Appendix D

Biological Resources Assessment

HELIX Environmental Planning

1833 DS Cannabis Cultivation Project

Biological Resources Assessment

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ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
BRA	Biological Resources Assessment
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CSA	California Special Animals
CWA	Clean Water Act
DBH	diameter at breast height
FESA	Federal Endangered Species Act
HCP	Habitat Conservation Plan
HELIX	HELIX Environmental Planning, Inc.
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
OHWM	ordinary high water mark
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SSC	Species of Special Concern
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) conducted a Biological Resources Assessment (BRA) for the ±58.63-acre 1833 DS Cannabis Cultivation Project (Project) located at 10750 Siegler Springs Road in unincorporated Lake County, California (Study Area). The Study Area is situated in Township 12 North, Range 8 West, and Section 14 as depicted on the U.S. Geological Survey (USGS) *Clearlake Highland, CA* 7.5-minute quadrangle map. The approximate center of the Study Area is at latitude 38.8942829 and longitude -122.7133743, NAD 83, and is located at elevations between 2,560 and 2,920 feet (780 – 890 meters) above mean sea level.

The purpose of this BRA is to describe baseline conditions within the Study Area, summarize the general biological resources occurring or potentially occurring in the Study Area, to assess the suitability of the Study Area to support special-status species and sensitive vegetation communities or habitats, and to provide recommendations for regulatory permitting or further analysis that may be required before development activities occurring on the site.

The ±58.63-acre Study Area is located on partially developed land in an agricultural setting and is surrounded by rural residential properties and undeveloped land. The Study Area is comprised of cropland (37.40 acres), urban areas (1.30 acres), ruderal/disturbed areas (10.21 acres), and montane hardwood-conifer forest (9.72 acres). Evidence of previous disturbance, such as vegetation (orchard) removal, was observed on-site and is visible on aerial imagery. Surrounding land uses include rural residential properties, undeveloped forested land, and vineyards.

Known or potential biological constraints in the Study Area include:

- Known habitat for the special-status plant, Napa lomatium (*Lomatium repostum*); and
- Potential habitat for nesting migratory birds and raptors.

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1.0 INTRODUCTION

This report summarizes the findings of a Biological Resources Assessment (BRA) completed by HELIX Environmental Planning, Inc. (HELIX) for the ±58.63-acre 1833 DS Cannabis Cultivation Project (Study Area). The Study Area is located at 10750 Siegler Springs Road in unincorporated Lake County, California, and is comprised of eight separate areas. This document addresses the on-site physical features, plant communities present, and the common plant and wildlife species occurring or potentially occurring in the Study Area. In addition, the suitability of habitats to support special-status species and sensitive habitats are analyzed, and recommendations are provided for any regulatory permitting or further analysis required before development activities occurring on the site.

1.1 PROJECT DESCRIPTION

The project is located at 10750 North Seigler Road near the town of Kelseyville in Lake County, California (Figure 1, *Site and Vicinity Map*). It is situated on the USGS 7.5' Clearlake Highlands Quadrangle; Township 12 North, Range 08 West, Section 14; Mount Diablo Base and Meridian (Figure 2, *USGS Topographic Map*). The project is set on four adjacent parcels (APNs 011-069-48, 115-004-01, 115-004-05, and 115-004-007) (Figure 3, *Aerial Map*). Access to the property is via North Seigler Road, which runs between parcel 115-004-01 and parcels 115-004-05 and 115-004-07.

The landowner proposes to expand on an existing commercial cannabis cultivation project. The existing commercial cannabis cultivation consists of two areas on either side of Siegler Springs Road, which runs through the project site. The existing and proposed cannabis cultivation areas are shown in Figure 3. The northern existing cultivation area, Area B, and an existing support building are located on parcel 115-004-005. The southern existing cultivation area, Area D, is located on parcel 115-004-010. The total existing cultivation area is approximately 38.15 acres.

The proposed project would expand the commercial cannabis cultivation to include approximately 13.14 additional acres of cultivation. The proposed project would add three new cultivation areas. One of the proposed cultivation areas, Area A, would be located on parcel 011-69-48 and would consist of approximately 6.47 acres of outdoor cultivation. Three additional outdoor cultivation areas (Areas E, F, and G) are proposed on parcel 115-004-01, with acres of approximately 2.28, 3.27, and 1.12, respectively. The proposed project would also add new support structures to the site, including a 40,000-sf nursery, a 40,000-sf processing site, and a 600,000-gallon water tank.

2.0 REGULATORY FRAMEWORK

Federal, State, and local environmental laws, regulations, and policies relevant to the California Environmental Quality Act (CEQA) review process are summarized below. Applicable CEQA significance criteria are also addressed in this section.

2.1 FEDERAL REGULATIONS

2.1.1 Federal Endangered Species Act

The U.S. Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National

Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3) (19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

In the context of the proposed Project, FESA consultation with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) would be initiated if development resulted in the potential for take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

2.1.2 Migratory Bird Treaty Act

Raptors, migratory birds, and other avian species are protected by a number of State and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior.

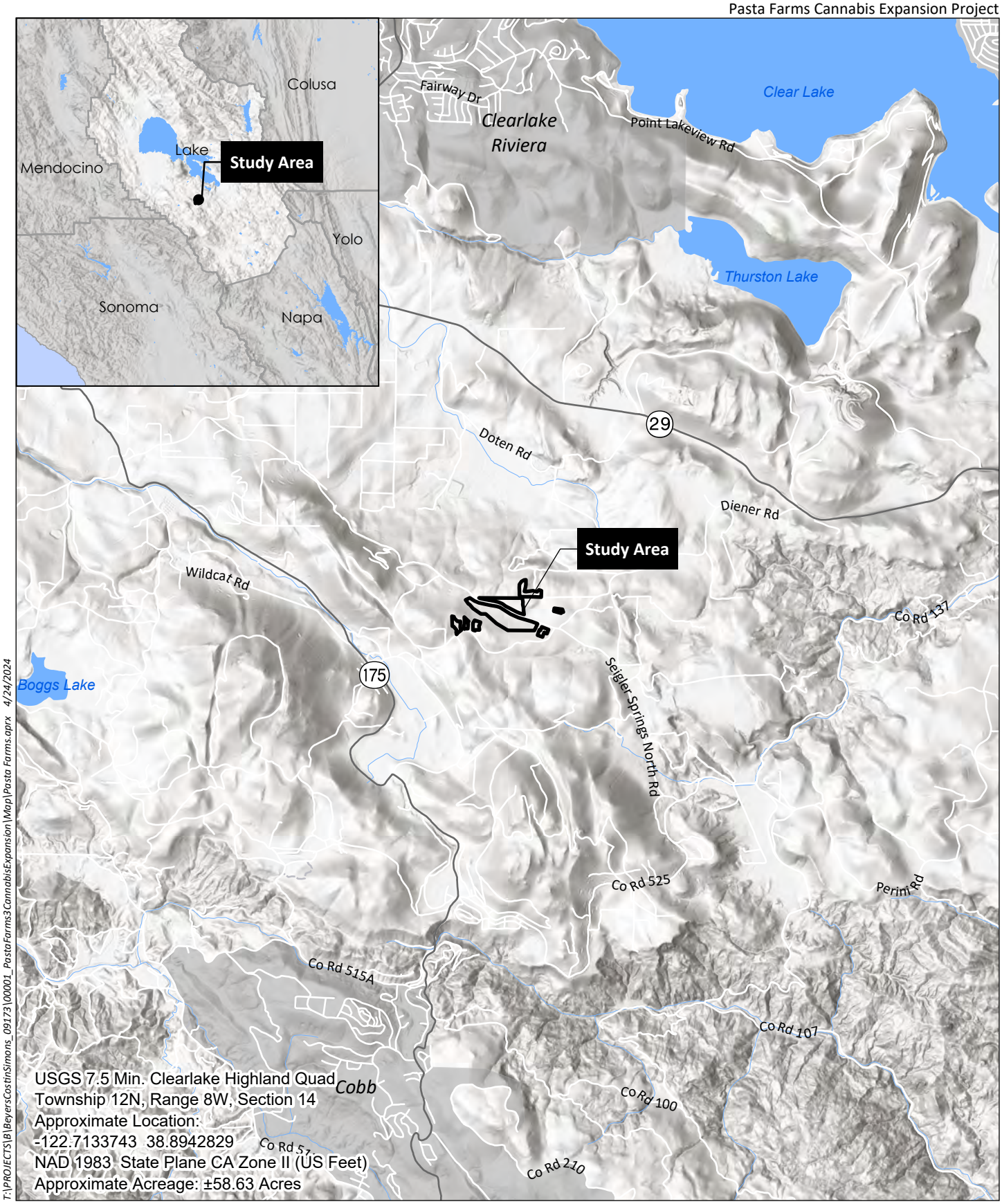
2.1.3 The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act) prohibits the taking or possession of and commerce in bald and golden eagles with limited exceptions. Under the Eagle Act, it is a violation to "*take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, thereof.*" Take is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, and disturb. Disturb is further defined in 50 CFR Part 22.3 as "*to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.*"

2.2 STATE REGULATIONS

2.2.1 California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW) when preparing CEQA documents. The purpose is to ensure that the State lead agency's actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). CESA directs agencies to consult with CDFW on projects or actions that could affect listed species. It also directs CDFW to determine whether jeopardy would occur and allows CDFW



Source: Base Map Layers (Esri, USGS, NGA, NASA)

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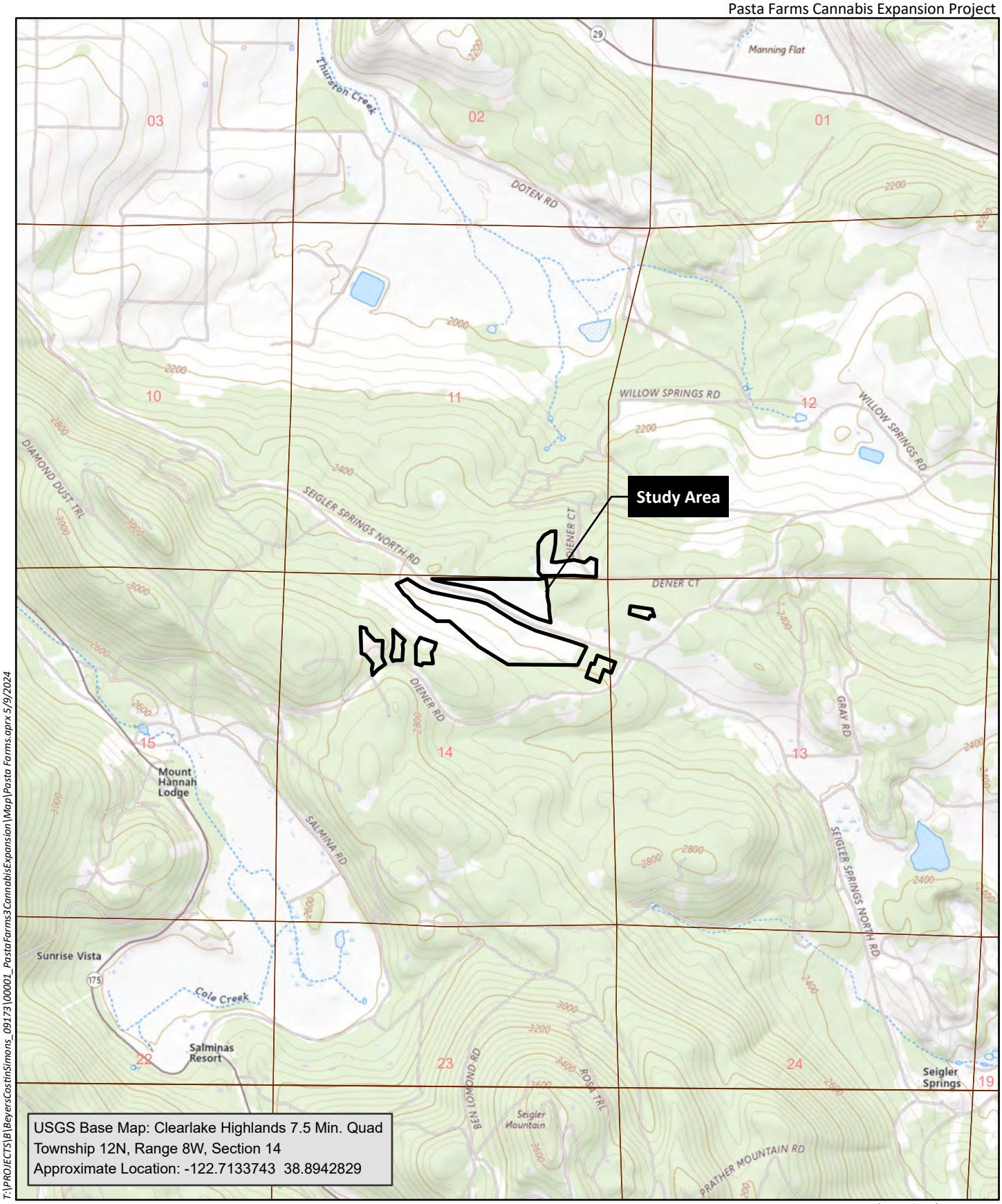
Site and Vicinity Map

Figure 1



USGS Base Map: Clearlake Highlands 7.5 Min. Quad
Township 12N, Range 8W, Section 14
Approximate Location: -122.7133743 38.8942829

