestern pond turtles are typically active between March and November. Mating generally occurs during late April and early May and eggs are deposited between late April and early August (Jennings and Hayes 1994). Eggs are deposited within excavated nests in upland areas, with substrates that typically have high clay or silt fractions (Jennings and Hayes 1994). The majority of nesting sites are located within 650 feet (200 meters) of aquatic sites; however, nests have been documented as far as 1,310 feet (400 meters) from aquatic habitat.

There are no CNDDB occurrences of northwestern pond turtle within five miles of the Study Area (CDFW 2021a). However, the Study Area may provide marginally suitable upland habitat for this species. Habitat suitability is likely diminished by the long history of disturbance to the aquatic features and uplands within and adjacent to the Study Area, the urban/agricultural setting, and the frequency of public use of the site. Northwestern pond turtle has low potential to occur within the Study Area.

4.2.4 Birds

A total of 15 special-status bird species were identified as having the potential to occur within the Study Area based on the literature review (Table 1). Of those, 12 species were determined to be absent from the Study Area due to the lack of suitable habitat and/or due to the Study Area being outside of the known geographic range of the species. No further discussion of those species is provided in this assessment. A brief description of the remaining three species that have the potential to occur within the Study Area is presented below.

Nuttall's Woodpecker

The Nuttall's woodpecker (*Dryobates nuttallii*) is not listed pursuant to either the federal or California ESAs but is designated as a USFWS BCC. They are resident from Siskiyou County south to Baja California. Nuttall's woodpeckers nest in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands (Lowther et al. 2020). Breeding occurs during April through July.

The CNDDB does not track Nuttall's woodpecker. Nuttall's woodpecker was observed foraging within the oak woodland in the Study Area during the site reconnaissance. The trees in the oak woodlands within and adjacent to the Study Area may also provide suitable nesting habitat for this species. Nuttall's woodpecker has potential to nest onsite.

Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) is not listed pursuant to either the federal or California ESAs but is designated as a USFWS BCC. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley (Cicero et al. 2020). They are found in dry oak or oak-pine woodlands but may also use scrub oaks or other brush near woodlands (Cicero et al. 2020). Nesting occurs during March through July.

The CNDDB does not track oak titmouse. The trees and brush in and near the oak woodlands within and adjacent to the Study Area may provide suitable nesting and foraging habitat for this species. Oak titmouse has potential to nest onsite.

Lawrence's Goldfinch

The Lawrence's goldfinch (*Spinus lawrencei*) is not listed pursuant to either the federal or California ESAs but is designated as a USFWS BCC. Lawrence's goldfinch breed west of the Sierra Nevada-Cascade axis from Tehama, Shasta, and Trinity counties south into the foothills surrounding the Central Valley to Kern County; and on the Coast Range from Contra Costa County to Santa Barbara County (Watt et al. 2020). Lawrence's goldfinch nest in arid woodlands usually with brushy areas, tall annual weeds and a local water source (Watt et al. 2020). Nesting occurs during March through September.

There are no CNDDB occurrences of Lawrence's goldfinch within five miles of the Study Area (CDFW 2021a). However, the trees and other vegetation within and adjacent to the Study Area may provide suitable nesting and foraging habitat for this species. Lawrence's goldfinch has potential to nest onsite.

Other Protected Birds

In addition to the above-listed special-status birds, all native or naturally occurring birds and their occupied nests/eggs are protected under the California Fish and Game Code and the MBTA. The Study Area supports potential nesting habitat for a variety of native birds protected under these regulations.

4.2.5 Mammals

Two special-status mammal species were identified as having potential to occur in the vicinity of the Study Area based on the literature review (Table 1). Upon further analysis and after the reconnaissance site visit, both species were identified to have potential to occur in the Study Area as described below. A brief description of both species is presented in the following sections.

Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. Townsend's big-eared bat is a fairly large bat with prominent bilateral nose lumps and large "rabbit-like" ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. This species has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet. Habitats include coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. Townsend's big-eared bat primarily forages on moths. Foraging habitat is generally edge habitats along streams adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California (WBWG 2021).

There are two CNDDB occurrences of Townsend's big-eared bat within five miles of the Study Area (CDFW 2021a). The structures and trees within the Study Area may provide suitable roosting habitat and the entire Study Area may provide suitable foraging habitat for this species. Townsend's big-eared bat has potential to occur within the Study Area.

Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia, south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 feet) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (above 7,000 feet). This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges and barns. Pallid bats are feeding generalists that glean a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs,

ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. This species is not thought to migrate long distances between summer and winter sites (WBWG 2021).

There is one CNDDB occurrence of pallid bat within five miles of the Study Area (CDFW 2021a). The structures and trees within the Study Area may provide suitable roosting habitat and the entire Study Area may provide suitable foraging habitat for this species. Pallid bat has potential to occur within the Study Area.

4.3 Critical Habitat and Essential Fish Habitat

There are no Critical Habitats mapped within the Study Area (USFWS 2021b). The Study Area is not EFH (NOAA 2021a).

4.4 Riparian Habitats and Sensitive Natural Communities

Riparian habitats are present within the Study Area. Two narrow strips of valley oak woodland and a small patch of Fremont cottonwood are located along the riparian corridors for the onsite drainage and for Burns Valley Creek which is adjacent to the Study Area to the west (See Section 4.1.3 and Figure 3). Only a portion of the valley oak woodland depicted on Figure 3 is considered to be riparian habitat.

The valley oak woodland is representative of the Valley Oak Forest and Woodland Alliance, a sensitive natural community with a state rarity rank of S3. The patch of Fremont cottonwood within the Study Area is too limited in extent to be considered a stand or a separate vegetation community and is not representative of a sensitive alliance.

Four other sensitive natural communities were identified as having potential to occur within the vicinity of the Study Area based on the literature review (CDFW 2021a). These include Coastal and Valley Freshwater Marsh, Great Valley Cottonwood Riparian Forest, Northern Basalt Flow Vernal Pool, and Northern Volcanic Ash Vernal Pool. Upon further analysis and site reconnaissance, these four sensitive natural communities were determined to be absent from the Study Area.

4.5 Wildlife Movement/Corridors and Nursery Sites

The Study Area is subject to disturbance from the presence of people, has a history of disturbance due to agricultural use, and is surrounded entirely by either agricultural, commercial, or residential development. The Study Area does not fall within an Essential Habitat Connectivity area mapped by the CDFW and is not identified as a critical and non-critical winter and summer range, fall holding areas, fawning grounds, or migration corridors for mule deer (*Odocoileus hemionus*) (CDFW 2021b). Therefore, the Study Area is not expected to support critical wildlife movement corridors or potential nursery sites. However, a variety of common bird species were observed within the Study Area during the site reconnaissance and other wildlife species also likely move through the Study Area.

