

Appendix E -Biological Resources

Clearlake Airport Redevelopment Project

City of Clearlake, Lake County, CA

Biological Resources Assessment

Prepared for:
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1.0 INTRODUCTION

Greg Matuzak, Principal Biologist from Greg Matuzak Environmental Consulting LLC is a California Department of Fish and Wildlife (CDFW) and United States Fish and Wildlife Service (USFWS) Qualified Biologist. Mr. Matuzak conducted a reconnaissance-level biological resources survey and required background research related to sensitive biological resources in order to develop this Biological Resources Assessment (BRA), which has been fully developed by Mr. Matuzak. This BRA has been developed for the City of Clearlake Airport Redevelopment Project (Project) and meets the California Environmental Quality Act (CEQA) Guidelines standards for the review of sensitive biological resources as part of the Environmental Impact Report (EIR) being developed for the proposed Project. In addition, CDFW, USFWS, State and Regional Water Quality Control Board, and United States Army Corps of Engineers (Corps) jurisdiction within the Project area was assessed.

The Project is proposed to be divided up between three (3) Planned Development Zones with a total acreage of approximately 54.49 acres in total for the proposed Project area covered in this BRA and will be covered in the EIR for the Project. The proposed Zone District PD 1 will include a Mixed Use Zone and will be 13.20 acres in size. The proposed Zone District PD 2 will include a Primary Commercial/Wellness Zone and will be 35.29 acres in size. The proposed Zone District PD 3 will include a Heavy Commercial Zone and will be 6.0 acres in size. The initial Project area boundary that was circulated as part of the Notice of Preparation (NOP) for the development of an EIR did not include the proposed hotel project development, extension of 18th Avenue to connect with State Route (SR) 53, or the southern tip of the Project area. Therefore, this BRA includes the updated Project area boundary to be included within the EIR. See Appendix A for Project Vicinity and Location Maps and Appendix B for Site Plans outlining the overall Project area as well as each of the Planned Development Zones within the overall Project area.

The Project area is located within the southern area of the incorporated limits of the City of Clearlake, in Lake County, California (see attached Project Vicinity and Project Regional Location Maps in Appendix A). The Project site is bounded by the 18th Avenue extension and Victor Street to the north, SR 53 to the east, and Old Highway 53 to the south and west as shown in Appendix A and Appendix B (see attached Project Vicinity and Location Maps and Site Plans). Primary access to the site would be via 18th Avenue and Old Highway 53 and from SR 53 into the northeastern section of the Project area. No off-site infrastructure improvements are anticipated with the Project.

The Project site was previously developed with the Pearce Airport and since its closure in 1994, the majority of the site was purchased by the Clearlake Redevelopment Agency in 1995. Since then, it has largely been used as a corporation yard by the City of Clearlake Public Works Department. The City of Clearlake's animal control facility is also located within the Project site. As such, site soils are largely disturbed and vegetation

consists largely of ruderal species. Native habitats do not exist on the Project site with the exception of small, unconnected pockets of oak trees in the southern and eastern areas. Therefore, the potential for sensitive and protected biological resources to occur within the overall Project site is considered low given the lack of such native habitats and the overall degradation of the existing soils and vegetation within a majority of the Project site.

The City of Clearlake, California, is located within the Clear Lake Watershed, which is part of the larger Upper Cache Creek USGS hydrologic unit. The Clear Lake Watershed is contained within this larger area, which covers 271,360 acres (109,820 ha). Clear Lake drains to the east through Cache Creek, which is the only outlet for the lake, and Cache Creek flows into the Sacramento River. Cache Creek has two major tributaries: North Fork Cache Creek and Bear Creek. Based on a review of the National Wetland Inventory (NWI) and the National Hydrography Database (NHD), there is a single mapped aquatic resource within the northwest corner of the overall Project area that contains a drainage area. The drainage area in the northwestern section of the Project area is ephemeral in nature and drains runoff from the east and northeast given the topography within the greater Project area where runoff runs west and southwest until it reaches Clear Lake. A second ephemeral drainage was also identified within the southern section of the Project area and also drains towards the west and Clear Lake. A USDA Soils Map is attached in Appendix C and the southern drainage is not mapped within the NWI or NHD (see Appendix D).

The General Plan land use designation for the Project site is predominantly Commercial with two parcels designated Medium Density Residential. Zoning is predominantly General Commercial (GC), with the same two parcels north of 18th Avenue zoned Low Density Residential (LDR). These two parcels are APN 042-124-260, which is 0.22 acre; and APN 042-124-300, which is 0.23 acres.

Project Description

The development of the Project would result in creating a new mixed-use hub and destination gathering space for this area of the City of Clearlake, transforming the former Pearce Airport into a regional destination that meets the needs of the area through new medical, hospitality, residential, shopping and restaurant venues, development of a new hotel, and an area for heavy commercial uses. The various parcels within the center would be connected by new multi-modal streets and pedestrian networks, offering parks, pathways, a central plaza and public market food hall and event space, bringing together both residents and visitors. The following objectives have been developed for the Project:

- Develop a destination for visitors and community by attracting jobs and commerce to the area.
- Create a Clearlake identity at the South Gateway and a new City brand with street

improvements, park improvements, and existing business improvement initiatives.

- Maintain visibility along State Route (SR) 53.
- Create a pleasant and attractive appearance that complements the surrounding area with the use of drought-tolerant and water-efficient landscaping and architectural designs that support and enhance community character.
- Minimize impacts to adjacent land uses through appropriate design.
- Provide walkable retail, services, and public space, and minimize travel lengths, and accommodate all transportation types, including vehicles, pedestrians, bicyclists, and transit users.
- Develop a fiscally beneficial project that provides sufficient revenues to maintain municipal services.
- Minimize environmental impacts to the maximum extent possible.
- Promote local businesses and develop retail stores that will accommodate the retail demands of the Clearlake community, and diversify products and services offered in the community.
- Provide sufficient on- and off-street parking to ensure that adequate parking is provided for store customers and employees.
- Provide significant economic benefits to the City of Clearlake and community in terms of diverse employment opportunities and increased sales tax revenues.

The proposed Project is a conceptual development plan, or master plan, that would develop the 54.49-acre former airport site with a mix of uses, potentially including but not limited to healthcare facilities, multifamily housing, retail, restaurants, a hotel, heavy commercial industries, and open space. The Project would be developed with both active and passive transportation users in mind, with roadways and parking for vehicles and bicycles, sidewalks, and off-street pedestrian walkways, as well as new sewer, water, energy, and drainage infrastructure throughout. Project phasing would be sequenced through and be dependent on the City of Clearlake's or future developer's acquisition of properties as they become available.

Although a final and definitive Site Plan is not currently proposed, for planning purposes a conceptual site plan, called the "Preferred Site Plan," was prepared and is attached in Appendix B. The Preferred Site Plan establishes a target Floor Area Ratio

(FAR) for each use for purposes of streamlining future development CEQA analysis. New housing units would be constructed across Zone Districts 1 and 2, and they would include commercial uses (which may include hospital/medical facilities) would be constructed across all three Zone Districts. Greater than 4.5 acres would remain landscaped or for drainage features. North-to-south mainline infrastructure is anticipated to occur first within the main portion of the site to facilitate development of individual sites east and west of the central roadway. Following infrastructure installation, the Project may be developed in any order; no phasing is proposed.

A number of existing trees would be removed in order to develop the proposed Project. However, trees along SR 53 will be evaluated for screening and potential sound buffering benefits. Other trees on the site may be preserved if the benefits of mature trees can be accommodated as parcels are developed. The proposed Project would provide landscaping improvements, including the planting of new trees and shrubs throughout the Project site. Central to this development is a plaza adjacent the market building and park that spans a vegetated bluff. Overlooks, connecting trails, play space, and performance spaces are designed as a destination for the area.

An overlook point at the top of the bluff will be adjacent commercial space and parking, providing additional retail amenity and spill-out seating options. Additionally, within the northern section of the Project area, a new hotel is proposed that will be adjacent to a larger open space containing a dense oak woodland. A connection with SR 53 is proposed to connect the northeast portion of the Project area with the state highway.

All future vegetation will include California native, drought-tolerant, or native adaptive vegetation, highlighting the beauty of the surrounding hills and landscape of the region. Existing mature trees are mapped in the site plan and will be incorporated into parking lot screening and recreational space where possible to retain them. Additional specimen trees are planned for pocket-park locations to act as both gateways to the site and screens to parking areas.

Proposed Infrastructure Development

The proposed drainage plans include stormwater detention and implementation of storm water treatment consistent with the City of Clearlake's low impact design guidelines. The Project design integrates on-site detention basins coupled with low impact design (LID) principles to manage stormwater in an environmentally sustainable manner while enhancing flood protection and water quality. The Project would contribute to enhancing localized resilience against flooding and improving overall water quality in the regional area. By incorporating LID principles, the Project promotes sustainable development practices that reduce the environmental footprint of urbanization. Preservation of natural hydrological processes and ecosystem services will be emphasized to minimize impacts on local habitats and biodiversity.

New storm drainage systems would also be developed within each parcel, which would provide new storm drain lines throughout the paved areas on-site. The lines would ultimately drain into the new storm drain line within the 18th avenue extension, north/south road, Airport Road, and west road. No offsite stormwater facilities are anticipated to be constructed offsite as a result of the proposed Project.

The Geotechnical Report Findings are Summarized as follows as they relate to the existing soils within the overall Project area (NV5, 2022 and Moore/Twining Associates, 2008):

- The soils are highly disturbed as a result of the construction and use of the site previously, as a municipal airport; and
- The underlying soils consist of a varying condition having some fill, with very large boulders on the north side, and soils ranging down to 10 +/- feet deep, to shallow soils and volcanic rock at or near the ground surface as you move across the site to the south.

Purpose of the Biological Resources Assessment

For the purposes of this BRA, the background research and the site visit, and the implementation of a reconnaissance-level biological resources survey conducted within the Project area were intended to determine the potential for sensitive biological resources to occur within the overall Project area. Based on the background and site-specific information identified for the Project area, an assessment of such sensitive biological resources was conducted to ensure the proposed Project complies with local, state, and federal regulations governing the protection of sensitive and protected biological resources, including local City of Clearlake ordinances and policies. Additionally, this BRA was developed as the technical document for the development of the CEQA EIR as required by the State of California.

Additionally, this BRA identifies the location and extent of sensitive biological resources within the overall Project area, including special-status plant and wildlife species, and the presence of drainage and wetland features that could potentially meet the Corps' criteria as a "waters of the United States," pursuant to Section 404 of the Clean Water Act (CWA), and streams that could be under the jurisdiction of the California Fish and Wildlife Code Section 1600 *et. seq.* The BRA also satisfies the City of Clearlake Municipal Code and General Plan and CEQA requirements as they pertain to the proposed Project.

2.0 REGULATORY OVERVIEW AND DEFINITIONS

Federal Regulations

Section 404 of the Clean Water Act

The U.S. Army Corps of Engineers ("Corps") and the Environmental Protection Agency ("EPA") regulate the discharge of dredge or fill material into "waters of the U.S." under Section 404 of the Clean Water Act. "Waters of the U.S." include wetlands and lakes, rivers, streams, and their tributaries. Wetlands are defined for regulatory purposes as areas "...inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated solid conditions" as specified in 33 Code of Federal Regulations [CFR] 328.3, 40 CFR 230.3.

Generally, wetlands include swamps, marshes, bogs, and similar areas. Lakes, rivers, and streams are defined as "other waters of the U.S." Jurisdictional limits of these features are typically noted by the Ordinary High Water Mark ("OHWM"). The OHWM is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as mark a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR 328 and 33 CFR 329).

Isolated ponds or seasonal depressions had been previously regulated as waters of the U.S. However, in *Solid Waste Agency of Northwestern Cook County (SWANCC) v. USACE et al.* (January 8, 2001), the U.S. Supreme Court ruled that certain "isolated" wetlands (e.g., non-navigable, isolated, and intrastate) do not fall under the jurisdiction of the CWA and are no longer under the jurisdiction of the Corps. Some circuit courts (e.g., *U.S. v. Deaton*, 2003; *U.S. Rapanos*, 2003; *Northern California River Watch v. City of Healdsburg*, 2006), though, have ruled that SWANCC does not prevent CWA jurisdiction if a "significant nexus" such as a hydrologic connection exists, whether it be man-made (e.g., roadside ditch) or natural tributary to navigable waters, or direct seepage from the wetland to the navigable water, a surface or underground hydraulic connection, an ecological connection (e.g., the same bird, mammal, and fish populations are supported by both the wetland and the navigable water), and changes to chemical concentrations in the navigable water is present due to water from the wetland.

Areas considered to be non-jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions with no outlet for drainage (33 CFR, Part 328).

The *Clean Water Rule* is a 2015 regulation published by the EPA and Corps to clarify water resources management in the United States under a provision of the CWA. The regulation defined the scope of federal water protection in a more consistent manner, particularly over streams and wetlands, which have a significant hydrological and ecological connection to traditional navigable waters, interstate waters, and territorial seas. It is also referred to as the *Waters of the United States* rule, which defines all bodies of water that fall under U.S. federal jurisdiction. The rule has been contested in litigation and in 2017 the Trump administration announced its intent to review and rescind or revise the rule. Following a Supreme Court ruling on January 22, 2018 that lifted a nationwide stay on the rule, the Trump administration formally suspended the rule until February 6, 2020, thereby giving the EPA time to issue a draft proposal of replacement water regulatory requirements.

On October 22, 2019, the EPA and the Corps published a final rule to repeal the 2015 Clean Water Rule: Definition of "Waters of the United States" ("2015 Rule"), which amended portions of the Code of Federal Regulations (CFR), and to restore the regulatory text that existed prior to the 2015 Rule. The final rule will become effective on December 23, 2019. The EPA and the Corps will implement the pre-2015 Rule regulations informed by applicable agency guidance documents and consistent with Supreme Court decisions and longstanding agency practice.

However, on April 21, 2020, the EPA and the Corps published the Navigable Waters Protection Rule to define "Waters of the United States" in the *Federal Register*. For the first time, the agencies have streamlined the definition so that it includes four simple categories of jurisdictional waters, provides clear exclusions for many water features that traditionally have not been regulated, and defines terms in the regulatory text that have never been defined before. Congress, in the CWA, explicitly directed the Agencies to protect "navigable waters." The Navigable Waters Protection Rule regulates traditional navigable waters and the core tributary systems that provide perennial or intermittent flow into them.

Under the final rule, four clear categories of waters are federally regulated:

- The territorial seas and traditional navigable waters,
- Perennial and intermittent tributaries to those waters,
- Certain lakes, ponds, and impoundments, and
- Wetlands adjacent to jurisdictional waters

Therefore, as of June 22, 2020, the final rule details 12 categories of exclusions, features that are not "waters of the United States," such as features that only contain water in direct response to rainfall (e.g., ephemeral features); groundwater; many ditches; prior converted cropland; and waste treatment systems. The final rule clarifies key elements related to the scope of federal CWA jurisdiction, including:

- Providing clarity and consistency by removing the proposed separate categories for jurisdictional ditches and impoundments.
- Refining the proposed definition of “typical year,” which provides important regional and temporal flexibility and ensures jurisdiction is being accurately determined in times that are not too wet and not too dry.
- Defining “adjacent wetlands” as wetlands that are meaningfully connected to other jurisdictional waters, for example, by directly abutting or having regular surface water communication with jurisdictional waters.

The Navigable Waters Protection Rule is the second step in a two-step process to review and revise the definition of “waters of the United States” consistent with the February 2017 Presidential Executive Order entitled “Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the ‘Waters of the United States.’” This final rule became effective on June 22, 2020 and will replace the Step One Rule published in October, 2019 as outlined above.

However, the 2023 Updated Water of the United States (WOTUS) Rule reversed the 2020 ruling such that only perennial aquatic resources with documented connections to navigable waterways are currently regulated under the CWA. Therefore, the Project area does not contain any “waters of the U.S.” including wetlands, given the lack of perennial streams or drainages with a direct connection to a navigable waterway. Therefore, the Project area does not include any waters subject to regulation under the CWA. The proposed disturbance within the Project area; however, would adhere to City of Clearlake and State of California requirements to avoid and minimize any potential impacts to such streams and drainages, which would include avoidance of direct impacts to such aquatic resources and minimization of potential indirect impacts to such aquatic resources, if they occur within the Project area.

Section 401 of the Clean Water Act

CWA Section 401 compliance is required for any project requiring a federal action (i.e. Corps permit or federal funding) with construction that could have an impact to surface water quality. Project proponents must obtain a CWA Section 401 permit from the California Regional Water Quality Control District for all discharges of fill material into waters of the U.S., including wetlands, before proceeding with a proposed action. Therefore, the Project area does not include any waters subject to regulation under the CWA (see above for Section 404 of the CWA).

The proposed disturbance within the Project area; however, would adhere to City of Clearlake and State of California requirements to avoid and minimize any potential impacts to such streams and drainages, which would include avoidance of direct impacts to such aquatic resources and minimization of potential indirect impacts to such aquatic resources, if they occur within the Project area.

Endangered Species Act of 1973

For the proposed Project site, consultation with the USFWS would be necessary if a proposed action may affect suitable habitat for a federally listed species. This consultation would proceed under Section 7 of the Endangered Species Act (ESA) if a federal action is part of the proposed action or through Section 10 of the ESA if no such nexus were available (USFWS, 1973). There are federally protected species listed under the ESA previously mapped within 3 miles of the Project area as well as within the USFWS IPaC report covering the area where the Project is located (see assessment below and the results of CDFWS and USFWS database searches attached in Appendix G). However, the Project area does not provide suitable habitat for any of these species and therefore, ESA listed and protected species would not be impacted by the development of the proposed Project. There is no USFWS Designated Critical Habitat mapped within or adjacent to the Project area.

Migratory Bird Treaty Act of 1918 and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (MBTA) (16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (BAGEPA) (16 USC Section 668) protect certain species of birds from direct "take" (i.e. harm or harassment as described above). The MBTA protects migrant bird species from take through setting hunting limits and seasons and protecting occupied nests and eggs (USFWS, 1918). BAGEPA prohibits the take or commerce of any part of the bald or golden eagles (USFWS, 1940). The USFWS administers both Acts and reviews actions that may affect species protected under each Act.

State Regulations

California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) has jurisdiction over plant and wildlife species listed as threatened or endangered under section 2080 of the CDFW Code. The California Endangered Species Act (CESA) prohibits take of state-listed threatened and endangered species. The state Act differs from the federal Act in that it does not include habitat destruction in its definition of *take*. The CDFW defines *take* as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CDFW may authorize *take* under the CESA through Sections 2081 agreements. If the results of a biological survey indicate that a state-listed species would be affected by the project, the CDFW would issue an Agreement under Section 2081 of the CDFW Code and would establish a Memorandum of Understanding for the protection of state-listed species. CDFW maintains lists for Candidate Endangered and Threatened Species.

There are State of California protected species listed under CESA previously mapped within 3 miles of the Project area (see assessment below and the results of CDFWS and USFWS database searches attached in Appendix G). However, the Project area does not provide suitable habitat for any of these species and therefore, CESA listed and protected species would not be impacted by the development of the proposed Project.

Streambed Alteration Agreements: CDFG Code Section 1600 et seq.

CDFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes under Sections 1600–1616. CDFW has the authority to regulate all work under the jurisdiction of the State of California that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

In practice, CDFW marks its jurisdictional limit at the top of the stream or lake bank, or the outer edge of the riparian vegetation (where present) and extends its jurisdiction to the edge of the 100-year floodplain. The Project area contains two (2) small drainage areas within the southern and northern sections of the Project area that could be regulated by CDFW.

Porter-Cologne Water Quality Control Act & Section 1601 – Section 1607 of CDFG Code

These acts and codes pertain to projects with potential impacts to water quality or waterways. The Project area may contain regulated waters of the State as defined by the State Water Resources Board (State Board 2014). However, the Project area contains two (2) small drainage areas within the northern and southern sections of the Project area that could be regulated by the State Water Resources Board and by CDFW.

California Department of Fish and Game Code Sections 3503, 3503.5, and 3800: Nesting Migratory Bird and Raptors

Sections 3503, 3503.5, and 3800 of the CDFG Code prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance within active nesting territories be reduced or eliminated during critical phases of the nesting cycle (approximately March 1 – August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g. killing or abandonment of eggs or young), or the loss of habitat upon which birds are dependent, is considered "taking", and is potentially punishable by fines and/or imprisonment (LCC 2013). Such *taking* would also violate federal law protecting migratory birds (e.g. MBTA above).

California Special Species of Concern, Fully Protected, and Special Status Species

California designates Species of Special Concern (SSC) as species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational or educational values. These species do not have the same legal protection as listed species but may be added to official lists in the future (CDFW 2014). In the 1960's California created a designation to provide additional protection to rare species. This designation remains today and is referred to as "Fully Protected" species, and those listed "may not be taken or possessed at any time" (CDFW 2014). California special-status species are identified by the California Natural Diversity Database (CNDDDB) and includes those species considered to be of greatest conservation need by the CDFW.

California Environmental Quality Act Guidelines Section 15380

California Environmental Quality Act (CEQA) Guidelines section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria. This section was included in the guidelines to deal primarily with situations in which a public agency is reviewing a project that may have a significant effect on, for example a "candidate species" that has not yet been listed by the USFWS or CDFW. CEQA, therefore, enables an agency to protect a species from significant project impacts until the respective government agencies have had an opportunity to list the species as protected, if warranted (CNRA 2012).

Plants appearing on the California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) are considered to meet CEQA's Section 15380 criteria. Ranks include: 1A) plants presumed extirpated in California and either rare or extinct elsewhere, 1B) plant rare, threatened, or endangered in California and elsewhere, 2A) plants presumed extirpated in California, but more common elsewhere, and 2B) plants rare, threatened, or endangered in California, but more common elsewhere. Impacts to these species would therefore, be considered "significant" requiring mitigation.

State Oak Woodland Regulations

State laws that regulate protection of oak woodlands include Professional Forester's Law (PFL) and CEQA according to Public Resources Code Section 21083.4. Oak woodlands are defined as areas having 10% oak canopy cover or greater. "Oaks" are defined in Public Resources Code Section 21083.4 as a native tree species in the genus *Quercus*, that is 5 inches diameter at breast height (DBH) or greater. The Oak Woodlands Conservation Act (SB 1334) provides funding for the conservation and protection of oak woodlands in California. Oak woodland habitats are protected under both the State and the City of Clearlake in their General Plan and their Municipal Code as outlined below.

Local Regulations

City of Clearlake General Plan Adopted by Resolution 2017-10, on February 23, 2017

City of Clearlake Related 2040 General Plan Policies/Programs for Biological Resources

CO 1.2.1.1 The City should implement policies and programs established in the Total Maximum Drainage Load Implementation into the Lake.

- Program CO 1.3.1.1 The City should monitor occurrence of invasive species.
- Policy CO 2.2.1 The City shall promote native landscaping for municipal, residential, and commercial properties.
- Policy CO 2.3.1 The City shall promote use of low impact development (LID) practices.
- Policy CO 4.1.1 The City shall adhere to all federal and state requirements regarding the protection of endangered species.
- Policy CO 4.1.2 The City shall limit the encroachment of development within areas that contain a high potential for sensitive habitat, and direct development into less significant habitat areas.
- Policy CO 4.1.4 The City shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.
- Policy CO 4.1.5 The City shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained.
- Policy CO 4.1.7 The City shall consider using appropriate Mitigation Measures for future projects (i.e., community area plans or individual projects) based on mitigation standards or protocols adopted by the applicable statute or agency (e.g., CDFW, USFWS, NMFS, etc.) with jurisdiction over any affected sensitive habitats or special-status species.
- Policy CO 4.2.1 The City should conserve existing open space and prevent wildlife habitat and connecting corridor loss resulting from new development.
- Policy CO 8.1.1 Work with other government land management agencies to preserve and protect biological resources while maintaining the ability to utilize and enjoy the natural resources in the City.

Section 18-1.407 City of Clearlake Municipal Code: Native Tree Protection and Removal Permits

Establishes the procedures for protecting certain native trees. A native tree protection and removal permit is required prior to the removal of native oak trees and heritage trees. A Tree Protection Permit and Tree Removal Permit shall be required for the following:

1. Native oak trees as follows:
 - a. Blue Oak (*Quercus douglasii*);
 - b. Valley Oak (*Quercus lobata*);
 - c. Interior Live Oak (*Quercus wislizeni*);
 - d. California Black Oak (*Quercus kelloggii*);
 - e. Canyon Live Oak (*Quercus chrysolepsis*); and
 - f. Oregon White Oak (*Quercus garryana*).
2. Any other tree designated by the City Council as a "Heritage Tree"

Any disturbances including, but not limited to the following, which might cause harm to a protected tree, are strictly prohibited within the root protection zone (RPZ) of that tree:

- a. Removing, moving, or failing to install and maintain proper temporary protection fencing in the vicinity of construction prior to completion of on-site work;
- b. Trenching;
- c. Any permanent or temporary structures, however temporary structures not fixed to the ground shall be allowed as long as they will not compact the soil;
- d. Grading, cutting, filling, or changing the natural grade in any way;
- e. Installation of an irrigation system;
- f. Covering with any substance impermeable to air and rain water, such as asphalt, concrete, plastic, etc.; however, pervious surfacing such as pavers, gravel, pervious asphalt or other such materials may be used to within ½ the distance from the dripline of the tree to the trunk;
- g. Burning, open fires, or open flames;
- h. Compaction of the soil;

i. Girdling; and/or

j. Topping.

Removal Criteria: Unless exempt under Section 18-5.1403, no Heritage tree shall be approved for removal unless first declassified in accordance with Section 18-5.1406(b). Native Tree Removal permits may be issued for all other Protected Trees meeting the following criteria unless a waiver is granted for a parking reduction in accordance with section (b) below:

1. Protected Trees that cannot be avoided and associated with residential or nonresidential construction, remodels, renovations, expansions, or grading that does not meet exemption criteria;

2. Installation of temporary structures such as above-ground pools, sheds, or other structures that are not fixed to the ground. A tree removal permit shall not be granted prior to the granting of all other permits required for the project in question.

Replacement Trees:

- For each protected tree felled and/or removed, two replacement trees shall be planted for the first six (6) inches DBH of tree removed and one tree for each additional inch of DBH of the protected tree felled.
- The replacement trees shall be of the same species type as that of the removed tree and shall be planted by the permittee within twelve (12) months of issuance of the removal permit. Replacement saplings shall be a minimum of a five (5) gallon sapling.
- All required replacement trees shall be maintained, or replaced if needed, until they are established. Should the site not contain appropriate habitat to allow for the success of same-species replacement, the Director may authorize all or partial on-site replacement of a different species from among the list of Protected Trees.
- Where replacement trees cannot be reasonably accommodated on-site, replacement trees shall be planted off-site at a ratio of four (4) replacement trees for the first six (6) inches DBH of the protected tree felled and/or removed and one tree for each additional inch of DBH of the protected tree felled. Maintenance of replacement trees shall be as required as above.
- Off-site replacement may be on other property owned by the applicant, or on public property, in locations to be determined by the City. All off-site replanting requests shall be submitted to the Director or his/her designee at the time of the tree removal permit application.

- For off-site replacement on public property, the applicant shall contribute to a fund established by the City to replant and maintain the trees. The fee shall be established by the City Council and shall be equivalent to the estimated cost to purchase, replant, and maintain the trees until established.
- A Tree Replacement Plan shall be submitted with all applications for a Native Tree Removal Permit where the applicant is proposing to undertake the replanting. The plan shall be reviewed and approved by the Community Development Department prior to issuance of a permit. The plan shall depict the proposed location and manner of tree replacement, consistent with the above requirements.

3.0 METHODS

In order to evaluate the proposed Project development areas for the presence of any sensitive biological resources, baseline information from databases and reporting for similar projects in Lake County and northern California was collected and reviewed prior to conducting the reconnaissance-level field biological survey of the entirety of the subject parcels and overall Project area. Additionally, existing biological resources assessments that were previously developed were reviewed for a portion of the overall Project area as well as a report for another project in the City of Clearlake. The database searches, background research, and habitat level field survey characterized the baseline conditions of the subject parcels and proposed Project development areas within the subject parcels.

Based on the baseline conditions of the subject parcels and the proposed development outlined within the Project Description outlined above in Section 1 of this BRA and within the attached Site Plan (Appendix B), an assessment was implemented to determine if any special-status plant or wildlife species have the potential to use the subject parcels and overall Project development areas within the Project area at any time during their life cycle. The baseline conditions identified the presence of any sensitive habitat or communities, if they were identified within the subject parcels and the overall Project development areas.

Sensitive Biological Resources

The following information was used to identify potential special-status plant and wildlife species within the Project region that could be found to use the subject parcels and Project development areas within the subject parcels:

- California Department of Fish and Wildlife's California Natural Diversity Database records search for the Lower Lake and Clearlake Highlands USGS Topo Quads where the Project is located and a search of the Project area and 3-mile buffer around the Project (CDFW, 2025);
- The California Native Plant Society's online Inventory of Rare and Endangered Plants of California for both the Lower Lake and Clearlake Highlands USGS Topo Quads where the Project area is located (CNPS, 2025);
- The U.S. Fish and Wildlife Service Federal Endangered and Threatened Species Information for Planning and Consultation (IPaC) for the Project area. Sacramento Fish and Wildlife Service (USFWS, 2025).
- National Wetland Inventory and National Hydrography Database (NWI and NHD, 2025);
- United States Department of Agriculture (USDA) Soils Mapper (USDA, 2025);

- Natural Resources Conservation Service (NRCS) Hydric Soils List for Lake County (NRCS, 2025);
- City of Clearlake Municipal Code; and
- City of Clearlake 2040 General Plan Adopted by the City Council by Resolution 2017-10, on February 23, 2017

Previous Review of Biological Resources within the Project Area

A previous Biological Resources Evaluation was developed for the proposed hotel site within the northern section of the Project area. The Biological Resources Evaluation was developed by Live Oak Associates, Inc. (dated July 21, 2022). Live Oak Associates, Inc. also developed an Arborist Tree Inventory and Assessment for the hotel site (dated July 18, 2022). The Biological Resources Evaluation concluded that up to nine (9) special-status plant species and four (4) special-status wildlife species. They concluded however, that their survey was conducted outside the blooming period for each of the 9 plant species and therefore, they were unable to document the presence or absence of those species. Their recommendation for plant species was to conduct plant surveys during the appropriate blooming periods of these plants (March, April, June, and October). For wildlife species, they concluded the hotel site contains suitable habitat for three (3) bat species and an aquatic species called the Clear Lake roach (*Hesperoleucus venustus* X *H. symmetricus*).

Per the results of the Live Oak Associates, Inc. Arborist Tree Inventory and Assessment for the hotel site (dated July 18, 2022), they concluded that the area is an interior live oak (*Quercus wislizeni*) woodland. They mapped 79 individual trees within the proposed hotel site and along the 18th Avenue extension to the northeast and tying into SR 53. Besides interior live oak, the documented blue oak (*Quercus douglasii*) and a single, small valley oak (*Quercus lobata*).

