Appendix C:
Biological Resources Supporting Information

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C.1 - Biological Resources Assessment

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Biological Resources Assessment
Masson Estates Residential Project
City of Saratoga, Santa Clara County, California

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Date: June 14, 2024

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SECTION 1: INTRODUCTION

This Biological Resources Assessment (BRA) has been prepared by FirstCarbon Solutions (FCS) for the proposed Masson Estates Residential Project (proposed project). The purpose of the BRA is to (1) document existing and potentially occurring biological resources within the Study Area) (2) analyze potential project-related impacts on regulated biological resources; (3) summarize relevant local, State, and federal regulations; and (4) recommend appropriate measures to mitigate potential impacts on biological resources to less than significant levels.

1.1 - Project Location and Description

1.1.1 - Project Parcel

The Project Parcel consists of 72.45 acres. Within the northern portion of the 72.45-acre Parcel is the 19.03-acre Study Area, which is comprised of an 18.29-acre Development Area and a 0.74-acre Emergency Access Road. The Study Area is the focus of the biological components of this report as the remaining areas (53.42 acres) would be left undisturbed. The Project Parcel is generally located within the southwestern corner of the City of Saratoga (City) (Exhibit 1). More specifically, the Project Parcel is located east of The Mountain Winery, north of California State Route (SR) 9 and west of Pierce Road (Exhibit 2). The Project Parcel is located within Assessor's Parcel Number (APN) 503-46-005 and within the *Cupertino, Californi*a United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map (Latitude: 37.259797, Longitude: -122.057001).

1.1.2 - Project Description

The project applicant, Chateau Masson, LLC, proposes to subdivide the greater 72.45-acre Project Parcel. The proposed project would construct 20 market-rate and five affordable single-family homes within the 18.29-acre Development Area. Development would be focused in the northern portion of the parcel; the remain areas of the Project Parcel would be left undeveloped with the exception of Emergency Access Road (Exhibit 3). This road would connect to Vintage Road southwest of the Development Area.

As noted above, the Project Parcel corresponds to APN 503-46-005, which has a General Plan Land Use Designation of Residential Hillside Conservation (RHC) and a zoning designation of Hillside Residential (HR).

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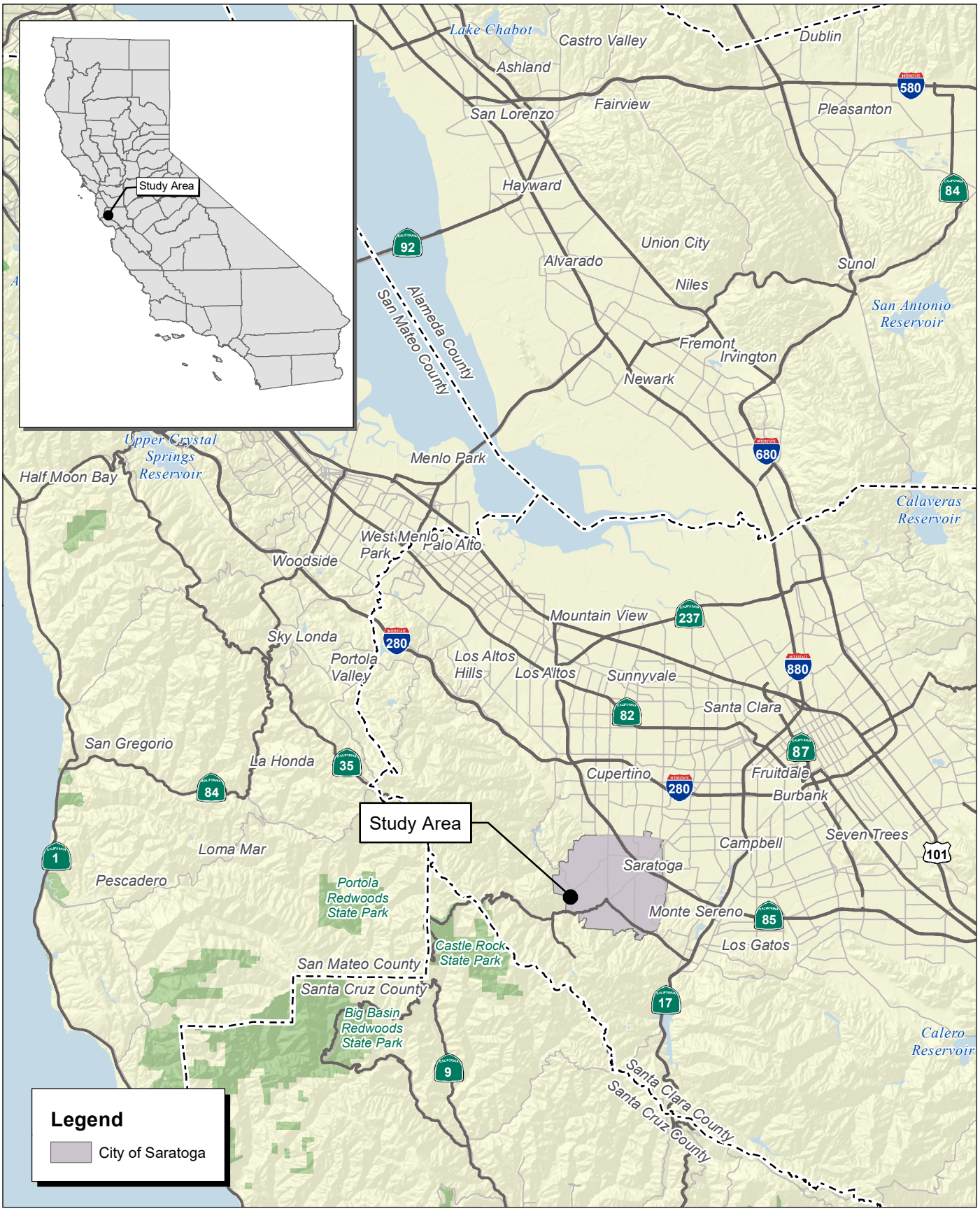

Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

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Exhibit 1
Regional Location Map

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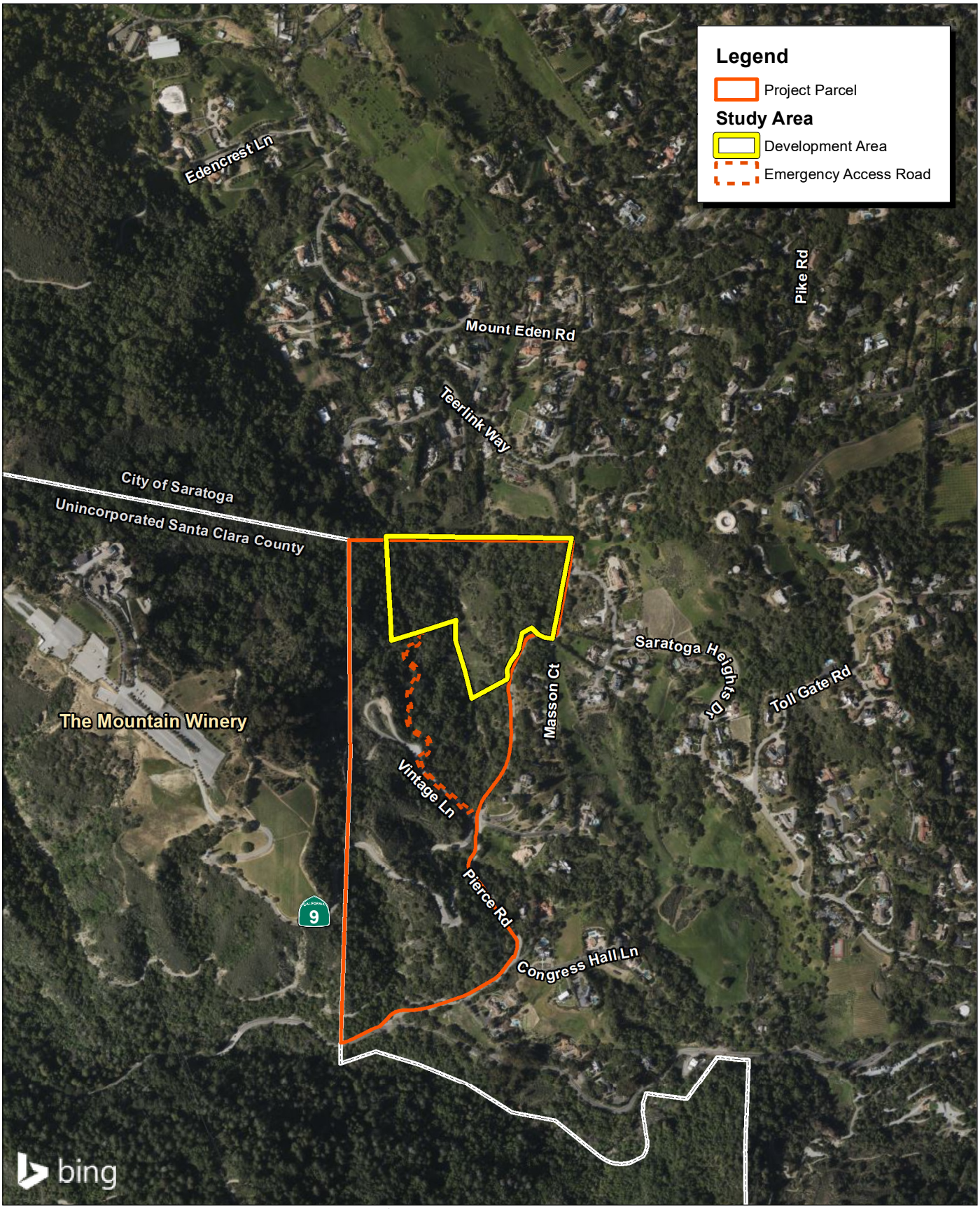

Source: Bing Aerial Imagery. Hanna-Brunetti Civil Engineers, 02/2024.