0 2,000 Feet

N

Source: USGS, The National Map, 2021

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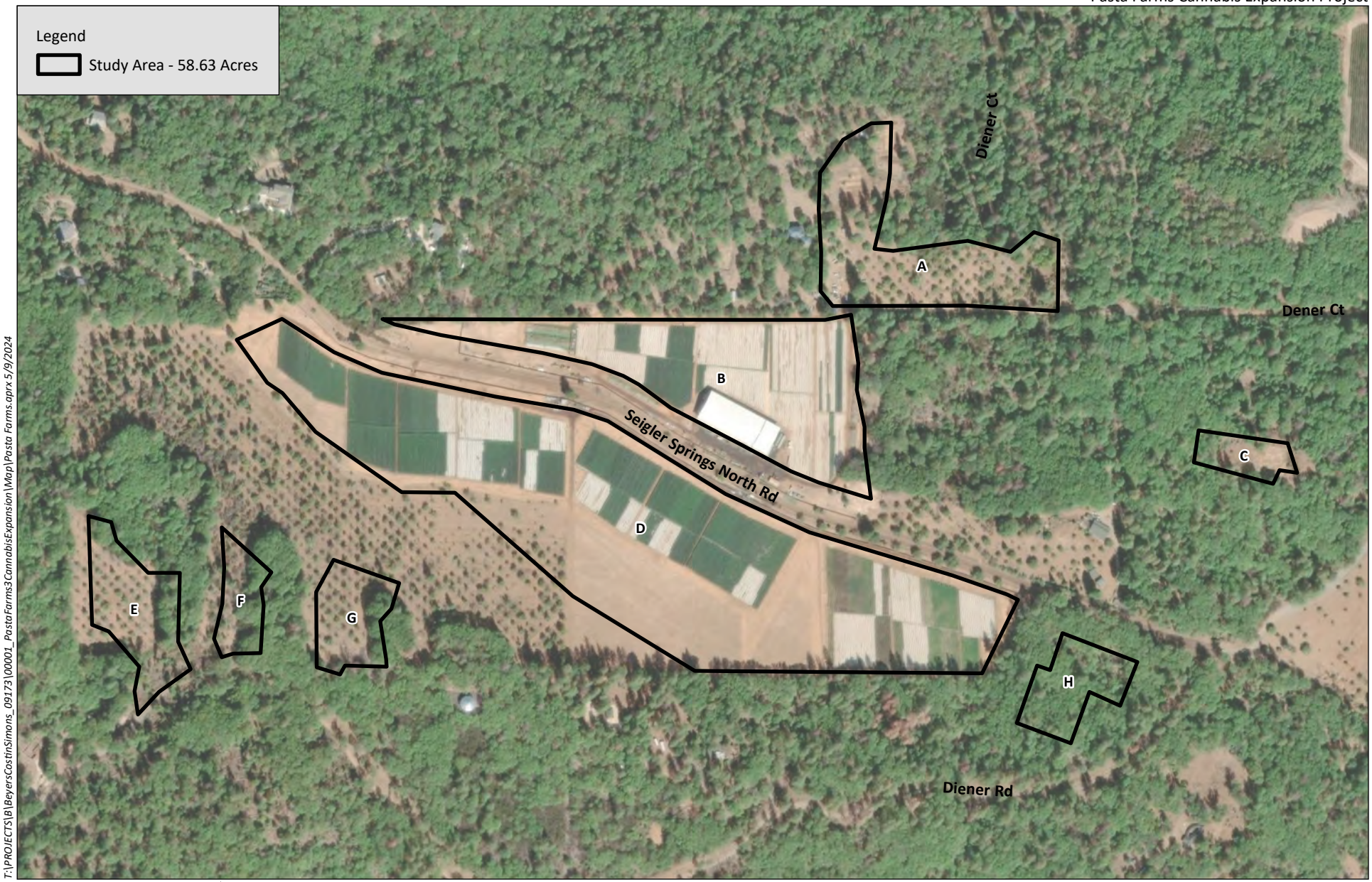
USGS Topographic Map

Figure 2



Source: Aerial Imagery (Maxar, 2023)

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Aerial Map

Figure 3

to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code §2081).

2.2.2 California Department of Fish and Game Codes

A number of species have been designated as "fully protected" species under Sections 5515, 5050, 3511, and 4700 of the Fish and Game Code, but are not listed as endangered (Section 2062) or threatened (Section 2067) species under CESA. Except for take related to scientific research, all take of fully protected species is prohibited. The California Fish and Game Code defines take as "*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.*" Additionally, Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit the killing of birds or the destruction of bird nests.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA), enacted in 1977, allows the Fish and Game Commission to designate plants as rare or endangered. The NPPA prohibits take of endangered or rare native plants, with some exceptions for agricultural and nursery operations and emergencies. Vegetation removal from canals, roads, and other sites, changes in land use, and certain other situations require proper advance notification to CDFW.

2.3 JURISDICTIONAL WATERS

2.3.1 Federal Jurisdiction

On May 25, 2023, the United States Supreme Court issued a decision in the case of *Sackett v. Environmental Protection Agency* (Supreme Court of the United States, 2023), which will ultimately influence how federal waters are defined. The May 25, 2023 Supreme Court decision in Sackett v. Environmental Protection Agency determined that "the Clean Water Act (CWA) extends to only those 'wetlands with a continuous surface connection to bodies that are "waters of the United States" in their own right,' so that they are 'indistinguishable' from those waters." The U.S. Environmental Protection Agency (USEPA) and the U.S. Army Corps of Engineers (USACE) issued a final rule to replace the 2023 rule that amends the Revised Definition of "Waters of the U.S." to conform key aspects of the regulatory text to the U.S. Supreme Court's May 25, 2023 decision in the case of *Sackett v. Environmental Protection Agency*.

Unless considered an exempt activity under Section 404(f) of the Federal Clean Water Act, any person, firm, or agency planning to alter or work in "waters of the U.S.", including the discharge of dredged or fill material, must first obtain authorization from the USACE under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403). Activities exempted under Section 404(f) are not exempted within navigable waters under Section 10.

The Clean Water Act (33 United States Code (USC) 1251-1376) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there were no practicable alternative that would have less adverse impacts.

2.3.2 State Jurisdiction

2.3.2.1 Regional Water Quality Control Board

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the Federal Clean Water Act. Although the Clean Water Act is a Federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Boards are the authorities that certify that the issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the certification for discharges requiring USACE permits for fill and dredge discharges within Waters of the United States, and now also implements the State's wetland protection and hydromodification regulation program under the Porter Cologne Water Quality Control Act.

On May 28, 2020, the SWRCB implemented the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California (SWRCB 2019). The Procedures consist of four major elements:

I. A wetland definition;

II. A framework for determining if a feature that meets the wetland definition is a water of the state;

III. Wetland delineation procedures; and

IV. Procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the State" includes all "Waters of the U.S."

More specifically, a wetland is defined as: *"An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."* The wetland definition encompasses the full range of wetland types commonly recognized in California, including some features not protected under federal law, and reflects current scientific understanding of the formation and functioning of wetlands (SWRCB 2019).

Unless excluded by the Procedures, any activity that could result in the discharge of dredged or fill material to Waters of the State, which includes Waters of the U.S. and non-federal Waters of the State, requires the filing of an application under the Procedures.

2.3.2.2 California Department of Fish and Wildlife

The CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds… except when the department has been notified pursuant to Section 1601." Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over four inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow the protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends applying for a Streambed Alteration Agreement (SAA) for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

2.4 CEQA SIGNIFICANCE

Section 15064.7 of the State CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study Checklist included in Appendix G of the State CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;

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

- Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

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

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and

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

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

2.4.1 California Native Plant Society

The California Native Plant Society (CNPS) maintains a rank of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California*. Potential impacts to populations of CNPS-ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS Rare Plant Ranking System:

Rank 1A: Plants presumed Extinct in California and either rare or extinct elsewhere

Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere

Rank 2A: Plants presumed extirpated in California but common elsewhere

Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere

Rank 3: Plants about which we need more information – A Review List

Rank 4: Plants of limited distribution – A Watch List

All plants appearing on CNPS Rank 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA. Furthermore, the CNPS Rare Plant Rankings include levels of threat for each species. These threat ranks include the following:

0.1 Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);

0.2 Moderately threatened in California (20-80 percent occurrences threatened/moderate degree and immediacy of threat); and

0.3 Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

Threat ranks do not designate a change of environmental protections so that each species (i.e., CRPR 1B.1, CRPR 1B.2, CRPR 1B.3, etc.) be fully considered during the preparation of environmental documents under CEQA.

2.4.2 California Department of Fish and Wildlife Species of Concern

Additional fish, amphibian, reptile, bird, and mammal species may receive consideration by CDFW and lead agencies during the CEQA process, in addition to species that are formally listed under FESA and CESA or listed as fully protected. These species are included on the *Special Animals List*, which is maintained by CDFW. This list tracks species in California whose numbers, reproductive success, or habitat may be in decline. In addition to "Species of Special Concern" (SSC), the *Special Animals List* includes species that are tracked in the California Natural Diversity Database (CNDDB) but warrant no legal protection. These species are identified as "California Special Animals" (CSA).

2.5 LOCAL REGULATIONS

2.5.1 Lake County General Plan

The Lake County (County) General Plan (Plan) includes goals and policies that will be used by the County to guide future land use decisions, local and regional resource management decisions, and input into other appropriate venues. Applicable sections of the Plan are outlined below (Lake County 2008).

Open Space, Conservation, and Recreation: The purpose of the Open Space, Conservation, and Recreation Element is to protect and enhance the natural and cultural resources that make Lake County unique. This element contains goals, policies, and programs designed to address agricultural resources, mineral and energy resources, water resources, biological resources, cultural resources, scenic resources, open space, and recreation.

Biological Resources

- **GOAL OSC-1**. To preserve and protect environmentally sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County.
    - *Policy OSC-1.1 Protection of Rare and Endangered Species*. The County should ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government.
    - *Policy OSC-1.2 Development in Environmentally Sensitive Areas.* The County shall limit the encroachment of development within areas that contain a moderate to high potential for sensitive habitat, and direct development into less significant habitat areas.
    - *Policy OSC-1.3 Encourage Cluster Development.* When reviewing development proposals, the County should encourage cluster development in areas with moderate to high potential for sensitive habitat.

- *Policy OSC-1.4 Protect Riparian Corridors.* The County shall require that buildings and other forms of development be set back from riparian corridors to avoid damage to habitat.

- *Policy OSC-1.5 Creek Management Plans and Mineral Reclamation Plans*. Creek Management Plans and Mineral Reclamation Plans shall include measures to protect and maintain riparian resources and habitats.

- *Policy OSC-1.6 Management of Wetlands.* The County shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.

- *Policy OSC-1.7 Encourage Planting of Native Vegetation*. The County shall encourage the planting of native trees, shrubs, and grasslands 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 OSC-1.8 Native Vegetation for Landscaping*. The County shall develop a list of native vegetation to be used as a landscaping palette for use by citizens and developers.

- *Policy OSC-1.9 Open Space Buffers*. The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, and wetlands.

- *Policy OSC-1.10 Coordination on Management of Adjacent Lands.* 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 County.

- *Policy OSC-1.11 Appropriate Access for Recreation*. The County shall encourage appropriate access to resource-managed lands.

- *Policy OSC-1.12 Hunting and Fishing.* The County shall provide opportunities for hunting and fishing activities within the County pursuant to appropriate regulations of the California Fish and Game Code.

- *Policy OSC-1.13 Management of Oak Woodland Communities.* The County shall support the conservation and management of oak woodland communities and their habitats.

- *Policy OSC-1.14 Requirement for Biological Studies*. Before approving a specific plan or project, the County shall require a biological study to be prepared by a qualified biologist for proposed development within areas containing a moderate to high potential for sensitive habitat, sensitive wildlife species, and/or sensitive plant species. As appropriate, the study shall include the following activities: (1) inventory species listed in the CNPS Manual of California Vegetation; (2) inventory species identified by USFWS, DFG, and NMFS; (3) inventory special-status species listed in the CNDDB; and (4) conduct field surveys of the project site by a qualified biologist.

- *Policy OSC-1.15 Protect Natural Resources*. The County shall strive to protect natural resource areas, fish and wildlife habitat areas, scenic areas, open space areas, and parks from encroachment or destruction by incompatible development and invasive species.

- *Policy OSC-1.16 Development Proposals Review*. The County shall review development proposals against the most updated CNDDB to assist in identifying potential conflicts with sensitive habitats or special-status species.

- *Policy OSC-1.17 Project Mitigation Measures.* The County 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., CDFG, USFWS, NMFS, etc.) with jurisdiction over any affected sensitive habitats or special-status species.

- *Policy OSC-1.18 Minimize Lighting Impacts*. The County shall ensure that lighting in residential areas and along roadways shall be designed to prevent artificial lighting from reflecting into adjacent natural or open space areas.

- *Policy OSC-1.19 Protection of Sensitive Habitat in Recreational Areas.* The County should incorporate the protection of sensitive habitat as nature areas where recreational facilities are proposed in these habitats.

3.0 METHODS

Available information pertaining to the natural resources of the region was reviewed before conducting the field survey. The following published information was reviewed for this BRA:

- California Department of Fish and Wildlife (CDFW). 2024. *California Natural Diversity Database* (CNDDB); For: *Clearlake Oaks, Clearlake Highlands, Lucerne, Benmore Canyon, The Geysers, Middletown, Whispering Pines, Lower Lake,* and *Kelseyville* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [April 23, 2024];

- California Native Plant Society (CNPS). 2024. *Inventory of Rare and Endangered Plants* (online edition, v8-03 0.45) For: *Clearlake Oaks, Clearlake Highlands, Lucerne, Benmore Canyon, The Geysers, Middletown, Whispering Pines, Lower Lake,* and *Kelseyville* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [April 23, 2024];

- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). 1993. *Sacramento County, California*. USDA, NRCS, in cooperation with the Regents of the University of California (Agricultural Experiment Station);

- USDA, NRCS. 2024. *Web Soil Survey*. Available at: http://websoilsurvey.sc.egov.usda.gov. Accessed [April 23, 2024];

- U.S. Fish and Wildlife Service (USFWS). 2024. *Information for Planning and Consultation* (IPaC) *Pasta Farms.* Accessed [April 23, 2024]; and

- USGS. 2021. *Clearlake Highlands, California*. 7.5-minute series topographic quadrangle. United States Department of Interior.