Reconnaissance-level Biological Resources Field Survey

A reconnaissance-level biological field survey was conducted on foot of the entire Project area by Greg Matuzak, Principal Biologist with Greg Matuzak Environmental Consulting. Mr. Matuzak is a Qualified Biologist with both CDFW and USFWS and has conducted similar assessments of sensitive biological resources within Lake County and several other neighboring counties in northern California.

The initial site visit and biological resources reconnaissance-level survey of the entirety of the Project area was conducted on June 19th, 2024. A follow up biological resources reconnaissance-level survey of the entirety of the Project area was conducted to ensure the additional areas included in the Project area were surveyed and those additional site visits and surveys occurred on May 21st and 22nd, 2025. Given the timing of

the site visit and biological resources reconnaissance-level survey, all of the species with potential to occur within the Project area having blooming periods in the spring and early summer periods and therefore, would have been identifiable in June of 2024 and in May of 2025. Therefore, the biological resources reconnaissance-level surveys are considered comprehensive in nature and therefore, Mr. Matuzak could rule out the potential presence of special-status species within the Project area if they were not identified during the site visits and biological resources reconnaissance-level surveys conducted in June of 2024 and in May of 2025.

The assessment below as well as the impact analysis and proposed mitigation measures outline the process to ensure any such species are evaluated, and if they are present, any potential impact to them would be avoided, minimized, and/or mitigated to a level of less than significant under CEQA. A Photo Log is included in the attachments (Appendix F), which documents the subject parcels and proposed areas of development during the site visit and field survey. Additionally, attached to Appendix E is a list of plant and wildlife species observed during the June 19, 2024 and May 21st and 22nd, 2025 site visits and reconnaissance-level surveys of the entirety of the Project area.

4.0 RESULTS

Environmental Setting

The Project area is located within relatively flat to gently rolling terrain situated at an elevational range of approximately 1,350 to 1,415 feet above mean sea level (MSL) in the Inner North Coast Ranges District of the California floristic province (Baldwin et al. 2012). The existing Project site slopes generally toward the west at varying slopes ranging up to about 2:1. 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 2024).

The City of Clearlake, California, is located within the Clear Lake Watershed, which is part of the larger Upper Cache Creek USGS hydrologic unit. The Clear Lake Watershed is contained within this larger area. Clear Lake itself drains to the east through Cache Creek, which is the only outlet for the lake, and Cache Creek flows into the Sacramento River.

Soil Types Mapped within the Project Area

Per a review of the USDA Web Soil Survey, a total of three soil types occur within the Project site and they include the following:

- 1) Asbill clay loam, 5 to 8 percent slopes
- 2) Asbill clay loam, 8 to 15 percent slopes
- 3) Benridge-Sodabay loams, 8 to 15 percent slopes

These soils are well drained with medium to rapid runoff and moderately slow to permeability. These soils are not considered hydric or edaphic and none of these soil types are listed within the NRCS Hydric Soils List for Lake County. Mapped hydric soils can identify potential soils that associate with wetlands and other aquatic resources; however, given the arid and disturbed nature of the Project area, water quickly evaporates and runs offsite to the north and south and then to the west towards Clear Lake. Therefore, sufficient time for the development of hydric soils and other characteristics associated with wetlands and wetland hydrology does not occur within the Project area and thus the existing soil types are common in the region for upland and non-hydric soils. See the attached soils map in Appendix C and see below for further information regarding the soils mapped within the Project area.

Benridge-Sodabay loams, 8 to 15 percent slopes

The existing Project site slopes generally toward the west at varying slopes ranging up to about 2:1. The USGS Web Soil Survey is utilized to identify existing soil

conditions within each of the four disconnected zones. A majority of the north and western sections of the Project site is mapped as Benridge-Sodabay loams, with slopes of 8% to 15%. Loam and gravelly clay loam exist down to a depth of 21 to 26 inches. Gravelly clay lies below the loam, and it is expected that this soil will exist down to a depth of 63-68 inches. There are more than 80 inches of depth to any restrictive layer or water table, and the soil is naturally well drained. Clay loam is present down to a depth of 13 inches, with silty clay occurring from 13 to 39 inches in depth. Below this lies bedrock. There are more than 80 inches to groundwater, and the soil is naturally well drained.

Asbill clay loam, 5 to 8 percent slopes and 8 to 15 percent slopes

Asbill clay loam occurs at slopes of 5 to 8 percent and is also mapped within a small area along the northern border of the overall Project area between 8 to 15 percent slopes. From 0 to 13 inches deep clay loam occurs and from 13 to 39 inches silty clay occurs, with bedrock below that area. There are more than 80 inches to groundwater, and the soil is naturally well drained.

Plant Communities

Plant communities have been classified based on the California Wildlife Habitat Relationships System developed by the California Department of Fish and Wildlife (CDFW). The CDFW also manages the California Natural Diversity Data Base (CNDDB), which is a database inventory of the locations of rare and endangered plants, wildlife, and natural communities in California. A list of plants and wildlife documented during the field survey are attached in Appendix E.

The Project area contains the following biotic habitats: Developed and Ruderal, Non-Native Annual Grassland, Chaparral, Oak Woodlands, and Drainage. These habitats are discussed in more detail below.

Developed and Ruderal Habitats

This habitat type within the Project area is located where existing outbuildings, and gravelly areas with piles of ground gravel/asphalt around the exterior occur within the site. Vegetation within this habitat is limited to non-native invasive herbaceous annual plants which are consistent with the Non-native Annual Grassland habitat type outlined below.

Animal species observed in this habitat was limited to a western gray squirrel (*Sciurus griseus*). This habitat is most likely used by animals occurring in adjacent habitats to move through the larger, more suitable habitat areas.

Non-Native Annual Grasslands

Much of this habitat community is located within the large, open areas within the central section of the Project site and within the understory of areas that contain

woodland and chaparral species. The dominant plant species identified within this habitat community includes goat grass (*Aegilops cylindrica*), wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis*), yellow star-thistle (*Centaurea solstitialis*), blue wild-rye (*Elymus glaucus*), yerba santa (*Eriodictyon californicum*), narrow tarplant (*Holocarpha virgata*), Indian tobacco (*Nicotiana quadrivalvis*), European black nightshade (*Solanum nigrum*), red sandspurry (*Spergularia rubra*), clover (*Trifolium* sp.), Ithuriel's spear (*Triteleia laxa*), vetch (*Vicia* sp.), and other non-native invasive species were present in this habitat. Much of this habitat type within the overall Project area is considered ruderal or degraded given the levels of historical disturbance within the site.

This habitat type is most likely used by California ground squirrels (*Otospermophilus beecheyi*), which a few were identified within the Project area along with their burrows.

Chaparral

Shrub dominated vegetation can be found within the edges of the Project area along the western and northern sections of the site. The dominant species within the chaparral are chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos* spp.), deerbrush (*Ceanothus integerrimus* var. *macrothyrsus*), buckbrush (*Ceanothus cuneatus*), coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*) and yerba santa (*Eriodictyon californicum*). Grasses and herbs are relatively common in the understory.

This habitat type is most likely used by California ground squirrels (*Otospermophilus beecheyi*), which a few were identified within the Project area along with their burrows. Additionally, some songbirds could be heard within the existing shrubs in this habitat type while conducting the site visit and reconnaissance-level biological resources survey.

Oak Woodlands

Found along the northern and southwest sections of the Project area that contain a dominance of interior live oak (*Quercus wislizeni*) and mixture with blue oak (*Quercus douglasii*) trees. The mixed oak woodlands also consist of some scattered foothill pine (*Pinus sabiniana*), which are also scattered along the eastern section of the Project area where most have been burned by recent fire activity. Within the understory of the oak woodlands, shrubs include toyon (*Heteromeles arbutifolia*), manzanita (*Arctostaphylos* sp.), and ceanothus (*Ceanothus* sp.) as the dominant understory vegetation.

Much of the woodland habitat and scattered oak and pine trees within the eastern and western sections of the Project were burned in a fire. Additionally, some of the trees and woodlands in the northern section of the Project area were also burned.

Animal species observed in this habitat type include the mourning dove (*Zenaida macroura*), acorn woodpecker (*Melanerpes formicivorus*), California scrub jay (*Aphelocoma californica*), northern mockingbird (*Mimus polyglottos*), oak titmouse (*Baeolophus inornatus*), California towhee (*Melospiza crissalis*), spotted towhee (*Pipilo maculatus*), American goldfinch (*Spinus tristis*), and the western gray squirrel.

Project Area Drainage Features

Per the attached NWI and NHD mapping, a single drainage occurs in the northwestern corner of the site. However, the overall Project area was found to contain two drainages, the one located in the northwestern corner of the Project site and another one within the extreme southern section of the Project site. No other drainage, wetland, pond, or other aquatic resources were mapped within the NWI and NHD databases for the Project area (see Appendix D).

The mapped drainage within the northwestern section of the Project area contains culverts running under Victor Street to the north of the Project area. The drainage area was dry at the time of the June 2024 and May 2025 site visits (see Appendix F for photos of the ephemeral drainage). The drainage area has a flat bottom with short banks, suggesting a volume of seasonal flow occurs only after larger precipitation events. The width of the drainage averaged approximately four feet in width on average (between 6 feet wide at the culvert exit point within the Project area and 2 feet within the flat area southwest of Victor Street). The northern ephemeral drainage exits the Project site on the western side of the northwestern section of the Project area. The banks supported upland vegetation consistent with the woodland and grassland adjacent to it. Based on aerial imagery and the NWI and NHD mapping, this unnamed drainage appears to be a tributary of Cache Creek which is connected to Clear Lake.

The second drainage within the southern section of the Project area comes from an existing culvert under SR 53 to the east and flows through the southern end of the Project area to the west and then offsite to the west where it connects with Clear Lake. This drainage is not mapped within the NWI or NHD databases and it is a smaller drainage than the one in the northwestern section of the Project area. It is located completely in an upland area with non-native grassland species dominant along its edges. The southern drainage feature averages a width of approximately 3 to 4 feet and it appears to be ephemeral in nature and only flows after larger rainfalls. This drainage area does not exhibit the size for aquatic resources to be present, even during the presence of water in the drainage. See Appendix F for photos of the second drainage within the southern section of the Project site.

The drainages do not contain any riparian or wetland associated vegetation and are not part of a defined floodplain given the low flows that flow through the small drainage channels. Therefore, the Project area does not contain any wetlands

(seasonal, perennial, vernal pools), named creeks or streams, ponds, or any other aquatic resources besides the 2 small seasonal/ephemeral drainages. No riparian or wetland associated vegetation or plant species was documented within the two drainage areas and was completely absent from the entirety of the Project site. Given the updated WOTUS 2023 Rule, it is most likely that neither drainage would be regulated under the Clean Water Act given the ephemeral and intermittent nature of both drainages and the lack of connection to a navigable waterway.

Protected Trees by the City of Clearlake

Protected trees within the Project site are expected to be both removed and encroached upon due to the proposed construction envelopes and associated Project related activities given the extensive development proposed. These protected trees are mostly located within northern and southern oak woodland habitat areas. They are mostly located within a designated open space area within the northern section of the Project area and within an area designated for commercial/retail development within the southern end of the Project area. The trees are dominated by interior live oak with some blue oak and foothill pine trees mixed within both woodland areas and scattered along the western and eastern edges of the overall Project area. See Appendix F for a Photo Log documenting the entirety of the Project area and the locations of the existing oak woodlands. A Tree Protection Plan and Tree Removal Permit will be required to be developed prior to the City of Clearlake granting grading or building permits within any area of the Project area that will either 1) completely remove a protected tree or 2) any grading or construction related activities will encroach within the dripline of a protected tree per the definition under the City of Clearlake Municipal Code.

SPECIAL STATUS SPECIES

Special-status species considered for this BRA is based on a current review of the California Natural Diversity Data Base (CNDDDB) and database information provided by the United States Fish and Wildlife Service (USFWS) and the California Native Plant Society (CNPS). The following reviews were implemented as part of the development of this BRA:

- CNDDDB map containing previously identified locations of special-status species was developed for the Project area and a buffer of 3 miles from the Project area;
- USFWS IPaC review of the Project area; and
- CNDDDB and CNPS review of special-status plant and wildlife species previously documented within the Lower Lake and Clearlake Highlands USGS Topo Quads where the Project area is located.

See Appendix G for the CNDDDB mapping and special-status species lists for the proposed Project covered under this BRA. The background research and database review of the Project area identified a total of thirty (30) wildlife, fish, and aquatic species previously identified and mapped within the greater Project area. Additionally, the database review of the Project area identified a total of forty (40) plant species previously identified and mapped within the greater Project area and those species contain CNPS listings of List 1, List 2, List 3, or List 4 rankings. Therefore, the species table provided below includes a review of seventy (70) species that were provided by USFWS, CDFW, and CNPS as having been identified within the greater Project area previously.

The database searches cover both the Lower Lake and Clearlake Highlands USGS Topo Quads where the Project is located. Additionally, the database review includes several additional species that have been identified by USFWS within the IPaC federal database for protected species by USFWS and by CDFW as special-status species based on the review of the Project area with a 3 miles buffer and within the CNDDDB. The table below outlines the review of each of the database identified species and a determination of their likelihood to occur within the Project area, which is based on the presence of suitable habitat for the species within the Project area. There is no Designated Critical Habitat (DCH) mapped by the USFWS within the Project area or adjacent to it. The CNDDDB does include four (4) aquatic and terrestrial communities mapped within the Clearlake Highlands USGS Quad; however, none of these sensitive habitats mapped within the CNDDDB occur within or adjacent to the Project area.

The special-status species (plants and bat species) highlighted by Live Oak Associates, Inc. as having potential to occur within the proposed hotel site have been included in this BRA, the impacts assessment in Section 5.0, and are included in the proposed mitigation measures outlined in Section 5.0.

Special-Status Plant Species Assessment

Based on the California Environmental Quality Act (CEQA) Guidelines Section 15380 (see Section 2.0), provides a legal framework that only impacts to CNPS Ranks 1 and 2 species would therefore be considered “significant” requiring mitigation. Therefore, Project related impacts to CNPS List 3 and 4 species would not be considered “significant” and therefore, would not require mitigation measures to reduce a significant impact to such CNPS List 3 and 4 species to a less than significant level.

These species (CNPS List 3 and 4 species) are watchlist species and do not need to be discussed formally as part of any CEQA analysis. Therefore, the CNDDDB and CNPS lists attached in Appendix G contain several CNPS List 3 and 4 species that are also included in the special-status species table below. However, given they are watchlist species, their identification within the Project area would have been noted, if identified, and the CNDDDB and CNPS would be contacted with the mapped location of such species for their databases. However, as part of this BRA and CEQA review process covering the proposed Project, any CNPS List 3 or List 4 species would be regarded as a watchlist species and any proposed Project related impact to those species would be considered “less than significant” per the CEQA Guidelines Section 15380.

None of these species was observed during field surveys that were conducted within Project area in June of 2024 and in May of 2025, which covers the blooming season of most of the plant species with potential to occur within the Project area. There is a very low potential for any special-status plant species, in particular CNPS List 1 and List 2 species, to occur within the overall Project area given the high levels of disturbance and development within the site. List 3 and List 4 species impacts are not considered and therefore, mitigation for impacts to such CNPS List 3 or List 4 species are considered less than significant under CEQA. However, the Project area contains marginal suitable habitat for the CNPS List species identified as having any potential to occur within the Project area (see Species Table below).

Special-Status Wildlife Species Assessment

Many of the special-status wildlife species previously recorded within the greater Project area are associated with Clear Lake, large tributaries to it, vernal pools, and other aquatic resources. The Project area does not contain any vernal pool habitat and therefore, the proposed Project would have no impact on vernal pools or any species associated with vernal pools or other seasonal wetland habitats given they were not identified within or adjacent to the Project area. The special-status species table below includes the focal species evaluated within this BRA analysis for special-status species and under CEQA to ensure that any threatened, endangered, or otherwise rare species have been adequately assessed.

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) has not been documented within Lake County and neither CDFW or USFWS included the species within the database reviews covering the Project area. Therefore, it is assumed based on a review of the species and a review of the species of concern of CDFW and USFWS for the Project area that the species is precluded from the potential to occur within the Project area.

Based on the site visits and site surveys conducted, the Project area does contain suitable habitat for the western burrowing owl (*Athene cunicularia*), purple martin (*Progne subis*), Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), and long-eared myotis (*Myotis evotis*). Additionally, below is an outline of the potential for nesting raptors and other protected migratory bird species to occur within the Project disturbance areas.

Nesting raptors and other migratory birds species - Protected under MBTA, Protected under CA State DFG Code Sections 3503, 3503.5, and 3800

There is a low to moderate potential for nesting raptors and other nesting migratory bird species protected under the MBTA to occur within the proposed areas of disturbance within the Project site given the high level of disturbance along the existing access roads and large, open areas and due to the invasive nature of the non-native annual grasslands that dominate the proposed Project site. The proposed areas of disturbance within the Project area represents degraded potential habitat for bird species protected under the MBTA, such as tree nesting species (raptors) and ground nesting species like the spotted towhee (*Pipilo maculatus*) and dark-eyed junco (*Junco hyemalis*).

Active and inactive nests within and adjacent to the Project area were not identified during site visits and field surveys conducted in June of 2024 and May of 2025. However, this does not preclude the potential of such species from actively nesting within the Project area. If development within the overall Project area will occur during the nesting season for raptors and ground nesting MBTA protected birds (February 1st through August 31st), a pre-construction survey shall be conducted if such development activities pose a risk to nest abandonment prior to the fledging of young from such nests. This would ensure that the Project would have a less than significant impact on any nesting bird species. See the impact assessment and recommended mitigation outlined below.

Special-status Species Reported by CNDDB, CNPS, and USFWS in the Project Area Vicinity

Common Name	Scientific Name	Status	General Habitat	Microhabitat	Potential to Occur in Project Area
Red-bellied newt	<i>Taricha rivularis</i>	CSSC	Broadleaved upland forest; North coast coniferous forest; Redwood; Riparian forest; Riparian woodland	Lives in terrestrial habitats, juveniles generally 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.	Absent: No habitat onsite.
Burrowing owl	<i>Athene cucularia</i>	OE/CSSC	Burrowing owls are adapted to open, sparsely vegetated areas like prairies, deserts, grasslands, and agricultural fields, where they nest in underground burrows rather than trees.	They favor areas with good drainage, avoiding wetlands or areas prone to flooding. They prefer areas with minimal understory vegetation, allowing them to easily spot prey and predators.	Potential to occur: Marginal suitable habitat present along the edge of the open areas where burrows are present
California red-legged frog	<i>Rana draytonii</i>	CT/CSSC	Aquatic; Artificial flowing waters; Artificial standing waters; Freshwater marsh; Marsh & swamp; Riparian forest; Riparian scrub; Riparian woodland; South coast flowing waters; South coast standing waters; Sacramento/San Joaquin flowing waters; Sacramento	Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Absent: No habitat onsite.
Foothill yellow-legged frog – north coast DPS	<i>Rana boylei</i>	CSSC	Aquatic; Chaparral; Cismontane woodland; Coastal scrub; Klamath/North coast flowing waters; Lower montane coniferous forest; Meadow & seep; Riparian forest; Riparian woodland; Sacramento/San Joaquin flowing waters	Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Absent: No habitat onsite.
Osprey	<i>Pandion haliaetus</i>	CWL	Riparian forest	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Absent: No habitat onsite.
Bald eagle	<i>Haliaeetus leucocephalus</i>	OE/CFP	Lower montane coniferous forest; Old-growth	Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Absent: No habitat onsite.
Golden eagle	<i>Aquila chrysaetos</i>	CFP/CWL	Broadleaved upland forest; Cismontane woodland; Coastal prairie; Great Basin grassland; Great Basin scrub; Lower montane coniferous forest; Pinon & juniper woodlands; Upper montane coniferous forest; Valley & foothill grassland	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Absent: No habitat onsite.
Great blue heron	<i>Ardea herodias</i>	None	Great Blue Herons are found in a wide variety of both freshwater and saltwater habitats, including marshes, swamps, riverbanks, lakeshores, and coastal areas, often near bodies of water with fish, and they are known to nest in tall trees or structures near water.	Nesting sites require tall trees, such as are found in wooded swamps. Nests are often on islands safe from predators.	Absent: No habitat onsite.
Great egret	<i>Ardea alba</i>	None	Commonly found in a variety of wetlands, including marshes, swamps, and along the edges of lakes, rivers, and estuaries, both freshwater and saltwater	They typically nest in colonies, often in trees or shrubs near water, sometimes in thickets a distance from water, or low in the marsh	Absent: No habitat onsite.

Common Name	Scientific Name	Status	General Habitat	Microhabitat	Potential to Occur in Project Area
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	FT/CE	Riparian forest	Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Absent: No habitat onsite.
Purple martin	<i>Progne subis</i>	CSSC	Broadleaved upland forest; Lower montane coniferous forest	Nests in old woodpecker cavities mostly; also in human-made structures. Nest often located in tall, isolated tree/snag.	Potential to occur: Marginal suitable habitat present.
Northern spotted owl	<i>Strix occidentalis caurina</i>	FT/CT	Northern spotted owls primarily inhabit old-growth and mature coniferous forests, particularly Douglas fir forests, with high canopy closure, complex canopy structure, and large decaying trees or snags	Nests in broken treetops, tree-trunk hollows, mistletoe tangles, or old nests built by other raptors or squirrels. Old-growth forests provide a variety of prey, including flying squirrels, woodrats, and other small mammals.	Absent: No habitat onsite.
Sacramento perch	<i>Archoplites interruptus</i>	CSSC	Aquatic; Sacramento/San Joaquin flowing waters; Sacramento/San Joaquin standing waters	Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	Absent: No habitat onsite.
Clear Lake tule perch	<i>Hesperoleucus venustus</i> x <i>H. symmetricus</i>	CSSC	Aquatic		Absent: No habitat onsite.
Clear Lake roach	<i>Hysterocarpus traskii lagunae</i>	CSSC	Aquatic		Absent: No habitat onsite.
Clear Lake prickly sculpin	<i>Cottus asper</i> ssp.	CSSC	Aquatic		Absent: No habitat onsite.
Clear Lake hitch	<i>Lavinia exilicauda chi</i>	PT/CT	Aquatic; Sacramento/San Joaquin flowing waters; Sacramento/San Joaquin standing waters	Adults found in the limnetic zone. Juveniles found in the nearshore shallow-water habitat hiding in the vegetation.	Absent: No habitat onsite.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	CSSC	Broadleaved upland forest; Chaparral; Chenopod scrub; Great Basin grassland; Great Basin scrub; Joshua tree woodland; Lower montane coniferous forest; Mojavean desert scrub; Meadow & seep; Riparian forest; Riparian woodland; Sonoran desert scrub; Sonoran	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Potential to occur: Marginal suitable habitat present.
Pallid bat	<i>Antrozous pallidus</i>	CSSC	Chaparral; Coastal scrub; Desert wash; Riparian woodland; Upper montane coniferous forest; Valley & foothill grassland	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Potential to occur: Suitable habitat present.
Long-eared myotis	<i>Myotis evotis</i>	None	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests.	Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.	Potential to occur: Suitable habitat present.
Yuma myotis	<i>Myotis yumanensis</i>	CSSC	Yuma myotis are found near water sources, and occupy a variety of habitats including riparian areas, deserts, grasslands, and forests, often roosting in buildings, bridges, caves, and trees.	Yuma myotis forage for insects that are associated with water sources, such as streams, rivers, and ponds	Absent: No habitat onsite.

Common Name	Scientific Name	Status	General Habitat	Microhabitat	Potential to Occur in Project Area
Northwestern pond turtle	<i>Actinemys marmorata</i>	PT/CSSC	Aquatic; Artificial flowing waters; Klamath/North coast flowing waters; Klamath/North coast standing waters; Marsh & swamp; South coast flowing waters; South coast standing waters; Sacramento/San Joaquin flowing waters; Sacramento/San Joaquin standing waters	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Absent: No habitat onsite.
Monarch butterfly	<i>Danaus plexippus</i>	FC	Require habitats with milkweed for caterpillars and nectar-rich flowers for adults in fields, meadows, grasslands, roadsides, and even urban gardens	Milkweed is the host plant of this species and when no milkweed is present this species is absent from the area.	Absent: No habitat onsite.
Brownish dubiraphian riffle beetle	<i>Dubiraphia brunnescens</i>	None	Aquatic	Inhabits exposed, wave-washed willow roots.	Absent: No habitat onsite.
Wilbur Springs shorebug	<i>Saldula usingeri</i>	None	Aquatic	Inhabits the shoreline of the creek at Wilbur Hot Springs.	Absent: No habitat onsite.
American bumble bee	<i>Bombus pensylvanicus</i>	None			Absent: No habitat onsite.
Borax Lake cuckoo wasp	<i>Hedychridium milleri</i>	None		External parasite of wasp and bee larva.	Absent: No suitable habitat onsite.
Western ridged mussel	<i>Gonidea angulata</i>	None	Aquatic	Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from central and southern California.	Absent: No habitat onsite.
Clear Lake pyrg	<i>Pyrgulopsis ventricosa</i>	None	Aquatic	Known only from spring fed creek in Seigler Canyon	Absent: No habitat onsite.
Tule elk	<i>Cervus canadensis nannodes</i>	None	Tule elk, a subspecies of elk found only in California, are adapted to open, brushy habitats, including grasslands, valley floors, riparian areas, oak woodlands, and chaparral	They are the most specialized elk in North America, adapted to open country and semi-desert conditions, unlike other elk species that typically prefer heavy cover.	Absent: No habitat onsite.
Loch Lomond button-celery (coyote thistle)	<i>Eryngium constancei</i>	FE/GE/1B.1	Vernal pool, Wetland	Volcanic ash flow vernal pools. 460-855 m.	Absent: No habitat onsite.
Hoover's lomatium	<i>Lomatium hooveri</i>	4.3	Foothill woodlands and chaparral	Native perennial herb with a blooming period between April and July	Potential to occur: Marginal suitable habitat present.
Napa lomatium	<i>Lomatium repostum</i>	4.2	Foothill woodlands and chaparral	Native perennial herb with a blooming period between March and June	Potential to occur: Marginal suitable habitat present.
Bristly leptosiphon	<i>Leptosiphon aureus</i>	4.2	Foothill woodlands and chaparral	Native annual herb with a blooming period between March and June	Potential to occur: Marginal suitable habitat present.

Common Name	Scientific Name	Status	General Habitat	Microhabitat	Potential to Occur in Project Area
Woolly meadowfoam	<i>Limnanthes floccosa</i> ssp. <i>floccosa</i>	4.2	Foothill woodlands, valley grasslands, chaparral and in wetlands	Native annual herb with a blooming period between March and May	Absent: No habitat onsite.
Pink star-tulip	<i>Calochortus uniflorus</i>	4.2	Coastal scrub and woodlands and in wetlands	Native perennial herb with a blooming period between April and June	Absent: No habitat onsite.
Burke's goldfields	<i>Lasthenia burkei</i>	FE/CE/1B.1	Meadow & seep; Vernal pool; Wetland	Most often in vernal pools and swales. 15-580 m.	Absent: No habitat onsite.
Colusa layia	<i>Layia septentrionalis</i>	1B.2	Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 15-1100 m.	Absent: No habitat onsite.
Hall's harmonia	<i>Harmonia hallii</i>	1B.2	Chaparral; Ultramafic	Serpentine hills and ridges. Open, rocky areas within chaparral. 335-945 m.	Absent: No habitat onsite.
Bent-flowered fiddleneck	<i>Amsinckia lunaris</i>	1B.2	Coastal bluff scrub; Cismontane woodland; Valley & foothill grassland	3-795 m.	Potential to occur: Marginal suitable habitat present.
Serpentine birds-beak	<i>Cordylanthus tenuis</i> ssp. <i>brunneus</i>	4.3	Foothill woodlands and chaparral	Native annual herb with a blooming period between July and August	Absent: No habitat onsite.
Swamp larkspur	<i>Delphinium uliginosum</i>	4.2	Valley grasslands and chaparral in wetlands	Native perennial herb with a blooming period between May and June	Absent: No habitat onsite.
Marsh zigadenus	<i>Toxicoscordion fontanum</i>	4.2	Foothill mixed evergreen woodlands and chaparral and in wetlands	Native perennial herb with a blooming period between April and July	Absent: No habitat onsite.
Four-petaled pussypaws	<i>Calyptidium quadripetalum</i>	4.3	Chaparral	Native annual herb with a blooming period between April and June	Absent: No habitat onsite.
Michael's rein orchid	<i>Piperia michaelii</i>	4.2	Foothill woodlands	Native perennial herb with a blooming period between April and August	Absent: No habitat onsite.
Twig like snapdragon	<i>Antirrhinum virga</i>	4.3	Openings in chaparral habitats	Native perennial herb with a blooming period between June and July	Absent: No habitat onsite.
Watershield	<i>Brasenia schreberi</i>	2B.3	Marsh & swamp; Wetland	Aquatic known from water bodies both natural and artificial in California. 1-2180 m.	Absent: No habitat onsite.

Common Name	Scientific Name	Status	General Habitat	Microhabitat	Potential to Occur in Project Area
Oval-leaved viburnum	<i>Viburnum ellipticum</i>	2B.3	Chaparral; Cismontane woodland; Lower montane coniferous forest	215-1400 m.	Potential to occur: Marginal suitable habitat present. Absent: No habitat onsite.
Lake County stonecrop	<i>Sedella leiocarpa</i>	FE/CE/1B.1	Cismontane woodland; Valley & foothill grassland; Vernal pool; Wetland	Level areas that are seasonally wet and dry out in late spring; substrate usually of volcanic origin. 515-640 m.	Absent: No habitat onsite.
Raiche's manzanita	<i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	1B.1	Chaparral; Lower montane coniferous forest; Ultramafic	Rocky, serpentine sites. Slopes and ridges. 485-1070 m.	Absent: No habitat onsite.
Konociti manzanita	<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	1B.3	Chaparral; Cismontane woodland; Lower montane coniferous forest	Volcanic soils. 225-1830 m.	Absent: No habitat onsite.
Jepson's milk-vetch	<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	1B.2	Cismontane woodland; Ultramafic; Valley & foothill grassland	Commonly on serpentine in grassland or openings in chaparral. 175-1005 m.	Absent: No habitat onsite.
Two-carpellate western flax	<i>Hesperolinon bicarpellatum</i>	1B.2	Chaparral; Ultramafic	Serpentine barrens at edge of chaparral. 175-825 m.	Absent: No habitat onsite.
Sharsmith's western flax	<i>Hesperolinon sharsmithiae</i>	1B.2	Chaparral; Ultramafic	Serpentine substrates. 180-670 m.	Absent: No habitat onsite.
Keck's checkerbloom	<i>Sidalcea keckii</i>	FE/1B.1	Cismontane woodland; Ultramafic; Valley & foothill grassland	Grassy slopes in blue oak woodland. On serpentine-derived, clay soils, at least sometimes. 85-505 m.	Absent: No habitat onsite.
Marsh checkerbloom	<i>Sidalcea oregana</i> ssp. <i>hydrophila</i>	1B.2	Meadow & seep; Riparian forest; Wetland	Wet soil of streambanks, meadows. 455-2030 m.	Absent: No habitat onsite.
Hellers bushmallow	<i>Malacothamnus helleri</i>	3.3	Chaparral	Native shrub with blooming period between June and August	Absent: No habitat onsite.
Brandegee's eriastrum	<i>Eriastrum brandegeae</i>	1B.1	Chaparral; Cismontane woodland	On barren volcanic soils; often in open areas. 410-845 m.	Absent: No habitat onsite.
Baker's navarretia	<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	1B.1	Cismontane woodland; Lower montane coniferous forest; Meadow & seep; Valley & foothill grassland; Vernal pool; Wetland	Vernal pools and swales; adobe or alkaline soils. 3-1680 m.	Absent: No habitat onsite.
Few-flowered navarretia	<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>	FE/CT/1B.1	Vernal pool; Wetland	Volcanic ash flow, and volcanic substrate vernal pools. 425-855 m.	Absent: No habitat onsite.