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Exhibit 2
Local Vicinity Map

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CITY OF SARATOGA
MASSON ESTATES
BIOLOGICAL RESOURCE ASSESSMENT

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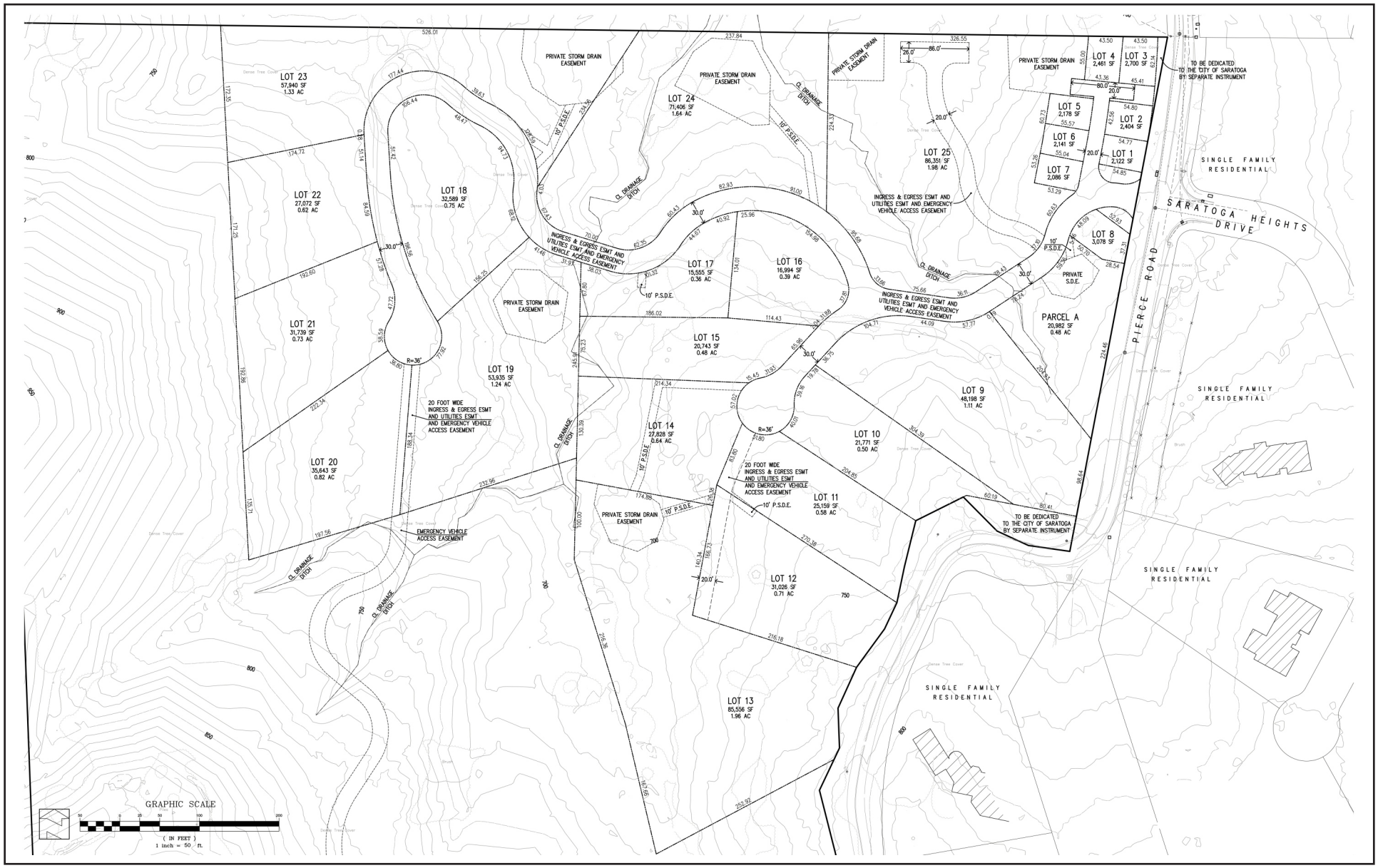

Source: Hanna-Brunetti. 12/2023.

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Exhibit 3
Site Plan

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SECTION 2: REGULATORY SETTING

2.1 - Federal

2.1.1 - Endangered Species Act of 1973

The United States Fish and Wildlife Service (USFWS) has jurisdiction over species listed as threatened or endangered under the federal Endangered Species Act of 1973. Section 9 of the Endangered Species Act protects listed species from "take," which is broadly defined as actions taken to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." The Endangered Species Act protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process.

2.1.2 - Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. All migratory birds and their nests are protected from take and other impacts under the MBTA (16 United States Code [USC] § 703, *et seq*.).

2.1.3 - Bald and Golden Eagle Protection Act

The golden eagle (*Aquila chrysaetos*) and bald eagle (*Haliaeetus leucocephalus*) are afforded additional protection under the Eagle Protection Act, amended in 1973 (16 USC § 669, *et seq*.) and the Bald and Golden Eagle Protection Act (16 USC §§ 668–668(d)).

2.1.4 - Clean Water Act

Section 404

The United States Army Corps of Engineers (USACE) administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the United States.

As of the preparation of the original version of this report on August 11, 2023, the final "Revised Definition of Waters of the United States" rule was published in the Federal Register on January 18, 2023, and took effect on March 20, 2023. However, the final rule is not currently operative in certain states and for certain parties due to litigation. Moreover, the United States Environmental Protection Agency (EPA) and USACE (hereafter known as the agencies) are in receipt of the U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency* [*Sackett*]. In light of this decision, the agencies will interpret the phrase "waters of the United States" consistent with the Supreme Court's decision in *Sackett*. On August 29, 2023, the EPA and the USACE issued a final ruling that amends the "Revised Definition of 'Waters of the United States'" to conform key portions of the regulatory text to the U.S. Supreme Court's May 25, 2023 decision, defining "waters of the United States" as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
2. The territorial seas or interstate waters.
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
   a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
   b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
   c. Which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under this definition.
5. Waters that are relatively permanent, standing or continuously flowing bodies of water.
6. Tributaries of waters identified in paragraphs(s) (1) or (2)of this section.
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs(s) (1) through (5) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 Code of Federal Regulations 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA and/or USACE.

"Wetland" refers to areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and seasonal wetlands. Wetlands are considered jurisdictional if they fall under one of the categories of waters of the United States defined above. The USACE jurisdiction typically extends up to the ordinary high water mark (OHWM).

In general, a USACE permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on the impacted acreage, the purpose of the proposed fill, and other factors.

Section 401

As stated in Section 401 of the CWA, "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB).

2.2 - State

2.2.1 - CEQA Guidelines

The California Environmental Quality Act (CEQA) requires public agencies to evaluate potential impacts to special-status species and their habitat. The following CEQA Guidelines Appendix G checklist questions serve as thresholds of significance when evaluating the potential impacts of a proposed project on biological resources. Impacts are considered significant if a project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Have a substantial adverse effect on federally and State-protected wetlands as defined by Section 404 of the CWA (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.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

Oak Woodlands Conservation Act

Senate Bill (SB) 1334, the Oak Woodlands Conservation Act (Assembly Bill [AB] 242, 2001), became law on January 1, 2005, and was added to the CEQA statutes as 21083.4. This statute requires that a county must determine whether or not a project will result in a significant impact on oak woodlands and, if it is determined that a project may result in a significant impact on oak woodlands, then the county shall require one or more of the following mitigation measures:

- Conserve oak woodlands through the use of conservation easements;

- Plant an appropriate number of trees, including maintenance of plantings and replacement of failed plantings;
- Contribute funds to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements;
- Other mitigation measures developed by the county.

2.2.2 - California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with the CDFW when preparing CEQA documents to ensure that the State lead agency 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 [FGC] § 2080). CESA directs agencies to consult with the CDFW on projects or actions that could affect listed species, directs the CDFW to determine whether jeopardy would occur, and allows the CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows the 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 (FGC § 2081).

2.2.3 - California Fish and Game Code

Under CESA, the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC § 2070). Fish and Game Code Sections 2050 through 2098 outline the protection provided to California's rare, endangered, and threatened species. Fish and Game Code Section 2080 prohibits the taking of plants and animals listed under the CESA. Fish and Game Code Section 2081 established an incidental take permit program for State-listed species. The CDFW maintains a list of "candidate species," which it formally notices as being under review for addition to the list of endangered or threatened species.