For the purposes of this analysis, nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries or bat maternity roosts. This data is available through CDFW's Biogeographic Information and Observation System (BIOS) database or as occurrence records in the CNDDB and is

supplemented with the results of the site reconnaissance. No nursery sites have been documented within the Study Area (CDFW 2021a) and none were observed during the site reconnaissance.

5.0 IMPACT ANALYSIS

This section specifically addresses the questions raised by the CEQA - Appendix G Environmental Checklist Form, IV. Biological Resources. This impact analysis assumes the Project will implement measures that fulfill the intent of recommended measures described in Section 6.0.

5.1 Special Status Species

Would the Project result in effects, either directly or through habitat modifications, to species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

No special-status species are known to occur within the Study Area; however, plant and wildlife surveys have not been conducted. The Study Area includes potential habitat for special-status species within the impact area. Potential effects to special-status species are summarized in the following sections by taxonomic group or species.

5.1.1 Special-Status Plants

There is no potential habitat for federally or State-listed plant species in the Study Area, but there is potential or low potential for 21 non-listed special-status plant species to occur. Project development would permanently remove or alter a minimal amount of marginally suitable or suitable potential habitat for special-status plants, and in the unlikely chance that special-status plant populations occur onsite they may be directly or indirectly impacted by development.

Implementation of recommendations BIO2, PLANT1, and PLANT2 described in Section 6.0 would avoid, minimize, and/or compensate for potential effects to special-status plants. With implementation of these measures, the Project is not expected to significantly impact special-status plants.

5.1.2 Northwestern Pond Turtles

Northwestern pond turtles have low potential to occur within the Study Area due to the historic degradation of the aquatic features near the project, the urban/agricultural setting, and the extent of disturbance and public use. Should Northwestern pond turtles utilize the site and/or be present onsite before and during construction, a minimal amount of marginal potential upland habitat would be permanently removed or altered, and turtles may be temporarily displaced from upland habitats during construction. Removal or alteration of marginal habitat and displacement of turtles which may incidentally occur during construction is not expected to significantly impact Northwestern pond turtles.

Implementation of recommendations BIO1, BIO2, and NPT1 described in Section 6.0 would avoid or minimize potential effects to Northwestern pond turtles.

5.1.3 Special-Status and Other Protected Birds

There is no potential habitat for federally or State-listed bird species in the Study Area, but there is potential for three non-listed special-status bird species and a variety of other birds that are protected under the MBTA and the California Fish and Game Code. Project development would permanently remove or alter a minimal amount of nesting and foraging habitat in the development area, and Project construction would generate a temporary disturbance that would likely displace foraging birds from the Study Area during construction. Permanent removal or alteration of a minimal amount of habitat and displacement of foraging birds during construction is not expected to significantly impact special-status birds.

Implementation of recommendations BIO2 and BIRD1 described in Section 6.0 would avoid or minimize potential effects to special-status birds and other protected birds.

5.1.4 Special-Status Mammals

Two special-status bats have potential to occur in the Study Area. Removal of trees and structures may directly impact roosting habitat. Project development would permanently remove a minimal amount of potential roosting and foraging habitat in the development area, and Project construction would generate a temporary disturbance during the day that would likely displace day-roosting bats from the Study Area. Permanent removal of a minimal amount of potential roosting or foraging habitat and displacement of day-roosting bats during construction is not expected to significantly impact special-status bats.

Implementation of recommendations BIO2 and BAT1 described in Section 6.0 would avoid and/or minimize potential effects to special-status bats.

5.2 Riparian Habitat and Sensitive Natural Communities

Would the Project 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 Game or US Fish and Wildlife Service?

The Study Area supports a small amount of valley oak woodland, which may be considered a sensitive natural community. Portions of the valley oak woodland and a patch of Fremont cottonwood located riparian along the Burns Valley Creek and the unnamed drainage represent riparian habitat (Figure 3). The Project does not propose impacts to riparian habitat or valley oak woodland that is adjacent to Burns Valley Creek.

The Project is located within an urban and agricultural area, and the valley oak woodland that is not associated with Burns Valley Creek is a small patch on the edge of a complex of scattered oak woodland patches that are remnant of historical clearing for development of the surrounding areas. Impacts to this small patch of remnant valley oak woodland within the Study Area is not expected to be a significant impact to the sensitive natural community.

The Project may directly or indirectly impact riparian habitat and valley oak woodland along the unnamed drainage due to removal for development or due to alteration of hydrology.

Implementation of recommendations BIO2, RIP1, RIP2, and TREE1 as described in Section 6.0 would avoid, minimize, and/or compensate for potential effects to riparian habitat and individual oak trees.

5.3 Aquatic Resources, Including Waters the U.S. and State

Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Based on the preliminary aquatic resources assessment, the Project would have no direct impact on federally protected wetlands; however, the drainage channel within the Study Area may be considered a Water of the U.S. and/or State. Project implementation may result in fill of this drainage within the development area.

The Project is adjacent to Burns Valley Creek, which may also be considered a Water of the U.S. and State. The Project does not propose impacts Burns Valley Creek.

Implementation of recommendations WATER1 through WATER5 described in Section 6.0 would avoid, minimize, and/or compensate for potential effects to Waters of the U.S. and State.

5.4 Wildlife Movement/Corridors

Would the Project 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 Study Area provides limited migratory opportunities for terrestrial wildlife. Project construction is likely to temporarily disturb and displace most wildlife from the Study Area. Some wildlife such as birds or nocturnal species are likely to continue to use the habitats opportunistically for the duration of construction. Once construction is complete, wildlife movements are expected to resume but will likely be more limited through the developed areas of the Study Area. The Project is not expected to substantially interfere with wildlife movement.

There are no documented nursery sites and no nursey sites were observed within the Study Area during the site reconnaissance. Therefore, the Project is not expected to impact wildlife nursery sites.

5.5 Local Policies, Ordinances, and Other Plans

Does the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Project may impact trees protected under the City's Tree Ordinance. Implementation of recommendations BIO2 and TREE1 would prevent conflicts with the local tree ordinance.

Does the Project 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 Study Area is not covered by any local, regional, or State conservation plan. Therefore, the Project would not conflict with a local, regional, or State conservation plan.

6.0 RECOMMENDATIONS

This section summarizes recommended measures to avoid, minimize, or compensate for potential impacts to biological resources from the proposed Project.