Common Name	Scientific Name	Status	General Habitat	Microhabitat	Potential to Occur in Project Area
Many-flowered navarretia	<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	FE/CE/1B.2	Vernal pool; Wetland	Volcanic ash flow vernal pools. 30-915 m.	Absent: No habitat onsite.
Bolander's horkelia	<i>Horkelia bolanderi</i>	1B.2	Cismontane woodland; Lower montane coniferous forest; Meadow & seep; Valley & foothill grassland	Grassy margins of vernal pools and meadows. 455-855 m.	Absent: No habitat onsite.
Boggs Lake hedgehyssop	<i>Gratiola heterosepala</i>	CE/1B.2	Freshwater marsh; Marsh & swamp; Vernal pool; Wetland	Clay soils; usually in vernal pools, sometimes on lake margins. 4-2410 m.	Absent: No habitat onsite.
Little mouse-tail	<i>Myosurus minimus</i> ssp. <i>apus</i>	3.1	Vernal pools and other seasonal wetlands	Native annual herb with a blooming period between March and June	Absent: No habitat onsite.
Mendocino tarplant	<i>Hemizonia congesta</i> ssp. <i>calyculata</i>	4.3	Foothill woodlands and valley grasslands	Native annual herb with a blooming period between July and November	Potential to occur: Marginal suitable habitat present.
Slender Orcutt grass	<i>Orcuttia tenuis</i>	FT/CE/1B.1	Vernal pool; Wetland	Often in gravelly substrate. 25-1755 m.	Absent: No habitat onsite.
California alkali grass	<i>Puccinellia simplex</i>	1B.2	Chenopod scrub; Meadow & seep; Valley & foothill grassland; Vernal pool	Alkaline, vernal mesic. Sinks, flats, and lake margins. 1-915 m.	Absent: No habitat onsite.
Adobe-lily	<i>Fritillaria pluriflora</i>	1B.2	Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Usually on clay soils; sometimes serpentine. 45-945 m.	Absent: No habitat onsite.
California satintail	<i>Imperata brevifolia</i>	2B.1	Chaparral; Coastal scrub; Mojavean desert scrub; Meadow & seep; Riparian scrub; Wetland	Mesic sites, alkali seeps, riparian areas. 3-1495 m.	Absent: No habitat onsite.
Eel-grass pondweed	<i>Potamogeton zosteriformis</i>	2B.2	Marsh & swamp; Wetland	Ponds, lakes, streams. 90-2135 m.	Absent: No habitat onsite.

Definitions of Status Codes:

Federal Rankings

FE = Federally listed as endangered
FT = Federally listed as threatened
FPE = Federally proposed for listing as endangered
FPT = Federally proposed for listing as threatened
FC = Candidate for Federal listing
MB = Migratory Bird Act

State of California Rankings

CE = California State listed as endangered
CT = California State listed as threatened
CSSC = California species of special concern
CR = California rare species
CFP = California fully protected species
CWL = California watch list species

CNPS (California Native Plant Society)

CNPS List 1A = Plants presumed extinct in California by CNPS
CNPS List 1B = CNPS designated rare or endangered plants in California and elsewhere
CNPS List 2 = CNPS designated rare or endangered plants in California, but more common elsewhere

Global Ranking

G1 = Critically Imperiled
G2 = Imperiled
G3 = Vulnerable

State Ranking

S1 = Critically Imperiled
S2 = Imperiled
S3 = Vulnerable

5.0 IMPACT ASSESSMENT AND MITIGATION

This section establishes the impact criteria, then analyzes potential Project-related impacts upon the known biological resources within the Project area, and then suggests mitigation measures to reduce these impacts to a less-than-significant level. The significance of impacts to biological resources depends upon the proximity and quality of vegetation communities and wildlife habitats, the presence or absence of special-status species, and the effectiveness of measures implemented to protect these resources from Project-related impacts. As defined by CEQA, the Project would be considered to have a significant adverse impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a special-status species in local or regional plans, policies, or regulations, or by USFWS or CDFW
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by USFWS or CDFW
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any county or municipal policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved governmental habitat conservation plan.

Impact Assessment and Mitigation Measures

Impacts Aquatic Resources

The proposed Project disturbance areas within the Project area do not contain any jurisdictional wetlands or “waters of the U.S.” and the small intermittent or ephemeral drainage areas within the Project area would most likely not meet the updated Corps criteria for being regulated under the Clean Water Act (CWA). The 2023 Updated Water of the United States (WOTUS) Rule reversed the 2020

ruling such that only perennial aquatic resources with documented connections to navigable waterways are currently regulated under the CWA (See Section 2.0 above under the Section 404 of the Clean Water Act for details). Therefore, the Project area does not contain any “waters of the U.S.” including wetlands, given the lack of perennial streams and wetlands with a direct connection to a navigable waterway.

However, CDFW could regulate the ephemeral and intermittent drainage areas within the Project area most likely. The drainages do not contain any riparian or wetland associated vegetation and are not part of a floodplain so the CDFW regulated stream zone would be the bed and bank of each drainage only. Therefore, at a minimum, it is recommended that the Project applicant enter into a Lake or Streambed Alteration Agreement (LSA) with CDFW if the proposed Project would encroach upon the two drainage areas within the overall Project site.

Therefore, in conclusion, no impacts to any aquatic resources regulated under the CWA will occur (no streams or wetlands meeting the Corps criteria will be impacted) and therefore, no permitting under Section 404 or 401 of the CWA is required as part of the development of the proposed Project. Given the Project site contains two intermittent and ephemeral drainage areas, the Project applicant should enter into an LSA with CDFW for any impacts to the Class II and Class III drainages within the northwestern and southern section of the Project area respectively. Therefore, with the LSA with CDFW, the Project would be in compliance for potential disturbances within surface water within the Project area and the impacts to such drainage areas would be less than significant with the implementation of a mitigation measure to enter into an LSA with CDFW for any impacts to either drainage area within the overall Project site.

With the implementation of this mitigation measure, adverse impacts upon State of California and CDFW regulated waterways would be reduced to a less-than-significant level.

Impacts to Protected Nesting Birds

The trees and vegetation within the Project area (see Photo Log in the appendices attached) contain marginal suitable habitat for nesting raptors and MBTA protected nesting bird species. The breeding season for most protected birds in the vicinity of the Project area is generally from February 1st to August 31st. Vegetation clearing or tree removal outside of the breeding season for such bird species would not require the implementation of any avoidance, minimization, or mitigation measures. However, construction or development activities during the breeding season could disturb or remove occupied nests of migratory birds or raptors and could require the implementation of a pre-construction survey within 500 feet of the disturbance area within the subject parcels for nesting migratory birds and raptors prior to development.

If any nesting raptors or migratory birds are identified during surveys, CDFW and/or USFWS should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site. The extent of these buffers would be determined by a wildlife biologist and would depend on the special-status species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors should be analyzed to make an appropriate decision on buffer distances.

With the implementation of this mitigation measure, adverse impacts upon special-status bird species and nesting birds would be reduced to a less-than-significant level.

Impacts to Special-Status Plant Species

Given the proposed areas of disturbance within the Project area contain a moderate to significant levels of disturbance, and due to the invasive nature of the non-native annual grasslands that dominate the Project area, there is an overall low potential for such special-status plant species to occur within the Project area. However, to ensure that the proposed disturbance within the Project area does not impact any threatened, endangered, or otherwise rare plant species, the following mitigation measures shall be implemented to ensure the proposed Project would not have a significant impact on any special-status plant species per the species table included in Section 4 above and included in Appendix G given those are the species that have been documented by CDFW, CNPS, and USFWS as being previously identified within the greater Project area region.

- An additional botanical survey is recommended because the field surveys were not performed during the blooming period of some of the regionally-occurring rare plants. The survey should be focused on rare and special-status plant species that have been reported in the vicinity by the CNDDDB (see the Table included in Section 4 above and attached in Appendix G) and the pre-construction survey should be performed during the blooming period of the majority of target species, which would be between May and July to cover all of the potential species with some likelihood to occur within the Project area.
- The pre-construction rare plant survey should also focus on habitat types that are more likely to harbor rare and special-status plant species. If any special-status plant species are identified within any of the proposed areas of disturbance, the Project should either be redesigned to avoid impacts to those plants, or a transplantation program to move the plants outside the disturbance areas to ensure that impacts to such special-status plants are minimized. This mitigation measure is for CNPS List 1 and List 2 plant species only and any plant species

listed under the ESA or CESA given the under CEQA, impacts to CNPS List 3 and List 4 species are not considered significant and do not require mitigation to reduce impacts to them.

With the implementation of these mitigation measures, adverse impacts upon special-status plant species would be reduced to a less-than-significant level.

Impacts to Special-Status Wildlife Species

As stated within this BRA, the Project area was determined to contain suitable habitat for the western burrowing owl, purple martin, Townsend's big-ear bat, pallid bat, and long-eared myotis. Additionally, though elderberry shrubs were documented within the northern sections of the Project area, the valley elderberry longhorn beetle has not been documented within Lake County and neither CDFW or USFWS included the species within the database reviews covering the Project area. Therefore, the valley elderberry longhorn beetle is considered absent from the Project area and any impact to the existing elderberry shrubs within the Project area would not require a survey or mitigation as part of any proposed removal of those shrubs.

Therefore, Project related impacts could occur if disturbance and construction are implemented within or adjacent to the suitable habitat for western burrowing owl, purple martin, Townsend's big-eared bat, pallid bat, and long-eared myotis. Given purple martin is an MBTA protected species, it is covered under the nesting bird surveys outlined above and that mitigation is sufficient to ensure that the Project would not impact any nesting purple martin active nests. Below is the recommended mitigation to be implemented for the bat species with potential to occur within the Project area and mitigation measures for the western burrowing owl.

Mitigation for Townsend's Big-Eared Bat, Pallid Bat, and Long-Eared Myotis (and other bat species)

Occurrence: The Townsend's big-eared bat, pallid bat, and long-eared myotis have the potential to roost within the abandoned structures and woodlands within the Project area. However, these species have not been documented previously within or directly adjacent to the Project area and it has a moderate potential for any of these bat species to occur within the Project area.

Mitigation: Prior to disturbance of any structures within the Project area, a pre-construction bat roosting survey should be conducted to identify the presence or absence of roosting bats within any structures and within any woodlands. If any Townsend's big-eared bats, pallid bats, or long-eared myotis (or any other species of bat) are identified during roosting surveys, passive removal the roosting bats prior to disturbance to such structures or removal of trees associated with the

woodland where the bats are roosting should be implemented to avoid impacts to any bat species.

Passive removal includes allowing roosting bats to freely leave the roost site (and structure). Once the roosting bats have been passively removed from the structure(s), the structure(s) would be closed off from recurring bat roosting, if possible within the structure and the proposed work within the structure(s) would no longer pose a risk to individuals of the species. Pre-construction roosting bat surveys are recommended to be implemented within 7 days of the removal of trees associated within the woodlands in the northern or southern sections of the Project area and prior to any disturbance within any existing structure.

With the implementation of these mitigation measures, adverse impacts upon special-status bat species would be reduced to a less-than-significant level.

Mitigation for Impacts to Western Burrowing Owl

Prior to any ground disturbance related to covered activities, a CDFW approved biologist shall conduct pre-construction (i.e., take avoidance) surveys within the large, open areas identified in the planning surveys as having potential burrowing owl habitat. These large, open areas within the Project area contain small mammal and ground squirrel activity and burrows and therefore, though the species was not identified during the June 2024 and May 2025 surveys, the species could forage or nest within the Project area. Therefore, two site visits will be conducted: one within 14 days of construction start, and one within 48 hours of construction start. The surveys shall establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls in accordance with CDFW) survey guidelines.

Within the Project area where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint, as accessible, to identify burrows and owls. Surveys should take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be identified and mapped. During the breeding season (February 1– August 31), surveys shall document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1–January 31), surveys shall document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results shall be valid only for the season (breeding or nonbreeding) during which the survey is conducted.

If burrowing owl(s) are detected on-site during preconstruction surveys or during construction, no ground-disturbing activities within a minimum 200-meter (approximately 656 feet) avoidance buffer shall occur around occupied burrows during the breeding season (February 1–August 31), unless authorized by the California Department of Fish

and Wildlife. During the non-breeding season (September 1–January 31), no ground-disturbing activities within a minimum 50-meter (approximately 164 feet) avoidance buffer shall occur around occupied burrows, unless authorized by CDFW.

If occupied burrow avoidance is infeasible during the non-breeding season or during the breeding season where resident owls have not yet begun egg laying or incubation, or where the juveniles are foraging independently and capable of independent survival, the applicant shall coordinate with the CDFW to develop a Burrowing Owl Exclusion and Mitigation Plan. The plan shall differentiate strategies for active burrows found on the project site vs. active burrows found adjacent to the project site. For example, an Exclusion and Mitigation Plan strategy may include:

- Passive exclusion of burrowing owl from burrows within the project site using one-way doors.
- Excavation of potential burrowing owl burrows within the project site that are confirmed to be empty of burrowing owl adults and/or young.
- Creation of artificial burrowing owl burrows within the project site to offset the loss of known occupied burrowing owl burrows.
- Acquisition of burrowing owl conservation lands and/or bank credits.

With the implementation of these mitigation measures, adverse impacts upon western burrowing owl would be reduced to a less-than-significant level.

Additional Impacts Evaluated Under CEQA

- 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

Given the large areas of open space within and adjacent to the Project area, any resident or migratory species that would use the Project area as a wildlife corridor or nursery site would be able to move through and in/out of the Project area with minimal disturbance.

Therefore, this impact is considered less than significant.

- Conflict with any county or municipal policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

The Project will be in compliance with City of Clearlake policies and ordinances regarding protecting biological resources, including the tree preservation policy.

Based on site specific field survey, the Project area does contain oak and pine species. Two oak woodland areas located within the northern and southern

sections of the Project area have been documented and interior live oak and blue oak are the dominant species along with some foothill pine trees. Within the eastern and western sections of the Project area many trees were identified as dead from the previous fire that passed through the Project area. The woodland areas and an inventory of trees within the Project area is included in an Arborist Report (dated May 2025) and developed by Greg Matuzak Environmental Consulting. However, for protected trees under the City of Clearlake Municipal Code and Tree Preservation Policy, a site specific tree inventory based on the final site plan covering any area of the proposed Project would be required. Given, mitigation is required per impact to the number of protected oak trees to be removed, site specific tree impact assessments will be required. At a minimum however, the following must be incorporated into the Project site plans per the Native Tree Protection Ordinance, Chapter 18, Section 40 of the City of Clearlake Municipal Code:

Protected trees that will be impacted require an approved permit be obtained before disturbances "which might cause harm to a protected tree, are strictly prohibited within the Root Protection Zone (RPZ) of that tree". A Tree Protection Plan is recommended for all protected trees within twenty feet of the construction envelope. For tree removal, appropriate methods are required to prevent further damage to the surrounding protected trees as well as existing infrastructure on the property. These methods include directional felling and rigging. Stump removal is expected for this project to allow for grading and activities associated with hotel or road construction. It is expected that the woody debris from removing trees will be disposed of and removed off site in any fashion since there is no concern of pest or disease spreading. It is not allowed for tree trimming crews to leave debris in the remaining oak woodland adjacent to the project site.

All trees with canopies within twenty feet of construction areas will be required to have tree protection fencing installed prior to any project activities including tree removal, vegetation clearing, grubbing, trenching, grading, or any land disturbances. The fencing shall be temporary, readily visible, and a minimum of 4 feet high and constructed of chain link, orange plastic mesh fence, or a similar material with stationary posts at approximately 10- foot intervals. The fencing shall effectively keep the canopy, trunk, and roots of the tree clear from direct contact and damage by foot traffic, equipment, materials or disturbances, as well as preserve the roots and soil in an intact and non-compacted state. The fencing is expected to remain operational throughout the entirety of the project. The fencing needs to be regularly checked and repaired as required.

Therefore, local City of Clearlake permitting and mitigation for the removal of trees may be required and mitigation would be implemented per the tree preservation policy to fully mitigate for any potential impacts to protected trees by the City of Clearlake.

The proposed Project would have the potential to impact protected trees and with the development of the Tree Inventory and Arborist Report based on the final Site Plan covering the Project and with the implementation of preservation and mitigation per the City of Clearlake tree preservation policies, the Project would be in compliance with all relevant City of Clearlake policies and ordinances.

- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved governmental habitat conservation plan.

The Project would not conflict with any provision of an adopted HCP, NCCP, or other approved governmental habitat conservation plan given no such plan covers the Project area.

The proposed Project would have **no conflict with any habitat or natural community conservation plan at the local, state, or federal level.**

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by USFWS or CDFW

The Project area contains two small, intermittent and ephemeral drainages with no associated riparian habitat or wetland associated vegetation. The Project area does not contain any other sensitive natural communities identified by local, state, or federal government agencies and therefore, there would be no impact to such natural communities. As outlined above for impacts to CWA and State of California and CDFW regulated and protected aquatic habitats, the Project applicant will enter into an LSA with CDFW if the proposed Project has any encroachment into and potential impact on either of the drainage areas within the Project area.

The proposed Project would have **no impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by USFWS or under the CWA. As stated any impacts to either of the drainage areas would be included in a CDFW LSA between the Project applicant and CDFW to ensure full compliance with the State of California and CDFW policies pertaining to the regulation and protection of surface waters.**

References

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Appendix A

Project Vicinity and Location Maps



GREG MATUZAK
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Nevada City, CA

Clear Lake Project
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Figure 1. Vicinity Map



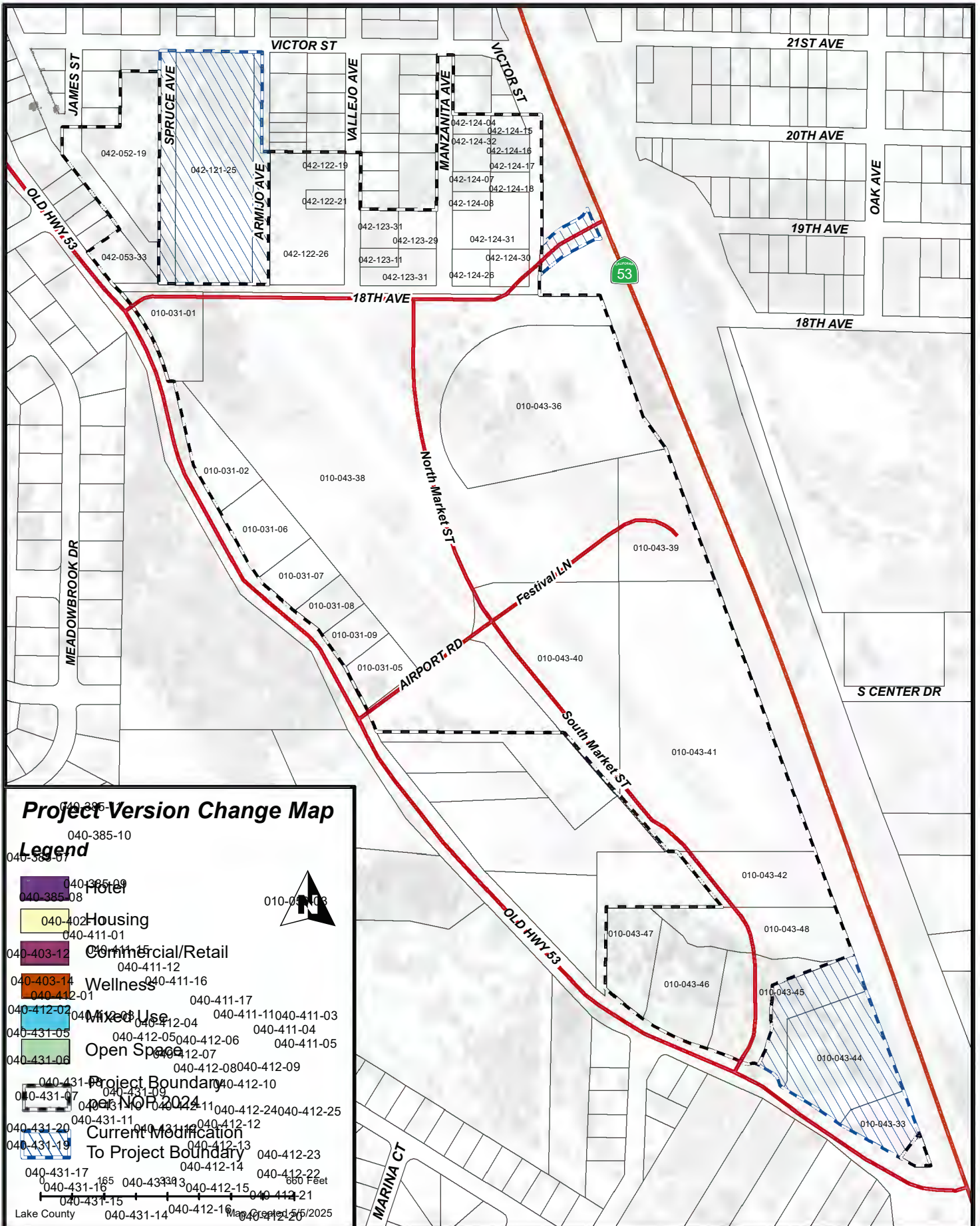
GREG MATUZAK
Environmental Consulting LLC
Nevada City, CA

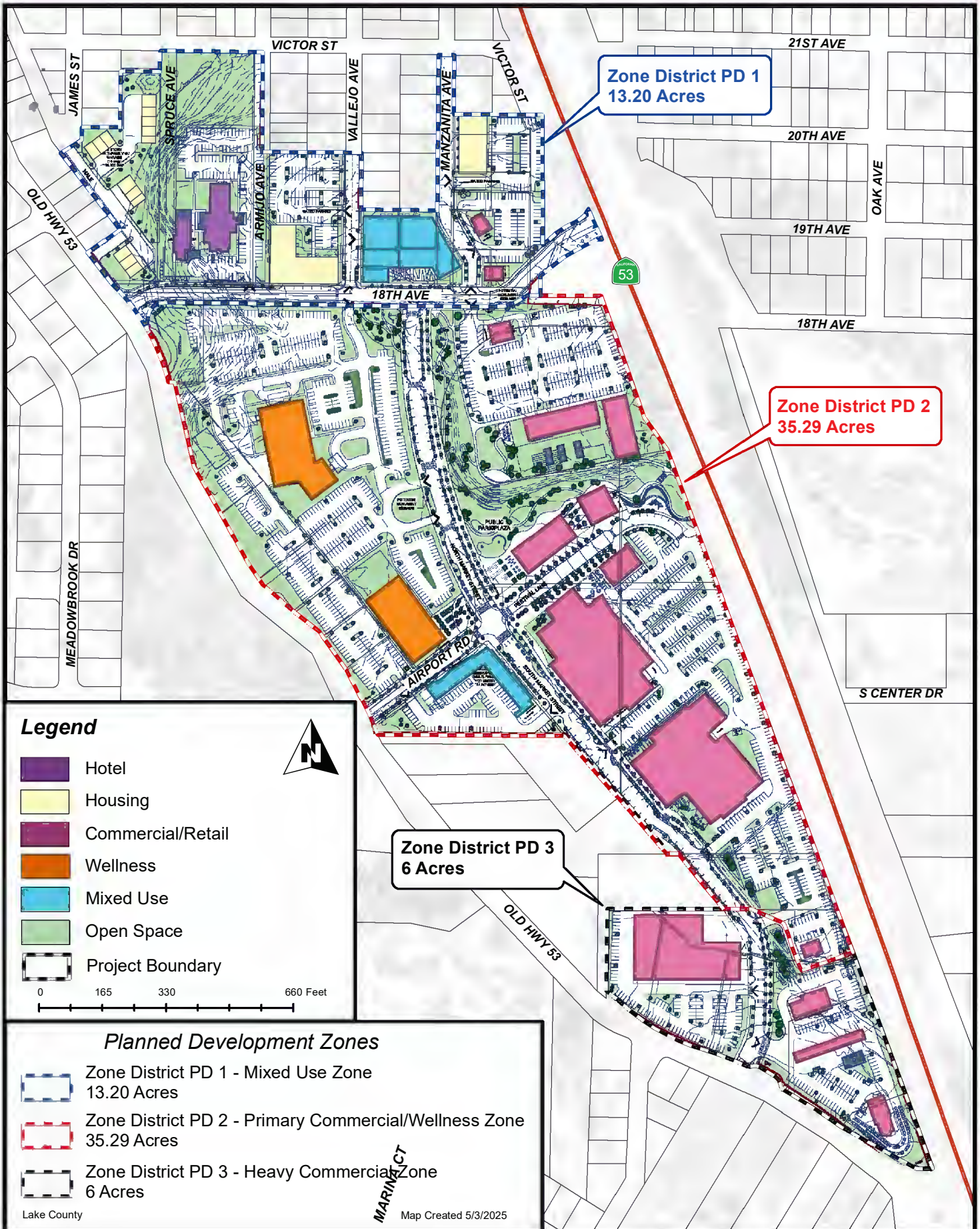
Clear Lake Project
Clear Lake Project

Figure 2. Project Location Map

Appendix B

Site Plans and Project Area Designations





Appendix C

USDA Soils Map



SOIL TYPE*

- 103 - Asbill clay loam, 5 to 8 percent slopes
- 104 - Asbill clay loam, 8 to 15 percent slopes
- 114 - Benridge-Sodabay loams, 8 to 15 percent slopes
- 131 - Fluvaquentic Haplaquolls, nearly level
- 147 - Kelsey fine sandy loam
- 153 - Konoti-Hambright complex, 15 to 30 percent slopes
- 233 - Still loam, stratified substratum

- 252 - Yorktree-Hopland-Squawrock complex, 15 to 50 percent slopes
- 256 - Water

GREG MATUZAK
Environmental Consulting LLC
Nevada City, CA

Clear Lake Project

Figure. Soils Map

Appendix D

National Wetland Inventory and National Hyrdography Database Search Map



Figure. Aquatic Resources Map

Prepared: Melissa Nugent 5/18/2025 Path: D:\GIS\Matuzaki Lake\County\LakeCounty.aprx

**Appendix E: Plant and Wildlife Species Observed During Surveys on June 19th,
2024 and May 20th and 21st, 2025, City of Clearlake, California**

Common Name	Scientific Name	Species Status
Plants		
wild oats	<i>Avena</i> spp.	Not FESA, CESA, or CNPS listed
ripgut brome	<i>Bromus diandrus</i>	Not FESA, CESA, or CNPS listed
red brome	<i>Bromus madritensis</i>	Not FESA, CESA, or CNPS listed
manzanita	<i>Arctostaphylos</i> spp.	Not FESA, CESA, or CNPS listed
buttercup spp.	<i>Ranunculus</i> spp.	Not FESA, CESA, or CNPS listed
California wild rose	<i>Rosa californica</i>	Not FESA, CESA, or CNPS listed
common mouse ear chickweed	<i>Cerastium fontanum</i>	Not FESA, CESA, or CNPS listed
common mullein	<i>Verbascum Thapsus</i>	Not FESA, CESA, or CNPS listed
black mustard	<i>Brassica nigra</i>	Not FESA, CESA, or CNPS listed
common periwinkle	<i>Vinca minor</i>	Not FESA, CESA, or CNPS listed
common sheep sorrel	<i>Rumex acetocella</i>	Not FESA, CESA, or CNPS listed
cyptanth spp.	<i>Cryptantha</i> spp.	Not FESA, CESA, or CNPS listed
dandelion spp.	<i>Agoseris</i> spp.	Not FESA, CESA, or CNPS listed
English plantain	<i>Plantago lanceolate</i>	Not FESA, CESA, or CNPS listed
everlasting pea	<i>Lathyrus latifolius</i>	Not FESA, CESA, or CNPS listed

Common Name	Scientific Name	Species Status
clover spp.	<i>Trifolium</i> spp.	Not FESA, CESA, or CNPS listed
Ceanothus	<i>Ceanothus</i> sp.	Not FESA, CESA, or CNPS listed
Ithuriel's spear	<i>Triteleia laxa</i>	Not FESA, CESA, or CNPS listed
foothill pine	<i>Pinus sabiniana</i>	Not FESA, CESA, or CNPS listed
perennial ryegrass	<i>Lolium perenne</i>	Not FESA, CESA, or CNPS listed
blue wild rye	<i>Elymus glaucus</i>	Not FESA, CESA, or CNPS listed
jointed goat grass	<i>Aegilops cylindrica</i>	Not FESA, CESA, or CNPS listed
Indian tobacco	<i>Nicotiana quadrivalvis</i>	Not FESA, CESA, or CNPS listed
European black nightshade	<i>Solanum nigrum</i>	Not FESA, CESA, or CNPS listed
narrow tarplant	<i>Holocarpha virgata</i>	Not FESA, CESA, or CNPS listed
red sandspurry	<i>Spergularia rubra</i>	Not FESA, CESA, or CNPS listed
stork's bill spp.	<i>Erodium</i> spp.	Not FESA, CESA, or CNPS listed
poison oak	<i>Toxicodendron diversilobum</i>	Not FESA, CESA, or CNPS listed

yellow star thistle	<i>Centaurea solstitialis</i>	Not FESA, CESA, or CNPS listed
interior live oak	<i>Quercus wislizeni</i>	Not FESA, CESA, or CNPS listed
blue oak	<i>Quercus douglasii</i>	Not FESA, CESA, or CNPS listed
white oak	<i>Quercus alba</i>	Not FESA, CESA, or CNPS listed
Western redbud	<i>Cercis occidentalis</i>	Not FESA, CESA, or CNPS listed
toyon	<i>Heteromeles arbutifolia</i>	Not FESA, CESA, or CNPS listed
black elderberry	<i>Sambucus nigra</i>	Not FESA, CESA, or CNPS listed
bull thistle	<i>Cirsium vulgare</i>	Not FESA, CESA, or CNPS listed
prickly lettuce	<i>Lactuca serriola</i>	Not FESA, CESA, or CNPS listed
hollyleaf redberry	<i>Rhamnus ilicifolia</i>	Not FESA, CESA, or CNPS listed
honeysuckle	<i>Lonicera sp.</i>	Not FESA, CESA, or CNPS listed

yerba santa	<i>Eriodictyon californicum</i>	Not FESA, CESA, or CNPS listed
vetch	<i>Vicia sp.</i>	Not FESA, CESA, or CNPS listed
chamise	<i>Adenostoma fasciculatum</i>	Not FESA, CESA, or CNPS listed
California poppy	<i>Eschscholzia californica</i>	Not FESA, CESA, or CNPS listed
foxtail barley	<i>Hordeum jubatum</i>	Not FESA, CESA, or CNPS listed
Fremont's cottonwood	<i>Populus fremontii</i>	Not FESA, CESA, or CNPS listed
Tree of heaven	<i>Ailanthus altissima</i>	Not FESA, CESA, or CNPS listed
Himalayan blackberry	<i>Rubus armeniacus</i>	Not FESA, CESA, or CNPS listed

Birds

American robin	<i>Turdus migratorius</i>	Not CESA or FESA listed. Migratory (active nests protected)
dark-eyed junco	<i>Junco hyemalis</i>	Not CESA or FESA listed. Migratory (active nests protected)
house finch	<i>Haemorhous mexicanus</i>	Not CESA or FESA listed. Migratory (active nests protected)

mourning dove	<i>Zenaida macroura</i>	Not CESA or FESA listed. Migratory (active nests protected)
northern flicker	<i>Colaptes auratus</i>	Not CESA or FESA listed. Migratory (active nests protected)
turkey vulture	<i>Cathartes aura</i>	Not CESA or FESA listed. Migratory (active nests protected)
western scrub-jay	<i>Aphelocoma californica</i>	Not CESA or FESA listed. Migratory (active nests protected)

Appendix F

Photo Log

Photos of the Site Visits and Surveys on June 19th, 2024 and May 20th and 21st, 2025

Photos from June 19th, 2024



Photo 1: Entrance into the western section of the Project area off of Airport Road. Photo is looking north along the western access road running north to south in the Project area.