Before conducting the biological field survey, existing information concerning known habitats and special-status species that may occur in the Study Area was reviewed. The results of the database query

and a nine quadrangle CNDDB query for the Study Area are included in Appendix A, *CNDDB, CNPS, and USFWS Lists of Regionally Occurring Special-Status Species*. HELIX biologists Patrick Martin and Dave Pfuhler conducted the biological field survey on April 26, 2024. The weather during the field survey was partly sunny, with an average temperature of 55°F. The Study Area was systematically surveyed on foot to ensure total search coverage, with special attention given to portions of the Study Area with the potential to support special-status species and sensitive habitats. Binoculars were used to further extend site coverage and identify species observed. All plant and animal species observed were recorded, and all biological communities occurring on-site were characterized. All resources of interest were mapped with a Global Positioning System (GPS)-capable tablet equipped with GPS receivers running ESRI Field Maps for ArcGIS with sub-meter accuracy.

Following the field survey, the potential for each species identified in the database query to occur within the Study Area was determined based on the site survey, soils, habitats present within the Study Area, and species-specific information, as shown in Appendix B, *Special-Status Species with Potential to Occur in the Study Area*. Species observed within the Study Area during the survey are included in Appendix C, *Plant and Wildlife Species Observed in the Study Area,* and photographs taken during the survey are included in Appendix D, *Representative Site Photographs*.

3.1 SPECIAL-STATUS PLANT SURVEY

HELIX biologists Dave Pfuhler and Kate Valdez conducted two surveys for special-status plants with the potential to occur in the Study Area on April 26, 2024 and May 30, 2024. Before conducting the follow-up survey, the biologists visited a nearby reference population of Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*) at the Boggs Mountain State Demonstration Forest managed by CalFire. The biologists surveyed the Study Area in suitable habitat locations for special-status plants identified in the database query. The survey focused on manzanita species and late-blooming species that may not have been identifiable during the initial site survey on April 26, 2024.

4.0 RESULTS

4.1 SITE LOCATION AND DESCRIPTION

The ±58.63-acre Study Area is located at 10750 Siegler Springs Road in unincorporated Lake County, California. The Study Area is situated in Township 12 North, Range 8 West, and Section 14 as depicted on the U.S. Geological Survey (USGS) *Clearlake Highland, CA* 7.5-minute quadrangle map. The Study Area is located on partially developed land in an agricultural setting and is surrounded by rural residential properties and undeveloped forested land.

The Study Area is comprised of eight existing and proposed cannabis cultivation areas that are labeled A – H, and the majority of the areas have been disturbed or are already developed. Existing development and active cropland (cannabis) make up the majority of the Study Area and are located in areas B and D. Areas A, C, E, F, and G have all been cleared of understory vegetation, and remnants of former walnut orchards were observed on-site. Aerial imagery indicates the entire Study Area was an orchard at least since 1985, and by 2003, the eastern portion of the Study Area was converted to vineyards. Removal of a portion of the orchard appears to have occurred in 2019, and construction of the current cropland and development is visible on aerial imagery from 2020. Removal of the remainder of the orchard and vineyard appears to have occurred in 2021 (Google Earth 2024). The former orchard areas in A, C, E, F,

and G are now comprised of ruderal vegetation with remnant chaparral species such as manzanita scattered throughout. These areas are surrounded by undeveloped montane hardwood-conifer forest habitat, and this community comprises all of area H adjacent to the developed area of D.

A site and vicinity map of the Study Area is included as Figure 1, *Site and Vicinity Map*; a topographic map of the Study Area is included as Figure 2, *USGS Topographic Map*; and an aerial image of the Study Area is included as Figure 3, *Aerial Map*.

4.2 PHYSICAL FEATURES

4.2.1 Topography and Drainage

The topography of the Study Area is varied; the northern portion (areas A – D) is generally flat, with small undulating microtopography, and the southern portion (areas E – G) is moderately sloped. Elevations range from approximately 2,560 to 2,920 feet (780 – 890 meters) above mean sea level. The Study Area is in the Upper Cache watershed (USGS Hydrologic Unit Code [HUC8] 18020116). No aquatic resources were observed within or adjacent to the Study Area. Surface water runoff would generally flow downslope and north outside of the Study Area. The site has no apparent natural source of water other than direct precipitation.

4.3 SOILS

Two soil map units are mapped within the Study Area: Collayomi-Aiken-Whispering complex, 5 to 30 percent slopes, and Collayomi-Aiken-Whispering complex, 30 to 50 percent slopes (Figure 4, *Soils Map*). The general characteristics and properties associated with these soils are described below (NRCS 2024).

- **Collayomi-Aiken-Whispering complex, 5 to 30 percent slopes**: This soil unit has a parent material of residuum weathered from andesite and is typical of mountainsides and backslopes. A general soil profile is very gravelly loam (0-60 inches). This soil unit is well drained, has a medium runoff class, and no frequency of flooding or ponding. This soil unit is not considered hydric.

- **Collayomi-Aiken-Whispering complex, 30 to 50 percent slopes:** This soil unit has a parent material of residuum weathered from andesite and is typically found on mountains. A general soil profile is very gravelly loam (0-60 inches). This soil unit is well drained, has a high runoff class, and no frequency of flooding or ponding. This soil unit is not considered hydric.

4.4 BIOLOGICAL COMMUNITIES

Four upland biological communities occur in the Study Area: cropland (37.40 acres), urban areas (1.30 acres), ruderal/disturbed areas (10.21 acres), and montane hardwood-conifer forest (9.72 acres). A comprehensive list of all plant and wildlife species observed within the Study Area in these habitats is provided in Appendix C, and representative site photographs are included in Appendix D.

4.4.1 Cropland

Vegetation in this habitat type is varied and does not conform to normal habitat stages. Vegetation can either be annual or perennial, vary according to location in the state, and germinate at various times of the year. Crop rotation is typically used to conserve soil nutrients and maintain productivity. These crops are often established on fertile soils, which historically supported an abundance of wildlife. Many species of wildlife have adapted to croplands but are often controlled by fencing, trapping, and poisoning to prevent excessive crop losses. Availability of irrigation water during dryer months benefits many wildlife species as a source of water (Mayer and Laudenslayer 1988).

Approximately 37.40 acres of cropland occur in the Study Area within areas B and D and is the dominant habitat type within the Study Area (Figure 5, *Biological Communities*). This area is made up of an existing cannabis cultivation operation, dirt access roads, and bare ground. Cannabis is planted in the ground in rows and very little natural vegetation is present in this habitat type.

4.4.2 Urban

Urban habitat is often comprised of little to no vegetation and typically contains built structures and/or maintained surfaces such as roads or parking lots. Vegetation that does occur within this habitat type is often ornamental, rather than invasive or noxious weeds such as in ruderal habitat types.

Approximately 1.30 acres of urban habitat occurs in the Study Area and is made up of a large warehouse associated with the existing cannabis operation and the immediate surroundings (Figure 5).

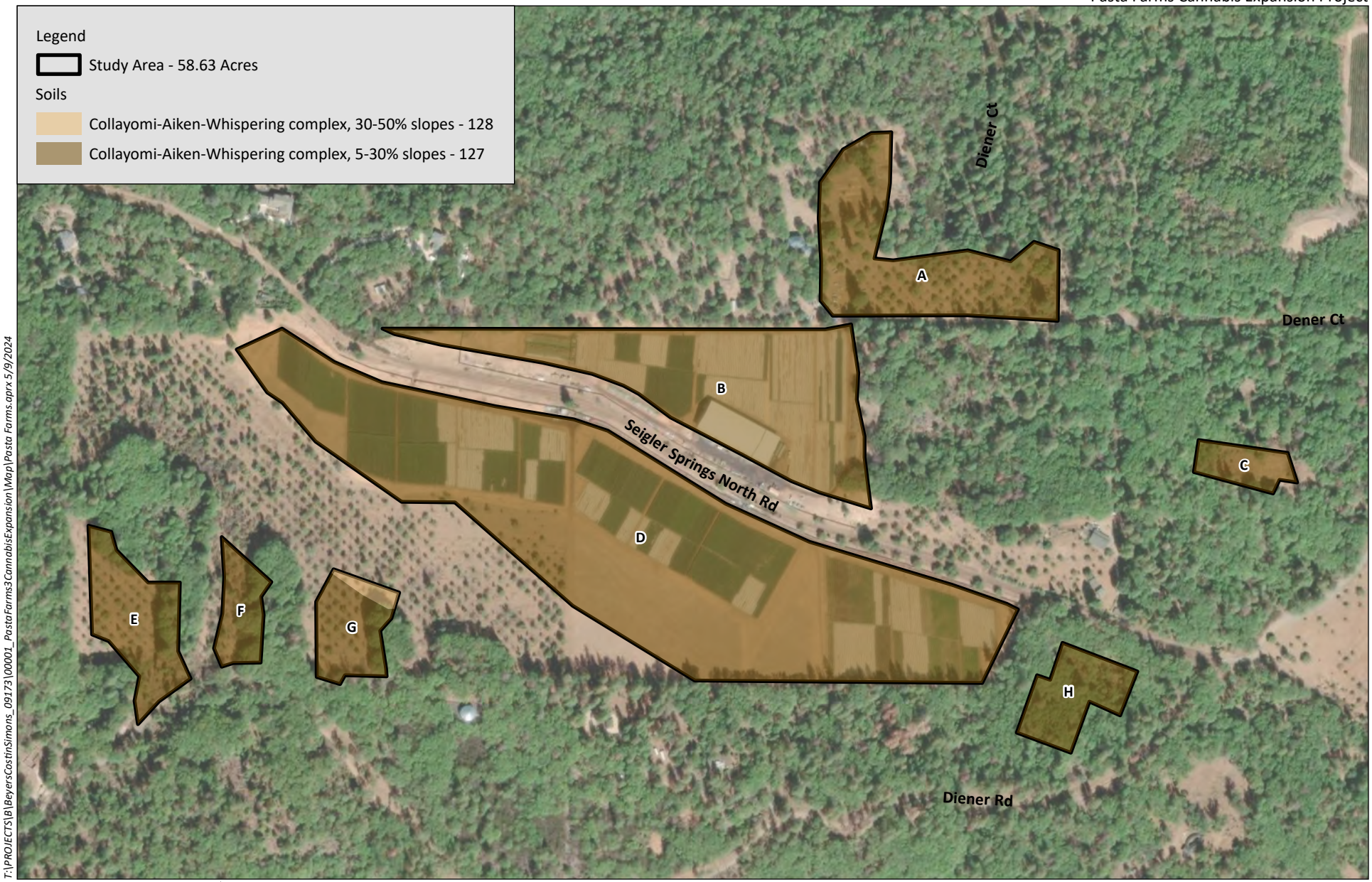
4.4.3 Ruderal/Disturbed

Ruderal habitats are characterized by an assemblage of non-native and invasive plant species that readily colonize disturbed landscapes. Roadsides, construction sites, and vacant lots are all sites where ruderal plant species typically occur. Disturbed habitats typically retain a soil substrate, but the vegetation communities are either lacking or are comprised of mostly ruderal plant species.

Approximately 10.21 acres of ruderal/disturbed habitat occurs in the Study Area and is comprised of the former orchards in areas A, C, and a portion of areas D, E, F, and G (Figure 5). The understory of the orchard was likely comprised of ruderal herbaceous plant species and is now comprised of mostly ruderal species, with some species typical of chaparral habitat also present. Fallen walnut trees are present throughout this habitat, and areas of bare and disturbed soil are located throughout. Dominant plant species observed within this habitat during the field survey include slender oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), small fescue (*Festuca microstachys*), common vetch (*Vicia sativa*), and common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*).

4.4.4 Montane Hardwood-Conifer Forest

Montane hardwood-conifer forest habitat is comprised of a mix of hardwood species such as California black oak (*Quercus kelloggii*), canyon live oak (*Quercus chrysolepis*), Pacific madrone (*Arbutus menziesii*), and fir (*Abies* spp.), as well as conifer species such as ponderosa pine (*Pinus ponderosa*), Douglas-fir (*Pseudotsuga menziesii*), and incense cedar (*Calocedrus decurrens*). This habitat often occurs in a mosaic-like pattern with small pure stands of conifers mixed with small stands of broad-leaved trees (Zeiner et al. 1990). This habitat often has a dense, bi-layered canopy and relatively little understory.