6.1 General Recommendations

The following general measures are recommended to avoid impacts to offsite and onsite biological resources:

- **BIO1:** The project should implement erosion control measures and BMPs to reduce the potential for sediment or pollutants at the Project site. Examples of appropriate measures are included below.
  - Avoided aquatic resources (including Burns Valley Creek) should be clearly demarcated prior to construction. Avoidance buffers should be consistent with the City of Clearlake requirements and/or requirements of regulatory permits. Erosion control measures should be placed between avoided aquatic resources and the outer edge of the impact limits prior to commencement of construction activities. Such identification and erosion control measures should be properly maintained until construction is completed and the soils have been stabilized.
  - Any fueling in the Study Area should use appropriate secondary containment techniques to prevent spills.
- **BIO2:** A qualified biologist should conduct a mandatory Worker Environmental Awareness Program for all contractors, work crews, and any onsite personnel to aid workers in recognizing special status species and sensitive biological resources that may occur on-site. The program shall include identification of the special status species and their habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and Mitigation Measures required to reduce impacts to biological resources within the work area.

6.2 Special-Status Species

Recommendations to minimize impacts to special status species or habitats are summarized below by species or taxonomic group.

6.2.1 Plants

There is potential or low potential for 20 special-status plants to occur within the Study Area. The following measures are recommended to minimize potential impacts to special-status plants:

- **PLANT1:** Perform floristic plant surveys according to USFWS, CDFW, and CNPS protocols prior to construction. Surveys should be conducted by a qualified biologist and timed according to the appropriate phenological stage for identifying target species. Known reference populations should be visited and/or local herbaria records should be reviewed, if available, prior to surveys to confirm the phenological stage of the target species. If no special-status plants are found within the Project site, no further measures pertaining to special-status plants are necessary.
- **PLANT2:** If special-status plants are identified within 25-feet of the Project impact area, implement the following measures:
    - If avoidance of special-status plants is feasible, establish and clearly demarcate avoidance zones for special-status plant occurrences prior to construction. Avoidance zones should include the extent of the special-status plants plus a 25-foot buffer, unless otherwise determined by a qualified biologist, and should be maintained until the completion of construction. A qualified biologist/biological monitor should be present must occur within the avoidance buffer to ensure special-status plants are not impacted by the work.
    - If avoidance of special-status plants is not feasible, mitigate for significant impacts to special-status plants. Mitigation measures should be developed in consultation with CDFW. Mitigation measures may include permanent preservation of onsite or offsite habitat for special-status plants and/or translocation of plants or seeds from impacted areas to unaffected habitats.

6.2.2 Northwestern Pond Turtle

Northwestern pond turtles have low potential to incidentally occur within the Study Area. Implementation of recommendation BIO1, BIO2, and the following measure would avoid and/or minimize potential adverse effects to northwestern pond turtles:

- **NPT1:** Conduct a pre-construction northwestern pond turtle survey in Project impact and staging areas within 48 hours prior to construction activities. Any northwestern pond turtle individuals discovered in the Project work area immediately prior to or during Project activities 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.

6.2.3 Special-Status Birds and MBTA-Protected Birds (including nesting raptors)

Three special-status birds and various other protected birds have the potential to nest within the Study Area. The following measures are recommended to minimize potential impacts to nesting birds:

- **BIRD1:** If construction is to occur during the nesting season (generally February 1 - August 31), conduct a pre-construction nesting bird survey of all suitable nesting habitat on the Project within 14 days of the commencement of construction. The survey shall be conducted within a 500-foot radius of Project work areas for raptors and within a 100-foot radius for other nesting birds. If any

active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

6.2.4 Special-Status Bats

There is potential for two special-status bats to occur within the Study Area, and the majority of the Study Area is planned for impact. The following measure is recommended to minimize potential impacts to special-status bats.

- **BAT1:** Within 14 days prior to Project activities that may impact bat roosting habitat (e.g., removal of manmade structures or trees), a qualified biologist will survey for all suitable roosting habitat within the Project impact limits. If suitable roosting habitat is not identified, no further measures are necessary. If suitable roosting habitat is identified, a qualified biologist will conduct an evening bat emergence survey that may include acoustic monitoring to determine whether or not bats are present. If roosting bats are determined to be present within the Project site, consultation with CDFW prior to initiation of construction activities and/or preparation of a Bat Management Plan outlining avoidance and minimization measures specific to the roost(s) potentially affected may be required.

6.3 Riparian and Sensitive Natural Communities

Valley oak woodland and riparian habitat is located within the Study Area. Measure TREE1 in Section 6.6 would avoid and/or minimize potential impacts to individual oak trees. The following measures are recommended to minimize potential impacts to riparian habitat:

- **RIP1:** Map the extent of riparian areas within the Study Area. Avoidance buffers for avoided riparian habitats (including riparian habitat for Burns Valley Creek) should be consistent with the City of Clearlake requirements and/or requirements of regulatory permits, should be clearly demarcated prior to construction, and should be maintained until the completion of construction. A qualified biologist/biological monitor should be present if work must occur within the avoidance buffer to ensure riparian habitat is not impacted by the work.
- **RIP2:** An SAA, pursuant to Section 1602 of the California Fish and Game Code, should be secured for any activity that will impact riparian habitats. Minimization measures will be developed during consultation with CDFW as part of the SAA agreement process to ensure protections for affected fish and wildlife resources.

6.4 Waters of the U.S./State

The Project site supports potential Waters of the U.S. and State. In addition to BIO1, the following measure is recommended if impacts are proposed to aquatic resources:

- **WATER1:** Prepare and submit an aquatic resources delineation for the Project to the USACE and obtain an Approved Jurisdictional Determination.
- **WATER2:** If necessary, file a request for authorization to fill wetlands and other Waters of the U.S. under the Section 404 of the federal CWA (Section 404 Permit) prior to discharging any dredged or fill materials into any Waters of the U.S. Mitigation measures will be developed as part of the Section 404 Permit process to ensure no net loss of wetland function and values. To facilitate such authorization, an application for a Section 404 Nationwide Permit for the Project should be prepared and submitted to USACE. Mitigation for impacts to Waters of the U.S. typically consists of a minimum of a 1:1 ratio for direct impacts; however final mitigation requirements will be developed in consultation with USACE.
- **WATER3:** If necessary, file a request for a Water Quality Certification or waiver pursuant to Section 401 of the CWA must be obtained from the RWQCB for Section 404 permit actions.
- **WATER4:** Pursuant to the Porter-Cologne Water Quality Act, a permit authorization from the RWQCB is required prior to the discharge of material in an area that could affect Waters of the State. Mitigation requirements for discharge to Waters of the State within the Project site will be developed in consultation with the RWQCB.
- **WATER5:** If necessary, prepare an LSA Notification to CDFW under California Fish and Game Code Section 1602 to request authorization to impact regulated aquatic features.