Photo 2: From Airport Road looking into the southern section of the Project area. Project area is heavily disturbed from historical development and disturbance.



Photo 3: Photo of the southeastern section of the Project area from the Airport Road entrance into the Project area.



Photo 4: Photo looking north from the central section of the of the Project area. Large disposal mounds are located within the central section of the Project area.



Photo 5: Photo of the 18th Avenue entrance into the eastern section of the Project area.



Photo 6: Existing burned trees in the photo are from a more recent fire that burned some sections of the Project area. Photo of northeastern section of the Project area.



Photo 7: Photo looking into the northwestern section of the Project area.



Photo 8: From the northwestern section of the Project area looking southwest. Old Highway 53 runs along the western edge of the overall Project area.



Photo 9: Woodland area located in the adjacent to the northern section of the Project area as it is not part of the EIR Boundary.



Photo 10: Looking north from the northern border of the Project area with 21st Avenue/Victor Street in the distance in the photo.



Photo 11: Looking south from the northern border of the Project area.



Photo 12: Turn out along western border of the Project area and Old Highway 53. Looking south with the western edge of the Project area located to the left.



Photo 13: Photo of the southwestern section of the Project area. Large woodland area is located within the EIR Boundary.



Photo 14: Southern section of the Project area looking north with Highway 53 to the right that runs north to south along the eastern border of the Project area.



Photo 15: Small drainage entering into the southeastern section of the Project area. Drainage crosses Highway 53 and crosses the southern section of the Project area.



Photo 16: Southwestern section of the Project area within the wooded area looking north with the small ephemeral drainage in the photo.



Photo 17: Southwestern section of the Project area within the wooded area looking south with Highway 53 running along the left/eastern border of the Project area.



Photo 18: Western section of the Project area where Airport Road enters off of Old Highway 53 into the Project area. Photo looking west at Airport Road.



Photo 19: Central section of the Project area documenting disturbance, disposal mounds, and disturbed non-native annual grassland and ruderal vegetation.



Photo 20: Central section of the Project area documenting disturbance, disposal mounds, and disturbed non-native annual grassland and ruderal vegetation.

Photos from May 21st and 22nd, 2025



Photo 21: Entrance into the Project area at Airport Road and Old Highway 53 along the western edge of the Project area. Photo looking north along Old Hwy 53.



Photo 22: Southern ephemeral drainage entering into the Project area through the culvert under State Route 53. Drainage lined with disturbed ruderal vegetation.



Photo 23: Southern ephemeral drainage looking northwest from where it enters the Project area. Dominated by non-native annual grassland and ruderal vegetation.



Photo 24: Mapped oak woodland within the southwestern section of the Project area and dominated by blue and interior live oak and foothill pine trees.



Photo 25: Southern end of the Project area with Old Highway 53 in the photo. Area dominated by disturbed non-native annual grassland and ruderal vegetation.



Photo 26: NWI and NHD mapped ephemeral drainage entering the northern end of the Project area through a culvert under Victor Street.



Photo 27: NWI and NHD mapped ephemeral drainage crossing through the northwestern section of the Project area. No riparian vegetation present.



Photo 28: Mapped oak woodland within the northern section of the Project area within the proposed hotel parcel. Interior live oak and foothill pine trees dominate.



Photo 29: Area of tree of heaven within the eastern section of the Project area. Tree is non-native and highly invasive.



Photo 30: Area of shrubby Fremont's cottonwood within the eastern section of the Project area. Not associated with any aquatic resource.



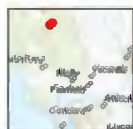
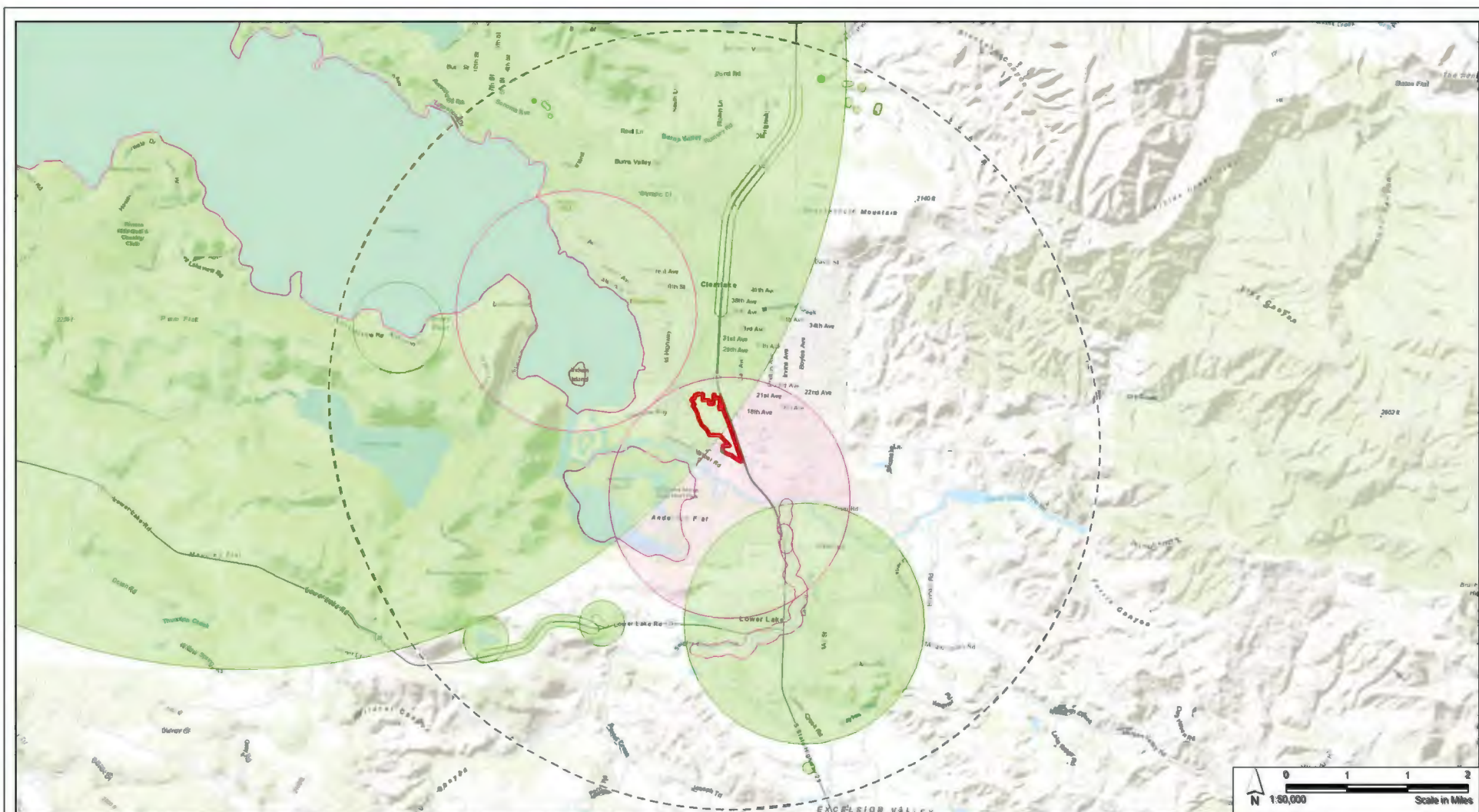
Photo 31: Mapped elderberry shrub within the northern section of the Project area. Valley elderberry longhorn beetle is not know to occur in Lake County.



Photo 32: Recent fires have burned many of the trees along the eastern and western sections of the Project area north of Airport Road. Most have been foothill pine trees.

Appendix G

CNDDDB Species Map and CNDDDB, CNPS, and USFWS IPaC Report



- Legend**
- Study Area
 - 3 mile Buffer on Project Area
 - CHNDB Wildlife Occurrence
 - CHNDB Plant Occurrence
 - Critical Plant Habitat**
 - Critical Wildlife Habitat**

CNDDB OCCURRENCES*

Plant Species

1. Baker's navarrette
2. Bolander's horkelia
3. Brandegee's eriogonum
4. Burke's goldfields
5. Colusa layia
6. Eastgrass pondweed

8. Hall's harmonia
9. Konoc's manzanita
10. Loch Lomond button-celery

Wildlife Species

11. American bumble bee
12. Brownish subiraphian rifle beetle
13. Clear Lake hitch
14. Clear Lake tule perch
15. Coastal and Valley Freshwater Marsh
16. Foothill yellowlegged frog - north coast DPS
17. Sacramento perch

18. Western ridged mussel
19. Western yellow-billed cuckoo

CRITICAL HABITAT OCCURRENCES**

Plant Habitat

None

Wildlife Habitat

None

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Clear Lake Project

* California Natural Diversity Database (CNDDB) Data Downloaded May 16, 2025, from the California Department of Fish and Wildlife
** United States Fish and Wildlife Service (USFWS) Critical Habitat Data Downloaded April, 2024, from: <https://www.fws.gov/land/critical-habitat>

Figure 3. CNDDB and Critical Habitat Map



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Imported file selection

Map Index Number: 32344

Key Quad: Lower Lake (3812285)

Occurrence Number: 1386

EO Index: 2575

Element Code: AAABH01051

Occurrence Last Updated: 1995-06-27

Scientific Name: *Rana boylei* pop. 1

Common Name: foothill yellow-legged frog - north coast DPS

Listing Status: Federal: None

Rare Plant Rank:

State: None

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
USFS_S-Sensitive

CNDDB Element Ranks: Global: G3T4

State: S4

General Habitat:

NORTHERN COAST RANGES NORTH OF SAN FRANCISCO BAY ESTUARY, KLAMATH MOUNTAINS, AND CASCADE RANGE INCLUDING WATERSHED SUBBASINS (HU 8) LOWER PIT, BATTLE CREEK, THOMES CREEK, AND BIG CHICO CREEK IN LASSEN, SHASTA, TEHAMA, AND BUTTE COUNTIES.

Micro Habitat:

PARTLY SHADED SHALLOW STREAMS AND RIFFLES WITH A ROCKY SUBSTRATE IN A VARIETY OF HABITATS. NEEDS AT LEAST SOME COBBLE-SIZED SUBSTRATE FOR EGG-LAYING AND AT LEAST 15 WEEKS TO ATTAIN METAMORPHOSIS.

Last Date Observed: 1956-04-XX

Occurrence Type: Natural/Native occurrence

Last Survey Date: 1956-04-XX

Occurrence Rank: Unknown

Owner/Manager: UNKNOWN

Trend: Unknown

Presence: Presumed Extant

Location:

SEIGLER CANYON CREEK IN LOWER LAKE; TRIBUTARY TO CACHE CREEK.

Detailed Location:

Ecological:

RIVER.

Threats:

General:

MODERATELY ABUNDANT NUMBERS OBSERVED IN 1956.

PLSS: T12N, R07W, Sec. 02, SW (M)

Accuracy: non-specific area

Area (acres): 135

UTM: Zone-10 N4307559 E533727

Latitude/Longitude: 38.91629 / -122.61096

Elevation (feet): 1,340

County Summary:

Quad Summary:

Lake

Lower Lake (3812285), Clearlake Highlands (3812286)

Sources:

GER93U0001 GERSTUNG, E. - MEMORANDUM: AMPHIBIA OBSERVED ON NORTHERN CALIFORNIA WATERS, MAR-APR, 1956 1993-04-30



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	30009	EO Index:	5400
Key Quad:	Clearlake Highlands (3812286)	Element Code:	ABNRB02022
Occurrence Number:	60	Occurrence Last Updated:	1994-04-12

Scientific Name:	<i>Coccyzus americanus occidentalis</i>	Common Name:	western yellow-billed cuckoo
Listing Status:	Federal: Threatened State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5T2T3 State: S1	Other Lists:	BLM_S-Sensitive USFS_S-Sensitive

General Habitat:	Micro Habitat:
RIPARIAN FOREST NESTER, ALONG THE BROAD, LOWER FLOOD-BOTTOMS OF LARGER RIVER SYSTEMS.	NESTS IN RIPARIAN JUNGLES OF WILLOW, OFTEN MIXED WITH COTTONWOODS, WITH LOWER STORY OF BLACKBERRY, NETTLES, OR WILD GRAPE.

Last Date Observed:	1973-06-28	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1973-06-28	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
SOUTHEAST END OF CLEAR LAKE, NEAR THE TOWN OF CLEARLAKE.

Detailed Location:

Ecological:
HABITAT IS WILLOW-COTTONWOOD FOREST THAT SEEMS SUITABLE TO CUCKOOS FOR NESTING.

Threats:

General:
ONE INDIVIDUAL (MAY HAVE BEEN NESTING) DETECTED 28 JUN 1973.

PLSS:	T13N, R07W, Sec. 28 (M)	Accuracy:	1 mile	Area (acres):	0
UTM:	Zone-10 N4311013 E530732	Latitude/Longitude:	38.94753 / -122.64535	Elevation (feet):	1,400

County Summary:	Quad Summary:
Lake	Clearlake Highlands (3812286)

Sources:

GAI77R0001	GAINES, D. - CURRENT STATUS AND HABITAT REQUIREMENTS OF THE YELLOW-BILLED CUCKOO IN CALIFORNIA. ENDANGERED WILDLIFE PROJECT. E-1-1. CALIFORNIA DEPARTMENT OF FISH AND GAME. 1977-XX-XX
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Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 63528

Key Quad: Lower Lake (3812285)

Occurrence Number: 3

EO Index: 63620

Element Code: AFCJB19011

Occurrence Last Updated: 2005-12-28

Scientific Name: *Lavinia exilicauda chi*

Common Name: Clear Lake hitch

Listing Status: Federal: Proposed Threatened

State: Threatened

Rare Plant Rank:

Other Lists: AFS_VU-Vulnerable
USFS_S-Sensitive

CNDDB Element Ranks: Global: G4T1

State: S1

General Habitat:

FOUND ONLY IN CLEAR LAKE, LAKE COUNTY, AND ASSOCIATED PONDS. SPAWNS IN STREAMS FLOWING INTO CLEAR LAKE.

Micro Habitat:

ADULTS FOUND IN THE LIMNETIC ZONE. JUVENILES FOUND IN THE NEARSHORE SHALLOW-WATER HABITAT HIDING IN THE VEGETATION.

Last Date Observed: 1964-04-12

Last Survey Date: 1964-04-12

Owner/Manager: DPR-ANDERSON MARSH SHP

Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence

Occurrence Rank: Unknown

Trend: Unknown

Location:

SEIGLER CANYON CREEK ON SOUTH END OF CLEAR LAKE.

Detailed Location:

LOCATION GIVEN AS "SEIGLER SREEK 1/4 MILE ABOVE MOUTH ON CLEAR LAKE". BUT SEIGLER CANYON CREEK FLOWS INTO CACHE CREEK AND THEN INTO CLEAR LAKE. MAPPED 1/4 MILE ABOVE CONFLUENCE WITH CACHE CREEK.

Ecological:

CREEK.

Threats:

General:

A RIPE FEMALE COLLECTED 12 APR 1964 BY P.R. NEEDHAM, & J.D. HOPKIRK & PARTY (CAS #23566) HOLOTYPE AND (CAS #24032) PARATYPE.

PLSS: T12N, R07W, Sec. 02, NW (M)

Accuracy: non-specific area

Area (acres): 15

UTM: Zone-10 N4308125 E533616

Latitude/Longitude: 38.92139 / -122.61220

Elevation (feet): 1,338

County Summary:

Quad Summary:

Lake

Lower Lake (3812285)

Sources:

CAS05S0011 CALIFORNIA ACADEMY OF SCIENCES - PRINTOUT OF CAS MUSEUM SPECIMENS FOR LAVINIA EXILICAUDA CHI. 2005-12-28



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 43098

Key Quad: Lucerne (3912217)

Occurrence Number: 4

EO Index: 63621

Element Code: AFCJB19011

Occurrence Last Updated: 2005-12-28

Scientific Name: *Lavinia exilicauda chi*

Common Name: Clear Lake hitch

Listing Status: Federal: Proposed Threatened

State: Threatened

Rare Plant Rank:

Other Lists: AFS_VU-Vulnerable
USFS_S-Sensitive

CNDDDB Element Ranks: Global: G4T1

State: S1

General Habitat:

FOUND ONLY IN CLEAR LAKE, LAKE COUNTY, AND ASSOCIATED PONDS. SPAWNS IN STREAMS FLOWING INTO CLEAR LAKE.

Micro Habitat:

ADULTS FOUND IN THE LIMNETIC ZONE. JUVENILES FOUND IN THE NEARSHORE SHALLOW-WATER HABITAT HIDING IN THE VEGETATION.

Last Date Observed: 1962-04-08

Last Survey Date: 1962-04-08

Owner/Manager: UNKNOWN

Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence

Occurrence Rank: Unknown

Trend: Unknown

Location:

CLEAR LAKE.

Detailed Location:

Ecological:

Threats:

General:

COLLECTED 9 APR 1961 BY UCB ZOOLOGY 138 CLASS (CAS #72868) AND 8 APR 1962 BY P.R. NEEDHAM, & D.W. SEEGRIST & PARTY (CAS #24033) PARATYPE.

PLSS: T14N, R08W (M)

Accuracy: non-specific area

Area (acres): 39,250

UTM: Zone-10 N4319736 E519077

Latitude/Longitude: 39.02646 / -122.77960

Elevation (feet): 1,326

County Summary:

Quad Summary:

Lake

Clearlake Highlands (3812286), Clearlake Oaks (3912216), Lucerne (3912217), Lakeport (3912218)

Sources:

CAS05S0011 CALIFORNIA ACADEMY OF SCIENCES - PRINTOUT OF CAS MUSEUM SPECIMENS FOR LAVINIA EXILICAUDA CHI. 2005-12-28



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	43098	EO Index:	43098
Key Quad:	Lucerne (3912217)	Element Code:	AFCQB07010
Occurrence Number:	5	Occurrence Last Updated:	2000-06-19

Scientific Name:	<i>Archoplites interruptus</i>	Common Name:	Sacramento perch
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G1 State: S1	Other Lists:	AFS_TH-Threatened CDFW_SSC-Species of Special Concern IUCN_EN-Endangered

General Habitat:	Micro Habitat:
HISTORICALLY FOUND IN THE SLOUGHS, SLOW-MOVING RIVERS, AND LAKES OF THE CENTRAL VALLEY.	PREFERS WARM WATER. AQUATIC VEGETATION IS ESSENTIAL FOR YOUNG. TOLERATES WIDE RANGE OF PHYSIO-CHEMICAL WATER CONDITIONS.

Last Date Observed:	1937-04-29	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1937-04-29	Occurrence Rank:	None
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Possibly Extirpated		

Location:
CLEAR LAKE, BETWEEN HIGHWAYS 20, 29 & 53, LAKE COUNTY.

Detailed Location:

Ecological:

Threats:

General:
11 FISH COLLECTED IN CLEAR LAKE AND KEPT IN AQUARIUM AT ELK GROVE, RECEIVED AT NATIONAL MUSEUM OF NATURAL HISTORY DECEMBER 1937, ACC #146125 (USNM 00106570). 1 GILA CRASSICAUDA ALSO COLLECTED FROM THIS SITE, FEB 10, 1873.

PLSS:	T14N, R08W (M)	Accuracy:	non-specific area	Area (acres):	39,250
UTM:	Zone-10 N4319736 E519077	Latitude/Longitude:	39.02646 / -122.77960	Elevation (feet):	1,326

County Summary:	Quad Summary:
Lake	Clearlake Highlands (3812286), Clearlake Oaks (3912216), Lucerne (3912217), Lakeport (3912218)

Sources:
SMI96S0001 SMITHSONIAN INSTITUTION - MUSEUM RECORD OF ARCHOPLITES INTERRUPTUS, ACCESSION NUMBER 146125 (PLUS THE RECORD OF GILA CRASSICAUDA COLLECTED, FEB 10, 1873). 1996-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	43098	EO Index:	117501
Key Quad:	Lucerne (3912217)	Element Code:	AFCQK02013
Occurrence Number:	1	Occurrence Last Updated:	2020-01-07

Scientific Name:	<i>Hysteroecarpus traskii lagunae</i>	Common Name:	Clear Lake tule perch
Listing Status:	Federal: None	Rare Plant Rank:	
	State: None	Other Lists:	CDFW_SSC-Species of Special Concern
CNDDDB Element Ranks:	Global: G5T3		
	State: S3		

General Habitat:	Micro Habitat:
☐	☐

Last Date Observed:	2015-06-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2015-06-XX	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		
Location:	CLEAR LAKE.		
Detailed Location:	MAPPED ACROSS THE EXTENT OF THE LAKE.		
Ecological:			
Threats:	HABITAT HAS BEEN IMPACTED BY INTRODUCED FISHES, HISTORIC MINING, RESIDENTIAL DEVELOPMENT, AND AGRICULTURAL RUNOFF.		
General:	FOUND IN 1873, 1894, 1946, 1948, 1953, 1959, 1961, 1962, 1963, 1964, 1965, 1968, 1969, 1972, 1973, 1976, 1977, 1978, 1979 & 2012. ALSO, A SET OF ELECTROFISHING SURVEYS IN 2014-2015 FOUND H. T. LAGUNAE MADE UP 7% OF THE COUNT OF FISH CAUGHT.		
PLSS:	T14N, R08W (M)	Accuracy:	non-specific area
UTM:	Zone-10 N4319736 E519077	Latitude/Longitude:	39.02646 / -122.77960
Area (acres):	39,250		
Elevation (feet):	1,326		
County Summary:	Quad Summary:		
Lake	Clearlake Highlands (3812286), Clearlake Oaks (3912216), Lucerne (3912217), Lakeport (3912218)		



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Sources:

ANONDS0264	ANONYMOUS - CAS #22780 COLLECTED FROM CLEAR LAKE XXXX-XX-XX
ANONDS0265	ANONYMOUS - CAS #21203 COLLECTED FROM CLEAR LAKE XXXX-XX-XX
BAL81A0001	BALTZ, D. & P. MOYLE - MORPHOMETRIC ANALYSIS OF TULE PERCH (HYSTEROCARPUS TRASKI) POPULATIONS IN THREE ISOLATED DRAINAGES. COPEIA 1981(2):305-311. 1981-05-15
BAL82A0001	BALTZ, D. & P. MOYLE (UNIVERSITY OF CALIFORNIA, DAVIS) - LIFE HISTORY CHARACTERISTICS OF TULE PERCH (HYSTEROCARPUS TRASKI) POPULATIONS IN CONTRASTING ENVIRONMENTS. ENVIRONMENTAL BIOLOGY OF FISHES 7(3):229-242. 1982-XX-XX
BAL84A0001	BALTZ, D. & E. LOUDENSLAGER - ELECTROPHORETIC VARIATION AMONG SUBSPECIES OF TULE PERCH (HYSTEROCARPUS TRASKI). COPEIA 1984(1):223-227. 1984-02-23
BRO78A0002	BROADWAY, J. & P. MOYLE (UNIVERSITY OF CALIFORNIA, DAVIS) - ASPECTS OF THE ECOLOGY OF THE PRICKLY SCULPIN, COTTUS ASPER RICHARDSON, A PERSISTENT NATIVE SPECIES IN CLEAR LAKE, LAKE COUNTY, CA. ENVIRONMENTAL BIOLOGY OF FISHES 3(4):337-343. 1978-XX-XX
CON62S0003	CONNERS, J. - CAS #22803 COLLECTED FROM UPPER CLEAR LAKE 1962-03-12
CON62S0004	CONNERS, J. - CAS #45490 COLLECTED 3 MI NE OF UC BERKELEY LAB, CLEAR LAKE 1962-06-06
COO61S0007	COOK, S. & J. CONNERS - CAS #22794 COLLECTED FROM UPPER CLEAR LAKE 1961-11-14
COO61S0008	COOK, S. & J. CONNERS - CAS #22801 COLLECTED FROM UPPER CLEAR LAKE 1961-12-05
COO62S0003	COOK, S. & J. CONNERS - CAS #23506 & 23507 COLLECTED FROM LAKEPORT 1962-04-02
COO62S0004	COOK, S. & J. CONNERS - CAS #22802 COLLECTED FROM UPPER CLEAR LAKE 1962-03-21
COO62S0005	COOK, S. & J. CONNERS - CAS #22804 COLLECTED FROM UPPER CLEAR LAKE 1962-03-27
COO62S0006	COOK, S. & J. CONNERS - CAS #22815 COLLECTED FROM UPPER CLEAR LAKE 1962-04-10
COO62S0007	COOK, S. & J. CONNERS - CAS #22816 COLLECTED FROM UPPER CLEAR LAKE 1962-04-20
COO62S0008	COOK, S. & J. CONNERS - CAS #22817 COLLECTED FROM UPPER CLEAR LAKE 1962-05-02
COO62S0009	COOK, S. & J. CONNERS - CAS #22818 COLLECTED FROM UPPER CLEAR LAKE 1962-05-09
COO62S0010	COOK, S. & J. CONNERS - CAS #22819 COLLECTED FROM UPPER CLEAR LAKE 1962-05-15
COO62S0011	COOK, S. & J. CONNERS - CAS #22904 COLLECTED FROM UPPER CLEAR LAKE 1962-06-11
COO62S0012	COOK, S. & J. CONNERS - CAS #22796 COLLECTED FROM UPPER CLEAR LAKE 1962-01-12
COO65S0003	COOK, S. & G. BRACKETT - CAS #23909 COLLECTED FROM CLEAR LAKE 1965-07-XX
COONDS0003	COOK, S. & J. HOPKIRK - CAS #66757 COLLECTED FROM CLEAR LAKE AT RIVIERA BEACH 19XX-XX-XX
EWI16R0001	EWING, B. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - 2014-2015 CLEAR LAKE FISHERY AND HABITAT EVALUATION 2016-02-17
FRE59S0001	FREIHOFFER, W. & J. HENDRICKS - CAS #54523 COLLECTED FROM CLEAR LAKE, LAKEPORT, ABOUT 1/4 MI S OF PUBLIC BOAT LAUNCH, AT SMALL POINT PROJECTING OFFSHORE 1959-10-31
HOP88A0001	HOPKIRK, J. - FISH EVOLUTION AND THE LATE PLEISTOCENE AND HOLOCENE HISTORY OF CLEAR LAKE, CALIFORNIA. GEOLOGIC SOCIETY OF AMERICA SPECIAL PAPER 214: 183-193. 1988-XX-XX
JOR95A0001	JORDAN, D. & C. GILBERT - LIST OF THE FISHES INHABITING CLEAR LAKE, CALIFORNIA. BULLETIN OF THE UNITED STATES FISH COMMISSION 14: 139-140. 1895-XX-XX
JORNS0002	JORDAN, D. & C. GILBERT - CAS #5006 COLLECTED FROM LAKEPORT 18XX-XX-XX
KIR59S0002	KIRSCHBAUM, E. & D. RENTZ - CAS #22785 COLLECTED FROM CLEAR LAKE 1959-06-12
MOY15R0001	MOYLE, P. ET AL. (UNIVERSITY OF CALIFORNIA, DAVIS) - FISH SPECIES OF SPECIAL CONCERN IN CALIFORNIA, THIRD EDITION. REPORT TO THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE. 2015-07-XX
MUR48S0001	MURPHY, G. - CAS #212540 COLLECTED FROM CLEAR LAKE 1948-09-XX
NEE53S0001	NEEDHAM, P. - CAS #22799 COLLECTED FROM UPPER CLEAR LAKE 1953-05-09
NEE62S0001	NEEDHAM, P. ET AL. - CAS #22814 COLLECTED FROM UPPER CLEAR LAKE 1962-04-08
NEE64S0001	NEEDHAM, P. ET AL. - CAS #23564 COLLECTED FROM CLEAR LAKE 1964-04-11
PUC72U0001	PUCKETT, L. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - SUMMARY OF RESULTS OF ELECTROFISHING SURVEYS AT CLEAR LAKE 1972-06-15
THO13A0001	THOMPSON, L. ET AL. (UNIVERSITY OF CALIFORNIA, DAVIS) - THE NATIVE AND INTRODUCED FISHES OF CLEAR LAKE: A REVIEW OF THE PAST TO ASSIST WITH DECISIONS OF THE FUTURE. CALIFORNIA FISH AND GAME 99(1): 7-41. 2013-XX-XX
UCB79S0001	UC BERKELEY ZOOLOGY CLASS - CAS #59237 COLLECTED FROM CLEAR LAKE STATE PARK, SODA BAY 1979-10-27
WEE83R0001	WEEK, L. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - MODERN FISHES OF CLEAR LAKE, CALIFORNIA 1983-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 08398

Key Quad: Clearlake Highlands (3812286)

Occurrence Number: 8

EO Index: 16081

Element Code: CTT52410CA

Occurrence Last Updated: 1998-07-16

Scientific Name: *Coastal and Valley Freshwater Marsh*

Common Name: Coastal and Valley Freshwater Marsh

Listing Status: Federal: None

Rare Plant Rank:

State: None

Other Lists:

CNDDDB Element Ranks: Global: G3

State: S2.1

General Habitat:

Micro Habitat:

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Last Date Observed: 1986-02-01

Occurrence Type: Natural/Native occurrence

Last Survey Date: 1986-02-01

Occurrence Rank: Unknown

Owner/Manager: DPR, AUDUBON

Trend: Unknown

Presence: Presumed Extant

Location:

ANDERSON MARSH STATE HISTORIC PARK; SE END OF CLEAR LAKE, 2 MILES SOUTH OF CLEARLAKE HIGHLANDS.