In addition, the Native Plant Protection Act of 1977 (NPPA) (FGC § 1900, *et seq*.) prohibits the taking, possessing, or sale within the State of any plants with a State designation of rare, threatened, or endangered (as defined by the CDFW). An exception to this prohibition in the NPPA allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. Fish and Game Code Section 1913 exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right-of-way." Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

In addition to formal listing under the Endangered Species Act and CESA, some species receive additional consideration by the CDFW and local lead agencies during the CEQA process. Species that may be considered for review are those listed as a "Species of Special Concern." The CDFW

maintains lists of "Species of Special Concern" that serve as species "watch lists." Species with this status may have limited distributions or limited populations and/or the extent of their habitats has been reduced substantially, such that their populations may be threatened. Thus, their populations are monitored and they may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA and specific protection measures may be warranted. In addition to Species of Special Concern, the CDFW Special Animals List identifies animals that are tracked by the California Natural Diversity Database (CNDDB) and may be potentially vulnerable but that warrant no federal interest and no legal protection.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. CEQA Guidelines Section 15065 (Mandatory Findings of Significance) requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines Section 15380 (Rare or Endangered Species) provides for the assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on the California Native Plant Society (CNPS) List ranked 1A, 1B, and 2 would typically require evaluation under CEQA.

Fish and Game Code Sections 3500 to 5500 outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. The CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under Fish and Game Code Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. To comply with the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project Study Area and determine whether the proposed project would have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under Fish and Game Code Section 206.591. Authorization from the CDFW would be in the form of an Incidental Take Permit.

Fish and Game Code Section 1602 requires any entity to notify the CDFW before beginning any activity that "may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake" or "deposit debris, waste, or other materials that could pass into any river, stream, or lake." "River, stream, or lake" includes waters that are episodic and perennial and ephemeral streams, desert washes, and watercourses with a subsurface flow. A Lake or Streambed Alteration Agreement would be required if the CDFW

determines that project activities may substantially adversely affect fish or wildlife resources through alterations to a covered body of water. CDFW jurisdiction typically extends to the edge or "drip line" of the riparian habitat or top of bank.

2.2.4 - California Porter-Cologne Water Quality Control Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the State" (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)). In 2019, the California State Water Resources Control Board (State Water Board) published the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) to guide wetland/waters of the State determinations and the permitting process.[1]

2.2.5 - California Native Plant Society

CDFW, in collaboration with CNPS and other technical experts, maintains a rank of plant species that are native to California and 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. The California Rare Plant Rank (CRPR) system includes six rarity and endangerment ranks that are defined as follows:

- **Rank 1A:** Plants presumed extirpated 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 more information is needed
- **Rank 4:** Watch List: Plants of limited distribution

Potential impacts to populations of CRPR ranked plants receive consideration under CEQA review. All plants appearing on the CNPS List ranked 1 or 2 are considered to meet the CEQA Guidelines Section 15380 criteria. Rank 3 and 4 plants do not automatically meet this definition. Rank 4 plants do not clearly meet CEQA standards and thresholds for impact considerations. Nevertheless, some level of CEQA review is justified for CRPR 4 taxa, and under some circumstances, a full impact analysis is warranted. Taxa that can be shown to meet the criteria for endangered, rare, or threatened status under CEQA Section 15380(d) or that can be shown to be regionally rare or unique as defined in CEQA Section 15125(c) must be fully analyzed in a CEQA document. Some circumstances, such as local rarity, having occurrences peripheral to the taxon's distribution, or having occurrences on unusual substrates or rare and declining habitats, provide justification for treating some CRPR 4 taxa

[1] California State Water Resources Control Board (State Water Board). 2021. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Website: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf. Accessed March 8, 2024.

occurrences as regionally rare or unique. One limitation to fully analyzing impacts on CRPR 4 taxa is the difficulty in obtaining current data on the number and condition of the occurrences.[2]

2.3 - Regional and Local

2.3.1 - City of Saratoga General Plan

Goal OSC 11 Protect and enhance sensitive vegetative and wildlife habitat in the Saratoga Planning area.

Policy OSC 11.1 Minimize development that would encroach into important wildlife habitats, limit, or restrict normal range areas, or restrict access to water food or shelter. This includes limitations on the installation of barrier fencing in hillside areas.

Policy OSC 11.2 Through the development and CEQA process, preserve, protect, and maintain riparian habitats and creek corridors. This includes requiring biological surveys of parcels of land that could contain sensitive species or their habitats prior to allowing development on these parcels.

Policy OSC 11.3 The design of parking lots shall be evaluated for opportunities to reduce large continuous expanses of asphalt and to promote the establishment of visually interesting and aesthetically pleasing parking lots.

Policy OSC 11.4 The City should provide information and assistance to the public in the preservation and care of native trees whose existence can be threatened by environmental stress and development.

Policy OSC 11.5 Mature vegetation shall be preserved wherever possible.

OSC.11.a The City shall continue to utilize the design review and environmental review process for all development applications to ensure that projects are designed in a manner that minimizes disruption to important wildlife, riparian and plant habitats.

OSC.11.b The City shall continue to require that all projects conform to the City's Tree Ordinance.

Goal OSC 12 Support appropriate management for sustaining the health and increasing the extent of arbor resources in the City. The specific vision is to increase overall tree cover, tree health and consequent tree benefits in an equitable, cost beneficial and sustainable manner.

Policy OSC 12.1 Development projects should include the preservation of protected trees and other significant trees. Any adverse effect on the health and longevity of native

[2] California Native Plant Society (CNPS). 2024. Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis. Sacramento, CA. Accessed March 8, 2024.

oak trees, protected or other significant trees should be avoided through appropriate design measures and construction practices. When tree preservation is not feasible, individual development projects shall include appropriate tree replacement as approved by the City.

Policy OSC 12.2 Trees used for new or replacement plantings should be selected primarily for low water use characteristics.

Policy OSC 12.3 To further protect and enhance the City's arbor resources built on the City's Tree Regulations, the City should continue its support of tree protection programs.

Policy OSC 12.4 It is the City's policy that forested lands in the City's Sphere of Influence shall be managed to maximize environmental protection and to discourage logging to the maximum extent possible, consistent with proper fire protection standards and practices. Implementation:

OSC.12 The City shall continue to require that all development projects conform to the City's Tree Ordinance. The preservation of existing trees shall be ensured through the collection of security deposits.

Goal OSC 13 The preservation of native and other plant species indicative of Saratoga's cultural heritage shall be given priority over development and provide for the perpetuation of such species.

Policy OSC 13.1 To further preserve the City's inventory of arbor resources, the City should encourage owners to consider formal designation of heritage trees.

Policy OSC 13.2 The City shall encourage public knowledge, understanding and ap appreciation of the City's past and foster civic and neighborhood pride and sense of identity based upon the recognition and use of the City's heritage resources, particularly as it relates to the designation and preservation of heritage trees. This can be done by publicizing information about heritage trees and the benefits of designation of heritage trees on the City's Website.

Policy OSC 13.3 Fire safety shall be an important consideration when evaluating the preservation of native vegetation.

OSC.13.a Continue to utilize the design review process, Historic Preservation Ordinance and Tree Ordinance to ensure preservation of significant arbor resources.

2.3.2 - City of Saratoga Municipal Code

The City of Saratoga Ordinance Code Chapter 15-50.050 defines protected trees as any native tree having a diameter at breast height (DBH) of 6 inches or greater; any other tree having a DBH of 10 inches or greater; any street tree (any tree within the public street or right-of-way) regardless of size; any heritage tree (means any tree of historic significance as a tree having historic value related to the

heritage of the City and designated by action of the City Council upon recommendation of the Heritage Preservation Commission) regardless of size; any tree required to be planted or retained as a condition of any approval granted under this Chapter or Chapter 14 of this Code; any tree required to be planted as a replacement, as provided in Section 15-50.170.

Pursuant to the Municipal Code, it is unlawful for any person to remove, damage, prune, or encroach upon, or cause to be removed, damaged, pruned, or encroached upon any protected tree, located on any private or public property in the City, without first having obtained a tree removal, pruning or encroachment permit issued pursuant to Article 15-50.050 and authorizing the proposed action. Additionally, an Arborist Report shall be required for any application for discretionary development approval that would require the removal of one or more trees protected by this Chapter and for any other projects where the Community Development Director determines it is necessary.

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SECTION 3: METHODS

3.1 - Literature Review

Literature review was conducted to analyze existing documentation regarding biological resources and habitat conditions within the Study Area and is summarized below.

3.1.1 - Existing Documentation

As part of the literature review, an FCS Biologist compiled and analyzed existing environmental documentation for the Study Area and relevant areas in its vicinity. This documentation included literature pertaining to the habitat requirements of special-status species with the potential to occur in the project vicinity; federal register listings, protocols, species data provided by the USFWS, CDFW, and CNPS; and previous technical studies, listed below:

- Aquatic Resource Delineation Report (2023) prepared by FCS;
- Habitat Assessment for California Red-legged Frog (2019) prepared by Mark Jennings;
- Pre-construction Dusky-footed Woodrat Survey prepared (2014) by Olberding Environmental, Inc;
- Tree Inventory, Assessment and Protection Report (2023) prepared by Monarch Consulting Arborists.