6.5 Wildlife Movement Corridors

No impacts to wildlife movement, corridors, or nursery sites are expected.

6.6 Trees

Oak trees are present within the Study Area and are protected under the City tree ordinance. The following measure is recommended to prevent conflicts with the local tree ordinance:

- **TREE1:** A native tree protection and removal permit, waiver, or similar approval should be secured prior to impacting trees protected under the City ordinance. Avoidance buffers for protected trees should be consistent with the City requirements, should be clearly demarcated prior to construction, and should be maintained until the completion of construction. A qualified biologist/biological monitor should be present if work must occur within the avoidance buffer to ensure avoided protected trees are not impacted by the work.

7.0 SUMMARY

No federal or State listed species have potential to occur within the Study Area. However, 21 non-listed special-status plants, one special-status turtle, three special-status birds, various birds protected under the MBTA and the California Fish and Game Code, and two special-status bats have potential or low potential to occur within the Study Area. One drainage channel located within the Study Area may be considered a Water of the U.S. and State. Individual oak trees within the Study Area are protected under the City

ordinance are located within the Study Area, and the oak woodlands onsite may be considered a sensitive natural community by CDFW.

With implementation of recommendations described in Section 6.0, the Project is not expected to have a significant effect on biological resources.

8.0 REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual; Vascular Plants of California*, Second Edition. University of California Press, Berkeley, California.

CDFW. 2021a. Rarefind 5. Online Version, commercial version dated February 28, 2021. California Natural Diversity Database. The Resources Agency, Sacramento.

_____. 2021b. Biogeographic Information and Observation System (BIOS). Available https://wildlife.ca.gov/data/BIOS. Accessed February and March 2021.

Cicero, C., P. Pyle, and M. A. Patten. 2020. Oak Titmouse (Baeolophus inornatus), version 1.0. In Birds of the World (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.oaktit.01.

City of Clearlake. 2020. City of Clearlake Municipal Code. Chapter XVIII (Zoning), Article 18-1 (Administration). Available https://clearlake.municipal.codes/. Accessed March 2021.

_____. 2016a. *City of Clearlake 2040 General Plan Update*. Available https://clearlake.ca.us/DocumentCenter/View/608/A_Clearlake_2040_General_Planpdf. Accessed March 5, 2021.

_____. 2016b. *City of Clearlake California 2040 General Plan Update Draft EIR*. November 2016. State Clearinghouse No. 2014012023. Available https://clearlake.ca.us/DocumentCenter/View/608/A_Clearlake_2040_General_Planpdf. Accessed March 5, 2021.

CNPS. 2021. Inventory of Rare and Endangered Plants in California (online edition, v8-03 0.39). California Native Plant Society. Sacramento, CA. Available online: February and March 2021.

Horton, John D., 2017. 0818, The State Geologic Map Compilation (SGMC) Geodatabase of the Conterminous United States: U.S. Geological Survey data release DOI: 10.5066/F7WH2N65, U.S. Geological Survey, Denver, CO. Available https://doi.org/10.5066/F7WH2N65

Jennings, C.W., R.G. Strand, and T.H. Rogers. 1977. Geologic map of California: California Division of Mines and Geology, scale 1:750,000. Available https://mrdata.usgs.gov/geology/state/sgmc-lith.php?code=5.14#California. Accessed December 2020.

Jennings, M. R. and M. P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Final report to California Department of Fish and Game, Inland Fisheries Branch. Rancho Cordova, CA.

Lowther, P. E., P. Pyle, and M. A. Patten. 2020. Nuttall's Woodpecker (Dryobates nuttallii), version 1.0. In Birds of the World (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.nutwoo.01.

Moyle, P.B., R. M. Quiñones, J. V. Katz and J. Weaver. 2015. Fish Species of Special Concern in California. Sacramento: California Department of Fish and Wildlife. Available https://wildlife.ca.gov/Conservation/SSC/Fishes. Accessed March 2021.

NOAA. 2021a. NOAA Fisheries West Coast Region California Species List Tools. Available online: https://archive.fisheries.noaa.gov/wcr/maps_data/california_species_list_tools.html. Accessed March 4, 2021.

_____. 2021b. National Climatic Data Center 1981-2010 Climate Normals for Clearlake 4 SE, California. https://www.ncdc.noaa.gov/cdo-web/datatools/normals. Accessed March 2, 2021.

NRCS. 2021a. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/. Accessed December 2020.

_____. 2021b. State Soil Data Access Hydric Soils List. https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed February 2, 2021.

NRCS, USGS, and U.S. Environmental Protection Agency. 2016. Watershed Boundary Dataset for California. http://datagateway.nrcs.usda.gov.

Safford, H. and Miller J.E.D. 2020. An updated database of serpentine endemism in the California flora. Madroño 67(2), 85-104, (October 16, 2020). https://doi.org/10.3120/0024-9637-67.2.85

Sawyer, J., Keeler-Wolf T., Evens J. M. 2009. *A Manual of California Vegetation, Second Edition*. Sacramento, California: California Native Plant Society.

SWRCB. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019. Available https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html#officialdocuments. Accessed March 8, 2021.

USACE. 2020. National Wetland Plant List. Document Number 2020-10630. Published May 18, 2020. Available https://www.federalregister.gov/documents/2020/05/18/2020-10630/national-wetland-plant-list#citation-1-p29690.

USFWS. 2021a. USFWS Resource Report List. Information for Planning and Conservation. Available https://ecos.fws.gov/ipac. Accessed February 2021.

_____. 2021b. Online Critical Habitat Mapper. Available https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77. Accessed February 2021.

_____. 2008. Birds of Conservation Concern 2008. U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. Arlington, Virginia. http://www.fws.gov/migratorybirds/. Accessed March 2021.

_____. 2005. Vernal Pool Recovery Plan: Species Account for Legenere. United States Department of the Interior, USFWS. Sacramento, California. Available Online:

http://www.fws.gov/sacramento/ES/Recovery-Planning/Vernal-Pool/Documents/legenere.pdf. Accessed 2 October 2015.]

USGS. 1993. "Clearlake Highlands, California" 7.5-minute Quadrangle. U.S. Department of the Interior. Denver, Colorado.