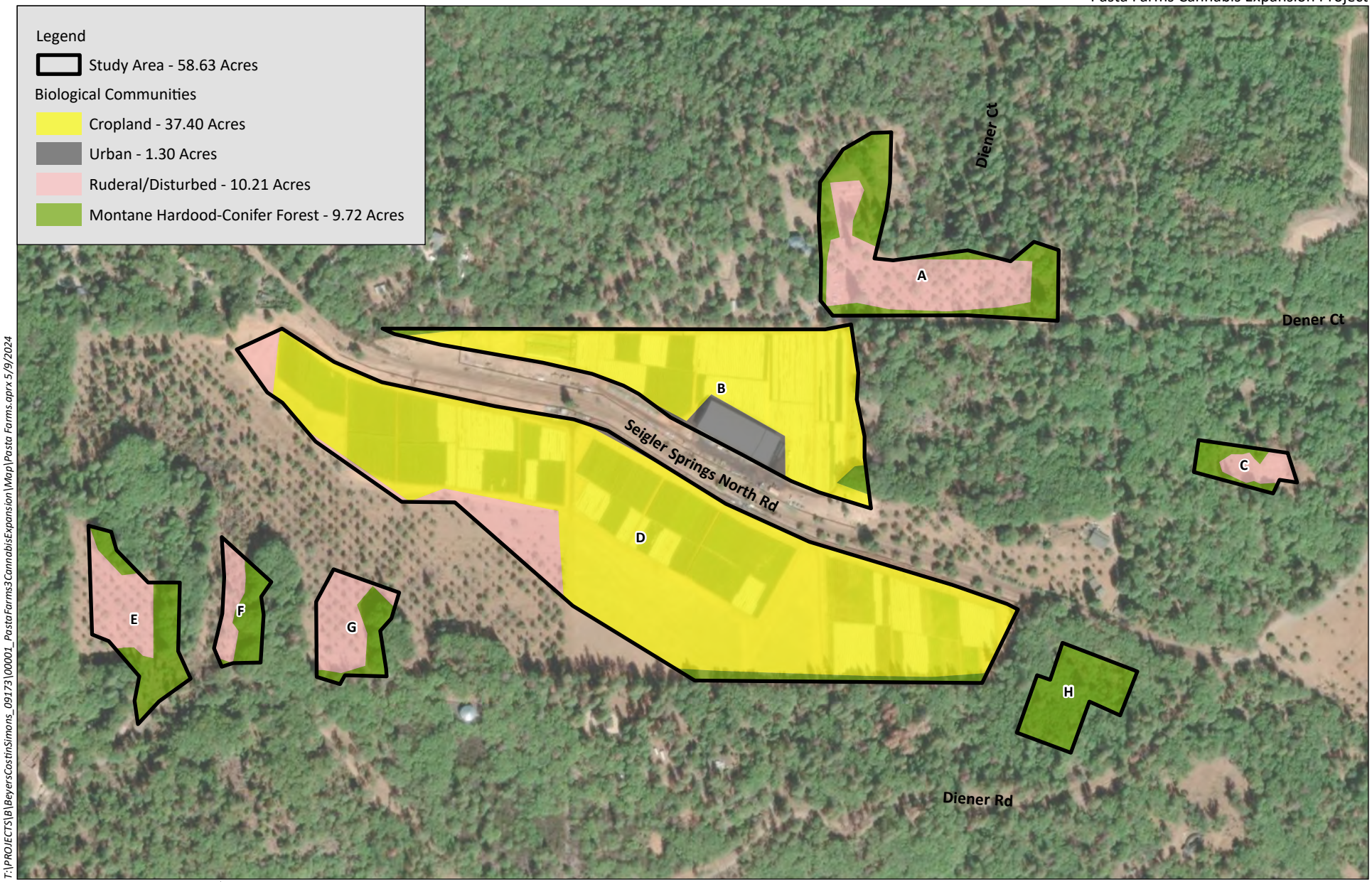


Source: NRCS, 2022; Aerial Imagery (Maxar, 2023)

HELIX Environmental Planning

Soils Map

Figure 4



Source: Aerial Imagery (Maxar, 2023)

HELIX Environmental Planning

Biological Communities Map

Figure 5

Montane hardwood-conifer forest habitat is often a transitional habitat between dense coniferous forest and montane hardwood, mixed chaparral, or open oak woodlands. It generally occurs on coarse, well-drained mesic soils in mountainous terrain with narrow valleys (Zeiner et al. 1990).

Approximately 9.72 acres of montane hardwood-conifer forest habitat occur in the Study Area. This habitat is located in area H, portions of areas A, C, E, F, and G, and within the buffers surrounding all other areas (Figure 5). The canopy of this habitat within the Study Area is fairly open and is comprised of ponderosa pine, California black oak, and knobcone pine (*Pinus attenuata*), and the understory is relatively bare, with some scattered common manzanita, hoary manzanita (*Arctostaphylos canescens*), and grassy species growing through the leaf litter.

4.5 SPECIAL-STATUS SPECIES

Special-status species are plant and wildlife species that have been afforded special recognition by federal, State, or local resource agencies or organizations. They are generally of relatively limited distribution and may require specialized habitat conditions. Special-status species are defined as meeting one or more of the following criteria:

- Listed or proposed for listing under CESA or FESA;
- Protected under other regulations (e.g., the PCCP, MBTA);
- Included on the CDFW Special Animals List or Watch List;
- Identified as Rare Plant Rank 1 to 3 by CNPS; or
- Receive consideration during an environmental review under CEQA.

Special-status species considered for this analysis are based on queries of the CNDDB, the USFWS, and CNPS ranked species (online versions) for the *Clearlake Highland, CA* USGS quadrangle and eight surrounding quadrangles (Appendix A). Appendix B includes the common name and scientific name for each species, regulatory status (federal, State, local, CNPS), habitat descriptions, and potential for occurrence within the Study Area. The following set of criteria has been used to determine each species' potential for occurrence within the Study Area:

Will Not Occur: Species is either sessile (i.e., plants) or so limited to a particular habitat that it cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur on the Study Area;

Not Expected: Species moves freely and might disperse through or across the Study Area, but suitable habitat for residence or breeding does not occur in the Study Area, potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100% certainty;

Presumed Absent: Habitat suitable for residence and breeding occurs in the Study Area; however, focused surveys conducted for the current project were negative;

May Occur: Species was not observed on the site, and breeding habitat is not present, but the species has the potential to utilize the site for dispersal;

High: Habitat suitable for residence and breeding occurs in the Study Area, and the species has been recorded recently in or near the Study Area but was not observed during surveys for the current project; and

Present: The species was observed during biological surveys for the current project and is assumed to occupy the Study Area or utilize the Study Area during some portion of its life cycle.

Only those species that are known to be present, have a high potential to occur, or may occur are discussed further in the following sections. Species that are not expected to occur or will not occur are included in Appendix B.

4.5.1 Listed and Special-Status Plants

According to the database query, 56 listed and/or special-status plants have the potential to occur on-site or in the vicinity of the Study Area (CDFW 2024 and CNPS 2024). Based on field observations, published information, and literature review, one special-status plant is known to occur in the Study Area, Napa lomatium (*Lomatium repostum*), and no other special-status plants have the potential to occur in the Study Area. The majority of the regional special-status plants identified in the query occur on serpentine or alluvial soils, within vernal pools or other aquatic habitats, or within other habitats or elevations that do not occur in the Study Area.

A follow-up survey for special-status plants was conducted on May 30, 2024, that focused on manzanita species and late-blooming species that may not have been identifiable during the initial site survey on April 26, 2024. No special-status plants besides Napa lomatium were observed in the Study Area.

4.5.1.1 Special-Status Plants Known to Occur

Napa Lomatium

Napa lomatium is a perennial herb that is rated 4.2 by CNPS (see Section 2.4.1 for a description of CNPS rankings). This species is endemic to Northern California and is found on serpentine or volcanic soils in chaparral and cismontane woodland habitats from 90 to 1,030 meters elevation. The blooming period is March to June (CNPS 2024).

Approximately 50 plants of this species were observed in area C within the Study Area. This species is well documented in the region of the Study Area (CNPS 2024) but is not currently tracked in the CNDDB (CDFW 2024). This species' taxonomy is under review and was changed from a California Rare Plant Ranking (CRPR) 1B.2 to a 4.2 on May 12, 2023 (CNPS 2024). CRPR 4 taxa include plants that are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly but they are not listed under State or federal regulation. CRPR 4 taxa do not clearly meet CEQA standards and thresholds for impact considerations and are not typically addressed in CEQA documents. These species may be locally uncommon or of limited distribution but do not hold any legal protection.

4.5.2 Listed and Special-Status Wildlife

According to the database query, 20 listed and/or special-status wildlife species have the potential to occur on-site or in the vicinity of the Study Area (CDFW 2024 and USFWS 2024a). Based on field observations, published information, and literature review, no special-status wildlife species have the

potential to occur in the Study Area. However, migratory birds and raptors protected under federal, State, and local laws/policies have the potential to occur within the Study Area. Special-status wildlife species identified in the database query occur in aquatic habitats, riparian habitats, old-growth forests, or in other habitats that do not occur in the Study Area.

The following species are not expected or may pass through the Study Area but are not expected to use the Study Area in any substantial way and are not discussed further in this report: Monarch butterfly (*Danaus plexippus*), golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), purple martin (*Progne subis*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western red bat (*Lasiurus frantzii*).

4.5.2.1 Nesting Migratory Birds and Raptors

Migratory birds are protected under the MBTA of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10; this also includes feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Additionally, Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., hawks, owls, eagles, and falcons), including their nests or eggs; and Section 3513 specifically states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

A number of migratory birds and raptors have the potential to nest in or adjacent to the Study Area. Many migratory birds and raptors were observed in the Study Area during the field survey on April 26, 2024, including red-shouldered hawk (*Buteo lineatus*), black-headed grosbeak (*Pheucticus melanocephalus*), California quail (*Callipepla californica*), orange-crowned warbler (*Leiothlypis celata*), and ash-throated flycatcher (*Myiarchus cinerascens*). Suitable nest locations within and adjacent to the Study Area include trees, shrubs, grass, artificial structures, and bare ground.

4.6 SENSITIVE HABITATS

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA; Section 1600 of the California Fish and Game Code, which includes riparian areas; and/or Sections 401 and 404 of the Clean Water Act, which include wetlands and other waters of the U.S. Sensitive habitats or resource types within the Study Area are discussed below.

4.6.1 Wildlife Migration Corridors

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. This fragmentation of habitat can also occur when a portion of one or more habitats is converted into another habitat; for instance, when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or construction activities. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species

extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The Study Area is in a partially developed area in an agricultural setting and is surrounded by rural residential properties. Although wildlife may disperse through the Study Area on a local level, the Study Area is not considered a wildlife migration or movement corridor.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The ±58.63-acre Study Area is located on partially developed land in an agricultural setting and is surrounded by rural residential properties and undeveloped land. The Study Area is comprised of cropland (37.40 acres), urban areas (1.30 acres), ruderal/disturbed areas (10.21 acres), and montane hardwood-conifer forest (9.72 acres).

One special-status plant, Napa lomatium, was observed in the Study Area during the field survey on April 26, 2024; no other special-status plant or wildlife species were observed. Suitable habitat is present for nesting migratory birds and raptors, and there is potential that these species may occur within the Study Area. Recommendations, including avoidance and minimization measures to limit or avoid impacts to special-status species and nesting birds, are included below.

Known or potential biological constraints in the Study Area include:

- Known habitat for the special-status plant, Napa lomatium; and
- Potential habitat for special-status and migratory nesting birds.

5.1 RECOMMENDATIONS

5.1.1 Special-Status Plants

The Study Area contains occupied habitat for Napa lomatium, which has a CRPR of 4.2; CRPR 4 taxa do not clearly meet CEQA standards and thresholds for impact considerations and are not typically addressed in CEQA documents. These species may be locally uncommon or of limited distribution but do not hold any legal protection. This species is well documented in the region of the Study Area (Calflora 2024) and, therefore, does not warrant further CEQA analysis for impact consideration. Impact considerations for Napa lomatium are not required for any CEQA analysis, and no measures are recommended for this species.

5.1.2 Nesting Migratory Birds and Raptors

Migratory birds and raptors protected under federal, State, and/or local laws and policies have the potential to nest within the Study Area. Although no active nests were observed during the field survey, the Study Area and adjacent land contain suitable habitat to support a variety of nesting birds within trees, shrubs, grass, structures, and on bare ground.

Active nests and nesting birds are protected by the California Fish and Game Code Sections 3503 and 3503.5, 3513, and the MBTA. Ground-disturbing and other development activities including grading, vegetation clearing, tree removal/trim, and construction could impact nesting birds if these activities

occur during the nesting season (generally February 1 to August 31). To avoid impacts to nesting birds, all ground-disturbing activity should be completed between September 1 and January 31, if feasible. If construction cannot occur outside of the nesting season, the following measures are recommended:

- If construction activities occur during the nesting season, a qualified biologist should conduct a nesting bird survey to determine the presence of any active nests within the Study Area. Additionally, the surrounding 500 feet of the Study Area should be surveyed for active raptor nests, where accessible. The nesting bird survey should be conducted within 14 days before the commencement of ground-disturbing or other development activities. If the nesting bird survey shows that there is no evidence of active nests, then a letter report should be prepared to document the survey and be provided to the project proponent, and no additional measures are recommended. If development does not commence within 14 days of the nesting bird survey, or halts for more than 14 days, then an additional survey is required before starting or resuming work within the nesting season.

    - If active nests are found, then the qualified biologist should establish a species-specific buffer to prohibit development activities near the nest to and minimize nest disturbance until the young have successfully fledged or the biologist determines that the nest is no longer active. Nest monitoring may also be warranted during certain phases of construction to ensure nesting birds are not adversely impacted. If active nests are found within any trees slated for removal, then an appropriate buffer should be established around the tree and all trees within the buffer should not be removed until a qualified biologist determines that the nest has successfully fledged and/or is no longer active.

- A qualified biologist should conduct environmental awareness training that is given to all on-site personnel before the initiation of work.