3.1.2 - Topographic Maps and Aerial Photographs

An FCS Biologist reviewed current USGS 7.5-minute topographic quadrangle map(s)and aerial photographs as a preliminary analysis of the existing conditions within the Study Area and immediate vicinity.[3] Information obtained from the topographic maps included elevation, general watershed information, and potential drainage feature locations using Google Earth in conjunction with the EPA Watershed Assessment, Tracking, and Environmental Results System (WATERS).[4] Aerial photographs provided a perspective of the current site conditions relative to on-site and off-site land use, plant community locations, and potential locations of wildlife movement corridors.

3.1.3 - Soil Surveys

The United States Department of Agriculture (USDA) has published soil surveys that describe the soil series (i.e., group of soils with similar profiles) occurring within a particular area.[5] These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units that provide specific information

[3] United States Geological Survey (USGS). 2023. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed March 8, 2024.

[4] United States Environmental Protection Agency (EPA). 2023. Watershed Assessment, Tracking and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed March 8, 2024.

[5] Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey (WSS). United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed March 8, 2024.

regarding soil characteristics. Many special-status plant species have a limited distribution based exclusively on soil type. Therefore, pertinent USDA soil survey maps were reviewed to determine the existing soil mapping units within the Study Area and to inform whether the soil conditions on-site are potentially suitable for any special-status plant species. However, Natural Resources Conservation Service (NRCS) soil maps utilize an approximately 1.4-acre minimum mapping unit and line placement may not be accurate on a large (i.e., parcel-level) scale.

3.1.4 - Special-status Species Database Search

An FCS Biologist compiled a list of threatened, endangered, and otherwise special-status species previously recorded within the project vicinity based on a search of the USFWS Information for Planning and Consultation (IPaC) database,[6] the California Natural Diversity Database (CNDDB), and the CNPS Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California for the USGS *Cupertino, California* 7.5-minute Topographic Quadrangle Map, and the eight surrounding quadrangles (Appendix B).[7,8] The CNDDB Biogeographic Information and Observation System (BIOS 6) was used to determine the distance between the known occurrences of special-status species and the Study Area.[9]

3.1.5 - Trees

Prior to conducting the reconnaissance-level field survey, an FCS Biologist reviewed applicable ordinances pertaining to tree preservation and protection and ascertained whether tree replacement measures or permits for the removal of protected trees are required.

3.1.6 - Jurisdictional Waters and Wetlands

Prior to conducting the reconnaissance-level survey, an FCS Biologist reviewed EPA WATERS and aerial photography to identify potential natural drainage features and water bodies.[10] Additionally, an Aquatic Resource Delineation Report, described in detail below, was drafted to identify aquatic features within the Study Area and greater Project Parcel. In general, all surface drainage features identified as blue-line streams on USGS maps and linear patches of vegetation are expected to exhibit evidence of flows and considered potentially subject to State and federal regulatory authority as waters of the United States and/or State.

3.2 - Field Survey

FCS Biologists familiar with the biological resources of the region conducted general wildlife, habitat, vegetation community, and aquatic resource surveys on March 21, 2024. The objective of the field

[6] United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation (IPaC). Website: https://ecos.fws.gov/ipac/. Accessed March 8, 2024.

[7] California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database (CNDDB) RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed March 8, 2024.

[8] California Native Plant Society (CNPS). 2023. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed March 8, 2024.

[9] California Department of Fish and Wildlife (CDFW). 2023. Biogeographic Information and Observation System (BIOS 6). Website: https://wildlife.ca.gov/Data/BIOS. Accessed March 8, 2024.

[10] United States Environmental Protection Agency (EPA). 202. Watershed Assessment, Tracking and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed March 12, 2024.

survey was to ascertain general site conditions, determine wildlife use, and identify whether existing vegetation communities provide suitable habitat for special-status plant or wildlife species. Potentially sensitive areas identified during the literature review were ground-truthed during the field survey for mapping accuracy. Special attention was paid to sensitive habitats and areas potentially supporting special-status floral and faunal species.

Wildlife species detected during the reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded. Notations were made regarding suitable habitat for those special-status species determined to have the potential to occur within the Study Area.[11]

3.2.1 - Aquatic Resources Delineation Report

An Aquatic Resources Delineation Report was conducted by FCS on October 26, 2023 (Appendix D). The survey boundaries covered the entire Project Parcel (72.45 acres). However, only aquatic features within the 19.03-acre Study Area are analyzed in this report. The presence/absence of wetlands was determined based on the requirements of the Corps of Engineers Wetlands Delineation Manual and revised procedures in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.[12,13] Drainage channels were characterized through presence/absence of bed, bank, and OHWM. The OHWM was determined and characterized using definitions and guidance of A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States.[14] Culverted drainage sections were examined for evidence of concentrated flow, including presence of water stains, mineral or sediment deposits, and biofilm.

3.2.2 - Protocol-level California Red-legged Frog Surveys

A California Red-legged frog [*Rana draytonii*] (CRLF) survey was conducted by Mark Jennings on April 17, 2019 (Appendix E). The survey covered the northeastern portion of the Study Area. The USFWS protocol for the CRLF Habitat Assessment was followed and observations regarding amphibians and reptiles were made. Additionally, CRLF occurrences recorded within 3.1 miles of the Study Area were mapped. 7.5-minute USGS quadrangles and aerial photographs for potentially suitable aquatic habitats within a 3.1-mile radius of the site and connectivity of these habitats with the Study Area were also examined.

3.2.3 - Pre-construction Dusky-footed Woodrat Survey

A pre-construction dusky-footed woodrat survey was conducted by Olberding Environmental, Inc., in March 2014 (Appendix F). The survey covered the northeastern portion of the Study Area. All woodrat nests were pin flagged to be made clearly visible. A total of four woodrat stick nests were monitored nightly with motion censored wildlife trail cameras also having infrared capabilities for nighttime photos. After the cameras were up for a period of 24 hours, they were removed and placed on four new nests. If a nest was determined to host the dusky-foot woodrat, the word

[11] California Department of Fish and Wildlife (CDFW). 2023. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed March 8, 2024.
[12] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1.
[13] United States Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28.
[14] Lichvar, R.W. and S.M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.

"active" was written on an orange flagging tape outside the nest. The presence of fresh woodrat scat outside the entrance to the nest was also used to determine whether a nest was active or not.

3.2.4 - Tree Inventory, Assessment and Protection Report

A Tree Inventory, Assessment, and Protection Report was conducted by Monarch Consulting Arborist Richard Gessner on December 13, 2024 (Appendix G). The survey boundaries covered the entirety of the Study Area and consisted of an assessment of the trees within the project area and on the adjacent sites where necessary. This assessment included species, size, condition, and suitability for preservation. Tree protection specifications, guidelines, and expected impact rating for those affected by the proposed project were also included.

3.2.5 - Vegetation

Common plant species observed during the reconnaissance-level survey were identified by visual characteristics and morphology in the field and recorded. Uncommon plants were identified with the use of taxonomical guides, including Jepson eFlora and Calflora.[15,16] Taxonomic nomenclature used in this study follows The Jepson Manual: Vascular Plants of California.[17] Vegetation types and boundaries were noted on aerial photos, verified through field observation, and digitized using ESRI ArcGIS software® ArcMap 10.0. By incorporating collected field data and interpreting aerial photography, a map of habitat types, land cover types, and other biological resources within the Study Area was prepared. Vegetation community and land cover types used to help classify habitat types are based on the Manual of California Vegetation (MCV) where applicable.

Sensitive natural communities are vegetation communities or special wildlife habitats that are rare or occur in limited distributions or provide specific habitat requirements for special-status plant or wildlife species. The CDFW maintains a list of natural communities which attempts to classify vegetation types found within the State of California and rank them based on rarity. Communities ranked S1-S3 are considered sensitive natural communities.[18]

3.2.6 - Wildlife

Wildlife species detected during the reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded. Notations were made regarding suitable habitat for those special-status species determined to have the potential to occur within the Study Area.[19] Appropriate field guides were

[15] Jepson Flora Project (eds.) 2020. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/. Accessed March 12, 2024.
[16] Calflora. 2020. Calflora: Information on California plants for education, research, and conservation. Website: http://www.calflora.org/. Accessed March 8, 2024.
[17] Baldwin, B. et al. 2012. The Jepson Manual: Vascular Plants of California. Berkeley: University of California Press. County of San Bernardino (Bernardino). 2007 (amended 2015).
[18] California Department of Fish and Wildlife (CDFW). 2024. Sensitive Natural Communities List, Sacramento: California Department of Fish and Wildlife. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities. Accessed March 8, 2024.
[19] California Department of Fish and Wildlife (CDFW). 2024. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed March 8, 2024.

used to assist in species identification during surveys, such as Peterson, Reid, and Stebbins.[20,21,22] Online resources such as eBird and California Herps were also consulted as necessary.[23,24]

3.2.7 - Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by natural and anthropogenic dispersal barriers, including rugged terrain, changes in vegetation, development, or human disturbance. Urbanization and the resulting fragmentation of open space areas create isolated "islands" of wildlife habitat, forming separated populations. Corridors act as an effective link between populations.