Watt, D. J., P. Pyle, M. A. Patten, and J. N. Davis. 2020. Lawrence's Goldfinch (Spinus lawrencei), version 1.0. In Birds of the World (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.lawgol.01.

WBWG. 2021. Western Bat Species Accounts. Available http://wbwg.org/western-bat-species/. Accessed March 2021.

LIST OF ATTACHMENTS

ATTACHMENT A

Results of Database Searches

IPaC **U.S. Fish & Wildlife Service**

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

Lake County, California

Local offices

Red Bluff Fish And Wildlife Office

(530) 527-3043
(530) 529-0292

10950 Tyler Road
Red Bluff, CA 96080-7762

Sacramento Fish And Wildlife Office

(916) 414-6600

(916) 414-6713

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

Endangered species

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

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

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

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

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

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

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

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

The Red Bluff Fish And Wildlife Office has not enabled species list delivery through IPaC. Please contact them directly to determine which endangered species need to be considered as part of your project.

Red Bluff Fish And Wildlife Office

(530) 527-3043
(530) 529-0292

10950 Tyler Road
Red Bluff, CA 96080-7762

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

Birds

NAME	STATUS
Northern Spotted Owl Strix occidentalis caurina Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/1123	Threatened
Yellow-billed Cuckoo Coccyzus americanus There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/321	Threatened

Flowering Plants

NAME	STATUS

Burke's Goldfields Lasthenia burkei — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4338

Few-flowered Navarretia Navarretia leucocephala ssp. pauciflora (=N. pauciflora) — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8242

Lake County Stonecrop Parvisedum leiocarpum — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2263

Loch Lomond Coyote Thistle Eryngium constancei — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5106

Many-flowered Navarretia Navarretia leucocephala ssp. plieantha — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2491

Slender Orcutt Grass Orcuttia tenuis — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/1063

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

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 should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

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, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
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

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
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

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
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

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
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

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
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/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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 and understand the FAQ "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 migratory birds potentially occurring 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 AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. 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

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

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.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

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.

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

81 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3912217, 3912216, 3912215, 3812287, 3812286, 3812285, 3812277 3812276 and 3812275;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S3	G3
Antirrhinum subcordatum	dimorphic snapdragon	Plantaginaceae	annual herb	Apr-Jul	4.3	S3	G3
Antirrhinum virga	twig-like snapdragon	Plantaginaceae	perennial herb	Jun-Jul	4.3	S3?	G3?
Arabis blepharophylla	coast rockcress	Brassicaceae	perennial herb	Feb-May	4.3	S4	G4
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	(Jan)Mar-May(Jul)	1B.3	S3	G5T3
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	1B.1	S2	G3T2
Asclepias solanoana	serpentine milkweed	Apocynaceae	perennial herb	May-Jul(Aug)	4.2	S3	G3
Astragalus breweri	Brewer's milk-vetch	Fabaceae	annual herb	Apr-Jun	4.2	S3	G3
Astragalus clevelandii	Cleveland's milk-vetch	Fabaceae	perennial herb	Jun-Sep	4.3	S4	G4
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S3	G4T3
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual / perennial herb	Aug	4.2	S4	G5
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
Brodiaea rosea ssp. rosea	Indian Valley brodiaea	Themidaceae	perennial bulbiferous herb	May-Jun	3.1	S2	G2
Calamagrostis ophitidis	serpentine reed grass	Poaceae	perennial herb	Apr-Jul	4.3	S3	G3
Calochortus uniflorus	pink star-tulip	Liliaceae	perennial bulbiferous herb	Apr-Jun	4.2	S4	G4
Calyptridium quadripetalum	four-petaled pussypaws	Montiaceae	annual herb	Apr-Jun	4.3	S4	G4
	Mt. Saint Helena	Convolvulaceae	perennial	Apr-Jun	4.2	S3	G4T3

Calystegia collina ssp. oxyphylla	morning-glory		rhizomatous herb				
Calystegia collina ssp. tridactylosa	three-fingered morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jun	1B.2	S1	G4T1
Carex praticola	northern meadow sedge	Cyperaceae	perennial herb	May-Jul	2B.2	S2	G5
Castilleja rubicundula var. rubicundula	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	1B.2	S2	G5T2
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Jun	1B.1	S1	G1
Ceanothus divergens	Calistoga ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr	1B.2	S2	G2
Chlorogalum pomeridianum var. minus	dwarf soaproot	Agavaceae	perennial bulbiferous herb	May-Aug	1B.2	S3	G5T3
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Onagraceae	annual herb	Apr-Jul	4.2	S3	G5T3
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	May-Jun	4.3	S4	G4
Cordylanthus tenuis ssp. brunneus	serpentine bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug	4.3	S3	G4G5T3
Cryptantha dissita	serpentine cryptantha	Boraginaceae	annual herb	Apr-Jun	1B.2	S2	G2
Delphinium uliginosum	swamp larkspur	Ranunculaceae	perennial herb	May-Jun	4.2	S3	G3
Downingia willamettensis	Cascade downingia	Campanulaceae	annual herb	Jun-Jul(Sep)	2B.2	S2	G4
Eriastrum brandegeeae	Brandegee's eriastrum	Polemoniaceae	annual herb	Apr-Aug	1B.1	S1	G1Q
Erigeron greenei	Greene's narrow-leaved daisy	Asteraceae	perennial herb	May-Sep	1B.2	S3	G3
Eriogonum nervulosum	Snow Mountain buckwheat	Polygonaceae	perennial rhizomatous herb	Jun-Sep	1B.2	S2	G2
Eryngium constancei	Loch Lomond button-celery	Apiaceae	annual / perennial herb	Apr-Jun	1B.1	S1	G1
Fritillaria pluriflora	adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2S3	G2G3
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2
Grimmia torenii	Toren's grimmia	Grimmiaceae	moss		1B.3	S2	G2
Harmonia hallii	Hall's harmonia	Asteraceae	annual herb	Apr-Jun	1B.2	S2?	G2?
Hemizonia congesta ssp. congesta	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	1B.2	S2	G5T2
Hesperolinon adenophyllum	glandular western flax	Linaceae	annual herb	May-Aug	1B.2	S2S3	G2G3
Hesperolinon bicarpellatum	two-carpellate western flax	Linaceae	annual herb	May-Jul	1B.2	S2	G2
Hesperolinon didymocarpum	Lake County western flax	Linaceae	annual herb	May-Jul	1B.2	S1	G1
Hesperolinon sharsmithiae	Sharsmith's western flax	Linaceae	annual herb	May-Jul	1B.2	S2	G2Q
Horkelia bolanderi	Bolander's horkelia	Rosaceae	perennial herb	(May)Jun-Aug	1B.2	S1	G1
Imperata brevifolia	California satintail	Poaceae	perennial	Sep-May	2B.1	S3	G4