- If construction occurs outside of the nesting bird season (September 1 to January 31) a nesting bird survey and environmental training for nesting birds would not be required.

6.0 REFERENCES

California Department of Fish and Wildlife (CDFW). 2024. California Natural Diversity Database (CNDDB); For: *Clearlake Oaks, Clearlake Highlands, Lucerne, Benmore Canyon, The Geysers, Middletown, Whispering Pines, Lower Lake,* and *Kelseyville* USGS 7.5-minute series quadrangles, Sacramento, CA.

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Appendix A

CNDDB, CNPS, and USFWS Lists of Regionally Occurring Special-Status Species

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

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

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Amsinckia lunaris bent-flowered fiddleneck	PDBOR01070	None	None	G3	S3	1B.2
Antirrhinum subcordatum dimorphic snapdragon	PDSCR2S070	None	None	G3	S3	4.3
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Archoplites interruptus Sacramento perch	AFCQB07010	None	None	G1	S1	SSC
Arctostaphylos manzanita ssp. elegans Konocti manzanita	PDERI04271	None	None	G5T3	S3	1B.3
Arctostaphylos stanfordiana ssp. raichei Raiche's manzanita	PDERI041G2	None	None	G3T2	S2	1B.1
Astragalus rattanii var. jepsonianus Jepson's milk-vetch	PDFAB0F7E1	None	None	G4T3	S3	1B.2
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Bombus pensylvanicus American bumble bee	IIHYM24260	None	None	G3G4	S2	
Brasenia schreberi watershield	PDCAB01010	None	None	G5	S3	2B.3
Calasellus californicus An isopod	ICMAL34010	None	None	G2	S3	
Calystegia collina ssp. oxyphylla Mt. Saint Helena morning-glory	PDCON04032	None	None	G4T3	S3	4.2
Calystegia collina ssp. tridactylosa three-fingered morning-glory	PDCON04036	None	None	G4T1	S1	1B.2
Camissonia lacustris grassland suncup	PDONA030W0	None	None	G2	S2	1B.2
Carex praticola northern meadow sedge	PMCYP03B20	None	None	G5	S2	2B.2
Castilleja rubicundula var. rubicundula pink creamsacs	PDSCR0D482	None	None	G5T2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ceanothus confusus Rincon Ridge ceanothus	PDRHA04220	None	None	G1	S1	1B.1
Ceanothus divergens Calistoga ceanothus	PDRHA04240	None	None	G2	S2	1B.2
Central Valley Drainage Rainbow Trout/Cyprinid Stream Central Valley Drainage Rainbow Trout/Cyprinid Stream	CARA2422CA	None	None	GNR	SNR	
Chlorogalum pomeridianum var. minus dwarf soaproot	PMLIL0G042	None	None	G5T3	S3	1B.2
Clear Lake Drainage Cyprinid/Catostomid Stream Clear Lake Drainage Cyprinid/Catostomid Stream	CARA2530CA	None	None	GNR	SNR	
Clear Lake Drainage Resident Trout Stream Clear Lake Drainage Resident Trout Stream	CARA2520CA	None	None	GNR	SNR	
Clear Lake Drainage Seasonal Lakefish Spawning Stream Clear Lake Drainage Seasonal Lakefish Spawning Stream	CARA2550CA	None	None	GNR	SNR	
Coastal and Valley Freshwater Marsh Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G2G3	S2S3	SSC
Downingia willamettensis Cascade downingia	PDCAM060E0	None	None	G4	S2	2B.2
Dubiraphia brunnescens brownish dubiraphian riffle beetle	IICOL5A010	None	None	G1	S1	
Emys marmorata western pond turtle	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Eriastrum brandegeeae Brandegee's eriastrum	PDPLM030H0	None	None	G1Q	S1	1B.1
Erigeron greenei Greene's narrow-leaved daisy	PDAST3M5G0	None	None	G3	S3	1B.2
Eriogonum nervulosum Snow Mountain buckwheat	PDPGN08440	None	None	G2	S2	1B.2
Eryngium constancei Loch Lomond button-celery	PDAPI0Z0W0	Endangered	Endangered	G1	S1	1B.1
Fritillaria pluriflora adobe-lily	PMLIL0V0F0	None	None	G2G3	S2S3	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S2	
Gratiola heterosepala Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
Great Valley Mixed Riparian Forest Great Valley Mixed Riparian Forest	CTT61420CA	None	None	G2	S2.2	
Grimmia torenii Toren's grimmia	NBMUS32330	None	None	G2	S2	1B.3
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Harmonia hallii Hall's harmonia	PDAST650A0	None	None	G2?	S2?	1B.2
Hedychridium milleri Borax Lake cuckoo wasp	IIHYM68020	None	None	G1	S1	
Hemizonia congesta ssp. congesta congested-headed hayfield tarplant	PDAST4R0W1	None	None	G5T2	S2	1B.2
Hesperolinon adenophyllum glandular western flax	PDLIN01010	None	None	G2G3	S2S3	1B.2
Hesperolinon bicarpellatum two-carpellate western flax	PDLIN01020	None	None	G2	S2	1B.2
Hesperolinon didymocarpum Lake County western flax	PDLIN01070	None	Endangered	G1	S1	1B.2
Hesperolinon sharsmithiae Sharsmith's western flax	PDLIN010E0	None	None	G2Q	S2	1B.2
Horkelia bolanderi Bolander's horkelia	PDROS0W011	None	None	G1	S1	1B.2
Hydrochara rickseckeri Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Hysterocarpus traskii lagunae Clear Lake tule perch	AFCQK02013	None	None	G5T3	S3	SSC
Imperata brevifolia California satintail	PMPOA3D020	None	None	G3	S3	2B.1
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	
Lasiurus frantzii western red bat	AMACC05080	None	None	G4	S3	SSC
Lasthenia burkei Burke's goldfields	PDAST5L010	Endangered	Endangered	G1	S1	1B.1
Lavinia exilicauda chi Clear Lake hitch	AFCJB19011	None	Threatened	G4T1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Layia septentrionalis Colusa layia	PDAST5N0F0	None	None	G2	S2	1B.2
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Leptosiphon jepsonii Jepson's leptosiphon	PDPLM09140	None	None	G2G3	S2S3	1B.2
Limnanthes floccosa ssp. floccosa woolly meadowfoam	PDLIM02043	None	None	G4T4	S3	4.2
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Lupinus antoninus Anthony Peak lupine	PDFAB2B0C0	None	None	G2	S2	1B.2
Lupinus sericatus Cobb Mountain lupine	PDFAB2B3J0	None	None	G2?	S2?	1B.2
Mielichhoferia elongata elongate copper moss	NBMUS4Q022	None	None	G5	S3S4	4.3
Myotis evotis long-eared myotis	AMACC01070	None	None	G5	S3	
Myotis thysanodes fringed myotis	AMACC01090	None	None	G4	S3	
Navarretia leucocephala ssp. bakeri Baker's navarretia	PDPLM0C0E1	None	None	G4T2	S2	1B.1
Navarretia leucocephala ssp. pauciflora few-flowered navarretia	PDPLM0C0E4	Endangered	Threatened	G4T1	S1	1B.1
Navarretia leucocephala ssp. plieantha many-flowered navarretia	PDPLM0C0E5	Endangered	Endangered	G4T1	S1	1B.2
Navarretia paradoxinota Porter's navarretia	PDPLM0C160	None	None	G2	S2	1B.3
Northern Basalt Flow Vernal Pool Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	G3	S2.2	
Northern Volcanic Ash Vernal Pool Northern Volcanic Ash Vernal Pool	CTT44133CA	None	None	G1	S1.1	
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T3Q	S3	SSC
Orcuttia tenuis slender Orcutt grass	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Panicum acuminatum var. thermale Geysers panicum	PMPOA24028	None	Endangered	G5T2Q	S2	1B.2
Penstemon newberryi var. sonomensis Sonoma beardtongue	PDSCR1L483	None	None	G4T3	S3	1B.3

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Potamogeton zosteriformis eel-grass pondweed	PMPOT03160	None	None	G5	S3	2B.2
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Pyrgulopsis ventricosa Clear Lake pyrg	IMGASJ0F40	None	None	G1	S1	
Rana boylii pop. 1 foothill yellow-legged frog - north coast DPS	AAABH01051	None	None	G3T4	S4	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Saldula usingeri Wilbur Springs shorebug	IIHEM07010	None	None	G2	S2	
Sedella leiocarpa Lake County stonecrop	PDCRA0F020	Endangered	Endangered	G1	S1	1B.1
Sidalcea oregana ssp. hydrophila marsh checkerbloom	PDMAL110K2	None	None	G5T2	S2	1B.2
Streptanthus brachiatus ssp. brachiatus Socrates Mine jewelflower	PDBRA2G072	None	None	G2T1	S1	1B.2
Streptanthus brachiatus ssp. hoffmanii Freed's jewelflower	PDBRA2G071	None	None	G2T2	S2	1B.2
Streptanthus glandulosus ssp. hoffmanii Hoffman's bristly jewelflower	PDBRA2G0J4	None	None	G4T2	S2	1B.3
Streptanthus hesperidis green jewelflower	PDBRA2G510	None	None	G2G3	S2S3	1B.2
Taricha rivularis red-bellied newt	AAAAF02020	None	None	G2	S2	SSC
Trichostema ruygtii Napa bluecurls	PDLAM220H0	None	None	G1G2	S2	1B.2
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3	2B.3

Record Count: 96

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

6 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [**1A:1B:2A:2B:3:4**] Fed List is one of [**FE:FT:FC**] **and** State List is one of [**CE:CT:CR:CC**] , 9-Quad include [**3812286:3812287:3912217:3912216:3912215:3812285:3812275:3812276:3812277**]

▲ 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
Eryngium constancei	Loch Lomond button-celery	Apiaceae	annual/perennial herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1980-01-01	No Photo Available
Lasthenia burkei	Burke's goldfields	Asteraceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1974-01-01	© 2015 Neal Kramer
Navarretia leucocephala ssp. *pauciflora*	few-flowered navarretia	Polemoniaceae	annual herb	May-Jun	FE	CT	G4T1	S1	1B.1	Yes	1974-01-01	© 2013 Jake Ruygt
Navarretia leucocephala ssp. *plieantha*	many-flowered navarretia	Polemoniaceae	annual herb	May-Jun	FE	CE	G4T1	S1	1B.2	Yes	1974-01-01	No Photo Available
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	G2	S2	1B.1	Yes	1974-01-01	© 2013 Justy Leppert
Sedella leiocarpa	Lake County stonecrop	Crassulaceae	annual herb	Apr-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available

Showing 1 to 6 of 6 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 23 April 2024].

United States Department of the Interior

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

In Reply Refer To: 04/23/2024 20:18:58 UTC
Project Code: 2024-0081015
Project Name: Pasta Farms

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

To Whom It May Concern:

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

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

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

PROJECT SUMMARY

Project Code: 2024-0081015
Project Name: Pasta Farms
Project Type: New Constr - Above Ground
Project Description: Private cannabis operation.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.8950744,-122.71213419748861,14z

Counties: Lake County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 10 threatened, endangered, or candidate species on this species list.

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

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

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

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

BIRDS

NAME	STATUS
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

FLOWERING PLANTS

NAME	STATUS
Burke's Goldfields *Lasthenia burkei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Few-flowered Navarretia *Navarretia leucocephala ssp. pauciflora (=N. pauciflora)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8242	Endangered
Lake County Stonecrop *Parvisedum leiocarpum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2263	Endangered
Loch Lomond Coyote Thistle *Eryngium constancei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5106	Endangered
Many-flowered Navarretia *Navarretia leucocephala ssp. plieantha* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2491	Endangered

NAME	STATUS
Slender Orcutt Grass *Orcuttia tenuis*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/1063

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency:	HELIX Environmental Planning Inc.
Name:	Christine Heckler
Address:	1677 Eureka Road Suite 100
Address Line 2:	Suite 100
City:	Roseville
State:	CA
Zip:	95661
Email	christineh@helixepi.com
Phone:	9164351202