Detailed Location:

ADJ TO GRASSLAND, VALLEY & BLUE OAK WOODLAND, SMALL VALLEY OAK RIPARIAN AREA.

Ecological:

OPEN WATER W/JUNCUS SPP, CAREX SPP, SCIRPUS SPP & OTHER CYPERACEAE. 100 ASSOC BIRD SPP.

Threats:

GRAZING OCCURS IN ADJACENT PVT LANDS.

General:

MOST W/IN STATE PARK; AUDUBON SANCTUARY TO WEST & SW. EXCELLENT COND. SEE
[HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES](https://wildlife.ca.gov/Data/VegCamp/Natural-Communities) TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS: T12N, R07W, Sec. 04, NE (M)

Accuracy: specific area

Area (acres): 447

UTM: Zone-10 N4308482 E531521

Latitude/Longitude: 38.92469 / -122.63636

Elevation (feet): 1,326

County Summary:

Quad Summary:

Lake

Clearlake Highlands (3812286)

Sources:

DPRNDM0002	CALIFORNIA DEPARTMENT OF PARKS & RECREATION - MAP AND BROCHURE FOR ANDERSON MARSH STATE HISTORIC PARK. XXXX-XX-XX
HOO77R0001	HOOD, L. - INVENTORY OF CALIFORNIA NATURAL AREAS, CALIFORNIA NATURAL AREAS COORDINATING COUNCIL 1977-XX-XX
SHA86F0003	SHAW, C. - FIELD SURVEY FORM FOR COASTAL AND VALLEY FRESHWATER MARSH (NC52410.008). 1986-02-01
USF82M0001	U.S. FISH & WILDLIFE SERVICE - NATIONAL WETLAND SURVEY MAPS. 1982-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 43098

Key Quad: Lucerne (3912217)

Occurrence Number: 1

EO Index: 61189

Element Code: IICOL5A010

Occurrence Last Updated: 2012-10-15

Scientific Name: *Dubiraphia brunnescens*

Common Name: brownish dubiraphian riffle beetle

Listing Status: Federal: None

Rare Plant Rank:

State: None

Other Lists:

CNDDDB Element Ranks: Global: G1

State: S1

General Habitat:

Micro Habitat:

AQUATIC; KNOWN ONLY FROM THE NE SHORE OF CLEAR LAKE, LAKE COUNTY.

INHABITS EXPOSED, WAVE-WASHED WILLOW ROOTS.

Last Date Observed: 1988-XX-XX

Occurrence Type: Natural/Native occurrence

Last Survey Date: 1988-XX-XX

Occurrence Rank: Unknown

Owner/Manager: UNKNOWN

Trend: Stable

Presence: Presumed Extant

Location:

CLEAR LAKE.

Detailed Location:

COLLECTED FROM ROCKY POINT AND NICE, CLEAR LAKE. SHEPARD STATED IT IS ONLY KNOWN FROM THE NE SHORE OF CLEAR LAKE, BUT ROCKY PT IS NW. FURTHER, THERE IS ANOTHER ROCKY POINT FAR SE. MAPPED TO ENTIRE LAKE UNTIL BETTER LOCATION GIVEN.

Ecological:

INHABITS EXPOSED, WAVE WASHED WILLOW ROOTS.

Threats:

General:

2 SPECIMENS AT THE CALIFORNIA STATE COLLECTION OF ARTHROPODS (CDFA), COLLECTED BY H. CHANDLER 3 JUL 1946. 2 SPECIMENS COLLECTED 24 JUL 1969. POPULATION HIGH IN 1988 AND STABLE OVER SEVERAL YEARS OF MONITORING.

PLSS: T14N, R08W (M)

Accuracy: non-specific area

Area (acres): 39,250

UTM: Zone-10 N4319736 E519077

Latitude/Longitude: 39.02646 / -122.77960

Elevation (feet): 1,330

County Summary:

Quad Summary:

Lake

Clearlake Highlands (3812286), Clearlake Oaks (3912216), Lucerne (3912217), Lakeport (3912218)

Sources:

BRO69S0002 BROWN, H. - OMNH #104060 COLLECTED AT NICE, CLEAR LAKE 1969-07-24

BRO69S0003 BROWN, H. - OMNH #104060 COLLECTED AT NICE, CLEAR LAKE 1969-07-24

SHA05S0006 SHANKS, S. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE-CALIFORNIA NATURAL DIVERSITY DATABASE) - MUSEUM SPECIMEN DATA TAKEN FROM CALIFORNIA STATE COLLECTION OF ARTHROPODS (CDFA). 2005-04-20

SHE88U0002 SHEPARD, W.D. (CALIFORNIA STATE UNIVERSITY, SACRAMENTO) - LETTER FROM B. SHEPARD CONCERNING SOME BEETLES AND THEIR GENERAL RANGE DISTRIBUTION. 1988-10-24



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: B8909 **EO Index:** 124045
Key Quad: Lower Lake (3812285) **Element Code:** IIHYM24260
Occurrence Number: 49 **Occurrence Last Updated:** 2023-05-11

Scientific Name: *Bombus pensylvanicus* **Common Name:** American bumble bee
Listing Status: **Federal:** None **Rare Plant Rank:**
State: None **Other Lists:** IUCN_VU-Vulnerable
CNDDDB Element Ranks: **Global:** G3G4
State: S2

General Habitat:

□

Micro Habitat:

LONG-TONGUED; FORAGES ON A WIDE VARIETY OF FLOWERS INCLUDING VETCHES (VICIA), CLOVERS (TRIFOLIUM), THISTLES (CIRSIIUM), SUNFLOWERS (HELIANTHUS), ETC. NESTS ABOVE GROUND UNDER LONG GRASS OR UNDERGROUND. QUEENS OVERWINTER IN ROTTEN WOOD OR UNDERGROUND.

Last Date Observed: 1974-10-10 **Occurrence Type:** Natural/Native occurrence
Last Survey Date: 1974-10-10 **Occurrence Rank:** Unknown
Owner/Manager: DPR, UNKNOWN **Trend:** Unknown
Presence: Presumed Extant

Location:

VICINITY OF CACHE CREEK AT CA-53 CROSSING, JUST SE OF CLEAR LAKE.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED TO COORDINATES GIVEN BY MUSEUM FOR "CACHE CREEK", BUT COLLECTION COULD BE FROM ANYWHERE ALONG CACHE CREEK.

Ecological:

Threats:

General:

1 QUEEN COLLECTED BY N. SMITH ON 10 OCT 1974 (BMEC ENT #1961).

PLSS: T13N, R07W, Sec. 34 (M) **Accuracy:** 1 mile **Area (acres):** 1,987
UTM: Zone-10 N4308607 E532846 **Latitude/Longitude:** 38.92577 / -122.62108 **Elevation (feet):** 1,322

County Summary:

Lake

Quad Summary:

Lower Lake (3812285), Clearlake Highlands (3812286)

Sources:

RIC22D0001 RICHARDSON, L. (XERCES SOCIETY) - CALIFORNIA EXTRACT OF BUMBLE BEES OF NORTH AMERICA DATABASE.
HTTPS://WWW.LEIFRICHARDSON.ORG/BBNA.HTML. ACCESSED 7 DEC 2022. 2022-XX-XX
SMI74S0022 SMITH, N. - BMEC #1961 COLLECTED NEAR CACHE CREEK, LAKE COUNTY 1974-10-10



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 43098

Key Quad: Lucerne (3912217)

Occurrence Number: 123

EO Index: 118964

Element Code: IMBIV19010

Occurrence Last Updated: 2020-07-30

Scientific Name: *Gonidea angulata*

Common Name: western ridged mussel

Listing Status: Federal: None

Rare Plant Rank:

State: None

Other Lists: IUCN_VU-Vulnerable

CNDDDB Element Ranks: Global: G3

State: S2

General Habitat:

PRIMARILY CREEKS AND RIVERS AND LESS OFTEN LAKES.
ORIGINALLY IN MOST OF STATE, NOW EXTIRPATED FROM CENTRAL
AND SOUTHERN CALIFORNIA.

Micro Habitat:

□

Last Date Observed: 1947-07-29

Occurrence Type: Natural/Native occurrence

Last Survey Date: 2009-07-19

Occurrence Rank: Unknown

Owner/Manager: UNKNOWN

Trend: Unknown

Presence: Presumed Extant

Location:

CLEAR LAKE.

Detailed Location:

MULTIPLE HISTORICAL COLLECTIONS GIVE LOCALITY ONLY AS "CLEAR LAKE;" 1947 SPECIMEN FROM HORSESHOE BEND ON SE SHORE. 2009 RESURVEY SITE JKH09-009 FROM "ABOUT 2 MI S OF LUCERNE, CA 20 AT MILE MARKER 23.62."

Ecological:

ANODONTA ALSO FOUND HISTORICALLY AND RECENTLY.

Threats:

General:

COLLECTED PRIOR TO 1909, PRIOR TO APR 1918, AND ON UNKNOWN DATE. 9 COLLECTED ON 29 JUL 1947. LOCALITY LISTED IN INGRAM (1948). NONE FOUND ON 19 JUL 2009.

PLSS: T14N, R08W (M)

Accuracy: non-specific area

Area (acres): 39,250

UTM: Zone-10 N4319736 E519077

Latitude/Longitude: 39.02646 / -122.77960

Elevation (feet): 1,326

County Summary:

Quad Summary:

Lake

Clearlake Highlands (3812286), Clearlake Oaks (3912216), Lucerne (3912217), Lakeport (3912218)

Sources:

ANO47S0004 ANONYMOUS - LACM #104231 COLLECTED FROM CLEAR LAKE, HORSESHOE BEND, E OF LAKEPORT 1947-07-29

ANONDS0392 ANONYMOUS - UF #65292 COLLECTED FROM CLEAR LAKE XXXX-XX-XX

ANONDS0410 ANONYMOUS - ANSP #126670 COLLECTED FROM CLEAR LAKE XXXX-XX-XX

FUR09D0001 FURNISH, J. & J. HOWARD (U.S. FOREST SERVICE) - SHAPEFILE OF MUSSEL SURVEY SITES IN THE USFS PACIFIC SOUTHWEST REGION 2009-XX-XX

HOW10R0002 HOWARD, J. (THE NATURE CONSERVANCY) - SENSITIVE FRESHWATER MUSSEL SURVEYS IN THE PACIFIC SOUTHWEST REGION: ASSESSMENT OF CONSERVATION STATUS. REPORT PREPARED FOR USDA FOREST SERVICE, PACIFIC SOUTHWEST REGION. 2010-10-XX

ING48A0001 INGRAM, W. - THE LARGER FRESHWATER CLAMS OF CALIFORNIA, OREGON, AND WASHINGTON. JOURNAL OF ENTOMOLOGY AND ZOOLOGY 40(4): 72-92. 1948-12-XX

XERNDD0002 XERCES SOCIETY - WESTERN FRESHWATER MUSSEL DATABASE XXXX-XX-XX

YATNDS0006 YATES, L. - UMMZ #107894 COLLECTED FROM CLEAR LAKE XXXX-XX-XX

YATNDS0007 YATES, L. - USNM #26094 COLLECTED FROM CLEAR LAKE XXXX-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	38248	EO Index:	33255
Key Quad:	Clearlake Highlands (3812286)	Element Code:	PDAP10Z0W0
Occurrence Number:	3	Occurrence Last Updated:	2015-09-15

Scientific Name:	<i>Eryngium constancei</i>	Common Name:	Loch Lomond button-celery
Listing Status:	Federal: Endangered State: Endangered	Rare Plant Rank:	1B.1
CNDDB Element Ranks:	Global: G1 State: S1	Other Lists:	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden

General Habitat:	Micro Habitat:
VERNAL POOLS.	VOLCANIC ASH FLOW VERNAL POOLS. 460-855 M.

Last Date Observed:	1997-10-22	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1997-10-22	Occurrence Rank:	Poor
Owner/Manager:	PVT	Trend:	Unknown
Presence:	Presumed Extant		

Location:
"DRY LAKE" VERNAL POOL, JUST NORTH OF HWY 29 SOUTH OF CLEAR LAKE.

Detailed Location:
MAPPED BY CNDDB AROUND DRY LAKE VERNAL POOL BASED ON A 1997 ZALUSKY FIELD SURVEY. IN THE SW 1/4 OF SE 1/4 OF SECTION 4 AND THE NW 1/4 OF NE 1/4 OF SECTION 9.

Ecological:
POOL DOMINATED BY E. CONSTANCEI AND JUNCUS SPP. SURROUNDING COMMUNITY IS BLUE OAK WOODLAND.

Threats:
SURROUNDING SLOPES HAVE BEEN STRIPPED OF VEG & ARE ERODING INTO POOL. OWNER PLANS TO CONSTRUCT A RESERVOIR AT THE SITE.

General:
25,000 PLANTS ESTIMATED IN 1997. ID CONFIRMED BY L. CONSTANCE. POOL HAD BEEN DISKED AND TWO SOIL TEST PITS HAD BEEN EXCAVATED WITHIN IT WHEN SURVEYED IN 1997.

PLSS:	T12N, R07W, Sec. 04, SE (M)	Accuracy:	specific area	Area (acres):	5
UTM:	Zone-10 N4306924 E531146	Latitude/Longitude:	38.91066 / -122.64076	Elevation (feet):	1,520

County Summary:	Quad Summary:
Lake	Clearlake Highlands (3812286)

Sources:

CON97U0001	CONSTANCE, L. - LETTER TO S. ZALUSKY CONFIRMING PLANT ID. 1997-11-07
ZAL97F0001	ZALUSKY, S. - FIELD SURVEY FORM FOR ERYNGIUM CONSTANCEI 1997-10-22
ZAL97S0001	ZALUSKY, S. - ZALUSKY SN JEPS #105488 1997-10-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	08439	EO Index:	284
Key Quad:	Lower Lake (3812285)	Element Code:	PDAST5L010
Occurrence Number:	11	Occurrence Last Updated:	2021-10-15

Scientific Name:	<i>Lasthenia burkei</i>	Common Name:	Burke's goldfields
Listing Status:	Federal: Endangered State: Endangered	Rare Plant Rank:	1B.1
CNDDB Element Ranks:	Global: G1 State: S1	Other Lists:	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley

General Habitat:	Micro Habitat:
VERNAL POOLS, MEADOWS AND SEEPS.	MOST OFTEN IN VERNAL POOLS AND SWALES. 15-580 M.

Last Date Observed:	2007-XX-XX	Occurrence Type:	Transplant Outside of Native Hab./Range
Last Survey Date:	2007-XX-XX	Occurrence Rank:	Good
Owner/Manager:	PVT	Trend:	Unknown
Presence:	Presumed Extant		

Location:
PLOYEZ WINERY (FORMERLY STUERMER WINERY), WEST SIDE OF HWY 29, S OF LOWER LAKE AND N OF JUNCTION WITH SPRUCE GROVE ROAD.

Detailed Location:
MAPPED WEST OF HIGHWAY 29 ALONG ENTRANCE ROAD TO WINERY. A 1983 GUSTAFSON & REYNOLDS COLLECTION FROM "HWY 29, ABOUT 1 MI N OF THE SPRUCE GROVE RD" ALSO ATTRIBUTED TO THIS SITE.

Ecological:
IN VERNAL POOL, POSSIBLY ARTIFICIALLY CREATED. ASSOCIATED WITH DOWNINGIA; LASTHENIA BURKEI DOMINANT.

Threats:
General:
5000 IN 1985, 1000 IN 1990, UNK # IN 1998, 10,000+ IN 2002, >5000 IN 2006, 1000+ IN 2007. VARIATION IN PAPPUS AWN # PRESENT. SITE PROBABLY NOT NATIVE; PLANTS EITHER CAME IN OR WERE BROUGHT IN FOLLOWING SCRAPING ASSOCIATED WITH WINERY DEVEL.

PLSS:	T12N, R07W, Sec. 14, NW (M)	Accuracy:	80 meters	Area (acres):	0
UTM:	Zone-10 N4305061 E534013	Latitude/Longitude:	38.89377 / -122.60779	Elevation (feet):	1,400

County Summary:	Quad Summary:
Lake	Lower Lake (3812285)



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Sources:

CHA98S0004	CHAN, R. - CHAN #98026 JEPS #102008 JEPS #98729 1998-05-08
CHA98U0001	CHAN, R. - EMAIL TO ROXANNE BITTMAN REGARDING LASTHENIA CONJUGENS SITES 1998-05-13
CPR19U0001	CALIFORNIA PLANT RESCUE - SEED BANK DATA FOR THE CALIFORNIA PLANT RESCUE PROJECT 2019-07-24
GUS83S0007	GUSTAFSON, R. & S. REYNOLDS - GUSTAFSON #2746 POM #361572, RSA #0008454 1983-06-07
MCC85F0018	MCCARTEN, N. - FIELD SURVEY FORM FOR LASTHENIA BURKEI 1985-05-14
MCC85R0003	MCCARTEN, N. - A SURVEY OF LASTHENIA BURKEI 1985-04-15
MOR02U0001	MORANZ, R. - ANNOTATED RAREFIND PRINTOUTS FOR LASTHENIA BURKEI 2002-08-28
ORN85S0001	ORNDUFF, R. - ORNDUFF #9517 UC #1521832 1985-05-17
ORN85U0001	ORNDUFF, R. - NOTES REGARDING LASTHENIA BURKEI EO #11 WITH MAP. 1985-02-20
ORN98U0001	ORNDUFF, B. - LETTER TO S. MOREY REGARDING BRODIAEA PALLIDA & LASTHENIA BURKEI. 1998-08-13
PAT90U0022	PATTERSON, C. - SENSITIVE SPECIES SEED COLLECTION FORM FOR LASTHENIA BURKEI. 1990-05-XX
PAT94R0001	PATTERSON, C. ET AL. - INVENTORY OF RARE PLANT LOCATIONS AND SITES SURVEYED FOR WETLAND RESOURCES ON THE SANTA ROSA PLAIN, SONOMA COUNTY. PREPARED FOR CALIF DEPT FISH & GAME, YOUNTVILLE. 1994-06-30
SCH09U0004	SCHWAB, E. (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - SUMMARY OF THE BOTANICAL SURVEY FOR LAKE COUNTY 2009-01-12
SLO09R0002	SLOOP, C. & D. AYRES - CONSERVATION GENETICS OF THREE ENDANGERED VERNAL POOL PLANTS OF THE SANTA ROSA PLAIN, SONOMA COUNTY, CALIFORNIA 2009-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	42617	EO Index:	20017
Key Quad:	Lower Lake (3812285)	Element Code:	PDAST5N0F0
Occurrence Number:	18	Occurrence Last Updated:	2011-03-03

Scientific Name:	<i>Layia septentrionalis</i>	Common Name:	Colusa layia
Listing Status:	Federal: None State: None	Rare Plant Rank:	1B.2
CNDDDB Element Ranks:	Global: G2 State: S2	Other Lists:	BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley

General Habitat:	Micro Habitat:
CHAPARRAL, CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.	SCATTERED COLONIES IN FIELDS AND GRASSY SLOPES IN SANDY OR SERPENTINE SOIL. 15-1100 M.

Last Date Observed:	1999-06-07	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1999-06-07	Occurrence Rank:	Good
Owner/Manager:	PVT	Trend:	Unknown
Presence:	Presumed Extant		

Location:
EAST OF BURNS VALLEY, ABOUT 0.2-0.5 MILE EAST OF HIGHWAY 53, NORTH OF LOWER LAKE.

Detailed Location:
9 COLONIES MAPPED IN 6 POLYGONS AT CNDDDB, WITHIN THE S 1/2 OF SECTION 14.

Ecological:
GROWING UNDER QUERCUS DOUGLASII WITH BROMUS HORDEACEOUS, TRITELEIA LAXA, IRIS DOUGLASIANA, COLLINSIA HETEROPHYLLA, MADIA GRACILIS, ACHYRACHAENA MOLLIS, ET AL.

Threats:
A PORTION OF THIS SITE IS PROPOSED FOR VINEYARD CONVERSION.

General:
9 COLONIES RANGING IN SIZE FROM 4 TO 50 PLANTS OBSERVED IN 1999. TWO COLLECTIONS BY BOWMAN IN 1902 AND 1909, WITH LOCATIONS GIVEN AS BURNS VALLEY, ALSO ATTRIBUTED HERE. INCLUDES FORMER OCCURRENCE #35.

PLSS:	T13N, R07W, Sec. 14, S (M)	Accuracy:	specific area	Area (acres):	14
UTM:	Zone-10 N4314131 E534227	Latitude/Longitude:	38.97549 / -122.60486	Elevation (feet):	1,500

County Summary:	Quad Summary:
Lake	Lower Lake (3812285)

Sources:

BAL91U0001	BALDWIN, B. & S. BAINBRIDGE - LETTER WITH INFORMATION ON SEVERAL RARE PLANTS 1991-08-13
BOW02S0001	BOWMAN - BOWMAN #151 DS #3250 & #3260, CAS-BOT-BC #329320 & #329321 1902-04-XX
BOW09S0001	BOWMAN - BOWMAN #225 (CITED IN BAL91U0001) 1909-04-XX
MCB99F0001	MCBRIDE, G. - FIELD SURVEY FORM FOR LAYIA SEPTENTRIONALIS 1999-06-07
MCB99S0002	MCBRIDE, G. - MCBRIDE SN JEPS #95204 1999-05-12



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	35508	EO Index:	30505
Key Quad:	Lower Lake (3812285)	Element Code:	PDAST650A0
Occurrence Number:	10	Occurrence Last Updated:	2011-01-05

Scientific Name:	<i>Harmonia hallii</i>	Common Name:	Hall's harmonia
Listing Status:	Federal: None State: None	Rare Plant Rank:	1B.2
CNDDB Element Ranks:	Global: G2? State: S2?	Other Lists:	BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden

General Habitat:	Micro Habitat:
CHAPARRAL.	SERPENTINE HILLS AND RIDGES. OPEN, ROCKY AREAS WITHIN CHAPARRAL. 335-945 M.

Last Date Observed:	1893-05-31	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1893-05-31	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown

Presence: Presumed Extant

Location:
LOWER LAKE.

Detailed Location:
EXACT LOCATION NOT KNOWN. MAPPED BY CNDDB IN THE GENERAL VICINITY OF LOWER LAKE.

Ecological:

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1893 COLLECTION BY BLANKENSHIP. NEEDS FIELDWORK.

PLSS:	T12N, R07W, Sec. 02 (M)	Accuracy:	1 mile	Area (acres):	0
UTM:	Zone-10 N4306972 E533893	Latitude/Longitude:	38.91099 / -122.60908	Elevation (feet):	

County Summary:	Quad Summary:
Lake	Lower Lake (3812285), Clearlake Highlands (3812286)

Sources:
BLA93S0004 BLANKENSHIP - BLANKENSHIP SN UC #89172 1893-05-31



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 45506

Key Quad: Clearlake Highlands (3812286)

Occurrence Number: 8

EO Index: 45506

Element Code: PDERI04271

Occurrence Last Updated: 2015-06-10

Scientific Name: *Arctostaphylos manzanita* ssp. *elegans*

Common Name: Konocti manzanita

Listing Status: Federal: None

Rare Plant Rank: 1B.3

State: None

Other Lists: BLM_S-Sensitive
SB_UCSC-UC Santa Cruz

CNDDDB Element Ranks: Global: G5T3

State: S3

General Habitat:

CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE
CONIFEROUS FOREST.

Micro Habitat:

VOLCANIC SOILS. 225-1830 M.

Last Date Observed: 2003-05-12

Occurrence Type: Natural/Native occurrence

Last Survey Date: 2003-05-12

Occurrence Rank: Unknown

Owner/Manager: UNKNOWN

Trend: Unknown

Presence: Presumed Extant

Location:

2 MILES WEST OF LOWER LAKE ON LOWER LAKE-KELSEYVILLE ROAD.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDDB ALONG HIGHWAY 29 AROUND 2 ROAD MILES WEST OF LOWER LAKE.

Ecological:

Threats:

GENERAL DEVELOPMENT IN REGION, CONVERSION TO VINEYARDS, AND WIDENING OF HIGHWAY 29.

General:

MAIN SOURCE OF INFORMATION FOR THIS SITE IS A 1936 JEPSON COLLECTION. A 1934 JUSSEL COLLECTION FROM LOWER LAKE IS ALSO ATTRIBUTED HERE. LEITNER SURVEY FORM INDICATES PLANTS SEEN AT OCC #8 IN 2003; NEED MAP DETAIL FOR THIS AREA.

PLSS: T12N, R07W, Sec. 09, NW (M)

Accuracy: non-specific area

Area (acres): 70

UTM: Zone-10 N4306779 E530402

Latitude/Longitude: 38.90938 / -122.64934

Elevation (feet): 1,800

County Summary:

Quad Summary:

Lake

Clearlake Highlands (3812286)

Sources:

JEP36S0009 JEPSON, W. - JEPSON #17981 JEPS #38886 1936-12-05

JUS34S0001 JUSSEL, M. - JUSSEL SN CAS #192530 1934-03-28

LEI03F0020 LEITNER, B. & R. THOMPSON - FIELD SURVEY FORM FOR ARCTOSTAPHYLOS MANZANITA SSP. ELEGANS 2003-05-12



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 45508

Key Quad: Clearlake Highlands (3812286)

Occurrence Number: 10

EO Index: 45508

Element Code: PDERI04271

Occurrence Last Updated: 2015-06-01

Scientific Name: *Arctostaphylos manzanita* ssp. *elegans*

Common Name: Konocti manzanita

Listing Status: Federal: None

Rare Plant Rank: 1B.3

State: None

Other Lists: BLM_S-Sensitive
SB_UCSC-UC Santa Cruz

CNDDDB Element Ranks: Global: G5T3

State: S3

General Habitat:

CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE
CONIFEROUS FOREST.

Micro Habitat:

VOLCANIC SOILS. 225-1830 M.

Last Date Observed: 1951-04-04

Occurrence Type: Natural/Native occurrence

Last Survey Date: 1951-04-04

Occurrence Rank: Unknown

Owner/Manager: UNKNOWN

Trend: Unknown

Presence: Presumed Extant

Location:

JAGOS RESORT, 5 MILES WEST OF LOWER LAKE.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDDB IN THE VICINITY OF JAGO BAY WITHIN TRS PROVIDED: T13N R7W SECTION 30.

Ecological:

SLOPE 35% N.

Threats:

General:

ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1951 CUFF COLLECTION. NEEDS FIELDWORK.

PLSS: T13N, R07W, Sec. 30 (M)

Accuracy: 2/5 mile

Area (acres): 0

UTM: Zone-10 N4310721 E528378

Latitude/Longitude: 38.94497 / -122.67252

Elevation (feet): 1,450

County Summary:

Quad Summary:

Lake

Clearlake Highlands (3812286)

Sources:

CUF51S0001 CUFF, K. - CUFF #138 UC #1193030 1951-04-04



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	08348	EO Index:	18448
Key Quad:	Clearlake Highlands (3812286)	Element Code:	PDPLM030H0
Occurrence Number:	1	Occurrence Last Updated:	2012-10-18

Scientific Name:	<i>Eriastrum brandegeeeae</i>	Common Name:	Brandegee's eriastrum
Listing Status:	Federal: None State: None	Rare Plant Rank:	1B.1
CNDDB Element Ranks:	Global: G1Q State: S1	Other Lists:	BLM_S-Sensitive

General Habitat:	Micro Habitat:
CHAPARRAL, CISMONTANE WOODLAND.	ON BARREN VOLCANIC SOILS; OFTEN IN OPEN AREAS. 410-845 M.

Last Date Observed:	2007-06-19	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2007-06-19	Occurrence Rank:	Fair
Owner/Manager:	PVT	Trend:	Unknown
Presence:	Presumed Extant		

Location:
ABOUT 1 MI SE OF BORAX LAKE, OBSIDIAN RIDGE, BETWEEN BORAX LAKE & BURNS VALLEY, CLEAR LAKE.

Detailed Location:
IN OPEN AREAS WEST OF ACACIA ST. PLANTS IN SEVERAL COLONIES THROUGH THE AREA WHICH HAS MANY DIRT ROADS. MAPPED IN THE SE 1/4 OF SE 1/4 OF SEC 17. SITE WOULD MAKE A GOOD PRESERVE/OPEN SPACE. VAGUE COLLECTIONS FROM SE BORAX LAKE ATTRIB HERE.

Ecological:
ON VOLCANIC ASH AND OBSIDIAN RUBBLE. OPEN AREAS IN DISTURBED CHAPARRAL, SURROUNDED BY DEVELOPMENT. OTHER SPECIES IN THE AREA ARE PENSTEMON CENTRANTHIFOLIUS, ERIOGONUM LUTEOLUM?, ERIOGONUM HIRIFLORUM, AND PHACELIA SPP. SOIL IS VERY SANDY.

Threats:
RESIDENTIAL DEVELOPMENT, GENERAL DUMPING, OHV USE. SITE IS VERY DISTURBED BY ROADS/TRAIL.

General:
TYPE LOCALITY. NOT FOUND AT SITE IN 1977. 100'S OF PLANTS SEEN AT SW BASE OF BALD MOUNTAIN IN 2004. 200 IN 2007. GOWEN (2012) TENDS TO VIEW THE POPULATIONS OF E. BRANDEGEEAE NEAR BORAX LAKE AS THE ONLY REPRESENTATIVE ONES OF THE SPECIES.