			rhizomatous herb				
Lasthenia burkei	Burke's goldfields	Asteraceae	annual herb	Apr-Jun	1B.1	S1	G1
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	Apr-May	1B.2	S2	G2
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Leptosiphon acicularis	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	4.2	S4?	G4?
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	Mar-May	1B.2	S2S3	G2G3
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Limnanthaceae	annual herb	Mar-May(Jun)	4.2	S3	G4T4
Lomatium repostum	Napa lomatium	Apiaceae	perennial herb	Mar-Jun	4.3	S3	G3
Lupinus sericatus	Cobb Mountain lupine	Fabaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Malacothamnus helleri	Heller's bush-mallow	Malvaceae	perennial deciduous shrub	May-Jul	3.3	S3	G3Q
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4
Mielichhoferia elongata	elongate copper moss	Mielichhoferiaceae	moss		4.3	S4	G5
Myosurus minimus ssp. apus	little mousetail	Ranunculaceae	annual herb	Mar-Jun	3.1	S2	G5T2Q
Navarretia cotulifolia	cotula navarretia	Polemoniaceae	annual herb	May-Jun	4.2	S4	G4
Navarretia jepsonii	Jepson's navarretia	Polemoniaceae	annual herb	Apr-Jun	4.3	S4	G4
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G4T2
Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	Polemoniaceae	annual herb	May-Jun	1B.1	S1	G4T1
Navarretia leucocephala ssp. plieantha	many-flowered navarretia	Polemoniaceae	annual herb	May-Jun	1B.2	S1	G4T1
Navarretia paradoxinota	Porter’s navarretia	Polemoniaceae	annual herb	May-Jun(Jul)	1B.3	S2	G2
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	1B.1	S2	G2
Panicum acuminatum var. thermale	Geysers panicum	Poaceae	annual / perennial herb	Jun-Aug	1B.2	S2	G5T2Q
Penstemon newberryi var. sonomensis	Sonoma beardtongue	Plantaginaceae	perennial herb	Apr-Aug	1B.3	S2	G4T2
Piperia michaelii	Michael's rein orchid	Orchidaceae	perennial herb	Apr-Aug	4.2	S3	G3
Potamogeton zosteriformis	eel-grass pondweed	Potamogetonaceae	annual herb (aquatic)	Jun-Jul	2B.2	S3	G5
Sedella leiocarpa	Lake County stonecrop	Crassulaceae	annual herb	Apr-May	1B.1	S1	G1
Senecio clevelandii var. clevelandii	Cleveland's ragwort	Asteraceae	perennial herb	Jun-Jul	4.3	S3	G4?T3Q
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	Malvaceae	perennial herb	(Jun)Jul-Aug	1B.2	S2	G5T2
Streptanthus barbiger	bearded jewelflower	Brassicaceae	annual herb	May-Jul	4.2	S3	G3
Streptanthus brachiatus ssp. brachiatus	Socrates Mine jewelflower	Brassicaceae	perennial herb	May-Jun	1B.2	S1	G2T1
Streptanthus brachiatus ssp. hoffmanii	Freed's jewelflower	Brassicaceae	perennial herb	May-Jul	1B.2	S2	G2T2

Streptanthus glandulosus ssp. hoffmanii	Hoffman's bristly jewelflower	Brassicaceae	annual herb	Mar-Jul	1B.3	S2	G4T2
Streptanthus hesperidis	green jewelflower	Brassicaceae	annual herb	May-Jul	1B.2	S2	G2
Streptanthus morrisonii ssp. elatus	Three Peaks jewelflower	Brassicaceae	perennial herb	Jun-Sep	1B.2	S1	G2T1
Streptanthus morrisonii ssp. kruckebergii	Kruckeberg's jewelflower	Brassicaceae	perennial herb	Apr-Jul	1B.2	S1	G2T1
Toxicoscordion fontanum	marsh zigadenus	Melanthiaceae	perennial bulbiferous herb	Apr-Jul	4.2	S3	G3
Trichostema ruygtii	Napa bluecurls	Lamiaceae	annual herb	Jun-Oct	1B.2	S1S2	G1G2
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3	S3?	G4G5

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California Natural Diversity Database
The Jepson Flora Project
The Consortium of California Herbaria
CalPhotos

Questions and Comments
rareplants@cnps.org

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Lucerne (3912217) OR Clearlake Highlands (3812286) OR Clearlake Oaks (3912216) OR Benmore Canyon (3912215) OR Kelseyville (3812287) OR Lower Lake (3812285) OR The Geysers (3812277) OR Whispering Pines (3812276) OR Middletown (3812275))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAF02020	***Taricha rivularis*** red-bellied newt	None	None	G4	S2	SSC
AAAAH01020	***Dicamptodon ensatus*** California giant salamander	None	None	G3	S2S3	SSC
AAABH01022	***Rana draytonii*** California red-legged frog	Threatened	None	G2G3	S2S3	SSC
AAABH01050	***Rana boylii*** foothill yellow-legged frog	None	Endangered	G3	S3	SSC
ABNKC01010	***Pandion haliaetus*** osprey	None	None	G5	S4	WL
ABNKC10010	***Haliaeetus leucocephalus*** bald eagle	Delisted	Endangered	G5	S3	FP
ABNKC22010	***Aquila chrysaetos*** golden eagle	None	None	G5	S3	FP
ABNRB02022	***Coccyzus americanus occidentalis*** western yellow-billed cuckoo	Threatened	Endangered	G5T2T3	S1	
ABPAU01010	***Progne subis*** purple martin	None	None	G5	S3	SSC
AFCHA0209G	***Oncorhynchus mykiss irideus pop. 8*** steelhead - central California coast DPS	Threatened	None	G5T2T3Q	S2S3	
AFCJB19011	***Lavinia exilicauda chi*** Clear Lake hitch	None	Threatened	G4T1	S1	
AFCQB07010	***Archoplites interruptus*** Sacramento perch	None	None	G2G3	S1	SSC
AFCQK02013	***Hysterocarpus traskii lagunae*** Clear Lake tule perch	None	None	G5T2T3	S2S3	SSC
AMACC01070	***Myotis evotis*** long-eared myotis	None	None	G5	S3	
AMACC01090	***Myotis thysanodes*** fringed myotis	None	None	G4	S3	
AMACC02010	***Lasionycteris noctivagans*** silver-haired bat	None	None	G5	S3S4	
AMACC05030	***Lasiurus cinereus*** hoary bat	None	None	G5	S4	
AMACC05060	***Lasiurus blossevillii*** western red bat	None	None	G5	S3	SSC
AMACC08010	***Corynorhinus townsendii*** Townsend's big-eared bat	None	None	G3G4	S2	SSC