Appendix B

Special-Status Species with Potential to Occur in the Study Area

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Plants			
Amsinckia lunaris bent-flowered fiddleneck	--/--/1B.2	An annual herb found on gravelly slopes, serpentine soils, openings in cismontane woodland, and valley and foothill grassland from 5 – 800 meters elevation. Blooms March – June (Kelley and Ganders 2012).	**Will not occur.** Serpentine soil does not occur in the Study Area and gravely slopes and grassland habitat are also absent. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Antirrhinum subcordatum dimorphic snapdragon	--/--/4.3	An annual herb found on serpentine soils and shale in chaparral habitat. Most often found on west or south facing slopes and occurs from 185 – 800 meters elevation. Blooms April – July (CNPS 2024).	**Will not occur.** Serpentine soil or shale do not occur in the Study Area. One documented occurrence within five miles of the Study Area (CDFW 2024).
Arctostaphylos manzanita ssp. *elegans* Konocti manzanita	--/--/1B.3	A perennial evergreen shrub found on volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest habitats from 395 – 1,615 meters elevation. Blooms (January) March – May (July) (CNPS 2024).	**Presumed absent.** Suitable volcanic soil is present in the Study Area and portions of the ruderal/disturbed habitat appear to support chaparral species. However, this species was not observed during the initial site visit on April 26, 2024, or during a focused follow-up survey conducted on May 29, 2024. There are 16 documented occurrences within five miles of the Study Area (CDFW 2024).
Arctostaphylos stanfordiana ssp. *decumbens* Raiche's manzanita	--/--/1B.1	A perennial evergreen shrub that occurs in rhyolitic chaparral and cismontane woodlands from 485 – 1,070 meters elevation. Most often found on mountain ridges and summits. Blooms February – April (May) (CNPS 2024).	**Will not occur.** Suitable volcanic soil is present in the Study Area and portions of the ruderal/disturbed habitat appear to support chaparral species. However, this species was not observed in the Study Area during the initial site visit on April 26, 2024, or during a focused follow-up survey conducted on May 29, 2024. There is one historic CNDDB reported occurrence within a 5-mile radius of the Study Area; the occurrence is dated to 1938 and is from a non-specific record (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Astragalus rattanii var. *jepsonianus* Jepson's milkvetch	--/--/1B.2	An annual herb found in chaparral, cismontane woodland, and valley and foothill grassland from 295 – 700 meters elevation, often on serpentine soils. Blooms March – June (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area and the Study Area is above the known elevational range of this species. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Brasenia schreberi watershield	--/--/2B.3	A rhizomatous aquatic herb found in freshwater marshes and swamps from 30 – 2,200 meters elevation. Blooms June to September (CNPS 2024).	**Will not occur.** There is no suitable aquatic habitat for this species in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Calystegia collina ssp. *oxyphylla* Mt. Saint Helena morning-glory	--/--/4.2	A perennial rhizomatous herb found on serpentine soils in chaparral, lower montane coniferous forest, and valley and foothill grassland habitats. Often found on slopes and hillsides and occurs from 280 – 1,010 meters elevation. Blooms April – June (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Calystegia collina ssp. *tridactylosa* three-fingered morning-glory	--/--/1B.2	A perennial rhizomatous herb found on rocky or gravelly serpentine soils in openings in chaparral and cismontane woodland from 0 – 600 meters elevation. Blooms April – June (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area and the Study Area is above the known elevational range of this species. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Camissonia lacustris grassland suncup	--/--/1B.2	An annual herb found on serpentine, granitic or gravelly soils in lower montane coniferous forest, chaparral, cismontane woodlands and valley and foothill grasslands from 180 – 1,220 meters elevation. Blooms April – June (CDFW 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Carex praticola northern meadow sedge	--/--/2B.2	A perennial herb found in mesic meadows and seeps from 0 – 3,200 meters elevation. Blooms May – July (CNPS 2024).	**Will not occur.** Meadow or seep habitat does not occur in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Castilleja rubicundula ssp. *rubicundula* pink creamsacs	--/--/1B.2	An annual herb found on serpentine soils in chaparral, cismontane woodland, meadows, seeps, and valley and foothill grasslands from 20 – 910 meters elevation. Blooms April – June (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Ceanothus confusus Rincon Ridge ceanothus	--/--/1B.1	A perennial evergreen shrub found on volcanic or serpentine soils in closed-cone coniferous forest, chaparral, and cismontane woodland from 75 – 1,065 meters elevation. Blooms February – June (CNPS 2024).	**Presumed absent.** Suitable volcanic soil is present in the Study Area and portions of the ruderal/disturbed habitat appear to support chaparral species. However, this species was not observed during the site visit on April 26, 2024, or during a focused follow-up survey conducted on May 29, 2024. This species is a perennial shrub and would have been identifiable during the site visits. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Ceanothus divergens Calistoga ceanothus	--/--/1B.2	A perennial evergreen shrub found on rocky volcanic or serpentine soils in chaparral from 170 – 950 meters elevation. Blooms February – April (CNPS 2024).	**Presumed absent.** Suitable volcanic soil is present in the Study Area and portions of the ruderal/disturbed habitat appear to support chaparral species. However, this species was not observed during the site visit on April 26, 2024, or during a focused follow-up survey conducted on May 29, 2024. This species is a perennial shrub and would have been identifiable during the site visits. There are no documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Chlorogalum pomeridianum var. *minus* dwarf soaproot	--/--/1B.2	A perennial bulbiferous herb found on serpentine soils in chaparral from 305 – 1,000 meters elevation. Blooms May – August (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Downingia willamettensis Cascade downingia	--/--/2B.2	An annual herb found along lake margins in cismontane woodlands, valley and foothill grasslands, and vernal pools from 15 – 1,110 meters elevation. Blooms June -July (September) (CNPS 2024).	**Will not occur.** There is no suitable aquatic habitat for this species in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Eriastrum brandegeeae Brandegee's eriastrum	--/--/1B.1	An annual herb found in chaparral and cismontane woodland habitats on barren volcanic soils in open areas from 410 – 845 meters elevation. Blooms May – July (CNPS 2024).	**Presumed absent.** Suitable volcanic soil is present in the Study Area and portions of the ruderal/disturbed habitat appear to support chaparral species. However, this species was not observed during the site visit on April 26, 2024, or during a focused follow-up survey conducted on May 29, 2024. There are two documented occurrences within five miles of the Study Area (CDFW 2024).
Erigeron greenei Greene's narrow-leaved daisy	--/--/1B.2	A perennial herb found on serpentine or alluvial soils in chaparral from 80 – 1,005 meters elevation. Blooms May – September (CNPS 2024).	**Will not occur.** Serpentine or alluvial soils do not occur in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Eriogonum nervulosum Snow Mountain buckwheat	--/--/1B.2	A perennial rhizomatous herb found on serpentine soils in chaparral from 300 – 2,105 meters elevation. Currently known from only nine extant locations. Blooms June – September (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area and the Study Area is outside of the current known range of this species. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Eryngium constancei Loch Lomond button-celery	FE/SE/1B.1	An annual or perennial herb found in vernal pools from 460 – 855 meters elevation. Known from four occurrences. Blooms April – June (CNPS 2024).	**Will not occur.** Vernal pools do not occur in the Study Area and the Study Area is outside of the current known range of this species. There are three documented occurrences within five miles of the Study Area (CDFW 2024).
Fritillaria pluriflora adobe-lily	--/--/1B.2	A bulbiferous herb found in chaparral, cismontane woodland, and valley and foothill grassland habitats from 60 – 705 meters elevation, often on adobe soils. Blooms February – April (CNPS 2024).	**Will not occur.** Adobe soils do not occur in the Study Area and the Study Area is above the known elevational range of this species. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Gratiola heterosepala Boggs Lake hedge-hyssop	--/SE/1B.2	An annual herb found on clay soils in marshes, swamps, at lake margins, and in vernal pools from 10 – 2,375 meters elevation. Blooms April – August (CNPS 2024).	**Will not occur.** Clay soils and aquatic habitats do not occur in the Study Area. There are three documented occurrences within five miles of the Study Area (CDFW 2024).
Grimmia torenii Toren's grimmia	--/--/1B.3	A moss found in rocky openings and on boulder and rock walls, on carbonate or volcanic substrates, in chaparral, cismontane woodland, and lower montane coniferous forest habitats from 325 – 1,160 meters elevation. No blooming period (CNPS 2024).	**Will not occur.** Suitable rocky habitat does not occur in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Harmonia hallii Hall's harmonia	--/--/1B.2	An annual herb found on serpentine soils in chaparral habitat from 305 – 975 meters elevation. Blooms April – June (CNPS 2022).	**Will not occur.** Serpentine soil does not occur in the Study Area. There are two documented occurrences within five miles of the Study Area (CDFW 2024).
Hemizonia congesta ssp. *congesta* Congested-headed hayfield tarplant	--/--/1B.2	An annual herb found in valley and foothill grasslands from 20 – 560 meters elevation. Blooms April – November (CNPS 2024).	**Will not occur.** Valley or foothill grassland habitat does not occur in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Hesperolinon adenophyllum glandular western flax	--/--/1B.2	An annual herb found on serpentinite soils in chaparral, cismontane woodlands, and valley and foothill grasslands from 150 – 1,315 meters elevation. Blooms May – August (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There are six documented occurrences within five miles of the Study Area (CDFW 2024).
Hesperolinon bicarpellatum two-carpellate western flax	--/--/1B.2	An annual herb found on serpentine soils in chaparral habitat from 60 – 1,005 meters elevation. Blooms May – July (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There are two documented occurrences within five miles of the Study Area (CDFW 2024).
Hesperolinon didymocarpum Lake County western flax	--/SE/1B.2	An annual herb endemic to Lake County, California. Found on serpentine soils in chaparral habitat from 325 – 400 meters elevation. Currently known from six occurrences (CDFW 2024 and CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. The Study Area is above the known elevational range of this species and is not located near the known populations. There are no documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Hesperolinon sharsmithiae Sharsmith's western flax	--/--/1B.2	An annual herb found on serpentine soils in chaparral habitat from 270 - 300 meters elevation. Blooms May – July (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Horkelia bolanderi Bolander's horkelia	--/--/1B.2	A perennial herb found at the edges of vernally mesic areas, meadows, and seeps in chaparral, lower montane coniferous forest, and valley and foothill grasslands from 450 – 1,100 meters elevation. Blooms (May) June – August (CNPS 2024).	**Will not occur.** Vernally mesic areas, seeps, or meadows do not occur in the Study Area. There are nine documented occurrences within five miles of the Study Area (CDFW 2024).
Imperata brevifolia California satintail	--/--/2B.1	A perennial rhizomatous herb found in mesic microsites in chaparral, coastal scrub, Mojavean desert scrub, riparian scrub, and alkaline meadows and seeps from 0 – 1,215 meters elevation. Blooms September – May (CNPS 2024).	**Will not occur.** There is no suitable mesic microhabitat for this species in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Lasthenia burkei Burke's goldfields	FE/SE/1B.1	An annual herb found in mesic meadows and vernal pools from 15 – 600 meters elevation. Blooms April – June (CNPS 2024).	**Will not occur.** Meadows and vernal pools do not occur in the Study Area and the Study Area is above the known elevational range of this species. There are two documented occurrences within five miles of the Study Area (CDFW 2024).
Layia septentrionalis Colusa layia	--/--/1B.2	An annual herb found on sandy serpentine soils in chaparral, cismontane woodland, and valley and foothill grassland habitats from 100 – 1,095 meters elevation. Blooms April – May (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Legenere limosa legenere	--/--/1B.1	An annual herb found in vernal pools from 1 – 880 meters elevation. Blooms April – June (CNPS 2024).	**Will not occur.** Vernal pools do not occur in the Study Area. There are two documented occurrences within five miles of the Study Area (CDFW 2024).
Leptosiphon jepsonii Jepson's leptosiphon	--/--/1B.2	An annual herb usually found on volcanic soils in chaparral, cismontane woodlands, and valley and foothill grasslands from 100 – 500 meters elevation. Blooms March – May (CNPS 2024).	**Will not occur.** The Study Area is above the known elevational range of this species. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Limnanthes floccosa ssp. *floccose* wooly meadowfoam	--/--/4.2	An annual herb that occurs in vernally mesic areas in chaparral, cismontane woodland, and valley and foothill grasslands from 60 – 1,335 meters elevation. Blooms March – May (CNPS 2024).	**Will not occur.** Vernally mesic habitat does not occur in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Lomatium repostum Napa lomatium	--/--/4.2	A perennial herb found on serpentine or volcanic soils in chaparral and cismontane woodland habitats from 90 – 1,030 meters elevation. Blooms March – June. This species taxonomy is under review and was changed from a 1B.2 to a 4.2 on May 12, 2024 (CNPS 2024).	**Present.** This species was observed in the Study Area, with approximately 50 plants identified in polygon C. However, the California Rare Plant Ranking (CRPR) for this species changed from a 1B.2 to 4.2. CRPR 4 taxa do not clearly meet CEQA standards and thresholds for impact considerations and are not typically addressed in CEQA documents (CNPS 2020). This species is also well documented in the region of the Study Area (Calflora 2024) and therefore does not warrant further CEQA analysis for impact consideration. This species has not been documented in the CNDDB (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Lupinus antoninus Anthony Peak lupine	--/--/1B.2	A perennial herb found on rocky soils in lower- and upper montane coniferous forest from 1,220 – 2,285 meters elevation. Blooms May – July (CNPS 2024).	**Will not occur.** Upper montane coniferous forest habitat does not occur in the Study Area and the Study Area is below the known elevational range of this species. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Lupinus sericatus Cobb Mountain lupine	--/--/1B.2	A perennial herb found in chaparral, broadleafed upland forest, cismontane woodland, and lower montane coniferous forest from 275 – 1,525 meters elevation. Blooms March – June (CNPS 2024).	**Presumed absent.** This species could potentially occur in the montane hardwood-coniferous forest habitat or portions of the ruderal/disturbed habitat that support chaparral species. However, this species was not observed during the site visit on April 26, 2024, or during a focused follow-up survey conducted on May 29, 2024. This species is a perennial herb and would have been identifiable during the site visits. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Mielichhoferia elongate elongate copper moss	--/--/4.3	A moss that occurs on very acidic, metamorphic rock or substrate; usually in higher portions in fens. Often found on substrates naturally enriched with heavy metals (e.g., copper) such as mine tailings. Occurs from 5 – 1,085 meters elevation. No blooming period (CDFW 2024).	**Will not occur.** Suitable acidic rock or other substrates such as mine tailings do not occur in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Navarretia leucocephala ssp. *bakeri* Baker's navarretia	--/--/1B.1	An annual herb found in mesic meadows and vernal pools in cismontane woodland, lower montane coniferous forest, and valley and foothill grassland from 5 – 1,740 meters elevation. Blooms April – July (CNPS 2024).	**Will not occur.** Meadows and vernal pools do not occur in the Study Area. There are three documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Navarretia leucocephala ssp. *pauciflora* few-flowered navarretia	FE/ST/1B.1	An annual herb found in vernal pools on volcanic ash flow soils from 400 – 855 meters elevation. Blooms May – June (CNPS 2024).	**Will not occur.** Vernal pools do not occur in the Study Area. There are seven documented occurrences within five miles of the Study Area (CDFW 2024).
Navarretia leucocephala ssp. *plientha* many-flowered navarretia	FE/SE/1B.2	An annual herb found in vernal pools on volcanic ash flow soils from 30 – 950 meters elevation. Blooms May – June (CNPS 2024).	**Will not occur.** Vernal pools do not occur in the Study Area. There are five documented occurrences within five miles of the Study Area (CDFW 2024).
Navarretia paradoxinota Porter's navarretia	--/--/1B.3	An annual herb found on serpentine soils in vernally mesic openings and drainages from 165 – 840 meters elevation. Blooms May – June (July) (CNPS 2024).	**Will not occur.** Serpentine soils and vernally mesic habitats do not occur in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Orcuttia tenuis slender Orcutt grass	FT/SE/1B.1	An annual herb found in vernal pools from 35 – 1,760 meters elevation. Blooms May to October (CNPS 2024).	**Will not occur.** Vernal pools do not occur in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Panicum acuminatum var. *thermale* Geysers panicum	--/SE/1B.2	An annual/perennial herb found along streambanks in closed-cone coniferous forests, riparian forests, and valley and foothill grasslands from 305 – 2,470 meters elevation. Blooms June – August (CNPS 2024).	**Will not occur.** Streams and riparian habitat do not occur in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Penstemon newberryi var. *sonomensis* Sonoma beardtongue	--/--/1B.3	A perennial herb found in rocky microsites in chaparral habitat from 700 – 1,370 meters elevation. Blooms April – August (CNPS 2024).	**Presumed absent.** This species could potentially occur in the montane hardwood-coniferous forest habitat or portions of the ruderal/disturbed habitat that support chaparral species. However, this species was not observed during the site visit on April 26, 2024, or during a focused follow-up survey conducted on May 29, 2024. This species is a perennial herb and would have been identifiable during the site visits. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Potamogeton zosteriformis eel-grass pondweed	--/--/2B.2	An annual aquatic herb found in assorted freshwater habitats throughout the Central Valley from 0 – 1,860 meters elevation. Blooms June – July (CNPS 2024).	**Will not occur.** Aquatic habitat does not occur in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Sedella leiocarpa (=Parvisedum leiocarpum) Lake County stonecrop	FE/SE/1B.1	An annual herb found in vernal pools on volcanic outcrops in cismontane woodlands and valley and foothill grasslands from 365 – 790 meters elevation. Blooms April – May (CNPS 2024).	**Will not occur.** Vernal pools do not occur in the Study Area. There are three documented occurrences within five miles of the Study Area (CDFW 2024).