PLSS:	T13N, R07W, Sec. 17, SE (M)	Accuracy:	specific area	Area (acres):	3
UTM:	Zone-10 N4313721 E530234	Latitude/Longitude:	38.97195 / -122.65097	Elevation (feet):	1,400

County Summary:	Quad Summary:
Lake	Clearlake Highlands (3812286)

Sources:

BAK50S0001	BAKER, M. - BAKER #12233 UC #909730, RSA #73996 1950-05-23
BAK50S0005	BAKER, M. - BAKER #12273 RSA #63661 1950-06-02
CRA85R0001	CRANE, N. & B. MALLOCH - PG&E STUDY OF RARE PLANTS FOR THE GEYSERS-CALISTOGA KNOWN GEOTHERMAL RESOURCE AREA 1985-09-03
DEG07F0012	DE GROOT, S. - FIELD SURVEY FORM FOR ERIASTRUM BRANDEGEEAE 2007-06-19
GOW04F0001	GOWEN, D. - FIELD SURVEY FORM FOR ERIASTRUM BRANDEGEEAE 2004-08-16
GOW04U0002	GOWEN, D. - EMAIL TO R. BITTMAN REGARDING ERIASTRUM BRANDEGEEAE 2004-08-22
GOW12U0001	GOWEN, D. - EMAIL REGARDING VARIATION IN POPULATIONS OF ERIASTRUM TRACYI AND ERIASTRUM BRANDEGEEAE 2012-03-31
HOO38S0009	HOOVER, R. - HOOVER #3553 JEPS #24950, #9483, #9643, UC #690663 1938-06-09
MAS45S0002	MASON, H. - MASON #12604 UC #693854 & #971719, CAS #384736, DS #356932, GH #78495, HSC #16945, POM #310954, WTU #184143 1945-06-28
MAS45S0011	MASON, H. - MASON #12586 UC #962099 1945-05-12



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	24729	EO Index:	6875
Key Quad:	Clearlake Highlands (3812286)	Element Code:	PDPLM0C0E1
Occurrence Number:	8	Occurrence Last Updated:	2013-08-30

Scientific Name:	<i>Navarretia leucocephala ssp. bakeri</i>			Common Name:	Baker's navarretia
Listing Status:	Federal:	None	Rare Plant Rank:	1B.1	
	State:	None	Other Lists:	BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	
CNDDB Element Ranks:	Global:	G4T2			
	State:	S2			

General Habitat:	Micro Habitat:
CISMONTANE WOODLAND, MEADOWS AND SEEPS, VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND, LOWER MONTANE CONIFEROUS FOREST.	VERNAL POOLS AND SWALES; ADOBE OR ALKALINE SOILS. 3-1680 M.

Last Date Observed:	1996-05-18	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1996-05-18	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
1.5 MILES WEST OF LOWER LAKE.

Detailed Location:
MAPPED IN VICINITY OF "DRY LAKE" ON TOPO WHICH IS ABOUT 1.5 MILES WEST OF THE TOWN OF LOWER LAKE.

Ecological:
IN VERNAL POOL IN ADOBE SOIL SURROUNDED BY OAK SAVANNA (MASON 1945). VERY WET, HEAVY SOIL WITH DOWNINGIA CONCOLOR (SMITH 1957).

Threats:
General:

TYPE LOCALITY. SITE BASED ON SEVERAL HISTORIC COLLECTIONS FROM 1.5 MILES WEST OF LOWER LAKE. A 1996 DE NEVERS COLLECTION FROM "JUST S OF ANDERSON MARSH STATE HISTORIC PARK" ALSO ATTRIBUTED HERE. NEEDS FIELDWORK. INCLUDES FORMER EO #7.

PLSS:	T12N, R07W, Sec. 09, N (M)	Accuracy:	1/5 mile	Area (acres):	0
UTM:	Zone-10 N4306886 E531204	Latitude/Longitude:	38.91032 / -122.64009	Elevation (feet):	1,600

County Summary:	Quad Summary:
Lake	Clearlake Highlands (3812286)

Sources:

BAC53S0025	BACIGALUPI, R. - BACIGALUPI #4153 SEINET #201400 1953-05-26
BAK45S0014	BAKER, M. - BAKER #11070 (CITED IN MAS46A0001) 1945-06-XX
BAK52S0002	BAKER, M. - BAKER #12477 UC #972196, RSA #74134 & #90510 1952-05-27
DEN96S0001	DE NEVERS, G. - DE NEVERS #10814 CAS #1091245, CAS-BOT-BC #230346 1996-05-18
MAS45S0010	MASON, H. - MASON #12599 UC #700272 1945-06-28
MAS46A0001	MASON, H. - FIVE NEW SPECIES OF NAVARRETIA. MADRONO 8 (6): 196-200. 1946-XX-XX
MAS46S0003	MASON, H. - MASON #12802 UC #1178812 1946-05-30
MAS53S0002	MASON, H. - MASON #14533 UC #1178919, SEINET #200256 1953-06-08
SMI57S0007	SMITH, S. & J. ANDERSON - SMITH #3022 UC #1094375 1957-06-09



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	08439	EO Index:	283
Key Quad:	Lower Lake (3812285)	Element Code:	PDPLM0C0E1
Occurrence Number:	24	Occurrence Last Updated:	2008-10-30

Scientific Name:	<i>Navarretia leucocephala ssp. bakeri</i>	Common Name:	Baker's navarretia
Listing Status:	Federal: None State: None	Rare Plant Rank:	1B.1
CNDDDB Element Ranks:	Global: G4T2 State: S2	Other Lists:	BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden

General Habitat:	Micro Habitat:
CISMONTANE WOODLAND, MEADOWS AND SEEPS, VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND, LOWER MONTANE CONIFEROUS FOREST.	VERNAL POOLS AND SWALES; ADOBE OR ALKALINE SOILS. 3-1680 M.

Last Date Observed:	1994-05-14	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1994-05-14	Occurrence Rank:	Fair
Owner/Manager:	PVT	Trend:	Unknown
Presence:	Presumed Extant		

Location:
PLOYEZ WINERY (FORMERLY STUERMER WINERY), WEST SIDE OF HWY 29, SOUTH OF LOWER LAKE AND NORTH OF JCT W/SPRUCE GROVE ROAD.

Detailed Location:

Ecological:
IN VERNAL POOL; POSSIBLY ARTIFICIALLY CREATED. WITH LASTHENIA BURKEI, EPILOBIUM, LYTHRUM, ERYNGIUM, DOWNINGIA CONCOLOR CONCOLOR, AND PLAGIOBOTHRYUS STIPITATUS MICRANTHUS.

Threats:
HIGHWAY WIDENING WOULD DESTROY POPULATION.

General:
THOUSANDS OF PLANTS IN 1994.

PLSS:	T12N, R07W, Sec. 14, NW (M)	Accuracy:	80 meters	Area (acres):	0
UTM:	Zone-10 N4305061 E534013	Latitude/Longitude:	38.89377 / -122.60779	Elevation (feet):	1,400

County Summary:	Quad Summary:
Lake	Lower Lake (3812285)

Sources:

ORN98U0001	ORNDUFF, B. - LETTER TO S. MOREY REGARDING BRODIAEA PALLIDA & LASTHENIA BURKEI. 1998-08-13
SPE94F0001	SPENCER, S. - FIELD SURVEY FORM FOR NAVARRETIA LEUCOCEPHALA SSP. BAKERI 1994-05-14
SPE94S0001	SPENCER, S. - SPENCER #4514 RSA #642573 1994-05-14



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	90252	EO Index:	91271
Key Quad:	Lower Lake (3812285)	Element Code:	PDPLM0C0E1
Occurrence Number:	55	Occurrence Last Updated:	2013-09-05

Scientific Name:	<i>Navarretia leucocephala ssp. bakeri</i>			Common Name:	Baker's navarretia
Listing Status:	Federal:	None	Rare Plant Rank:	1B.1	
	State:	None	Other Lists:	BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	
CNDDB Element Ranks:	Global:	G4T2			
	State:	S2			

General Habitat:	Micro Habitat:
CISMONTANE WOODLAND, MEADOWS AND SEEPS, VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND, LOWER MONTANE CONIFEROUS FOREST.	VERNAL POOLS AND SWALES; ADOBE OR ALKALINE SOILS. 3-1680 M.

Last Date Observed:	1945-06-22	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1945-06-22	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
3.5 MILES NORTH OF LOWER LAKE.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB ALONG STATE ROUTE 53 AROUND 3.5 ROAD MILES NORTH OF LOWER LAKE, IN THE VICINITY OF CLEARLAKE.

Ecological:

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1945 COLLECTION BY HOWELL. NEEDS FIELDWORK.

PLSS:	T13N, R07W, Sec. 22 (M)	Accuracy:	non-specific area	Area (acres):	132
UTM:	Zone-10 N4312642 E532855	Latitude/Longitude:	38.96213 / -122.62077	Elevation (feet):	

County Summary:	Quad Summary:
Lake	Lower Lake (3812285)

Sources:
HOW45S0031 HOWELL, J. - HOWELL #21224 CAS #327770, CAS-BOT-BC #230342 1945-06-22



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	35508	EO Index:	46035
Key Quad:	Lower Lake (3812285)	Element Code:	PDPLM0C0E4
Occurrence Number:	3	Occurrence Last Updated:	2015-12-08

Scientific Name:	<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>			Common Name:	few-flowered navarretia
Listing Status:	Federal:	Endangered	Rare Plant Rank:	1B.1	
	State:	Threatened	Other Lists:	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	
CNDDB Element Ranks:	Global:	G4T1			
	State:	S1			

General Habitat:	Micro Habitat:
VERNAL POOLS.	VOLCANIC ASH FLOW, AND VOLCANIC SUBSTRATE VERNAL POOLS. 425-855 M.

Last Date Observed:	1951-05-21	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1951-05-21	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
LOWER LAKE.

Detailed Location:
EXACT LOCATION UNKNOWN, MAPPED IN GENERAL VICINITY OF LOWER LAKE.

Ecological:
VERNAL POOL.

Threats:

General:
BASED ON A 1938 DUTTON COLLECTION. A 1951 HOLM COLLECTION FROM "BETWEEN LOWER LAKE AND MIDDLETON" IS ALSO ATTRIBUTED TO THIS SITE. NEEDS FIELDWORK.

PLSS:	T12N, R07W, Sec. 02 (M)	Accuracy:	1 mile	Area (acres):	0
UTM:	Zone-10 N4306972 E533893	Latitude/Longitude:	38.91099 / -122.60908	Elevation (feet):	

County Summary:	Quad Summary:
Lake	Lower Lake (3812285), Clearlake Highlands (3812286)

Sources:

DUT38S0001	DUTTON, H. - DUTTON SN JEPS #43459 1938-05-30
HOL51S0001	HOLM, R. - HOLM SN DS #344978, CAS-BOT-BC #230407 1951-05-21



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 17094

Key Quad: Clearlake Highlands (3812286)

Occurrence Number: 4

EO Index: 12087

Element Code: PDROS0W011

Occurrence Last Updated: 2007-03-14

Scientific Name: *Horkelia bolanderi*

Common Name: Bolander's horkelia

Listing Status: Federal: None

Rare Plant Rank: 1B.2

State: None

Other Lists: BLM_S-Sensitive

CNDDDB Element Ranks: Global: G1

State: S1

General Habitat:

LOWER MONTANE CONIFEROUS FOREST, CHAPARRAL, MEADOWS AND SEEPS, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:

GRASSY MARGINS OF VERNAL POOLS AND MEADOWS. 455-855 M.

Last Date Observed: 1941-08-02

Occurrence Type: Natural/Native occurrence

Last Survey Date: 1989-07-04

Occurrence Rank: Unknown

Owner/Manager: PVT

Trend: Unknown

Presence: Presumed Extant

Location:

PINKEYE LAKE, ABOUT 3 MILES WEST OF LOWER LAKE.

Detailed Location:

EXACT LOCATION UNKNOWN. BASED ON COLLECTIONS FROM "3 MI W OF LOWER LAKE" AND "~17 MI NW OF MIDDLETOWN ALONG ROUTE CAL 29." MEASUREMENTS ARE IN VICINITY OF PINKEYE LAKE, WHICH HAS HABITAT SIMILAR TO NEARBY KNOWN SITES.

Ecological:

MEADOW/SEASONAL POND SURROUNDED BY CHAPARRAL.

Threats:

General:

BASED ON 1938 HOOVER COLLECTION AND 1941 MCVAUGH COLLECTION. NO PLANTS FOUND IN VICINITY OF PINKEYE LAKE IN 1989. NEEDS FIELDWORK.

PLSS: T12N, R07W, Sec. 08, NE (M)

Accuracy: 1/5 mile

Area (acres): 0

UTM: Zone-10 N4306627 E529673

Latitude/Longitude: 38.90804 / -122.65776

Elevation (feet): 1,700

County Summary:

Quad Summary:

Lake

Clearlake Highlands (3812286)

Sources:

BIT89F0004 BITTMAN, R. - FIELD SURVEY FORM FOR HORKELIA BOLANDERI 1989-07-04

HOO38S0018 HOOVER, R. - HOOVER #3815 UC #763980, DS #318602, SEINET #196220, UTC #79429 1938-09-05

MCV41S0002 MCVAUGH, R. - MCVAUGH #6207 UC #719817, DS #687599, GH #345610 1941-08-02



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	50797	EO Index:	50797
Key Quad:	Clearlake Highlands (3812286)	Element Code:	PMPOT03160
Occurrence Number:	8	Occurrence Last Updated:	2003-03-27

Scientific Name:	<i>Potamogeton zosteriformis</i>	Common Name:	eel-grass pondweed
Listing Status:	Federal: None State: None	Rare Plant Rank:	2B.2
CNDDDB Element Ranks:	Global: G5 State: S3	Other Lists:	

General Habitat:	Micro Habitat:
MARSHES AND SWAMPS.	PONDS, LAKES, STREAMS. 90-2135 M.

Last Date Observed:	1945-09-04	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1945-09-04	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		
Location:	CLEAR LAKE NEAR WYGALS RESORT AT SOUTH END OF LAKE.		
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB IN GENERAL VICINITY OF SOUTH END OF CLEAR LAKE.		
Ecological:	SHALLOW WATER.		
Threats:			
General:	ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1945 COLLECTION BY BAKER. NEEDS FIELDWORK.		
PLSS:	T13N, R08W, Sec. 13 (M)	Accuracy:	5 miles
UTM:	Zone-10 N4314109 E526216	Latitude/Longitude:	38.97557 / -122.69734
Area (acres):	0		
Elevation (feet):			
County Summary:	Quad Summary:		
Lake	Lower Lake (3812285), Clearlake Highlands (3812286), Kelseyville (3812287), Benmore Canyon (3912215), Clearlake Oaks (3912216), Lucerne (3912217)		
Sources:			
BAK45S0010	BAKER, M. - BAKER #11198 UC #110084 1945-09-04		

Element_Type	Scientific_Name	Common_Name	Element_Code	Federal_Status	State_Status	CDFW_Status	CA_Rare_Plant_Rank	Quad_Code	Quad_Name	Data_Status	Taxonomic_Si
Animals - Amphibians	Rana boylei pop. 1	foothill yellow-legged frog - north coast DPS	AAABH01051	None	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Amphibians - Ranidae - Rana boylei pop. 1
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Strix occidentalis caurina	Northern Spotted Owl	ABNSB12011	Threatened	Threatened	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Fish	Archoplates interruptus	Sacramento perch	AFCQB07010	None	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Fish - Centrarchidae - Archoplates interruptus
Animals - Fish	Cottus asper ssp.	Clear Lake prickly sculpin	AFC4E02021	None	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Animals - Fish - Cottidae - Cottus asper ssp.
Animals - Fish	Hesperoleucus venustus x H. symmetricus	Clear Lake roach	AFCJB19050	None	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Animals - Fish - Cyprinidae - Hesperoleucus venustus x H. symmetricus
Animals - Fish	Lavinia exilicauda chi	Clear Lake hitch	AFCJB19011	Proposed Threatened	Threatened	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda chi
Animals - Fish	Hysteroecarpus traskii lagunae	Clear Lake tule perch	AFCQK02013	None	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Fish - Embiotocidae - Hysteroecarpus traskii lagunae
Animals - Insects	Bombus pensylvanicus	American bumble bee	IIHYM24260	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Insect - Apidae - Bombus pensylvanicus
Animals - Insects	Hedychridium milleri	Borax Lake cuckoo wasp	IIHYM68020	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Insect - Chrysidae - Hedychridium milleri

Animals - Insects	Dubiraphia brunnescens	brownish dubiraphian riffle beetle	IICOL5A010	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Insecta - Elmidae - Dubiraphia brunnescens	Hedychridium milleri
Animals - Mammals	Cervus canadensis nannodes	tule elk	AMALC01011	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Animals - Mammalia - Cervidae - Cervus canadensis nannodes	
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Mapped and Unprocessed	Animals - Mammalia - Vespertilionidae - Antrozous pallidus	
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Mammalia - Vespertilionidae - Corynorhinus townsendii	
Animals - Mammals	Myotis evotis	long-eared myotis	AMACC01070	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Animals - Mammalia - Vespertilionidae - Myotis evotis	
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Animals - Mammalia - Vespertilionidae - Myotis yumanensis	
Animals - Mollusks	Pyrgulopsis ventricosa	Clear Lake pyrg	IMGASJ0F40	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped and Unprocessed	Animals - Mollusca - Hydrobiidae - Pyrgulopsis ventricosa	
Animals - Mollusks	Gonidea angulata	western ridged mussel	IMBIV19010	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Animals - Mollusca - Unionidae - Gonidea angulata	
Animals - Reptiles	Actinemys marmorata	northwestern pond turtle	ARAAD02031	Proposed Threatened	None	SSC	-	3812286	CLEARLAKE HIGHLANDS	Mapped and Unprocessed	Animals - Reptilia - Emydidae - Actinemys marmorata	
Community - Aquatic	Clear Lake Drainage Resident Trout Stream	Clear Lake Drainage Resident Trout Stream	CARA2520CA	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Community - Aquatic - Clear Lake Drainage Resident Trout Stream	
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh	
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool	
Community - Terrestrial	Northern Volcanic Ash Vernal Pool	Northern Volcanic Ash Vernal Pool	CTT44133CA	None	None	-	-	3812286	CLEARLAKE HIGHLANDS	Mapped	Community - Terrestrial - Northern Volcanic Ash Vernal Pool	

Plants - Vascular	Eryngium constancei	Loch Lomond button-celery	PDAP10Z0W0	Endangered	-	1B.1	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Apiaceae - Eryngium constancei
Plants - Vascular	Lomatium repostum	Napa lomatium	PDAP11B1M0	None	-	4.2	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Apiaceae - Lomatium repostum
Plants - Vascular	Harmonia hallii	Halls harmonia	PDAST650A0	None	-	1B.2	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Asteraceae - Harmonia hallii
Plants - Vascular	Hemizonia congesta ssp. calyculata	Mendocino tarplant	PDAST4R063	None	-	4.3	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Asteraceae - Hemizonia congesta ssp. calyculata
Plants - Vascular	Lasthenia burkei	Burkes goldfields	PDAST5L010	Endangered	-	1B.1	3812286	CLEARLAKE HIGHLANDS	Mapped and Unprocessed	Plants - Vascular Asteraceae - Lasthenia burkei
Plants - Vascular	Brasenia schreberi	watershield	PDCAB01010	None	-	2B.3	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Cabombaceae - Brasenia schreberi
Plants - Vascular	Viburnum ellipticum	oval-leaved viburnum	PDCPR07080	None	-	2B.3	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Caprifoliaceae - Viburnum ellipticum
Plants - Vascular	Sedella leiocarpa	Lake County stonecrop	PDCRA0F020	Endangered	-	1B.1	3812286	CLEARLAKE HIGHLANDS	Mapped and Unprocessed	Plants - Vascular Crassulaceae - Sedella leiocarp
Plants - Vascular	Arctostaphylos manzanita ssp. elegans	Konodi manzanita	PDERI04271	None	-	1B.3	3812286	CLEARLAKE HIGHLANDS	Mapped and Unprocessed	Plants - Vascular Ericaceae - Arctostaphylos manzanita ssp. elegans
Plants - Vascular	Arctostaphylos stanfordiana ssp. raichei	Raiches manzanita	PDERI041G2	None	-	1B.1	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Ericaceae - Arctostaphylos stanfordiana ssp. raichei
Plants - Vascular	Calochortus uniflorus	pink star-tulip	PMLIL0D1F0	None	-	4.2	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Liliaceae - Calochortus uniflorus
Plants - Vascular	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	PDLIM02043	None	-	4.2	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Limnanthaceae - Limnanthes floccosa ssp. floccosa
Plants - Vascular	Hesperolinon bicarpellatum	two-carpellate western flax	PDLIN1020	None	-	1B.2	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Linaceae - Hesperolinon bicarpellatum
Plants - Vascular	Sidalcea oregana ssp. hydrophila	marsh checkerbloom	PDMAL110K2	None	-	1B.2	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Malvaceae - Sidalcea oregana ssp. hydrophila

Plants - Vascular	Toxicoscordion fontanum	marsh zigadenus	PMLIL28050	None	None	-	4.2	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Melanthiaceae - Toxicoscordion fontanum
Plants - Vascular	Calyptridium quadripetalum	four-petaled pussypaws	PDPOR09080	None	None	-	4.3	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Montiaceae - Calyptridium quadripetalum
Plants - Vascular	Piperia michaelii	Michaels rein orchid	PMORC1X110	None	None	-	4.2	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Orchidaceae - Piperia michaelii
Plants - Vascular	Cordylanthus tenuis ssp. brunneus	serpentine birds-beak	PDSCR0J0S1	None	None	-	4.3	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Orobanchaceae Cordylanthus tenuis ssp. brunneus
Plants - Vascular	Antirrhinum virga	twig-like snapdragon	PDSCR2S090	None	None	-	4.3	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Plantaginaceae Antirrhinum virg
Plants - Vascular	Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	-	1B.2	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Plantaginaceae Gratiola heterosepala
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Poaceae - Imperata brevifc
Plants - Vascular	Eriastrum brandegeeeae	Brandegees eriastrum	PDPLM030H0	None	None	-	1B.1	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Polemoniaceae Eriastrum brandegeeeae
Plants - Vascular	Leptosiphon aureus	bristly leptosiphon	PDPLM09010	None	None	-	4.2	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Polemoniaceae Leptosiphon aureus
Plants - Vascular	Navarretia leucocephala ssp. bakeri	Bakers navarretia	PDPLM0C0E1	None	None	-	1B.1	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Polemoniaceae Navarretia leucocephala ss bakeri
Plants - Vascular	Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	PDPLM0C0E4	Endangered	Threatened	-	1B.1	3812286	CLEARLAKE HIGHLANDS	Mapped and Unprocessed	Plants - Vascular Polemoniaceae Navarretia leucocephala ss pauciflora
Plants - Vascular	Navarretia leucocephala ssp. plieantha	many-flowered navarretia	PDPLM0C0E5	Endangered	Endangered	-	1B.2	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Polemoniaceae Navarretia leucocephala ss plieantha
Plants - Vascular	Potamogeton zosteriformis	eel-grass pondweed	PM POT03160	None	None	-	2B.2	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Potamogetonac - Potamogeton zosteriformis
Plants - Vascular	Myosurus minimus ssp. apus	little mousetail	PDRAN0H031	None	None	-	3.1	3812286	CLEARLAKE HIGHLANDS	Unprocessed	Plants - Vascular Ranunculaceae Myosurus minirr ssp. apus

Plants - Vascular	Horkelia bolanderi	Bolandersonorkelia	PDROS0W011	None	None	-	1B.2	3812286	CLEARLAKE HIGHLANDS	Mapped	Plants - Vascular Rosaceae - Horkelia bolanderi
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Element_Type	Scientific_Name	Common_Name	Element_Code	Federal_Status	State_Status	CDFW_Status	CA_Rare_Plant_Rank	Quad_Code	Quad_Name	Data_Status	Taxonomic_Si
Animals - Amphibians	Rana boylei pop. 1	foothill yellow-legged frog - north coast DPS	AAABH01051	None	None	SSC	-	3812285	LOWER LAKE	Mapped	Animals - Amphibians - Ranidae - Rana boylei pop. 1
Animals - Amphibians	Taricha rivularis	red-bellied newt	AAAAF02020	None	None	SSC	-	3812285	LOWER LAKE	Mapped	Animals - Amphibians - Salamandridae - Taricha rivularis
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP WL	-	3812285	LOWER LAKE	Mapped and Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3812285	LOWER LAKE	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3812285	LOWER LAKE	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	Candidate Endangered	SSC	-	3812285	LOWER LAKE	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Fish	Hesperoleucis venustus x H. symmetricus	Clear Lake roach	AFCJB19050	None	None	SSC	-	3812285	LOWER LAKE	Unprocessed	Animals - Fish - Cyprinidae - Hesperoleucis venustus x H. symmetricus
Animals - Fish	Lavinia exilicauda chi	Clear Lake hitch	AFCJB19011	Proposed Threatened	Threatened	-	-	3812285	LOWER LAKE	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda chi
Animals - Insects	Bombus pensylvanicus	American bumble bee	IIHYM24260	None	None	-	-	3812285	LOWER LAKE	Mapped	Animals - Insect Apidae - Bombus pensylvanicus
Animals - Insects	Saldula usingeri	Wilbur Springs shorebug	IIHEM07010	None	None	-	-	3812285	LOWER LAKE	Mapped	Animals - Insect Saldidae - Saldula usingeri
Animals - Mammals	Cervus canadensis nannodes	tule elk	AMALC01011	None	None	-	-	3812285	LOWER LAKE	Unprocessed	Animals - Mammals - Cervidae - Cervus canadensis nannodes
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3812285	LOWER LAKE	Mapped and Unprocessed	Animals - Mammals - Vespertilionidae Antrozous pallidus
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	None	SSC	-	3812285	LOWER LAKE	Mapped	Animals - Mammals - Vespertilionidae Corynorhinus townsendii
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812285	LOWER LAKE	Unprocessed	Animals - Mammals - Vespertilionidae Myotis yumanensis

Animals - Reptiles	Actinemys marmorata	northwestern pond turtle	ARAAD02031	Proposed Threatened	None	SSC	-	3812285	LOWER LAKE	Unprocessed	Animals - Reptiles - Emydidae - Actinemys marmorata
Plants - Vascular	Lomatium hooveri	Hoovers lomatium	PDAP1B2K0	None	None	-	4.3	3812285	LOWER LAKE	Unprocessed	Plants - Vascular - Apiaceae - Lomatium hoovei
Plants - Vascular	Lomatium repostum	Napa lomatium	PDAP1B1M0	None	None	-	4.2	3812285	LOWER LAKE	Unprocessed	Plants - Vascular - Apiaceae - Lomatium repostum
Plants - Vascular	Harmonia hallii	Halls harmonia	PDAST650A0	None	None	-	1B.2	3812285	LOWER LAKE	Mapped	Plants - Vascular - Asteraceae - Harmonia hallii
Plants - Vascular	Lasthenia burkei	Burkes goldfields	PDAST5L010	Endangered	Endangered	-	1B.1	3812285	LOWER LAKE	Mapped	Plants - Vascular - Asteraceae - Lasthenia burkei
Plants - Vascular	Layia septentrionalis	Colusa layia	PDAST5N0F0	None	None	-	1B.2	3812285	LOWER LAKE	Mapped	Plants - Vascular - Asteraceae - Layia septentrionalis
Plants - Vascular	Amsinckia lunaris	bent-flowered fiddleneck	PDBOR01070	None	None	-	1B.2	3812285	LOWER LAKE	Mapped	Plants - Vascular - Boraginaceae - Amsinckia lunaris
Plants - Vascular	Astragalus rattanii var. jepsonianus	Jepsons milk-vetch	PDFAB0F7E1	None	None	-	1B.2	3812285	LOWER LAKE	Mapped	Plants - Vascular - Fabaceae - Astragalus rattanii var. jepsonianus
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3812285	LOWER LAKE	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Hesperolinon sharsmithiae	Sharsmiths western flax	PDLIN010E0	None	None	-	1B.2	3812285	LOWER LAKE	Mapped	Plants - Vascular - Linaceae - Hesperolinon sharsmithiae
Plants - Vascular	Malacothamnus helleri	Hellers bushmallow	PDMAL0Q0G0	None	None	-	3.3	3812285	LOWER LAKE	Unprocessed	Plants - Vascular - Malvaceae - Malacothamnus helleri
Plants - Vascular	Sidalcea keckii	Kecks checkerbloom	PDMAL110D0	Endangered	None	-	1B.1	3812285	LOWER LAKE	Unprocessed	Plants - Vascular - Malvaceae - Sidalcea keckii
Plants - Vascular	Leptosiphon aureus	bristly leptosiphon	PDPLM09010	None	None	-	4.2	3812285	LOWER LAKE	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon aureus
Plants - Vascular	Navarretia leucocephala ssp. bakeri	Bakers navarretia	PDPLM0C0E1	None	None	-	1B.1	3812285	LOWER LAKE	Mapped	Plants - Vascular - Polemoniaceae - Navarretia leucocephala ssp. bakeri
Plants - Vascular	Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	PDPLM0C0E4	Endangered	Threatened	-	1B.1	3812285	LOWER LAKE	Mapped	Plants - Vascular - Polemoniaceae - Navarretia leucocephala ssp. pauciflora
Plants - Vascular	Potamogeton zosteriformis	eel-grass pondweed	PMPOT03160	None	None	-	2B.2	3812285	LOWER LAKE	Mapped	Plants - Vascular - Potamogetonac

Plants - Vascular	Delphinium uliginosum	swamp larkspur	PDRAN0B1V0	None	None	-	4.2	3812285	LOWER LAKE	Unprocessed	- Potamogeton zosteriformis Plants - Vascular Ranunculaceae Delphinium uliginosum
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CNPS Rare Plant Inventory



Search Results

37 matches found. Click on scientific name for details

Search Criteria: , Quad is one of [3812286:3812285]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
<i>Amsinckia lunaris</i>	bent- flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2	Yes	1974- 01-01	 © 2011 Neal Kramer
<i>Antirrhinum virga</i>	twig-like snapdragon	Plantaginaceae	perennial herb	Jun-Jul	None	None	G3?	S3?	4.3	Yes	1974- 01-01	 © 2013 Aaron Schusteff

<i>Arctostaphylos</i> <i>manzanita</i> ssp. <i>elegans</i>	Konocti manzanita	Ericaceae	perennial evergreen shrub	(Jan)Mar- May(Jul)	None None	None None	G5T3	S3	1B.3	Yes	2001- 01-01	
© 2018 Dean Wm. Taylor												
<i>Arctostaphylos</i> <i>stanfordiana</i> ssp. <i>raichei</i>	Raiche's manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	None None	None None	G3T2	S2	1B.1	Yes	1988- 01-01	No Photo Available
<i>Astragalus</i> <i>rattanii</i> var. <i>jepsonianus</i>	Jepson's milk- vetch	Fabaceae	annual herb	Mar-Jun	None None	None None	G4T3	S3	1B.2	Yes	1988- 01-01	No Photo Available
<i>Brasenia</i> <i>schreberi</i>	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	None None	None None	G5	S3	2B.3		2010- 10-27	
©2014 Kirsten Bovee												
<i>Calochortus</i> <i>uniflorus</i>	pink star-tulip	Liliaceae	perennial bulbiferous herb	Apr-Jun	None None	None None	G4	S4	4.2		2010- 03-04	
© 2021 Scot Loring												

<i>Calyptridium quadripetalum</i>	four-petaled pussypaws	Montiaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3	Yes	1974-01-01	No	Photo Available
<i>Cordylanthus tenuis</i> ssp. <i>brunneus</i>	serpentine bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug	None	None	G4G5T3	S3	4.3	Yes	1988-01-01	No	Photo Available
<i>Delphinium uliginosum</i>	swamp larkspur	Ranunculaceae	perennial herb	May-Jun	None	None	G3	S3	4.2	Yes	1974-01-01	No	Photo Available
<i>Eriastrum brandegeeeae</i>	Brandegee's eriastrum	Polemoniaceae	annual herb	Apr-Aug	None	None	G1Q	S1	1B.1	Yes	1974-01-01	No	Photo Available
<i>Eryngium constancei</i>	Loch Lomond button-celery	Apiaceae	annual/perennial herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1980-01-01	No	Photo Available
<i>Fritillaria pluriflora</i>	adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2G3	S2S3	1B.2	Yes	1974-01-01		