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AMACC10010	***Antrozous pallidus*** pallid bat	None	None	G5	S3	SSC
AMAFJ01010	***Erethizon dorsatum*** North American porcupine	None	None	G5	S3	
ARAAD02030	***Emys marmorata*** western pond turtle	None	None	G3G4	S3	SSC
CARA2422CA	***Central Valley Drainage Rainbow Trout/Cyprinid Stream*** Central Valley Drainage Rainbow Trout/Cyprinid Stream	None	None	GNR	SNR	
CARA2520CA	***Clear Lake Drainage Resident Trout Stream*** Clear Lake Drainage Resident Trout Stream	None	None	GNR	SNR	
CARA2530CA	***Clear Lake Drainage Cyprinid/Catostomid Stream*** Clear Lake Drainage Cyprinid/Catostomid Stream	None	None	GNR	SNR	
CARA2550CA	***Clear Lake Drainage Seasonal Lakefish Spawning Stream*** Clear Lake Drainage Seasonal Lakefish Spawning Stream	None	None	GNR	SNR	
CTT44131CA	***Northern Basalt Flow Vernal Pool*** Northern Basalt Flow Vernal Pool	None	None	G3	S2.2	
CTT44133CA	***Northern Volcanic Ash Vernal Pool*** Northern Volcanic Ash Vernal Pool	None	None	G1	S1.1	
CTT52410CA	***Coastal and Valley Freshwater Marsh*** Coastal and Valley Freshwater Marsh	None	None	G3	S2.1	
CTT61420CA	***Great Valley Mixed Riparian Forest*** Great Valley Mixed Riparian Forest	None	None	G2	S2.2	
ICBRA06010	***Linderiella occidentalis*** California linderiella	None	None	G2G3	S2S3	
ICMAL34010	***Calasellus californicus*** An isopod	None	None	G2	S2	
IICOL5A010	***Dubiraphia brunnescens*** brownish dubiraphian riffle beetle	None	None	G1	S1	
IICOL5V010	***Hydrochara rickseckeri*** Ricksecker's water scavenger beetle	None	None	G2?	S2?	
IIHEM07010	***Saldula usingeri*** Wilbur Springs shorebug	None	None	G1	S1	
IIHYM24250	***Bombus occidentalis*** western bumble bee	None	Candidate Endangered	G2G3	S1	
IIHYM24380	***Bombus caliginosus*** obscure bumble bee	None	None	G4?	S1S2	
IIHYM68020	***Hedychridium milleri*** Borax Lake cuckoo wasp	None	None	G1	S1	
IMBIV19010	***Gonidea angulata*** western ridged mussel	None	None	G3	S1S2	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
IMGASJ0F40	***Pyrgulopsis ventricosa*** Clear Lake pyrg	None	None	G1	S1	
NBMUS32330	***Grimmia torenii*** Toren's grimmia	None	None	G2	S2	1B.3
NBMUS4Q022	***Mielichhoferia elongata*** elongate copper moss	None	None	G5	S3S4	4.3
PDAPI0Z0W0	***Eryngium constancei*** Loch Lomond button-celery	Endangered	Endangered	G1	S1	1B.1
PDAST3M5G0	***Erigeron greenei*** Greene's narrow-leaved daisy	None	None	G3	S3	1B.2
PDAST4R065	***Hemizonia congesta ssp. congesta*** congested-headed hayfield tarplant	None	None	G5T2	S2	1B.2
PDAST5L010	***Lasthenia burkei*** Burke's goldfields	Endangered	Endangered	G1	S1	1B.1
PDAST5N0F0	***Layia septentrionalis*** Colusa layia	None	None	G2	S2	1B.2
PDAST650A0	***Harmonia hallii*** Hall's harmonia	None	None	G2?	S2?	1B.2
PDBOR01070	***Amsinckia lunaris*** bent-flowered fiddleneck	None	None	G3	S3	1B.2
PDBRA2G071	***Streptanthus brachiatus ssp. hoffmanii*** Freed's jewelflower	None	None	G2T2	S2	1B.2
PDBRA2G072	***Streptanthus brachiatus ssp. brachiatus*** Socrates Mine jewelflower	None	None	G2T1	S1	1B.2
PDBRA2G0J4	***Streptanthus glandulosus ssp. hoffmanii*** Hoffman's bristly jewelflower	None	None	G4T2	S2	1B.3
PDBRA2G510	***Streptanthus hesperidis*** green jewelflower	None	None	G2G3	S2S3	1B.2
PDCAB01010	***Brasenia schreberi*** watershield	None	None	G5	S3	2B.3
PDCAM060E0	***Downingia willamettensis*** Cascade downingia	None	None	G4	S2	2B.2
PDCAM0C010	***Legenere limosa*** legenere	None	None	G2	S2	1B.1
PDCON04032	***Calystegia collina ssp. oxyphylla*** Mt. Saint Helena morning-glory	None	None	G4T3	S3	4.2
PDCON04036	***Calystegia collina ssp. tridactylosa*** three-fingered morning-glory	None	None	G4T1	S1	1B.2
PDCPR07080	***Viburnum ellipticum*** oval-leaved viburnum	None	None	G4G5	S3?	2B.3
PDCRA0F020	***Sedella leiocarpa*** Lake County stonecrop	Endangered	Endangered	G1	S1	1B.1