Sidalcea oregona ssp. *hydrophila* marsh checkerbloom	--/--/1B.2	A perennial herb found in mesic microsites in meadows, seeps, and riparian forest from 1,100 – 2,300 meters elevation. Blooms (June) July – August (CNPS 2024).	**Will not occur.** Suitable mesic microsites do not occur in the Study Area and the Study Area is below the known elevational range of this species. There are four documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Streptanthus brachiatus ssp. *hoffmanii* Freed's jewelflower	--/--/1B.2	A perennial herb found on serpentine soils in geothermal development areas in chaparral and cismontane woodland from 490 – 1,220 meters elevation (CDFW 2024). Blooms May – July (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Streptanthus brachiatus ssp. *brachiatus* Socrates Mine jewelflower	--/--/1B.2	A perennial herb found on serpentine soils in chaparral and closed-cone coniferous forest from 545 – 1,000 meters elevation. Blooms May – June (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Streptanthus hesperidis green jewelflower	--/--/1B.2	An annual herb found on serpentine, rocky soils in openings in chaparral and cismontane woodland habitat from 130 – 760 meters elevation. Blooms May – July (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area and the Study Area is above the known elevational range of this species. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Streptanthus glandulosa ssp. *hoffmanii* Hoffman's bristly jewelflower	--/--/1B.3	An annual herb found in rocky sites within valley/foothill grassland (often serpentinite), chaparral, and cismontane woodland from 120 – 475 meters elevation. Blooms March – July (CNPS 2024).	**Will not occur.** Serpentine soil does not occur in the Study Area and the Study Area is above the known elevational range of this species. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Trichostema ruygtii Napa bluecurls	--/--/1B.2	An annual herb found in vernal pools in chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland from 30 – 680 meters elevation. Blooms June – October (CNPS 2024).	**Will not occur.** Vernal pools do not occur in the Study Area and the Study Area is above the known elevational range of this species. There are no documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Trifolium hydrophilum saline clover	--/--/1B.2	An annual herb found in marshes, swamps, vernal pools, and mesic alkaline valley and foothill grasslands from 0 – 300 meters elevation. Blooms April – June (CNPS 2024).	**Will not occur.** Aquatic habitats and mesic areas do not occur in the Study Area and the Study Area is above the known elevational range of this species. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Viburnum ellipticum oval-leaved viburnum	--/--/2B.3	A perennial deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest from 215 – 1,400 meters elevation. Blooms May – June (CNPS 2024).	**Presumed Absent.** This species could potentially occur in the montane hardwood-coniferous forest habitat or portions of the ruderal/disturbed habitat that support chaparral species. However, this species was not observed during the site visit on April 26, 2024, or during a focused follow-up survey conducted on May 29, 2024. This species is a perennial shrub and would have been identifiable during the site visit. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Wildlife			
Invertebrates			
Bombus occidentalis western bumble bee	--/CE/--	Bumble bees are primitively eusocial insects that live in underground colonies made up of one queen, female workers, and reproductive members of the colony. New colonies are initiated by solitary queens, generally in the early spring, which typically occupy abandoned rodent burrows (Thorp *et al.* 1983). This species occurs in meadows and grasslands with an abundance of floral resources (CDFW 2019). This species is a generalist forager and has been reported visiting a wide variety of flowering plants. The flight period for queens in California is from early February to late November, peaking in late June and late September.	**Will not occur.** Suitable meadow or grassland habitat is not present in the Study Area and this species is not known to occur in Lake County. This species is currently rare across its range, and in California it is limited to high elevation meadows in the Sierra Nevada and small coastal populations (CDFW 2023). There are no documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
		New queens hibernate over the winter and initiate a new colony the following spring (Thorp *et al.* 1983). Rare throughout its range and in decline west of the Sierra Nevada crest. The most current known range of this species is limited to areas near the Klamath and northern Coast Range mountains as well as mountain areas in Shasta, Plumas, Sierra, Nevada, Placer, El Dorado, Lassen, Amador, Alpine, and Calaveras counties (CDFW 2023).	
Danaus plexippus pop. 1 monarch - California overwintering population	FC/--/--	Overwintering populations of Monarch butterflies roost in wind protected tree groves, especially with Eucalyptus sp., and species of pine or cypress with nectar and water sources nearby. Winter roost sites extend along the coast from Mendocino County to Baja California. As caterpillars, monarchs feed exclusively on the leaves of milkweed (*Asclepias* sp.) (Nial *et al.* 2019 and USFWS 2020). Monarch butterfly migration routes pass east over the Sierra Nevada in the fall and back to the California coast in the spring. The overwintering population is located along the Coast while summer breeding areas occur in interior California and North America with spring breeding areas located further east (USFWS 2020).	**Not expected.** Overwintering habitat is not present in the Study Area and no larval host plants were observed in the Study Area. This species may pass through the Study Area during migration but is not expected to use the site in any substantial way. There are no documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Fishes			
Archoplites interrupta Sacramento perch	--/--/SSC	Extinct in its native range, all known populations of this species are the result of introductions. The species is adapted for life in sloughs, slow moving rivers, and large lakes in the Central Valley, and can tolerate high temperatures and salinities as well as high pH (alkalinity). Extant populations are in reservoirs and this species has been replaced in its native range by introduced game fishes (Crain and Moyle 2011).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Hysterocarpus traskii lagunae Clear Lake tule perch	--/--/SSC	Endemic to three altered lakes which have lost most of their own native fish species. Occurs in Clear Lake and may still occur in Lower Blue Lake and remains common in Upper Blue Lake. This species is adapted for life in lakes with warm waters. Clear Lake tule perch are tolerant of varied environmental conditions, however their absence from the Central Valley indicates they may be less tolerant of poor water quality (Moyle *et al.* 2015).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Lavinia exilicauda chi Clear Lake hitch	--/ST/--	Found only in Clear Lake, where it is associated with ponds in streams that are tributary to Clear Lake. Adults are typically found in the limnetic zone of the lake and juveniles are found nearshore amongst vegetation (CDFW 2024).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Oncorhynchus mykiss irideus pop. 8 Central California coast DPS steelhead	FT/--/--	This distinct population segment includes all naturally spawned anadromous steelhead populations below natural and artificial impassable barriers from the Russian River to Aptos Creek and their tributaries. Steelhead spawn in rivers and streams with cool, clear, water and suitable silt free substrate (NMFS 2006 and CDFW 2024).	**Will not occur.** Suitable aquatic habitat is not present in the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Amphibians			
Dicamptodon ensatus California giant salamander	--/--/SSC	Endemic to California and occurs in wet coastal forests near clear, cold perennial streams below 3,000 feet elevation. Larval stage transforms to adult stage after approximately 18-24 months. Typically found on the surface on rainy nights or wet days while foraging. Will eat anything that it can overpower and fit into its mouth, such as slugs, rodents, other amphibians, and reptiles (Kucera 1997).	**Will not occur.** Wet coastal forest habitat is not present in the Study Area. The Study Area is comprised of arid upland habitats and no aquatic features are present in or adjacent to the Study Area. There are four documented occurrences within five miles of the Study Area (CDFW 2024).
Rana boylii pop. 1 foothill yellow-legged frog (north coast DPS)	--/--/SSC	This distinct population segment occurs in the Northern Coast Ranges north of San Francisco Bay Estuary, the Klamath Mountains, and the Cascade Range including watershed subbasins: Lower Pit, Battle Creek, and Thomes. This species uses perennial rocky streams in a wide variety of habitats up to 6,400 feet elevation. This species rarely ventures far from water, and is usually found basking in the water, under surface debris, or underground within 165 feet of water. Eggs are laid in clusters attached to gravel or rocks along stream margins in flowing water. Tadpoles typically require up to four months to complete aquatic development. Breeding typically follows winter rainfall and snowmelt, which varies based upon location (Jennings and Hayes 1994).	**Will not occur.** Suitable aquatic habitat is not present in or adjacent to the Study Area. There are three documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Rana draytonii California red-legged frog	FT/--/SSC	Adults require dense, shrubby, or emergent riparian vegetation closely associated with deep, still, or slow-moving water. The largest densities of California red-legged frogs are associated with deep-water pools with dense stands of overhanging willows (*Salix* spp.) and an intermixed fringe of cattails (*Typha latifolia*). Well-vegetated terrestrial areas within the riparian corridor may provide important sheltering habitat during winter. California red-legged frogs aestivate (enter a dormant state during summer or dry weather) in small mammal burrows and moist leaf litter. They have been found up to 100 feet from water in adjacent dense riparian vegetation. Studies have indicated that this species cannot inhabit water bodies that exceed 70° F, especially if there are no cool, deep portions (USFWS 2002).	**Will not occur.** Suitable aquatic habitat is not present in or adjacent to the Study Area. There are four documented occurrences within five miles of the Study Area (CDFW 2024).
Taricha rivularis red-bellied newt	--/--/SSC	Inhabits rapid flowing, rocky, permanent streams in redwood forest, mixed coniferous forest, valley-foothill woodland, montane hardwood, and hardwood-conifer habitats. Migrates to streams during the rainy season to breed.. During the summer, it aestivates underground (Jennings and Hayes 1994).	**Will not occur.** Suitable aquatic habitat is not present in or adjacent to the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Reptiles			
Emys marmorata northwestern pond turtle	--/FPT/SSC	Occurs in a variety of aquatic habitats; typically, permanent ponds, lakes, streams, irrigation ditches, canals, marshes, or pools in intermittent drainages. Prefers areas lined with abundant vegetation and either rocky or muddy substrates. Requires basking sites such as logs, rocks, cattail mats or exposed banks. Active from February to November, and breeding occurs from April to May. Overwintering occurs in upland terrestrial habitats close to water sources (approximately 300 feet), in which they will bury themselves under loose soil (CDFW 2024). Nesting sites in uplands may be as far as 400 meters (1,312 feet) or more from the aquatic habitat, although the distance is usually much less and is generally around 100 meters (328 feet) (Yolo HCP/NCCP 2018). In nonriverine habitats that experience little water level fluctuation, this species may overwinter underwater (Thomson *et al.* 2016).	**Will not occur.** Suitable aquatic habitat is not present in or adjacent to the Study Area. There are two documented occurrences within five miles of the Study Area (CDFW 2024).
Birds			
Aquila chrysaetos golden eagle	--/--/FP	Typically occurs in rolling foothills, mountain areas, deserts, and other open habitats up to 3,822 meters elevation. Typically nests in canyons, along cliffs, and in large trees in canyons. Will occasionally use other tall structures for nesting, such as electrical transmission towers. Prey consists mostly of rodents, carrion, birds, reptiles, and occasionally small livestock (Zeiner *et al.* 1990).	**Not expected.** Suitable nesting habitat is not present in the Study Area. This species could soar over the Study Area but is not expected to occur or use the site in any substantial way. There are no documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE/--	Occurs at isolated sites in the Sacramento Valley in northern California, and along the Kern and Colorado river systems in southern California. Frequents valley foothill and desert riparian habitats dominated by willows. Inhabits riparian habitats with dense understory foliage along river bottoms or other mesic habitats with high humidity. Prefers dense willows for roosting but will use adjacent orchards in the Sacramento Valley. Typically requires expansive riparian habitat for nesting (Zeiner *et al.* 1990).	**Will not occur.** Riparian habitat is not present in the Study Area. There is one potential observation of this species within five of the Study Area from 1973 that documented an observation in riparian forest near Clear Lake (CDFW 2024).
Haliaeetus leucocephalus bald eagle	FD/SE/FP	Occurs in a variety of habitats near large aquatic resources such as rivers or lakes. Nests in mature trees or snags, often in remote mixed stands adjacent to water. Typically nests in the largest tree in a stand and forages near water (CDFW 2024).	**Not expected.** Suitable nesting habitat is not present in the Study Area. This species could soar over the Study Area but is not expected to occur or use the site in any substantial way. There are no documented occurrences within five miles of the Study Area (CDFW 2024).
Pandion haliaetus osprey	--/--/WL	Osprey breed in Northern California from the Cascade Ranges southward to Lake Tahoe, and along the coast south to Marin County. They prey primarily on fish but also predate small mammals, birds, reptiles, and invertebrates. Foraging areas include open, clear waters of rivers, lakes, reservoirs, bays, estuaries, and surf zones. Habitat and nesting requirements include large trees, snags, and dead-topped trees in open forest habitats for cover and nesting (Zeiner *et al.* 1990).	**Not expected.** Suitable nesting habitat is not present in the Study Area. This species could soar over the Study Area but is not expected to occur or use the site in any substantial way. There are no documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Progne subis purple martin	--/--/SSC	Occurs as a summer resident and migrant, primarily from mid-March to late September. Breeds from May to mid-August. Martins are most abundant in mesic regions, near large wetlands and other water bodies, and at upper slopes and ridges, which likely concentrate aerial insects (Shuford and Gardali 2008). Nests in cavities in open areas with low canopy cover at the height of the nest, near large bodies of water that support high densities of large insects. Martins use a variety of cavities including in bridges, large tree snags, and collapsed lava tubes. This species is very sensitive to competition from European starlings and is extirpated from most low-elevation areas by starlings (Shuford and Gardali 2008).	**Not expected.** Suitable nesting habitat is not present in the Study Area and the Study Area is not located near preferred water sources for this species. This species may pass through the Study Area but is not expected to occur or use the site in any substantial way. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Strix occidentalis caurina northern spotted owl	FT/--/--	Northern spotted owls reside in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 7,600 feet elevation. This species is found from British Colombia south through northwestern California south to San Francisco.	**Will not occur.** Suitable forest habitat is not present in the Study Area. The montane hardwood-conifer forest habitat in the Study Area has a low-canopy cover and the understory is very thin. This habitat is fragmented and is adjacent to existing agricultural development. No old-growth or multi-layered forest habitat is present in the Study Area. There is one extirpated activity center approximately 0.95 mile from the Study Area. This activity center is from 1990 and documented one dead owlet. Subsequent surveys at the activity center did not document any owls (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Mammals			
Antrozous pallidus pallid bat	--/--/SSC	Occurs throughout California except for the high Sierra Nevada and the northern Coast Ranges. Habitats include grasslands, shrublands, woodlands, and forests from sea level to 6,000 feet. Most common in open, dry habitats with rocky areas for roosting; roosts also include cliffs, abandoned buildings, bird boxes, and under bridges (Bolster, ed. 1998).	**Not expected.** There is no suitable roosting habitat in the Study Area for this species. This species could forage within the Study Area and generally disperse through the area, but it is not expected to occur or use the site in any substantial way. There is one documented occurrence within five miles of the Study Area (CDFW 2024).
Corynorhinus townsendii Townsend's big-eared bat	--/--/SSC	Widely distributed throughout California except in alpine and subalpine habitats. Typically found near water since it is poor at concentrating its urine. This species uses caves, mines, tunnels, abandoned buildings, and abandoned artificial structures for roosting. Maternity roosts are typically in warm sites. Hibernation sites are typically cold, but not freezing. This species is very sensitive to disturbance and may abandon its roost after one disturbance (Zeiner *et al.* 1990).	**Not expected.** There is no suitable roosting habitat in the Study Area for this species. This species could forage within the Study Area and generally disperse through the area, but it is not expected to occur or use the site in any substantial way. There are two documented occurrences within five miles of the Study Area (CDFW 2024).