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Steve
Matson

<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2	1974-01-01	 ©2004 Carol W. Witham
<i>Harmonia hallii</i>	Hall's harmonia	Asteraceae	annual herb	(Mar)Apr-Jun	None	None	G2?	S2?	1B.2	1984-01-01	 © 2015 John Doyen
<i>Hemizonia congesta</i> ssp. <i>calyculata</i>	Mendocino tarplant	Asteraceae	annual herb	Jul-Nov	None	None	G5T4	S4	4.3	1974-01-01	 © 2015 John Doyen
<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	Linaceae	annual herb	(Apr)May-Jul	None	None	G2	S2	1B.2	1974-01-01	 © 2016 John Doyen
<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	Linaceae	annual herb	May-Jul	None	None	G2Q	S2	1B.2	2012-12-14	 © 2017 Aaron Arthur

<i>Horkelia bolanderi</i>	Bolander's horkelia	Rosaceae	perennial herb	(May)Jun-Aug	None	None	G1	S1	1B.2	Yes	1988-01-01	 © 2012 Barry Rice
<i>Imperata brevifolia</i>	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	None	None	G3	S3	2B.1		2006-12-26	 © 2020 Matt C. Berger
<i>Lasthenia burkei</i>	Burke's goldfields	Asteraceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 © 2015 Neal Kramer
<i>Layia septentrionalis</i>	Colusa layia	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.2	Yes	1994-01-01	 © 2013 Jake Ruygt
<i>Leptosiphon aureus</i>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Yes	1994-01-01	 © 2007 Len Blumin

<i>Limnanthes floccosa</i> ssp. <i>floccosa</i>	woolly meadowfoam	Limnanthaceae	annual herb	Mar-May(Jun)	None	None	G4T4	S3	4.2	1980-01-01	 © 2021 Scot Loring
<i>Lomatium hooveri</i>	Hoover's lomatium	Apiaceae	perennial herb	Apr-Jul	None	None	G3	S3	4.3	1980-01-01	 © 2022 Zoya Akulova
<i>Lomatium repostum</i>	Napa lomatium	Apiaceae	perennial herb	Mar-Jun	None	None	G3	S3	4.2	1974-01-01	No Photo Available
<i>Malacothamnus helleri</i>	Heller's bushmallow	Malvaceae	perennial deciduous shrub	May-Jul	None	None	G2Q	S2	3.3	1974-01-01	 © 2017 Keir Morse
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mouse-tail	Ranunculaceae	annual herb	Mar-Jun	None	None	G5T2Q	S2	3.1	1980-01-01	No Photo Available

<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G4T2	S2	1B.1	Yes	1994-01-01	 © 2018 Barry Rice
<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>	few-flowered navarretia	Polemoniaceae	annual herb	May-Jun	FE	CT	G4T1	S1	1B.1	Yes	1974-01-01	 © 2013 Jake Ruygt
<i>Navarretia leucocephala</i> ssp. <i>pliantha</i>	many-flowered navarretia	Polemoniaceae	annual herb	May-Jun	FE	CE	G4T1	S1	1B.2	Yes	1974-01-01	No Photo Available
<i>Piperia michaelii</i>	Michael's rein orchid	Orchidaceae	perennial herb	Apr-Aug	None	None	G3	S3	4.2	Yes	1984-01-01	No Photo Available
<i>Potamogeton zosteriformis</i>	eel-grass pondweed	Potamogetonaceae	annual herb (aquatic)	Jun-Jul	None	None	G5	S3	2B.2		1994-01-01	No Photo Available
<i>Sedella leiocarpa</i>	Lake County stonecrop	Crassulaceae	annual herb	Apr-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available

<i>Sidalcea</i>	marsh	Malvaceae	perennial herb	(Jun)Jul- Aug	None	None	G5T2	S2	1B.2	Yes	1974- 01-01	No	Photo Available
<i>oregana</i> ssp. <i>hydrophila</i>	checkerbloom												
<i>Toxicoscordion</i>	marsh	Melanthiaceae	perennial	Apr-Jul	None	None	G3	S3	4.2	Yes	2001- 01-01	No	Photo Available
<i>fontanum</i>	zigadenus		bulbiferous herb										
<i>Viburnum</i>	oval-leaved	Viburnaceae	perennial	May-Jun	None	None	G4G5	S3	2B.3		1974- 01-01		 © 2006
<i>ellipticum</i>	viburnum		deciduous shrub										Tom Engstrom

Showing 1 to 37 of 37 entries

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

NOT FOR CONSULTATION

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 species¹ 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 Fisheries²).

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

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

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

Birds

NAME

STATUS

Northern Spotted Owl *Strix occidentalis caurina*

Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/1123>

Yellow-billed Cuckoo *Coccyzus americanus*

Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/3911>

Reptiles

NAME

STATUS

Northwestern Pond Turtle *Actinemys marmorata*

Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1111>

Fishes

NAME

STATUS

Clear Lake Hitch *Lavinia exilicauda chi*

Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9298>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Proposed Threatened

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/9743>

Flowering Plants

NAME	STATUS
Burke's Goldfields <i>Lasthenia burkei</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4338	Endangered
Few-flowered Navarretia <i>Navarretia leucocephala</i> ssp. <i>pauciflora</i> (=N. <i>pauciflora</i>) Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8242	Endangered
Lake County Stonecrop <i>Parvisedum leiocarpum</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2263	Endangered
Loch Lomond Coyote Thistle <i>Eryngium constancei</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5106	Endangered
Many-flowered Navarretia <i>Navarretia leucocephala</i> ssp. <i>plieantha</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2491	Endangered
Slender Orcutt Grass <i>Orcuttia tenuis</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1063	Threatened

Critical habitats

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

There are no critical habitats at this location.

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

Bald & Golden Eagles

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

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

Additional information can be found using the following links:

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

Bald and Golden Eagle information is not available at this time

Bald & Golden Eagles FAQs

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

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that

have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply).

Proper interpretation and use of your eagle report

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

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

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

Interpreting the Probability of Presence Graphs

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

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

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

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

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

Breeding Season ()

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

Survey Effort ()

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

No Data ()

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

Survey Timeframe

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

Migratory birds

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

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

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

Migratory bird Information is not available at this time

Migratory Bird FAQs

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

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

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

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

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

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

Why are subspecies showing up on my list?

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

Proper interpretation and use of your migratory bird report

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

Interpreting the Probability of Presence Graphs

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

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

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

Breeding Season ()

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

Survey Effort ()

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

No Data ()

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

Survey Timeframe

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

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

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

Data limitations

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

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

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

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid 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.

NOT FOR CONSULTATION

Clearlake Airport Redevelopment Project

City of Clearlake, Lake County, CA

Tree Inventory and Assessment



Prepared for:
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1.0 INTRODUCTION

Greg Matuzak, Principal Biologist from Greg Matuzak Environmental Consulting LLC is a California Department of Fish and Wildlife (CDFW) and United States Fish and Wildlife Service (USFWS) Qualified Biologist. Mr. Matuzak conducted a tree survey and oak woodland assessment in order to develop this Tree Inventory and Oak Woodlands Assessment (Tree Inventory), which has been fully developed by Mr. Matuzak. Mr. Matuzak is also an International Society of Arboriculture (ISA) Certified Arborist (Certification #WE-8962A).

This Tree Inventory has been developed for the City of Clearlake Airport Redevelopment Project (Project) and meets the California Environmental Quality Act (CEQA) Guidelines standards for the review of sensitive tree and woodland resources as part of the Environmental Impact Report (EIR) being developed for the proposed Project. In a separate Biological Resources Assessment, Mr. Matuzak conducted a review of CDFW, USFWS, State and Regional Water Quality Control Board, and United States Army Corps of Engineers (Corps) jurisdiction within the Project area was assessed (see Greg Matuzak Environmental Consulting LLC 2025).

The Project area is located within the southern area of the incorporated limits of the City of Clearlake, in Lake County, California (see attached Project Vicinity and Project Regional Location Maps in Appendix A). The Project site is bounded by the 18th Avenue extension and Victor Street to the north, SR 53 to the east, and Old Highway 53 to the south and west as shown in Appendix A and Appendix B (see attached Project Vicinity and Location Maps and Site Plans). Primary access to the site would be via 18th Avenue and Old Highway 53 and from SR 53 into the northeastern section of the Project area. No off-site infrastructure improvements are anticipated with the Project.

The Project is proposed to be divided up between three (3) Planned Development Zones with a total acreage of approximately 54.49 acres in total for the proposed Project area covered in this Tree Inventory and will be covered in the EIR for the Project. The proposed Zone District PD 1 will include a Mixed Use Zone and will be 13.20 acres in size. The proposed Zone District PD 2 will include a Primary Commercial/Wellness Zone and will be 35.29 acres in size. The proposed Zone District PD 3 will include a Heavy Commercial Zone and will be 6.0 acres in size. The initial Project area boundary that was circulated as part of the Notice of Preparation (NOP) for the development of an EIR did not include the proposed hotel project development, extension of 18th Avenue to connect with State Route (SR) 53, or the southern tip of the Project area.

Therefore, this Tree Inventory includes the updated Project area boundary to be included within the EIR. See Appendix A for Project Vicinity and Location Maps and Appendix B for Site Plans outlining the overall Project area as well as each of the Planned Development Zones within the overall Project area.

Previous Review of Tree and Woodland Resources within the Project Area

Per the results of the Live Oak Associates, Inc. Arborist Tree Inventory and Assessment for the hotel site (dated July 18, 2022), they concluded that the area including the new hotel development contains an interior live oak (*Quercus wislizeni*) woodland. They mapped 79 individual trees within the proposed hotel site and along the 18th Avenue extension to the northeast and tying into SR 53. Besides interior live oak, they documented blue oak (*Quercus douglasii*) and a single, small valley oak (*Quercus lobata*). See the attached tree inventory map in Appendix D developed by Live Oak Associates, Inc. for the hotel development site and the 18th Avenue extension.

State Oak Woodland Regulations

State laws that regulate the protection of oak woodlands include Professional Forester's Law (PFL) and CEQA according to Public Resources Code Section 21083.4. Oak woodlands are defined as areas having 10% oak canopy cover or greater. "Oaks" are defined in Public Resources Code Section 21083.4 as a native tree species in the genus *Quercus*, that is 5 inches diameter at breast height (DBH) or greater. The Oak Woodlands Conservation Act (SB 1334) provides funding for the conservation and protection of oak woodlands in California. Oak woodland habitats are protected under both the State and the City of Clearlake in their General Plan and their Municipal Code as outlined below.

City of Clearlake Municipal Code Covering Protected Tree and Woodland Resources

Section 18-1.407 City of Clearlake Municipal Code: Native Tree Protection and Removal Permits

Establishes the procedures for protecting certain native trees. A native tree protection and removal permit is required prior to the removal of native oak trees and heritage trees. A Tree Protection Permit and Tree Removal Permit shall be required for the following:

1. Native oak trees as follows:
 - a. Blue Oak (*Quercus douglasii*);
 - b. Valley Oak (*Quercus lobata*);
 - c. Interior Live Oak (*Quercus wislizeni*);
 - d. California Black Oak (*Quercus kelloggii*);
 - e. Canyon Live Oak (*Quercus chrysolepsis*); and
 - f. Oregon White Oak (*Quercus garryana*).
2. Any other tree designated by the City Council as a "Heritage Tree"

Any disturbances including, but not limited to the following, which might cause harm to a protected tree, are strictly prohibited within the root protection zone (RPZ) of that tree:

- a. Removing, moving, or failing to install and maintain proper temporary protection fencing in the vicinity of construction prior to completion of on-site work;
- b. Trenching;
- c. Any permanent or temporary structures, however temporary structures not fixed to the ground shall be allowed as long as they will not compact the soil;
- d. Grading, cutting, filling, or changing the natural grade in any way;
- e. Installation of an irrigation system;
- f. Covering with any substance impermeable to air and rain water, such as asphalt, concrete, plastic, etc.; however, pervious surfacing such as pavers, gravel, pervious asphalt or other such materials may be used to within ½ the distance from the dripline of the tree to the trunk;
- g. Burning, open fires, or open flames;
- h. Compaction of the soil;
- i. Girdling; and/or
- j. Topping.

Removal Criteria: Unless exempt under Section 18-5.1403, no Heritage tree shall be approved for removal unless first declassified in accordance with Section 18-5.1406(b). Native Tree Removal permits may be issued for all other Protected Trees meeting the following criteria unless a waiver is granted for a parking reduction in accordance with section (b) below:

- 1. Protected Trees that cannot be avoided and associated with residential or nonresidential construction, remodels, renovations, expansions, or grading that does not meet exemption criteria;
- 2. Installation of temporary structures such as above-ground pools, sheds, or other structures that are not fixed to the ground. A tree removal permit shall not be granted prior to the granting of all other permits required for the project in question.

Project Level Review Under CEQA

The proposed Project is a conceptual development plan, or master plan, that would develop the 54.49-acre former airport site with a mix of uses, potentially including

but not limited to healthcare facilities, multifamily housing, retail, restaurants, a hotel, heavy commercial industries, and open space. The Project would be developed with both active and passive transportation users in mind, with roadways and parking for vehicles and bicycles, sidewalks, and off-street pedestrian walkways, as well as new sewer, water, energy, and drainage infrastructure throughout. Project phasing would be sequenced through and be dependent on the City of Clearlake's or future developer's acquisition of properties as they become available.

Although a final and definitive Site Plan is not currently proposed, for planning purposes a conceptual site plan, called the "Preferred Site Plan," was prepared and is attached in Appendix B. The Preferred Site Plan establishes a target Floor Area Ratio (FAR) for each use for purposes of streamlining future development CEQA analysis. New housing units would be constructed across Zone Districts 1 and 2, and they would include commercial uses (which may include hospital/medical facilities) would be constructed across all three Zone Districts. Greater than 4.5 acres would remain landscaped or for drainage features. North-to-south mainline infrastructure is anticipated to occur first within the main portion of the site to facilitate development of individual sites east and west of the central roadway. Following infrastructure installation, the Project may be developed in any order; no phasing is proposed.

A number of existing trees would be removed in order to develop the proposed Project. However, trees along SR 53 will be evaluated for screening and potential sound buffering benefits. Other trees on the site may be preserved if the benefits of mature trees can be accommodated as parcels are developed. The proposed Project would provide landscaping improvements, including the planting of new trees and shrubs throughout the Project site. Central to this development is a plaza adjacent the market building and park that spans a vegetated bluff. Overlooks, connecting trails, play space, and performance spaces are designed as a destination for the area.

All future vegetation will include California native, drought-tolerant, or native adaptive vegetation, highlighting the beauty of the surrounding hills and landscape of the region. Mature trees in the site plan will be incorporated into parking lot screening and recreational space, where possible to retain them. Additional specimen trees are planned for pocket-park locations to act as both gateways to the site and screens to parking areas. Given that site specific development and infrastructure plans have not been completed for any of the phases of the Project, the trees mapped by Live Oak Associates, Inc. have been integrated into this report and the remaining protected trees are included as part of the attached mapped oak woodlands (see Appendix D).

Each phase within the overall Project area will need to be inventoried for protected trees separately to determine the impacts to both protected trees by the City of Clearlake and oak woodlands per the definition of the State of California. Given tree growth and tree dieback, a Tree Inventory of the entirety of the Project area would not provide the precise tree data required for a City of Clear Lake Tree Protection Permit and Tree Removal Permit (see Appendix E). However, this Tree Inventory gives a basis for the assessment of protected trees and mitigation required under CEQA.

2.0 METHODS

In order to evaluate the proposed Project development areas for the presence of any protected trees and oak woodlands, baseline information from databases and reporting for similar projects in Lake County and northern California was collected and reviewed prior to conducting the site visits and tree inventory surveys within the Project area. Additionally, the Tree Inventory developed for the hotel development site and the 18th Avenue extension within the northern section of the Project area had previously been completed by Live Oak Associates, Inc. in 2022 and the results of that inventory and mapping has been integrated into the Tree Inventory, including a copy of the mapping completed in 2022 (see Appendix D).

A reconnaissance-level biological field survey and tree inventory survey was conducted on foot of the entire Project area by Greg Matuzak, Principal Biologist with Greg Matuzak Environmental Consulting. Mr. Matuzak is a Qualified Biologist with both CDFW and USFWS and has conducted similar assessments of sensitive biological resources within Lake County and several other neighboring counties in northern California. Mr. Matuzak is also an ISA Certified Arborist (Certification #WE-8962A).

The initial site visit and biological resources reconnaissance-level survey of the entirety of the Project area was conducted on June 19th, 2024. A follow up biological resources reconnaissance-level survey of the entirety of the Project area was conducted to ensure the additional areas included in the Project area were surveyed and those additional site visits and surveys occurred on May 21st and 22nd, 2025. During the follow up surveys in May of 2025, protected trees and oak woodlands within the Project area were evaluated and within the northern section of the Project area, specifically the proposed hotel site and 18th Avenue extension, was reviewed per the existing tree data that was collected by Live Oak Associates, Inc. in 2022.

The assessment below as well as the impact analysis and proposed mitigation measures outline the process to ensure any impacts to protected trees and oak woodlands is evaluated, and if they are present within or directly adjacent to any proposed area of disturbance, potential impacts to them would be avoided, minimized, and/or mitigated to a level of less than significant under CEQA. A Photo Log is included in the attachments (Appendix C), which documents the Project area during the May 2025 site visits and surveys.

3.0 RESULTS

The Project area contains the following biotic habitats: Developed and Ruderal, Non-Native Annual Grassland, Chaparral, Oak Woodlands, and Drainage. Protected trees were documented within the oak woodlands per the mapping attached in Appendix D. There were a few scattered protected trees within the northern and western sections of the Project area, including those mapped along the 18th Avenue extension and hotel site by Live Oak Associates, Inc. The tree species and their general locations within the Project area are discussed below.

Protected Trees and Oak Woodlands

As stated above, most of the individual protected trees within the overall Project area that are not included in the oak woodlands mapping (see Appendix D) have been heavily impacted by fire or have been mapped along the proposed 18th Avenue extension. Therefore, the protected trees and oak woodlands were documented within the northern and southern sections of the Project area. The dominant protected species within the Project area is the interior live oak (*Quercus wislizeni*). Other protected species documented include a mixture of blue oak (*Quercus douglasii*) trees with only a small number of small stature white oak (*Quercus alba*) and valley oak (*Quercus lobata*) trees.

The mixed oak woodlands also consist of some scattered foothill pine (*Pinus sabiniana*), which are also scattered along the eastern section of the Project area where most have been burned by recent fire activity. Within the understory of the oak woodlands, larger shrubs and smaller stature trees include toyon (*Heteromeles arbutifolia*) and black elderberry (*Sambucus nigra*). Additionally, Fremont's cottonwood (*Populus fremontii*), western redbud (*Cercis occidentalis*), and the highly invasive, non-native Asian species, the tree of heaven (*Ailanthus altissima*) were also documented within the Project area. Though the only protected trees within the Project area are the native oak species per the City of Clearlake Municipal Code (see Appendix E).

In total, oak woodlands were mapped within the northern section of the Project area (hotel site and the site immediately adjacent to the east of the hotel site) and within the southern section of the Project area. A total of 1.75 acres of oak woodland was mapped within the northern section of the Project area and a total of 1.9 acres of oak woodland was mapped within the southern section of the Project area. Therefore, a total of 3.65 acres of oak woodland was mapped within the Project area. Additionally, a total of 108 individual trees were mapped within the Project area that would be protected under the City of Clearlake Municipal Code. Of the 108 mapped individual trees, they are all native oak trees with most being interior live oak and a handful being blue oaks. See Appendix D with the mapped oak woodlands and the individual trees covering the entirety of the Project area.

As part of the tree inventory implemented by Live Oak Associates, Inc. in 2022, they mapped a total of 79 individual trees within the proposed hotel site and along the 18th Avenue extension to the northeast that ties into SR 53. Besides interior live oak, they documented blue oak and a single, small valley oak. See the attached tree inventory map in Appendix D developed by Live Oak Associates, Inc. for the hotel development site and the 18th Avenue extension. The mapped oak woodlands and individual trees included as part of the 2024 and 2025 site review covered under this Tree Inventory and Assessment by Mr. Matuzak includes the protected trees to be evaluated under the EIR being prepared for the Project.

4.0 IMPACT ASSESSMENT AND MITIGATION

This section establishes the impact criteria, then analyzes potential Project-related impacts upon the known tree and oak woodland resources within the Project area, and then suggests mitigation measures to reduce these impacts to a less-than-significant level. The significance of impacts to tree and oak resources depends upon the proximity of Project related disturbance to the oak woodlands and protected trees and whether trees will be fully removed or their driplines will be encroached upon. The effectiveness of measures implemented to protect these resources from Project-related impacts are well documented and the preservation and mitigation requirements are outlined within the City of Clearlake Native Tree Protection Municipal Code (see Appendix E). As defined by CEQA, the Project would be considered to have a significant adverse impact on biological resources if it would:

- Conflict with any county or municipal policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

Protected Trees by the City of Clearlake

Protected trees within the Project site are expected to be both removed and encroached upon due to the proposed construction envelopes and associated Project related activities given the extensive development proposed within the overall Project area. These protected trees are mostly located within northern and southern oak woodland habitat areas. They are mostly located within a designated open space area within the northern section of the Project area and within an area designated for commercial/retail development within the southern end of the Project area. However, 108 individual trees have been mapped outside the oak woodland areas within the Project area and therefore, the mapped oak woodlands and individual trees included as part of the 2024 and 2025 site review covered under this Tree Inventory and Assessment by Mr. Matuzak includes the protected trees to be evaluated under the EIR being prepared for the Project.

Most of the protected individual oak trees have been mapped within the northern and central sections of the Project area with just a handful being mapped within the southern section of the overall Project area. Many other oak and pine trees have been impacted along the western, northcentral, and eastern sections of the Project area given the fire that impacted them (see fire impacted zones within the Project area attached in Appendix D). Within the fire impacted areas, most of the trees are dead and those that are not dead are considered hazard trees given those trees have been severely compromised and pose a risk to both humans and property. There are just a few trees within the fire impacted areas that have been mapped as protected trees that are healthy enough to not be identified as hazard trees.

The trees are dominated by interior live oak with some blue oak trees mixed within the oak woodland areas. Interior live oak trees make up a majority of the individual trees protected within the Project area. Foothill pine trees are also mixed within both woodland areas and scattered along the western and eastern edges of the overall Project area; however, foothill pine trees on their own would not be protected given they are not native oak species protected under the City of Clearlake Native Tree Protection Municipal Code. See Appendix C for a Photo Log documenting the entirety of the Project area and the locations of the existing oak woodlands as well as other scattered trees and areas impacted by fire.

A Tree Protection Plan and Tree Removal Permit will be required to be developed prior to the City of Clearlake granting grading or building permits within any area of the Project area that will either 1) completely remove a protected tree or 2) any grading or construction related activities will encroach within the dripline of a protected tree per the definition under the City of Clearlake Municipal Code. This includes any tree removed from the areas mapped as an oak woodland.

Impact Assessment and Mitigation Measures

Based on site specific field surveys conducted throughout the entirety of the Project area, the Project area does contain oak and pine species. Two oak woodland areas located within the northern and southern sections of the Project area have been documented and interior live oak and blue oak are the dominant species along with some foothill pine trees. Additionally, as stated above, 108 individual trees have been mapped outside the oak woodlands and are each protected on their own. Per the City of Clearlake Municipal Code, any disturbances including, but not limited to the following, which might cause harm to a protected tree, are strictly prohibited within the root protection zone (RPZ) of that tree and therefore, Project related impacts to protected trees (and trees within mapped oak woodlands) would include the following:

- a. Removing, moving, or failing to install and maintain proper temporary protection fencing in the vicinity of construction prior to completion of on-site work;
- b. Trenching;
- c. Any permanent or temporary structures, however temporary structures not fixed to the ground shall be allowed as long as they will not compact the soil;
- d. Grading, cutting, filling, or changing the natural grade in any way;
- e. Installation of an irrigation system;
- f. Covering with any substance impermeable to air and rain water, such as asphalt,

concrete, plastic, etc.; however, pervious surfacing such as pavers, gravel, pervious asphalt or other such materials may be used to within ½ the distance from the dripline of the tree to the trunk;

g. Burning, open fires, or open flames;

h. Compaction of the soil;

i. Girdling; and/or

j. Topping.

Per the City of Clearlake Municipal Code, the following removal criteria must be met prior to the removal of any protected trees or any trees within a mapped oak woodland:

- Unless exempt under Section 18-5.1403, no Heritage tree shall be approved for removal unless first declassified in accordance with Section 18-5.1406(b).
- Native Tree Removal permits may be issued for all other Protected Trees meeting the following criteria unless a waiver is granted for a parking reduction in accordance with section (b) below:

1. Protected Trees that cannot be avoided and associated with residential or nonresidential construction, remodels, renovations, expansions, or grading that does not meet exemption criteria;

2. Installation of temporary structures such as above-ground pools, sheds, or other structures that are not fixed to the ground. A tree removal permit shall not be granted prior to the granting of all other permits required for the project in question.

To mitigate for any impacts to protected trees or trees associated with the mapped woodlands within the Project area, the following shall be implemented per the City of Clearlake Municipal Code:

Replacement Trees:

- For each protected tree felled and/or removed, two replacement trees shall be planted for the first six (6) inches DBH of tree removed and one tree for each additional inch of DBH of the protected tree felled.
- The replacement trees shall be of the same species type as that of the removed tree and shall be planted by the permittee within twelve (12) months of issuance of the removal permit. Replacement saplings shall be a minimum of a five (5) gallon sapling.
- All required replacement trees shall be maintained, or replaced if needed, until

they are established. Should the site not contain appropriate habitat to allow for the success of same-species replacement, the Director may authorize all or partial on-site replacement of a different species from among the list of Protected Trees.

- Where replacement trees cannot be reasonably accommodated on-site, replacement trees shall be planted off-site at a ratio of four (4) replacement trees for the first six (6) inches DBH of the protected tree felled and/or removed and one tree for each additional inch of DBH of the protected tree felled. Maintenance of replacement trees shall be as required as above.
- Off-site replacement may be on other property owned by the applicant, or on public property, in locations to be determined by the City. All off-site replanting requests shall be submitted to the Director or his/her designee at the time of the tree removal permit application.
- For off-site replacement on public property, the applicant shall contribute to a fund established by the City to replant and maintain the trees. The fee shall be established by the City Council and shall be equivalent to the estimated cost to purchase, replant, and maintain the trees until established.
- A Tree Replacement Plan shall be submitted with all applications for a Native Tree Removal Permit where the applicant is proposing to undertake the replanting. The plan shall be reviewed and approved by the Community Development Department prior to issuance of a permit. The plan shall depict the proposed location and manner of tree replacement, consistent with the above requirements

Therefore, to fully comply with the City of Clearlake Municipal Code and Tree Preservation Policy, a site-specific tree inventory based on the final site plan covering any area of the proposed Project to be developed would be required. A Tree Replacement Plan would be required to be developed for any potential impact to a protected tree or to any trees pertaining to one of the mapped oak woodland areas within the Project area. The Tree Replacement Plan will outline the mitigation that would be required for the impact to the number of protected oak trees and any trees pertaining to a mapped oak woodland within the Project area if they would be removed or their driplines encroached upon. Per the preservation and mitigation policies outlined above and attached in Appendix E, the local City of Clearlake permitting and mitigation (and State of California requirements for impacts to oak woodlands) would be in compliance and fully mitigated per the requirements of CEQA.