The Study Area was evaluated for evidence of a wildlife movement corridor during the reconnaissance-level survey and review of aerial photographs, and CDFW's BIOS 6 information. The focus of this study was to determine whether a change in land use at the Study Area could have significant impacts on the regional movement of wildlife. Conclusions are based on the information compiled during the literature review, including aerial photographs, USGS topographic maps and resource maps for the vicinity; the field survey; and professional experience with the desired topography, habitat, and resource requirements of the special-status species potentially utilizing the Study Area and vicinity.

[20] Peterson, T.R. 2010. A Field Guide to Birds of Western North America, Fourth Edition. Boston, MA: Houghton Mifflin Harcourt.
[21] Reid, F. 2006. A Field Guide to Mammals of North America, Fourth Edition. Boston, MA: Houghton Mifflin Harcourt.
[22] Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians. Third Edition. Boston, MA: Houghton Mifflin Harcourt.
[23] eBird. 2020. Online bird occurrence database. Website: http://ebird.org/content/ebird/. Accessed March 8, 2024.
[24] California Herps. 2020. A Guide to the Amphibians and Reptiles of California. Website: http://www.californiaherps.com/ Accessed March 8, 2024.

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SECTION 4: RESULTS

This section summarizes the general environmental setting based on the results of the literature research, database analyses, and field survey listed in Section 3. Sensitive biological resources including special-status species and the impact analysis are addressed separately in Section 5 and 6 of this document.

4.1 - Environmental Setting

The Study Area is located in the City of Saratoga, within the western portion of Santa Clara County (County), and within the southern portion of the greater San Francisco Bay Area. The Study Area is situated on the southwestern side of the City of Saratoga, where rural residential development is interspersed with native woodland habitat. The Study Area is bordered by residential development and associated roadways to the north and east and by undeveloped land to the south and west. The Mountain Winery is also located southwest of the Study Area.

4.2 - Topography and Hydrology

Elevation within the Study Area ranges from 1,118 feet above mean sea level (MSL) on the western boundary to 625 feet MSL along the northern boundary. Elevations along the eastern and southern boundary are approximately 865 and 750 feet MSL, respectively. A ridge occurs on the western boundary of the Study Area which extends in a southeasterly direction toward the center of the Study Area. Elevations are significantly reduced from the ridge to the north, south, and east. Subsequently, existing topography indicates the Study Area generally drains direct precipitation to the north of the on-site ridge through a network of ephemeral and intermittent drainage channels. The majority of the Study Area conveys collected runoff to the north, ultimately emptying into Calabazas Creek, a tributary of the San Francisco Bay.

4.3 - Soils

The USDA NRCS indicates that the soils within the Study Area consist of Mouser-Katykat-Sanikara complex and Literr-Urbanland-Merbeth complex. None of the soil types mapped or observed are classified as hydric soils (Exhibit 4). These soil type and their primary characteristics are summarized in Table 1 below.

Table 1: Soil Types Present within Study Area

Soil Name	Symbol	Slope	Description	Acreage
Mouser-Katykat-Sanikara	566	50-75%	Colluvium derived from mudstone and/or colluvium derived from sandstone and/or residuum weathered from sandstone and/or residuum weathered from mudstone. Well drained and non-saline soil.	6.54
Literr-Urbanland-Merbeth complex	322	15-30%	Derived from old, eroded alluvium. Soil is well drained and non-saline.	12.49
Source: Natural Resources Conservation Service (NRCS). 2021. Official Soil Series Descriptions. United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed March 11, 2024.				

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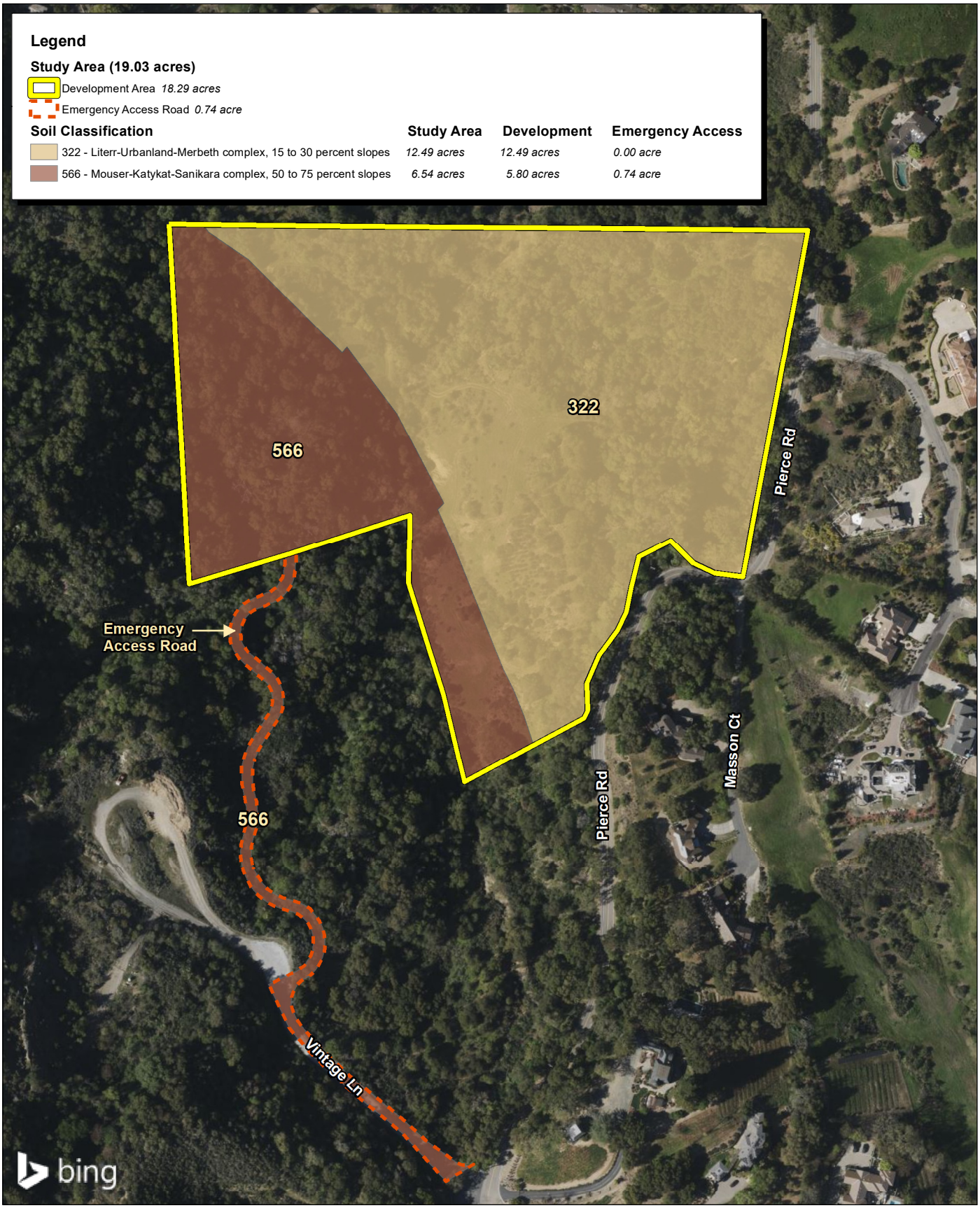

Source: Bing Aerial Imagery. Hanna-Brunetti Civil Engineers, 02/2024. USDA Soils Data Mart, Santa Clara County Western Area.

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Exhibit 4
Soils Map

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4.4 - Vegetation Communities and Land Cover Types

The following section describes the vegetation communities and land cover types present within the Study Area. The location and extent of each vegetation community is shown on Exhibit 5.

4.4.1 - Intermittent Tributaries

An intermittent tributary is defined as a watercourse that is temporally intermittent or seasonal and that flows during the wet season, continues to flow after a period of precipitation, and ceases surface flow during at least part of the dry season.

There are two intermittent tributary features within the Study Area. The first segment is part of a naturally occurring headwater drainage that runs through the center of the Study Area, where it generally drains to the north, connecting to Calabazas Creek outside the northern Study Area boundary (Appendix D). This feature is heavily incised and composed of gravelly substrate. At the time of the survey no flowing water was present, but small areas of stagnant water were observed in various reaches, indicating an intermittent hydrological regime. This drainage segment is located under an intermittently closed and open canopy of mixed oak woodland, with dominant species consisting of coast live oak *(Quercus agrifolia)*, arroyo willow (*Salix lasiolepis*), coyote brush (*Baccharis pilularis*), California buckeye (*Aesculus californica*), scouring brush (*Equisetum sp*.), and others. This segment originates within the Project Parcel, outside the southern boundary of the Development Area.