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDERI041G2	***Arctostaphylos stanfordiana ssp. raichei*** Raiche's manzanita	None	None	G3T2	S2	1B.1
PDERI04271	***Arctostaphylos manzanita ssp. elegans*** Konocti manzanita	None	None	G5T3	S3	1B.3
PDFAB0F7E1	***Astragalus rattanii var. jepsonianus*** Jepson's milk-vetch	None	None	G4T3	S3	1B.2
PDFAB2B0C0	***Lupinus antoninus*** Anthony Peak lupine	None	None	G2	S2	1B.2
PDFAB2B3J0	***Lupinus sericatus*** Cobb Mountain lupine	None	None	G2?	S2?	1B.2
PDFAB400R5	***Trifolium hydrophilum*** saline clover	None	None	G2	S2	1B.2
PDLAM220H0	***Trichostema ruygtii*** Napa bluecurls	None	None	G1G2	S1S2	1B.2
PDLIM02043	***Limnanthes floccosa ssp. floccosa*** woolly meadowfoam	None	None	G4T4	S3	4.2
PDLIN01010	***Hesperolinon adenophyllum*** glandular western flax	None	None	G2G3	S2S3	1B.2
PDLIN01020	***Hesperolinon bicarpellatum*** two-carpellate western flax	None	None	G2	S2	1B.2
PDLIN01070	***Hesperolinon didymocarpum*** Lake County western flax	None	Endangered	G1	S1	1B.2
PDLIN010E0	***Hesperolinon sharsmithiae*** Sharsmith's western flax	None	None	G2Q	S2	1B.2
PDMAL110K2	***Sidalcea oregana ssp. hydrophila*** marsh checkerbloom	None	None	G5T2	S2	1B.2
PDPGN08440	***Eriogonum nervulosum*** Snow Mountain buckwheat	None	None	G2	S2	1B.2
PDPLM03020	***Eriastrum brandegeeae*** Brandegee's eriastrum	None	None	G1Q	S1	1B.1
PDPLM09140	***Leptosiphon jepsonii*** Jepson's leptosiphon	None	None	G2G3	S2S3	1B.2
PDPLM0C0E1	***Navarretia leucocephala ssp. bakeri*** Baker's navarretia	None	None	G4T2	S2	1B.1
PDPLM0C0E4	***Navarretia leucocephala ssp. pauciflora*** few-flowered navarretia	Endangered	Threatened	G4T1	S1	1B.1
PDPLM0C0E5	***Navarretia leucocephala ssp. plieantha*** many-flowered navarretia	Endangered	Endangered	G4T1	S1	1B.2
PDPLM0C160	***Navarretia paradoxinota*** Porter's navarretia	None	None	G2	S2	1B.3
PDRHA04220	***Ceanothus confusus*** Rincon Ridge ceanothus	None	None	G1	S1	1B.1

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDRHA04240	***Ceanothus divergens*** Calistoga ceanothus	None	None	G2	S2	1B.2
PDROS0W011	***Horkelia bolanderi*** Bolander's horkelia	None	None	G1	S1	1B.2
PDSCR0D482	***Castilleja rubicundula var. rubicundula*** pink creamsacs	None	None	G5T2	S2	1B.2
PDSCR0R060	***Gratiola heterosepala*** Boggs Lake hedge-hyssop	None	Endangered	G2	S2	1B.2
PDSCR1L483	***Penstemon newberryi var. sonomensis*** Sonoma beardtongue	None	None	G4T3	S3	1B.3
PDSCR2S070	***Antirrhinum subcordatum*** dimorphic snapdragon	None	None	G3	S3	4.3
PMCYP03B20	***Carex praticola*** northern meadow sedge	None	None	G5	S2	2B.2
PMLIL0G042	***Chlorogalum pomeridianum var. minus*** dwarf soaproot	None	None	G5T3	S3	1B.2
PMLIL0V0F0	***Fritillaria pluriflora*** adobe-lily	None	None	G2G3	S2S3	1B.2
PMPOA24028	***Panicum acuminatum var. thermale*** Geysers panicum	None	Endangered	G5T2Q	S2	1B.2
PMPOA3D020	***Imperata brevifolia*** California satintail	None	None	G4	S3	2B.1
PMPOA4G050	***Orcuttia tenuis*** slender Orcutt grass	Threatened	Endangered	G2	S2	1B.1
PMPOT03160	***Potamogeton zosteriformis*** eel-grass pondweed	None	None	G5	S3	2B.2

Record Count: 94

Quad Name **Clearlake Highlands**
Quad Number **38122-H6**

ESA Anadromous Fish

SONCC Coho ESU (T) - None
CCC Coho ESU (E) - None
CC Chinook Salmon ESU (T) - None
CVSR Chinook Salmon ESU (T) - None
SRWR Chinook Salmon ESU (E) - None
NC Steelhead DPS (T) - None
CCC Steelhead DPS (T) - None
SCCC Steelhead DPS (T) - None
SC Steelhead DPS (E) - None
CCV Steelhead DPS (T) - None
Eulachon (T) - None
sDPS Green Sturgeon (T) - None

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - None
CCC Coho Critical Habitat - None
CC Chinook Salmon Critical Habitat - None
CVSR Chinook Salmon Critical Habitat - None
SRWR Chinook Salmon Critical Habitat - None
NC Steelhead Critical Habitat - None
CCC Steelhead Critical Habitat - None
SCCC Steelhead Critical Habitat - None
SC Steelhead Critical Habitat - None
CCV Steelhead Critical Habitat - None
Eulachon Critical Habitat - None
sDPS Green Sturgeon Critical Habitat - None

ESA Marine Invertebrates

Range Black Abalone (E) - None
Range White Abalone (E) - None

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat - None

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - None
Olive Ridley Sea Turtle (T/E) - None
Leatherback Sea Turtle (E) - None
North Pacific Loggerhead Sea Turtle (E) - None

ESA Whales

Blue Whale (E) - None
Fin Whale (E) - None
Humpback Whale (E) - None
Southern Resident Killer Whale (E) - None
North Pacific Right Whale (E) - None
Sei Whale (E) - None
Sperm Whale (E) - None

ESA Pinnipeds

Guadalupe Fur Seal (T) - None
Steller Sea Lion Critical Habitat - None

Essential Fish Habitat

Coho EFH - None
Chinook Salmon EFH - None
Groundfish EFH - None
Coastal Pelagics EFH - None
Highly Migratory Species EFH - None

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans - None
MMPA Pinnipeds - None

ATTACHMENT B

Representative Site Photographs

Photo 1. Representative photo of the walnut orchard that makes up the majority of the site. Photo taken January 29, 2021, facing north.

Photo 2. Culverted inlet for the onsite drainage located in the northeast corner of the Study Area. Photo taken January 29, 2021, facing west.

Photo 3. Representative photo of the vegetation along the drainage. Photo taken January 29, 2021, facing west.

Photo 4. Harding grass grassland and large oak trees in the southeast portion of the Study Area. Photo taken January 29, 2021, facing west-northwest

Photo 5. Representative photo of oak woodland riparian vegetation along Burns Valley Creek. Photo taken January 29, 2021, facing west.

Photo 6. Patch of Fremont cottonwood near the southern portion of the mapped drainage. Photo taken January 29, 2021, facing southwest.

Photo 7. A structure within the walnut orchard may provide roosting habitat for bats. Photo taken January 29, 2021, facing northeast.

Photo 8. Photo of foundations from old residential development and large oak trees. Photo taken January 29, 2021, facing west-northwest.