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City of Clearlake. 2017. 2040 General Plan Adopted by the City Council by Resolution 2017-10, on February 23, 2017

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Appendix A

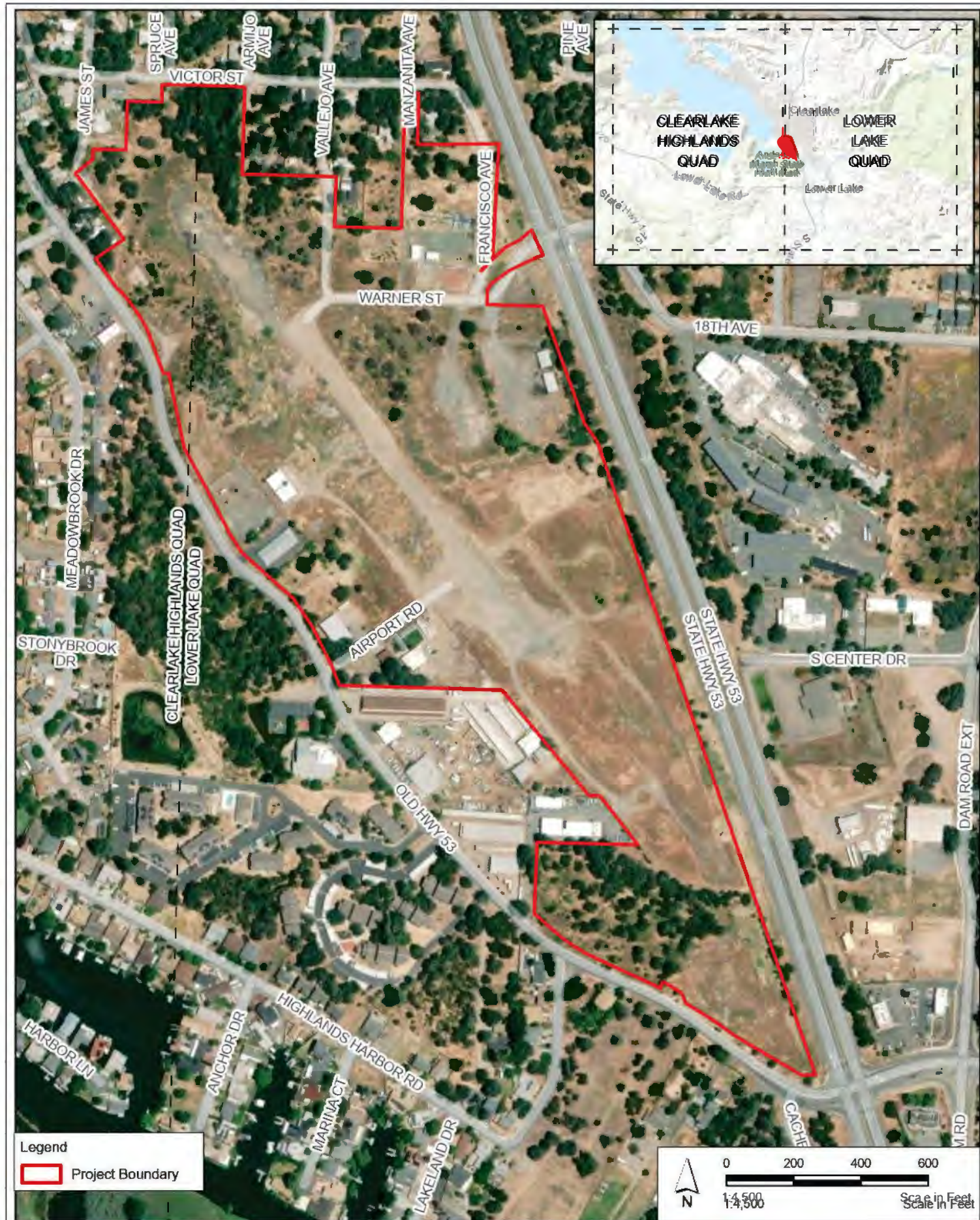
Project Vicinity and Location Maps



GREG MATUZAK
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Clear Lake Project
Clear Lake Project

Figure 1. Vicinity Map



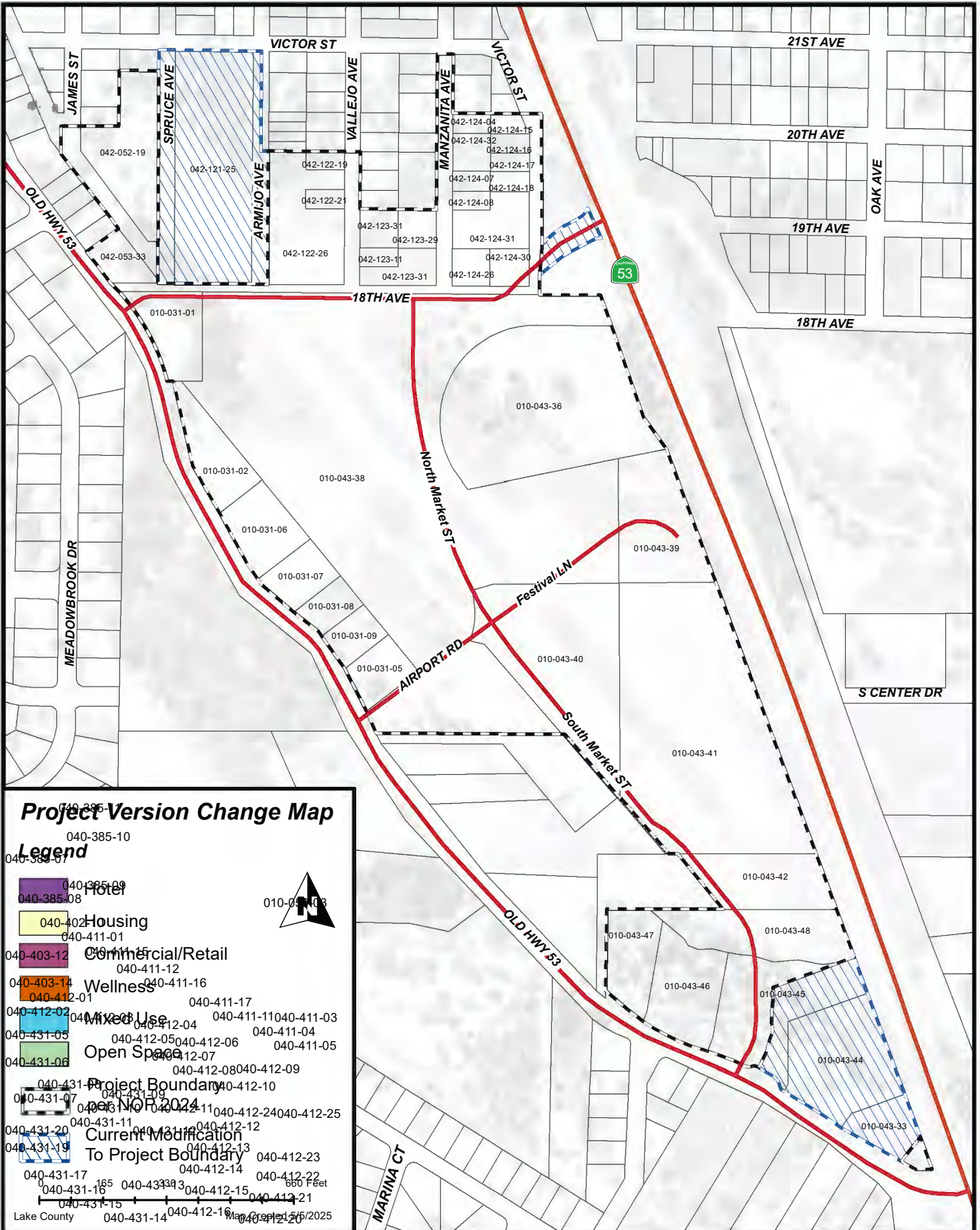
GREG MATUZAK
 Environmental Consulting LLC
 Nevada City, CA

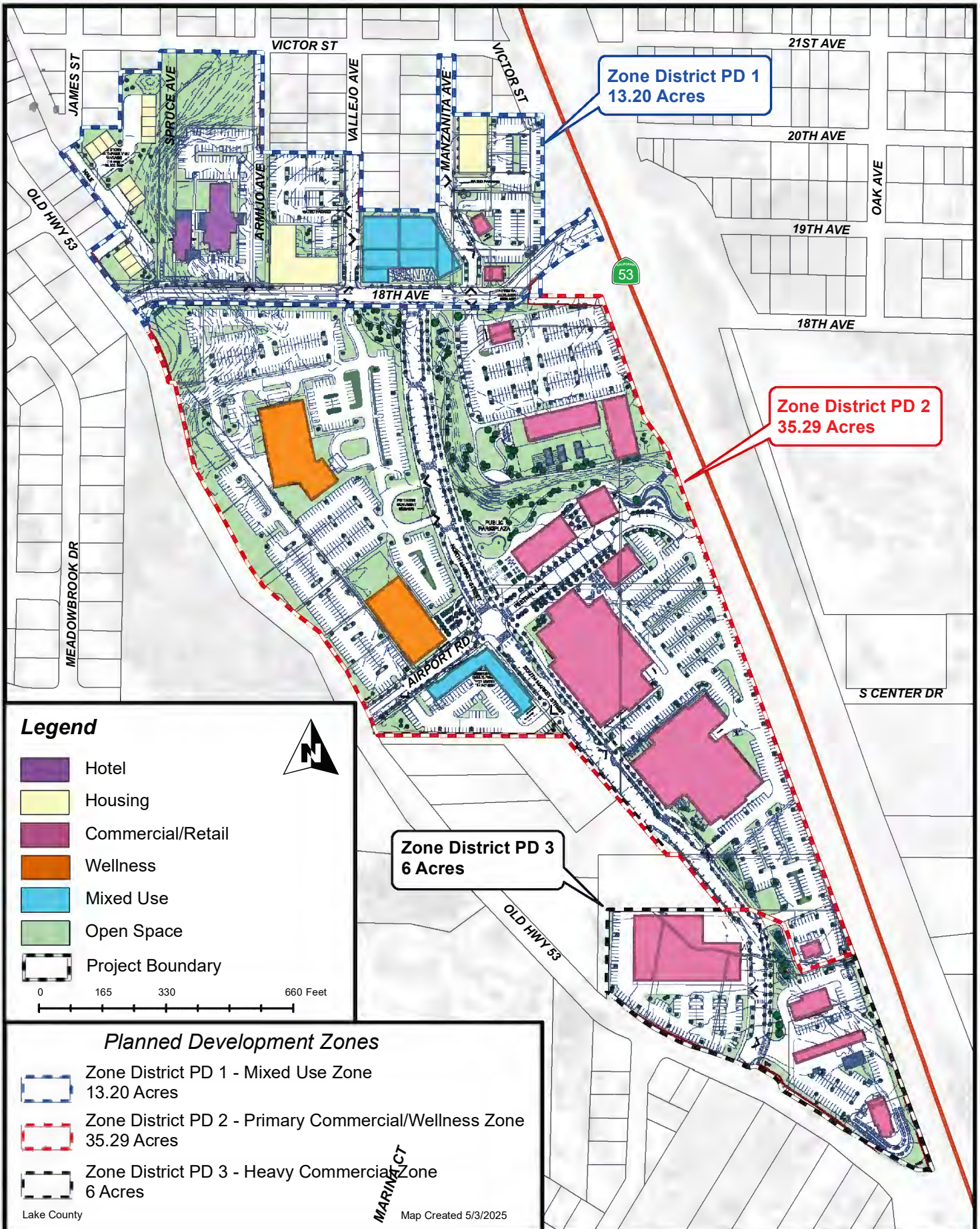
Clear Lake Project
 Clear Lake Project

Figure 2. Project Location Map

Appendix B

Site Plans and Project Area Designations





Appendix C

Photo Log

Photos of the Site Visits and Arborist Surveys on May 20th and 21st, 2025



Photo 1: Oak woodland mapped within the southern section of the Project area. Dominated by interior live oak with blue oak and foothill pine mixed in.



Photo 2: Mapped oak woodland within the southwestern section of the Project area and dominated by blue and interior live oak and foothill pine trees.



Photo 3: Oak woodland mapped within the northern section of the Project area. Dominated by interior live oak. Photo along Victor Street at culvert entering Project.



Photo 4: Mapped oak woodland within the northern section of the Project area within the proposed hotel parcel. Interior live oak and foothill pine trees dominate.



Photo 5: Area of tree of heaven within the eastern section of the Project area. Tree is non-native and highly invasive.



Photo 6: Area of shrubby Fremont's cottonwood within the eastern section of the Project area. Not associated with any aquatic resource.



Photo 7: Elderberry shrub adjacent to a very large interior live oak tree within the northeastern section of the Project area at Victor Street and 18th Avenue corner.



Photo 8: Recent fires have burned many of the trees along the eastern and western sections of the Project area north of Airport Road. Most have been foothill pine trees.



Photo 9: Large Fremont's cottonwood trees technically outside the Project area but their driplines hang over the western boundary south of Airport Rd. in the Project area.



Photo 10: Interior live oak trees along the eastern border of the Project area. SR 53 is to the left and the southern mapped oak woodland is to the right.



Photo 11: Interior live oak trees along the eastern border of the Project area. SR 53 is to the right and the southern mapped oak woodland is to the left.



Photo 12: Photo looking north from the north side of southern mapped oak woodland. No trees present. SR 53 to the right and cottonwood trees to the left from Photo #9.



Photo 13: Photo of a few smaller interior live oak trees along the existing eastern fence line with SR 53 in the background.



Photo 14: Photo looking within the northeastern section of the Project area north of Airport Road. Many trees are dead or hazard trees where fire impacted the site.



Photo 15: Photo looking south along the western border of the Project area north of Airport Road. Many tall pine trees in this area with some scattered interior live oaks.



Photo 16: Photo looking north along the western border of the Project area north of Airport Road. Most trees in this area are pines and were burned during the fire.

Appendix D

Tree Inventory and Oak Woodland Maps

City of Clear Lake Airport Redevelopment Project Oak Woodlands Map

Green outlined areas within the overall project area meet the State of CA 10%+ Canopy to be Mapped as Protected Woodlands



City of Clear Lake Airport Redevelopment Project Oak Woodlands Map

Green outlined areas within the overall project area meet the State of CA 10%+ Canopy to be Mapped as Protected Woodlands

A total of 1.75 acres of oak woodlands have been mapped in the northern section of the project area (1.35 acres in the larger area that includes the hotel site and 0.4 acres in the smaller mapped woodland directly to the east of the proposed hotel site.

Legend

Google Earth

Image © 2025 Airbus

400 ft



City of Clear Lake Airport Redevelopment Project Oak Woodlands Map

Green outlined areas within the overall project area meet the State of CA 10%+ Canopy to be Mapped as Protected Woodlands

A total of 1.9 acres of oak woodlands have been mapped in the southern section of the project area.



City of Clear Lake Airport Redevelopment Project Tree and Oak Woodlands Map

Green outlined areas within the overall project area meet the State of CA 10%+ Canopy to be Mapped as Protected Woodlands

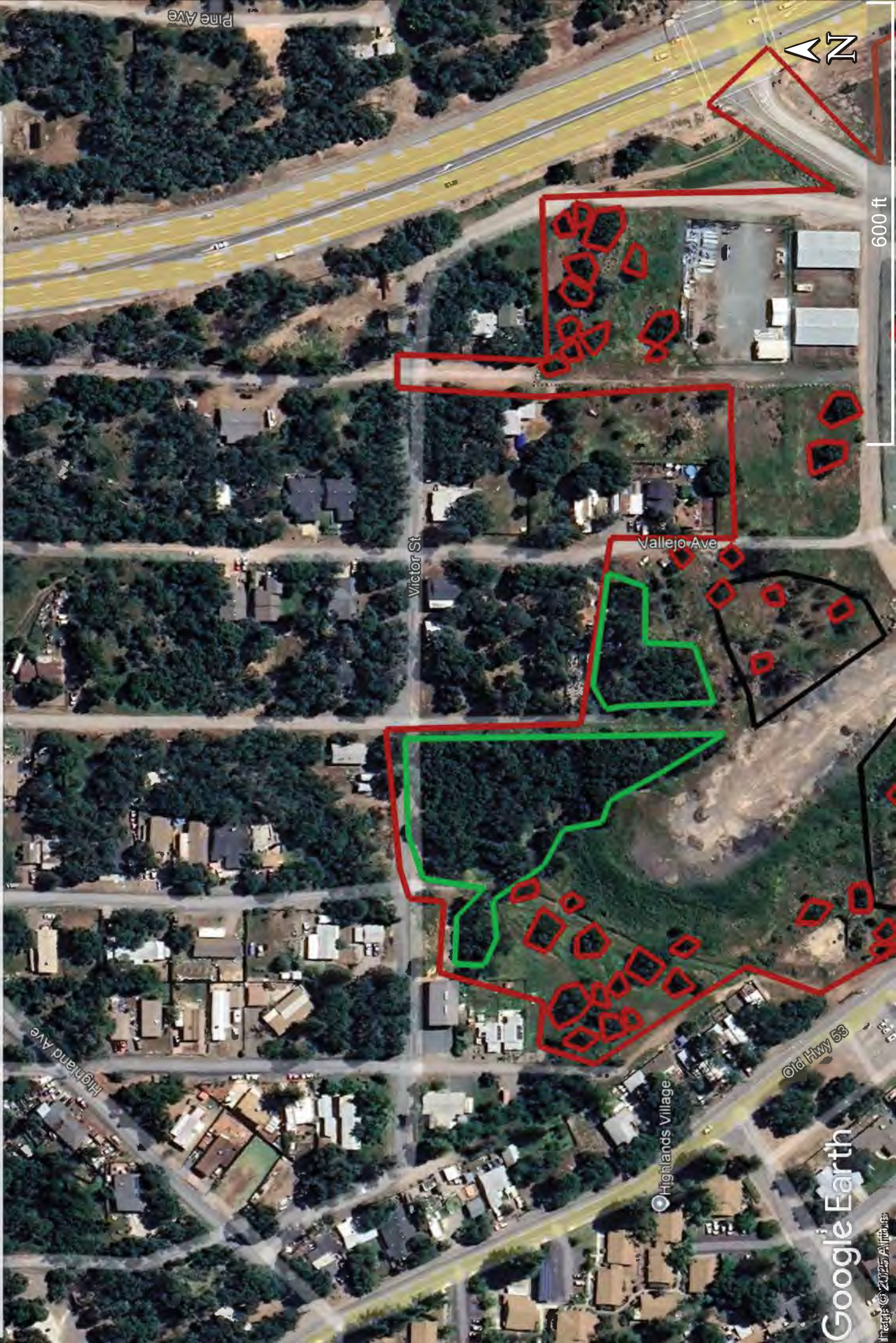
A total of 3.65 acres of oak woodlands have been mapped in the project area. Additionally, 108 individual trees have been mapped as protected.

Legend



City of Clear Lake Airport Redevelopment Project Tree and Oak Woodlands Map

Green outlined areas within the southern area of the project area meet the State of CA 10%+ Canopy to be Mapped as Protected Woodlands. A total of 1.75 acres of oak woodlands have been mapped in the northern section of the project area. Black areas are the fire zones. Additionally, 37 individual trees have been mapped as protected within the northern section of the project area.



City of Clear Lake Airport Redevelopment Project Tree and Oak Woodlands Map

Within the central section of the project area there are no mapped areas that meet the State of CA 10%+ Canopy to be Mapped as Woodlands 63 individual trees have been mapped as protected within the central section of the project area. Black areas are the fire zones.



City of Clear Lake Airport Redevelopment Project Tree and Oak Woodlands Map

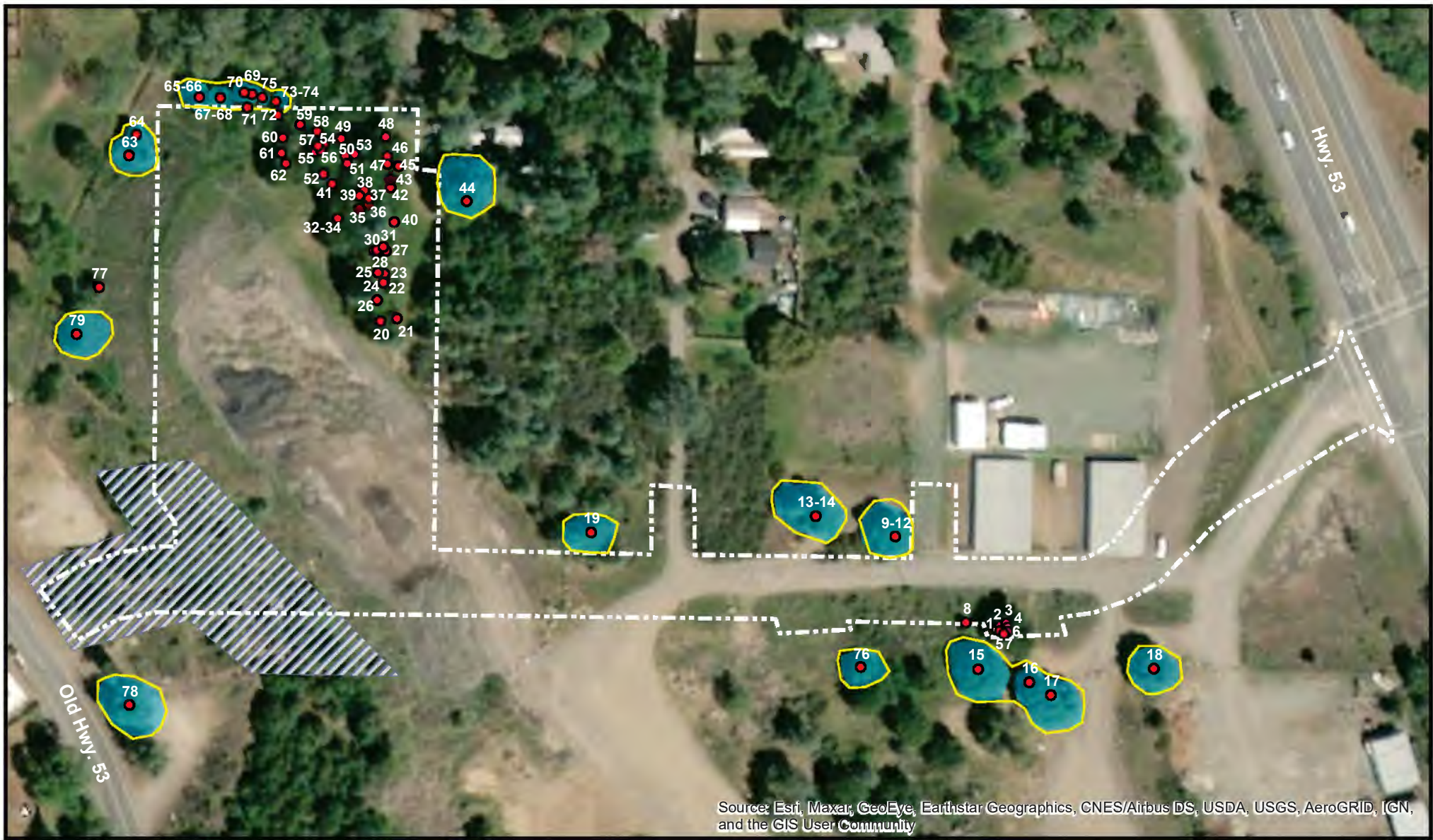
Green outlined areas within the southern area of the project area meet the State of CA 10%+ Canopy to be Mapped as Protected Woodlands. A total of 1.90 acres of oak woodlands have been mapped in the southern section of the project area. Additionally, 8 individual trees have been mapped as protected within the southern section of the project area.

Legend



Google Earth

Image © 2025 Airbus



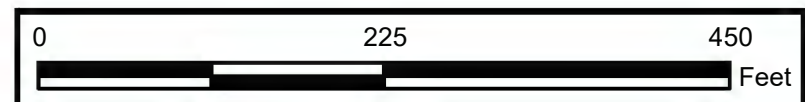
**Airport Property Commercial Center
Hotel Project**

Arborist Survey Results Map

Date: 7/14/2022 Project #: 2671-02 Figure #: 1

LEGEND

- Construction Envelope
- Area Not Surveyed (Inaccessible)
- Tree Trunk Location and Tree ID
- Tree Dripline
- Tree Protection Fencing



Appendix E

City of Clearlake Municipal Code: Native Tree Protection

18-40 NATIVE TREE PROTECTION.

18-40.010 Purpose.

a. The purpose of this article is to ensure the preservation and protection of resources that cannot be replaced while also balancing the needs of commerce, industry and the human population within the City. Trees are a valuable asset to make the City environment a healthier and more aesthetically appealing place to live. Given these recognized benefits and constraints, the intent and objectives of this article are to:

1. Protect and enhance the aesthetic qualities of the community provided by mature native trees;
2. Promote a healthy and attractive urban landscape as the community grows;
3. Limit the indiscriminate felling, removal and destruction of certain trees;
4. Require the replacement of certain trees that are removed, where appropriate; and
5. Promote the preservation of existing trees during development. (Ord. #248-2020, S2 (Exh. A))

18-40.020 Protected Trees.

a. A native tree removal permit shall be required for the following, unless exempted under Section [18-40.030](#):

1. Native oak trees with the following diameter at breast height (DBH):
 - (a) Blue Oak (*Quercus douglasii*) greater than six (6") inch DBH;
 - (b) Valley Oak (*Quercus lobata*) greater than six (6") inch DBH;
 - (c) Interior Live Oak (*Quercus wislizeni*) greater than six (6") inch DBH;
 - (d) California Black Oak (*Quercus kelloggii*) greater than six (6") inch DBH;
 - (e) Canyon Live Oak (*Quercus chrysolepsis*) greater than six (6") inch DBH;
 - (f) Oregon White Oak (*Quercus garryana*) greater than six (6") inch DBH.
2. Any other tree designated by the City Council as a "heritage tree" as described in Section [18-40.060](#). (Ord. #248-2020, S2 (Exh. A))

18-40.030 Exemption from Protection and Removal Regulations.

- a. No protected trees meeting the standards in Section [18-40.020](#) may be removed until zoning clearance is granted pursuant to this article. In the following situations, protected trees may be removed without the need for planting replacement trees as described in Section [18-40.050\(c\)](#), but are first required to obtain a zoning clearance:
1. The removal of dead or hopelessly diseased trees.
 2. The removal of trees judged to be hazardous to life or property.
 3. The removal of trees judged by a public utility company to be a hazard to the safety of high voltage power lines in accordance with Public Resources Code [4293](#).
 4. The removal of trees that must be felled to accommodate public improvements by the City, County or public utility company.
 5. The removal of trees that pose a fire safety hazard as certified by the Lake County Fire Protection District.
 6. The removal of trees whose dripline falls within the footprint of a proposed single-family dwelling, garage and driveway on an existing lot where the trees cannot be reasonably avoided for construction.
 7. The thinning of a stand of trees to improve the overall health of the stand. In this instance, the Planning and Community Development Director shall have discretion to approve which trees shall be removed.
- b. An administrative use permit shall be issued for removal of a heritage tree meeting criteria in subsection [\(a\)\(6\)](#) of this section. (Ord. #248-2020, S2 (Exh. A))

18-40.040 Tree Protection Regulations.

- a. Any disturbances including, but not limited to, the following, which might cause harm to a protected tree, are strictly prohibited within the root protection zone (RPZ) of that tree:
1. Removing, moving or failing to install and maintain proper temporary protection fencing in the vicinity of construction prior to completion of on-site work;
 2. Trenching;
 3. Any permanent or temporary structures; however, temporary structures not fixed to the ground shall be allowed as long as they will not compact the soil;
 4. Grading, cutting, filling or changing the natural grade in any way;
 5. Installation of an irrigation system;
 6. Covering with any substance impermeable to air and rain water, such as asphalt, concrete, plastic, etc.; however, pervious surfacing such as pavers, gravel, pervious asphalt or other such materials may be used to within one-half (1/2) the distance from the dripline of the tree to the trunk;

7. Burning, open fires or open flames;
8. Compaction of the soil;
9. Girdling; and/or
10. Topping. (Ord. #248-2020, S2 (Exh. A))

18-40.050 Removal Regulations.

a. *Removal Criteria.* Unless exempt under Section [18-40.030](#), no heritage tree shall be approved for removal unless first declassified in accordance with Section [18-40.030\(b\)](#). Native tree removal permits may be issued for all other protected trees meeting the following criteria unless a waiver is granted for a parking reduction in accordance with subsection [\(b\)](#) of this section:

1. Protected trees that cannot be avoided and associated with residential or non-residential construction, remodels, renovations, expansions or grading that does not meet exemption criteria;
2. Installation of temporary structures such as above-ground pools, sheds or other structures that are not fixed to the ground.
3. A tree removal permit shall not be granted prior to the granting of all other permits required for the project in question.

b. *Waiver of Parking Spaces.* At the discretion of the Director, the number of required parking spaces for commercial development may be reduced by up to two (2) parking spaces per protected tree that is retained within a proposed parking lot.

c. *Removal of Slash and Felled Trees.* All slash, downed trees or tree scraps except for wood that is cut, stacked and stored for firewood shall be chipped, burned or removed from the property by the permittee within forty-five (45) days following the felling of any tree. Should debris be burned, the permittee shall first obtain a burn permit from the Lake County Fire Protection District and comply with all burning regulations. Exceptions to this subsection may be approved by the Director should extenuating circumstances exist that delay the clean-up of the debris.

d. *Replacement Trees.*

1. For each protected tree felled and/or removed, two (2) replacement trees shall be planted for the first ten (10") inches DBH of tree removed and one (1) tree for each additional two (2") inches of DBH of the protected tree felled. The replacement trees shall be of the same species type as that of the removed tree and shall be planted by the permittee within twelve (12) months of issuance of the removal permit. Replacement saplings shall be a minimum of a five (5) gallon sapling. All required replacement trees shall be maintained or replaced if needed, until they are established. Should the site not contain appropriate habitat to allow for the success of same-species replacement, the Director may authorize all or partial on-site replacement of a different species from among the list of protected trees.

2. Where replacement trees cannot be reasonably accommodated on site, replacement trees shall be planted off-site at a ratio of four (4) replacement trees for the first six (6") inches of DBH of the protected tree felled and/or removed and one (1) tree for each additional inch of DBH of the protected tree felled. Maintenance of replacement trees shall be as required for subsection [\(d\)\(1\)](#) of this section.
 3. Off-site replacement may be on other property owned by the applicant or on public property, in locations to be determined by the City. All off-site replanting requests shall be submitted to the Director or his/her designee at the time of the tree removal permit application.
 4. For off-site replacement on public property, the applicant shall contribute to a fund established by the City to replant and maintain the trees. The fee shall be established by the City Council and shall be equivalent to the estimated cost to purchase, replant and maintain the trees until established.
 5. A tree replacement plan shall be submitted with all applications for a native tree removal permit where the applicant is proposing to undertake the replanting. The plan shall be reviewed and approved by the Community Development Department prior to issuance of a permit. The plan shall depict the proposed location and manner of tree replacement, consistent with the above requirements.
- e. *Security.* Security shall be provided to the City guaranteeing the maintenance of the replacement trees for a period not less than five (5) years to minimize loss. The security shall be relinquished when it is determined the trees are established.
- f. *Inspections.* The Community Development Department may make inspections at any time during which the security is in effect to verify that the replacement trees are being maintained according to the terms of the permit. (Ord. #248-2020, S2 (Exh. A))

18-40.060 Heritage Trees.

a. Designation of Heritage Trees.

1. A tree owner may submit an application to the City requesting that the City Council establish by resolution the designation of a tree or group of trees located on his or her property as a heritage tree(s). Applications shall be submitted on a form supplied by the City. The Council may also, on its own motion, commence the process of designating a heritage tree. The City shall notify the owner of the proposed heritage tree(s) by mail twenty (20) days prior to the meeting to consider the application. Once an application has been submitted and prior to Council action, the tree or trees shall be afforded the same level of statutory protection as a designated heritage tree.
2. In order to designate a tree as a heritage tree, the City Council must find that the tree is a significantly beneficial feature of the community because it possesses one (1) or more of the following attributes:
 - (a) The tree is an outstanding specimen of a desirable species;
 - (b) The tree is one of the largest or oldest trees in Clearlake;

- (c) The tree is of historical interest; or
- (d) The tree is of distinctive appearance.

b. *Declassification of Heritage Trees.* An owner of a heritage tree may submit an application to the City requesting that the City Council declassify by resolution a tree or group of trees previously designated as a heritage tree(s). The Council may also, on its own motion, commence the process of declassifying a heritage tree. The City shall notify the owner of the heritage tree(s) twenty (20) days prior to the Council meeting scheduled for the proposed action.

The Council may declassify a heritage tree upon a finding that the tree(s) is no longer a significant community benefit because:

1. It has deteriorated in health or appearance;
2. It no longer has habitat value; or
3. It prevents reasonable use of the property. (Ord. #248-2020, S2 (Exh. A))

18-40.070 Penalty.

- a. It is unlawful for any person to commit an act which is prohibited by this article. Any violation of this article shall constitute a misdemeanor; provided, however, the City Attorney or prosecuting attorney shall have the discretion to deem a violation of this article as an infraction in accordance with Section [1-5](#).
- b. Any person found guilty of violating this article shall be fully responsible for all costs arising from or relating to enforcement, investigation and legal costs associated with an infraction or misdemeanor. Each tree removed or damaged in violation of this article shall constitute a separate violation.
- c. The felling, removal or damage of a tree in violation of this article shall be punishable by a fine of one thousand (\$1,000.00) dollars.
- d. Any person who causes a tree to be removed or damaged in violation of this article shall repair or replace any such tree at the violator's expense pursuant to double the ratio of the tree replacement requirements set forth in Section [18-40.050\(d\)](#). The location, species and planting specifications for replacement trees shall be approved by the Director prior to replanting. (Ord. #248-2020, S2 (Exh. A))

The Clearlake Municipal Code is current through Ordinance #260-2022, passed March 17, 2022.

Disclaimer: The City Clerk's Office has the official version of the Clearlake Municipal Code. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

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