The second tributary, a naturally occurring headwater drainage, is characterized by scour and sediment deposits. At the time of the survey, flowing water was observed and moist soils were present, indicating an intermittent hydrological regime. This drainage segment is located under a closed canopy of mixed oak woodland, with dominant species consisting of coast live oak, California bay (*Umbellularia californica*), and arroyo willow. This segment likely drains the northern section of the westerly adjacent Mountain Winery property. This segment first enters the western portion of the Study Area, where it passes through the proposed Emergency Access Road under coast live oak woodland habitat; it then enters the southwestern portion of the Development Area before it meets the intermittent segment outlined above where it conveys intermittent flows to the north. Much of the western reach of this drainage was inaccessible due to site topography and dense vegetation. As such, this segment was partially mapped using topographic maps, breaks in vegetation, and the USFWS National Wetland Inventory Mapper. This segment originates off-site, outside the western boundary of the Study Area.

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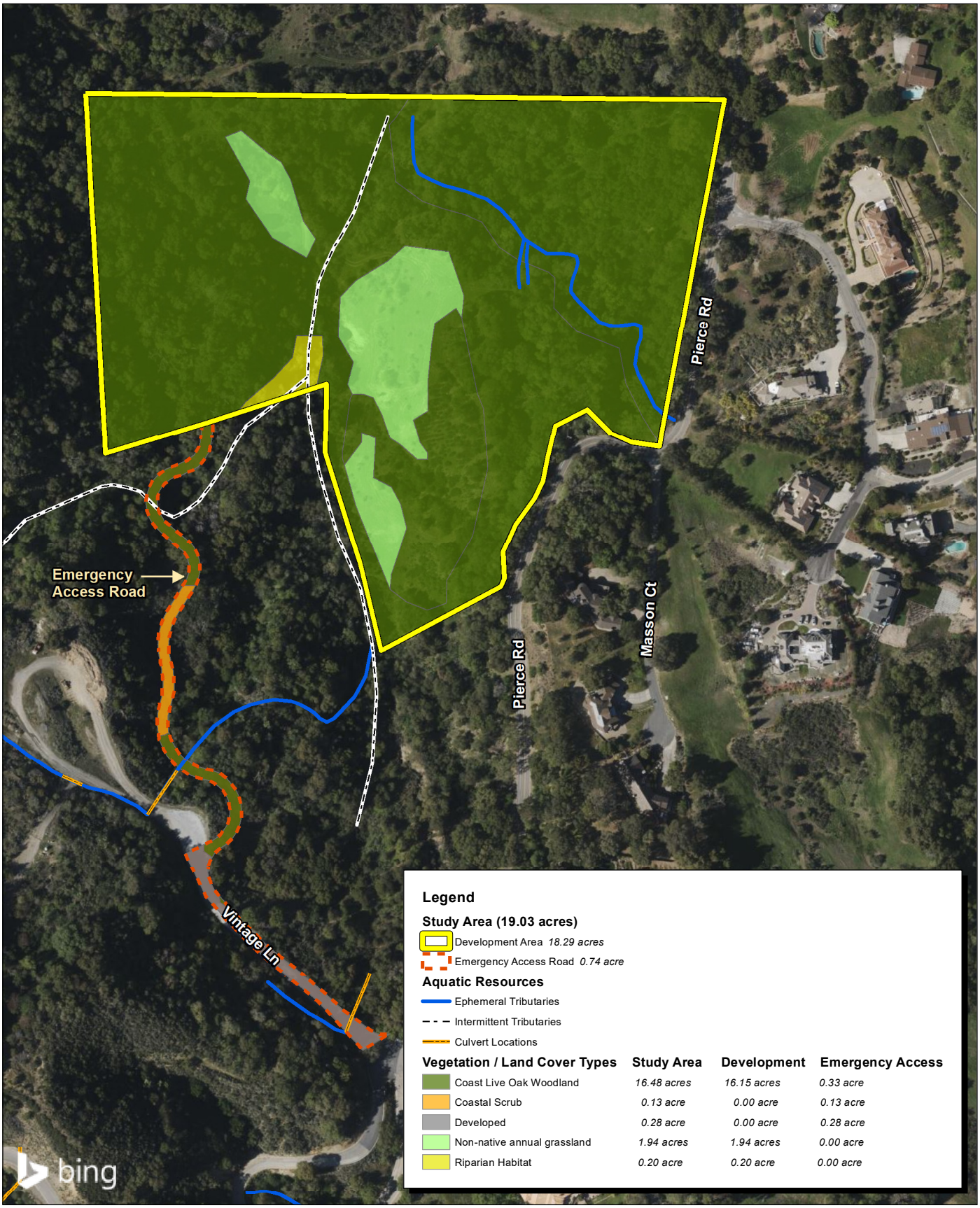

Source: Bing Aerial Imagery. Hanna-Brunetti Civil Engineers, 02/2024.

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Exhibit 5
Vegetation Communities and Land Cover Types

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4.4.2 - Ephemeral Tributaries

Several ephemeral tributary segments travel through the Study Area. Three segments are located in the northeastern portion of the Study Area (Appendix D). Hydrological input is provided by two culverts, one on each side of Pierce Road. This segment drains the northeastern portion of the Study Area to the north/northwest. The channel is characterized by the presence of deeply incised bed and banks and contains scour and sediment deposits. Two drainage segments connect to the first segment which appear to be erosional gullies that have developed over time into natural headwater drainages collecting runoff from the terrace upslope. However, at the time of the survey, no flowing water or soil moisture was present.

Two additional segments cross through the Emergency Access Road and are located to the south of the Development Area. The first segment is characterized as a continuation of the constructed drainage ditch that has developed into a headwater drainage. This segment originates off-site, outside the western boundary of the Study Area, where it is connected by two culvert segments which pass water under an unnamed road and Vintage Lane before crossing over the proposed Emergency Access Road within coast live oak woodland habitat. This segment conveys ephemeral flows into the intermittent drainage segment which ultimately drains to the north outside the Study Area.

The second segment is an erosional gully/ditch that that has developed into a semi-vegetated headwater drainage, which parallels an on-site access road (Vintage Lane) and drains runoff from the adjacent western hillside. This segment originates off-site, immediately to the west/southwest of the Study Area boundary. This segment is connected through one culvert which passes water under Vintage Lane and down the slope to the north/northeast. The reaches of the ephemeral drainages are shown in detail in Exhibit 5.

4.4.3 - Coastal Scrub

Coastal scrub habitat occurs throughout the proposed Emergency Access Road between stands of coast live oak woodland. This habitat type is relatively arid and is characterized by shrubby vegetation. Dominant vegetation includes but not limited to poison oak (*Toxicodendron pubescens*), California sagebrush (Artemisia californica), coyote brush, chamise (*Adenostoma fasciculatum*), sticky monkey flower (*Mimulus aurantiacus*), French broom (*Genista monspessulana*), toyon (*Heteromeles arbutifolia*), and pampas grass (*Cortaderia jubata*).

4.4.4 - Non-native Annual Grassland

Patches of non-native annual grassland habitat occurred within the central portions of the Development Area. This habitat type is dominated by species like coyote brush, wild oat (*Avena fatua*), rip-gut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian rye grass (*Festuca perennis*), yellow star thistle (*Centaurea solstitialis*), and scarlet pimpernel (*Lysimachia arvensis)*.

4.4.5 - Developed

Developed habitat is characterized by areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported and retains no soil substrate.

Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to large amounts of debris or other materials having been placed upon it may also be considered urban/developed (e.g., car recycling plant, quarry). Characteristic vegetation includes unvegetated or landscaped with a variety of ornamental (usually non-native) plants.

The Study Area contains a developed road (Vintage Lane) that runs through the southern portions of the proposed Emergency Access Road. The road enters the Study Area at Pierce Road where it eventually terminates at a large cul-de-sac adjacent to the western boundary of the Study Area.

4.4.6 - Coast Live Oak Woodland

Coast live oak woodland occur in several natural settings over a large parts of California, with elevations ranging from sea level to around 5,000 feet. The Development Area and the proposed Emergency Access Road contain coast live oak woodland which is the dominate habitat found within the Study Area. These areas are characterized by a relatively closed canopy woodland dominated by coast live oak. Although coast live oak is the dominant species in this habitat, other tree species do co-occur, including valley oak (*Quercus lobata*), California bay laurel with a limited number of madrone (*Arbutus menziesii*), black oak (*Quercus kelloggii*), and California buckeye. Dominant understory vegetation included poison oak, coast live oak saplings, French broom, snowberry (*Symphoricarpos albus),* catchweed bedstraw (*Galium aparine*), and others.

4.4.7 - Riparian Habitat

The term “riparian” generally refers to the transition zone between wetlands and uplands, often referring to the primarily woody vegetation associated with both lentic and lotic systems. CDFW defines riparian vegetation as “native vegetation occurring naturally along banks or margins of lakes or streams” (FGC §§ 1600-1607). The USFWS further defines riparian areas as “plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic and lentic water bodies (rivers, streams, lakes, or drainage ways)” that exhibit “distinctly different vegetative species than adjacent areas” and/or “species similar to adjacent areas but exhibiting more vigorous or robust growth forms.”[25]

Riparian habitat occurs within the south/southwestern portion of the Development Area and bounds the southern portion of the on-site intermittent tributaries as they converge. Vegetation is similar to the coast live oak woodland surrounding this area. Vegetation observed within the area consists of arroyo willow, valley oak, California buckeye, and California bay, with a limited number of western sycamore (*Platanus racemora*). Along the banks, within open canopy areas, inclusions of pampas grass was observed. Mule fat (*Baccharis salicifolia*) and scouring brush were observed along the banks and within the creek channel.