Species Name/ Common Name[1]	Status[2]	Habitat, Ecology and Life History	Potential to Occur
Lasiurus frantzii western red bat	--/--/SSC	Roosts primarily in woodlands and forests amongst branches and avoids roosting in caves or buildings (Bolster 1998). Forages in open habitat such as croplands, grasslands and shrublands. This species is typically associated with water and has a poor urine concentrating ability. Primarily roosts solitarily in trees, with females and young roosting higher in the trees than males. Forages along edge habitats (Zeiner et al. 1990). This species is rarely found in the winter at locations that freeze (Pierson *et al.* 2006).	**Not expected.** This species may occur in the montane hardwood-conifer forest habitat in the Study Area. However, because this species is often found near water, it is not expected to utilize the Study Area for prolonged periods of time. This species may forage within the Study Area and generally disperse through the area, but it is not expected to occur or use the site in any substantial way. There is one documented occurrence within five miles of the Study Area (CDFW 2024).

[1] Sensitive species reported in CNDDB or CNPS on the "*Clearlake Oaks, Clearlake Highlands, Lucerne, Benmore Canyon, The Geysers, Middletown, Whispering Pines, Lower Lake,* and *Kelseyville*" USGS quads, or in the USFWS list for the Study Area.

[2] Status is as follows: Federal (ESA) listing/State (CESA) listing/other CDFW status or CRPR. F = Federal; S = State of California; E = Endangered; T = Threatened; R = Rare; C = Candidate; P = Proposed; FP=Fully Protected; SSC=Species of Special Concern; WL=Watch List.

[3] Status in the Study Area is assessed as follows. **Will Not Occur**: Species is either sessile (*i.e.* plants) or so limited to a particular habitat that it cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur on the Study Area; **Not Expected**: Species moves freely and might disperse through or across the Study Area, but suitable habitat for residence or breeding does not occur on the Study Area, potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100% certainty; **Presumed Absent:** Habitat suitable for residence and breeding occurs on the Study Area; however, focused surveys conducted for the current project were negative; **May Occur**: Species was not observed on the site and breeding habitat is not present but the species has the potential to utilize the site for dispersal; **High**: Habitat suitable for residence and breeding occurs on the Study Area and the species has been recorded recently on or near the Study Area, but was not observed during surveys for the current project; **Present**: The species was observed during biological surveys for the current project and is assumed to occupy the Study Area or utilize the Study Area during some portion of its life cycle.

CRPR = California Rare Plant Rank: 1B – rare, threatened, or endangered in California and elsewhere; 2B – rare, threatened, or endangered in California but more common elsewhere; 3 – plants about which we need more information – A Review List; 4 – Plants of limited distribution, a watch list. Extension codes: .1 – seriously endangered; .2 – moderately endangered; .3 – Not very threatened in California.

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Appendix C

Plant and Wildlife Species Observed in the Study Area

Family	Scientific Name	Common Name
Native		
Agavaceae	*Chlorogalum pomeridianum* var. *pomeridianum*	common soaproot
Anacardiaceae	*Toxicodendron diversilobum*	poison oak
Apiaceae	*Lomatium repostum*	Napa lomatium*
	Sanicula tuberosa	turkey pea
Asteraceae	*Baccharis pilularis*	coyote bush
	Eriophyllum lanatum	yarrow leaved woolly sunflower
	Micropus californicus	q-tips
	Solidago velutina ssp. *californica*	Oreja de liebre
	Wyethia glabra	smooth mule ears
Boraginaceae	*Plagiobothrys* sp.	popcornflower
Caprifoliaceae	*Lonicera hispidula*	pink honeysuckle
Cornaceae	*Cornus nuttallii*	mountain dogwood
Cupressaceae	*Calocedrus decurrens*	incense cedar
Ericaceae	*Arctostaphylos manzanita* ssp. *manzanita*	common manzanita
	Arctostaphylos canescens	hoary manzanita
Fabaceae	*Acmispon brachycarpus*	short podded lotus
	Acmispon grandifloras	large leaved lotus
	Cercis occidentalis	western redbud
	Hosackia crassifolia	big deervetch
	Lupinus albifrons	bush lupine
	Trifolium willdenovii	tomcat clover
Dennstaedtiaceae	*Pteridium aquilium*	common bracken
Fagaceae	*Quercus kelloggii*	black oak
Iridaceae	*Iris macrosiphon*	ground iris
Juglandaceae	*Juglans hindsii*	Northern California black walnut
Liliaceae	*Calochortus tolmiei*	Tolmie's star tulip
Montiaceae	*Claytonia perfoliata*	miner's lettuce
Namaceae	*Eriodictyon californicum*	yerba santa
Onagraceae	*Clarkia rhomboidea*	diamond clarkia
Orobanchaceae	*Castilleja applegatei*	wavy leaf paintbrush
Pinaceae	*Pinus attenuata*	knobcone pine
	Pinus ponderosa	ponderosa pine
	Pseudotsuga menziesii	Douglas fir
Poaceae	*Elymus glaucus*	blue wildrye
	Festuca microstachys	small fescue
	Stipa sp.	needle grasses
Polemoniaceae	*Leptosiphon ciliates*	whiskerbrush
Primulaceae	*Primula hendersonii*	mosquito bill
Ranunculaceae	*Ranunculus occidentalis*	western buttercup
Rhamnaceae	*Ceanothus integerrimus*	deer brush
Rosaceae	*Cercocarpus betuloides*	birch-leaf mountain mahogany
	Heteromeles arbutifolia	toyon
	Rosa californica	California rose
	Rubus californicus	California blackberry

Family	Scientific Name	Common Name
Rubiaceae	*Galium aparine*	sticky willy
	Galium californicum	California bedstraw
Viburnaceae	*Sambucus mexicana*	blue elderberry
Violaceae	*Viola purpurea*	goosefoot violet
Non-native		
Asteraceae	*Logfia gallica*	narrowleaf cottonrose
Fabaceae	*Lathyrus latifolius*	sweet pea
	Medicago polymorpha	California burclover
	Pisum sativum	garden pea
	Vicia americana	American vetch
	Vicia fava	broad bean
	Vicia sativa	common vetch
Geraniaceae	*Geranium dissectum*	wild geranium
Poaceae	*Aira caryophyllea*	silvery hairgrass
	Avena barbata	slender oats
	Bromus diandrus	ripgut brome
	Bromus hordeaceus	soft brome
	Bromus madritensis	Spanish brome
	Festuca myuros	rattail sixweeks grass
	Poa bulbosa	bulbous blue grass
	Cynosurus echinatus	dogtail grass

* Status: California Native Plant Society Rare Plant Rank 4.2

Family	Scientific Name	Common Name
Insects		
Apidae	*Bombus bifarius*	two form bumblebee
	Bombus vosnesenskii	yellow-faced bumblebee
Reptiles		
Anguidae	*Elgaria multicarinata*	southern Alligator lizard
Phrynosomatidae	*Sceloporus occidentalis*	western fence lizard
Birds		
Accipitridae	*Buteo lineatus*	red-shouldered hawk
Aegithalidae	*Psaltriparus minimus*	bushtit
Cardinalidae	*Pheucticus melanocephalus*	black-headed grosbeak
Cathartidae	*Cathartes aura*	turkey vulture
Columbidae	*Zenaida macroura*	mourning dove
Corvidae	*Aphelocoma californica*	California scrub jay
	Corvus corax	common raven
Fringillidae	*Haemorhous mexicanus*	house finch
	Spinus psaltria	lesser goldfinch
Hirundinidae	*Tachycineta thalassina*	violet-green swallow
Odontophoridae	*Callipepla californica*	California quail
Paridae	*Baeolophus inornatus*	oak titmouse
Parulidae	*Leiothlypis celata*	orange-crowned warbler
Passerellidae	*Pipilo maculatus*	spotted towhee
Picidae	*Colaptes auratus*	northern flicker
	Melanerpes formicivorus	acorn woodpecker
	Dryobates nuttallii	Nuttall's woodpecker
Sittidae	*Sitta carolinensis*	white-breasted nuthatch
Trochilidae	*Calypte anna*	Anna's hummingbird
Troglodytidae	*Troglodytes aedon*	house wren
Turdidae	*Sialia mexicana*	western bluebird
	Turdus migratorius	American robin
Tyrannidae	*Myiarchus cinerascens*	ash-throated flycatcher

Appendix D

Representative Site Photographs

Photo 1. Representative view of ruderal/disturbed habitat in area A.
Photo date April 26, 2024.

Photo 2. Representative view of cropland habitat in area B.
Photo date April 26, 2024.

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Photo 3. Representative view of ruderal/disturbed habitat and fallen walnut trees in area C.
Photo date April 26, 2024.

Photo 4. Representative view of ruderal/disturbed habitat and fallen walnut trees in area E.
Photo date April 26, 2024.

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Photo 5. Representative view of ruderal/disturbed habitat and montane-hardwood conifer forest habitat in area F. Photo date April 26, 2024.

Photo 6. Representative view of ruderal/disturbed habitat and montane-hardwood conifer forest habitat in area G. Photo date April 26, 2024.

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Photo 7. Representative view of montane-hardwood conifer forest habitat in area H.
Photo date April 26, 2024.

Photo 8. Napa lomatium observed in area C.
Photo date April 26, 2024.

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