[25] United States Fish and Wildlife Service (USFWS). 2019. A System for Mapping Riparian Areas in The Western United States. Website: https://www.fws.gov/sites/default/files/documents/a-system-for-mapping-riparian-areas-in-the-western-united-states-2019.pdf. Accessed May 30, 2024.

4.5 - Common Wildlife

The vegetation community and land cover types discussed above provide habitat for numerous wildlife species. Wildlife activity consisted primarily of avian species, including American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), yellow-breasted warbler (*Phylloscopus montis*), turkey vulture (*Cathartes aura),* red tail hawk (*Buteo jamaicensis*), dark-eyed junco (*Junco hyemalis*), golden-crowned sparrow (*Zonotrichia atricapilla*), ruby-crowned kinglet (*Regulus calendula*), Bewicks wren (*Thryomanes bewickii*), California scrub-jay (*Aphelocoma californica*), acorn woodpecker (*Melanerpes formicivorus*), Steller's jay (*Cyanocitta stelleri*), California quail (*Callipepla californica*), American bushtit (*Psaltriparus minimus*), oak titmouse (*Baeolophus inornatus*), wrentit (*Chamaea fasciata*), and hermit thrush (*Catharus guttatus*).

Other species observed included mice (*Mus* sp.), black-tailed jackrabbit (*Lepus californicus*), western fence lizard (*Sceloporus occidentalis*), and California mule deer (*Odocoileus hemionus californicus*).

4.6 - Wildlife Movement Corridors and Nursery Sites

A wildlife corridor is an area of habitat connecting wildlife populations separated by human activities or structures (such as roads, development, or logging). This allows an exchange of individuals between populations, which may help prevent the negative effects of inbreeding and reduced genetic diversity (via genetic drift) that often occur within isolated populations.

An FCS Biologist evaluated the CDFW's BIOS 6 information on wildlife linkages within the Study Area and concluded that the proposed project does have the potential to interfere with the movement of native wildlife. The Study Area has no history of associated disturbance and currently contains aquatic features that provides potential movement corridors for aquatic wildlife species. The aquatic features associated with the Study Area generally drain to the north, ultimately emptying into Calabazas Creek. The intermittent and ephemeral drainage and associated riparian habitat on-site do not contain adequate habitat for fish, but amphibian and reptile species were observed during the CRLF Habitat Assessment survey. While no formal corridor movement studies were carried out, the Study Area does constitute a potential wildlife movement corridor.

Wildlife nursery sites include nesting birds and maternity bat roosts, aquatic breeding habitats, and special-status and non-special-status wildlife breeding or nesting colonies. No significant breeding/nesting colonies were observed during the wildlife surveys. However, individual nesting birds and roosting bats have the potential of being present on-site and within disturbance distance seasonally. For example, songbirds and raptor species likely nest in on-site native trees that occur throughout the entirety of the site.

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SECTION 5: SENSITIVE BIOLOGICAL RESOURCES

The following section discusses the existing site conditions and presence or potential presence for sensitive biological resources to occur within the Study Area.

5.1 - Sensitive Natural Communities

Sensitive natural communities are vegetation communities or special wildlife habitats that are rare or occur in limited distributions or provide specific habitat requirements for special-status plant or wildlife species. The CDFW identifies sensitive natural communities based on the MCV and ranks a subset based on rarity. Communities identified on CDFW's list as "sensitive" and/or communities ranked S1-S3 are considered sensitive natural communities under CEQA.[26]

Coast Live Oak Woodland

CDFW does not identify coast live oak woodland as sensitive. Coast live oak woodland is designated with a State Rank of S4. Therefore, coast live oak woodland is not considered a sensitive natural community.

Riparian Habitat

Riparian habitat occurs within the south/southwestern portion of the Development Area and bounds the southern portion of the on-site intermittent tributaries as they converge. The riparian habitat occurring within the south/southwestern portion of the Development Area is within the jurisdiction of CDFW pursuant to California Fish and Game Code 1600-1607, which regulates activities within or affecting rivers, streams, or lakes. As such, riparian habitat is generally identified as a sensitive natural community. Impacts to riparian habitat are addressed further in Section 6.3.

5.2 - Special-status Plant Species

The CNDDB and CNPS list 64 special-status or sensitive plant species that have been recorded within the *Cupertino, California* USGS 7.5-minute Topographic Quadrangle Map and the eight surrounding quadrangles (Table 1; Appendix A).[27,28,29] The CNDDB occurrences near the Study Area are shown on Exhibit 6. No rare or special-status plant species were observed during the 2024 general biological survey.

[26] California Department of Fish and Wildlife (CDFW). 2022. Natural Communities List, Sacramento: California Department of Fish and Wildlife. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities. Accessed March 12, 2024.
[27] United States Geological Survey (USGS). 2022. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con.
[28] California Department of Fish and Wildlife (CDFW). 2022. CNDDB RareFind 5 California Natural Diversity Database Query for Special-status Species. Website: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed March 12, 2024.
[29] California Native Plant Society (CNPS). 2022. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed March 12, 2024.

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CNDDB version 04/2024. Please Note:
The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

Legend

- Study Area

CNDDB

Symbology

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

Source: Bing Street Imagery. California Natural Diversity Database (CNDDB), April 2024.

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Exhibit 6
CNDDB Special-Status Species Occurrences

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Based upon the field survey, literature review, and on-site habitat conditions, five special-status plant species have the potential to occur within the site. The additional 59 species are not expected to occur within the Study Area due to the absence of suitable habitat. Although the site does not have a history of disturbance, the site lacks microhabitats, such as vernal pools, and alkaline, serpentine, or acidic soils, that are typically necessary to support many rare plants. For the reasons outlined above, it is reasonable to conclude that the additional 59 special-status plant species are determined to be absent from the Study Area. The remaining five special-status plant species are discussed in further detail below.

5.2.1 - Loma Prieta Hoita

Loma Prieta hoita (*Hoita strobilina*) is a perennial herb can be found in openings in chaparral or oak woodland, cismontane or riparian woodland, serpentine, or related Franciscan-formation substrata and descending in gravelly creek beds draining from the mountains into the Santa Clara Valley. The closest CNDDB record was documented 0.8 mile east of the Study Area. Additionally, there were three recent recorded occurrences of this species within 5 miles of the Study Area. The Study Area does contain oak and riparian woodland that may potentially support this species. However, the Study Area lacks serpentine soil, lowering the likelihood of this species presence. Although this species was not observed during the 2024 field survey, it has a low potential to be occur within the Study Area.

5.2.2 - Anderson's Manzanita

The Anderson's manzanita (*Arctostaphylos andersonii*) is a perennial evergreen shrub found in coastal dunes, marshes and swamps, coastal scrub, chaparral, redwood, and evergreen forest communities. This species also prefers mesic sites in dunes, along streams, or in coastal salt marshes. The closest CNDDB record was documented 4.5 miles west of the Study Area adjacent to SR-9. The site does contain scrub habitat and streams that could potentially support this species. The site lacks coastal dunes and marshes and swamps, lowering the likelihood of this species presence on-site. Although this species was not observed during the 2024 field survey, it has a low potential to be found within the Study Area and, out of an abundance of caution, potential presence cannot be ruled out.

5.2.3 - Santa Clara Red Ribbons

Santa Clara red ribbons (*Clarkia concinna* ssp. *automixa*) is an annual herb that prefers foothill woodland, chaparral, and scrub habitat on slopes and near drainages. The closest CNDDB occurrence of this species is mapped immediately south of the Study Area on the other side of SR-9 in Congress Springs Canyon, which is approximately 0.4 mile from the Study Area. The Study Area does contain woodland and scrub habitat to potentially support this species, along with sloping topography and drainages. This species was not observed on-site during the 2024 field survey, but due to suitable habitat and the proximity of occurrences of this species, there is a low potential for it to occur within the Study Area.

5.2.4 - Western Leatherwood

The western leatherwood (*Dirca occidentalis*) is a perennial deciduous shrub found in broadleaf upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland, and mesic habitats. There are two recent occurrences of this species within 5 miles of the Study Area with the nearest occurrence located 2.3 miles to the northwest. The Study Area contains woodland habitat that may potentially support this species. Although this species was not observed on-site during the 2024 field survey, due to suitable habitat and the proximity of occurrences of this species, there is a low potential for it to occur within the Study Area.

5.2.5 - Arcuate Bush-mallow

The Arcuate bush-mallow (*Malacothamnus arcuatus*) is a perennial deciduous shrub found in chaparral, coastal scrub, and cismontane woodland. The site does contain suitable coastal scrub and woodland to support this species. Three occurrences were identified within 5 miles of the Study Area. One individual was observed in 2015 within the Rancho San Antonio Open Space Preserve. This species was not observed on-site during the 2024 field survey, but due to suitable habitat and the proximity of occurrences of this species, there is a low potential for it to occur within the Study Area.

5.3 - Special-status Wildlife Species

CNDDB identifies 48 federal and State-listed threatened and/or endangered wildlife species and State Species of Special Concern that have been recorded within the *Cupertino, California* USGS 7.5-minuteTopographic Quadrangle Map and eight surrounding quadrangles (Table 2; Appendix A). Forty-two of the 48 species analyzed are unlikely to occur on-site, as discussed in the Special-status Species Occurrence Evaluation.

The remaining six species (and functional groups like nesting birds that include special-status species) could have the potential to occur on-site, perhaps as vagrant, dispersing, nesting, or foraging individuals, and are therefore discussed in more detail below.

5.3.1 - California Red-legged Frog

CRLF is listed as threatened under the Endangered Species Act and is a CDFW Species of Special Concern. CRLF inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. This species requires 11 to 20 weeks of permanent water for larval development. It is important that this species has access to estivation habitat during the dry season. There are four CNDDB occurrences of this species within 5 miles of the Study Area with the nearest occurrence approximately 0.5 mile north of the site located in Calabazas Creek.

A Habitat Assessment for CRLF was conducted by Mark Jennings on April 17, 2019, which did not find any evidence of CRLF within the Study Area (Appendix E). While there are three CRLF occurrences within 1.5 miles of the Study Area, they are all from perennial ponded aquatic habitats within major stream channels such as Calabazas and Saratoga Creeks. Both of these channels contain bullfrogs (*Lithobates catesbeiana)* and are separated from the Study Area by a combination of

vineyards, roads, dry and steep terrain, and urban development, which precludes the likelihood of dispersal from known occurrences. Moreover, with nearby urban developments, there are predators to CRLF, including raccoons and domestic cats. These animals likely ensure that any juvenile or adult CRLF that attempt to move out of perennial, deep water aquatic habitats into intermittent, shallow water habitats would be subject to predation. For these reasons, the assessment concludes that CRLF is not present within the Study Area, nor would the species be able to disperse into the Study Area. Therefore, CRLF is concluded to be absent from the Study Area and is not discussed further in this report.

5.3.2 - San Francisco Dusky-footed Woodrat

The San Francisco dusky-footed woodrat (*Neotoma fuscipes* ssp.) is a CDFW Species of Special Concern. This species occurs in a variety of woodland and scrub habitats throughout the South San Francisco Bay. The Study Area is located within the known range of the San Francisco dusky-footed woodrat. Olberding Environmental conducted a dusky-footed woodrat survey in 2014 identified a total of 22 woodrat nests within the surveyed area, 13 of which were determined to be active (Appendix F). No dusky-footed woodrats or active nests were identified within the Study Area during the 2024 FCS general biological survey. However, due to previous survey efforts, suitable habitats present, and recorded occurrences of this species within the Study Area, there is high potential for the dusky-footed woodrat to be present within the Study Area.

5.3.3 - Santa Cruz Black Salamander

The Santa Cruz black salamander (*Aneides niger*) is a CDFW Species of Special Concern. This species prefers mixed deciduous and coniferous woodlands, coastal grasslands, and riparian zones in San Mateo, Santa Cruz, and Santa Clara counties. Adults can be found under rocks, talus, and damp woody debris. The Study Area does contain suitable habitat to support this species in the form of grassland, woodland, and riparian habitats. The nearest CNDDB occurrence of this species is 0.5 mile west of the Study Area with 11 historic occurrences within 5 miles of the Study Area. This species was not observed on-site during the 2024 field survey, but due to suitable habitat and the proximity of occurrences of this species, there is a low potential for it to occur within the Study Area. Therefore, out of an abundance of caution, it cannot be ruled out that this species may be found within the Study Area before construction-related activities occur.

5.3.4 - California Giant Salamander

The California giant salamander (*Dicamptodon ensatus*) is a CDFW Species of Special Concern. This species requires cold permanent or semi-permanent streams. The Study Area contains suitable habitat for this species such as woodland, streams, and riparian habitat. There are five CNDDB occurrences of this species within 5 miles of the Study Area. The nearest occurrence is 0.41 mile south of the Study Area. This species was not observed on-site during the 2024 field survey, but due to suitable habitat present within the Study Area and the proximity of occurrences within the area, there is a low potential for this species to occur.

5.3.5 - White-tailed Kite and Cooper's Hawk

Both species have been documented within 4 miles of the Study Area, and the present trees within the Study Area or within disturbance distance could provide suitable nesting habitat for either species. It cannot be ruled out that white-tailed kite or Cooper's hawk could nest within the Study Area or within relevant disturbance distance.

5.3.6 - Protected Nesting Birds (Including All Special-status Bird Species)

In addition to the specific special-status bird species discussed in more detail above, the active nests of most resident and migratory (game and non-game) birds are protected by the MBTA and/or Fish and Game Code and are, therefore, categorized as "special-status" wildlife functional group during this time.

The Study Area provides nesting opportunities for different taxa of birds. The native woodland vegetation within the Study Area, along with the riparian corridor, understory shrubbery, and non-native grassland, could provide nesting and foraging opportunities to support successful nesting and rearing habitat. Therefore, it is likely that protected bird nests are present on-site during the nesting season (typically considered to last from February 1 to August 31 for most species).

5.3.7 - Bats (Including Special-status Bats)

Roosts are used during the daytime to seek refuge; at night between foraging excursions to rest, digest prey, seek refuge from predators or poor weather conditions, or for social purposes; and in winter for hibernation. Adult females and their young use some particularly secure roosts as maternity roosts. The number of bats occupying a given roost can vary from a solitary individual to a large colony, depending on the species. Roosting sites are very sensitive to human disturbance, especially when bats are hibernating or rearing young.

At dusk, bats leave their roosts to forage for insects in nearby ponds or riparian habitats. Bats generally prey on insect species that are locally abundant near water bodies. Ecotone areas (areas of transition between habitats) are also used as foraging areas. The annual grasslands and riparian habitat of the Study Area have foraging potential for bat species.

The Study Area offers degraded but potentially viable roosting habitat for bat species. Bats could use cavities in trees and the abandoned structure within the Study Area as potential roosting habitat. Bat species are often grouped together based on their roosting habitat requirements. Of the special-status bat species that have potential to occur in the region, Townsend's big-eared bat (*Corynorhinus townsendii*) and pallid bat (*Antrozous pallidus)* have the potential, albeit low, to occur within the Study Area.

5.4 - State or Federally Protected Waters and Wetlands

FCS conducted a field survey on October 26, 2023, in support of the Aquatic Resource Delineation Report (Appendix D). The Delineation Report identified three ephemeral drainage segments within the Development Area and two within the proposed Emergency Access Road. Two intermittent drainage segments were also located within the Development Area, with one extending into the

proposed Emergency Access Road. It should be noted that the Delineation Report covered the entire Project Parcel, but only the aquatic features within Study Area are discussed in this report..

Based on these findings, the Delineation Report surmised that the two intermittent drainage segments would likely be classified as waters of the United States under the jurisdiction of the USACE. However, the remaining drainage segments delineated within the Study Area would likely be exempt from USACE jurisdiction as these drainages are ephemeral streambeds that would not be subject to USACE jurisdiction pursuant to the *Sackett* decision recently levied by the U.S. Supreme Court. FCS proposes that all drainages within the Study Area boundary would fall under the jurisdiction of the RWQCB as jurisdictional waters of the State. Additionally, activities potentially impacting bed, banks, or riparian habitat are expected to be protected through the Fish and Game Code Streambed Alteration Program, administered by CDFW.

5.5 - Protected Trees

The City of Saratoga Ordinance Code Chapter 15-50.050 contains tree protection ordinances. These ordinances, as discussed in Section 2.3.2, define protected trees as any native tree having a DBH of 6 inches or greater, any other tree having a DBH of 10 inches or greater, any street tree regardless of size, any heritage tree, any tree required to be planted or retained as a condition of any approval granted under this Chapter, or any tree required to be planted as a replacement, as provided in Section 15-50.170.

An Arborist Report for the Study Area was prepared on December 13, 2024, by Monarch Consulting Arborists. The report identified 682 trees within the site, of which 367 trees are expected to be removed with an additional 85 trees in close proximity to grading. Of the 682 trees on-site, 456 are coast live oak, 116 are California bay laurel, and the remaining trees are made up of nine different trees species.

Several native trees that meet the City of Saratoga Chapter 15-50.050 tree protection ordinance criteria are found within the Study Area. The removal of an protected trees within the site requires the approval of a tree removal, pruning, or encroachment permit issued pursuant to Article 15-50.050. Trees to be preserved on-site must adhere to the stipulations addressed in the Tree Preservation Plan located in Section 15-50.140 of the Municipal Code.

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SECTION 6: IMPACT ANALYSIS AND RECOMMENDATIONS

The following discussion addresses potential project impacts on sensitive biological resources, including special-status species, and recommends measures to avoid and/or mitigate impacts to a less than significant level under CEQA.

6.1 - Impact Analysis for Special-status Plant Species

Five special-status plants were identified having the potential to occur due to the presence of coast live oak woodland, coastal scrub, and riparian habitat present within the Study Area. The proposed project is likely to impact the majority of habitat types on-site and therefore has the potential to impact special-status plants, if they are present. Mitigation Measure (MM) BIO-1 requires botanical surveys to be conducted in accordance with CDFW's Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities (2018). If special-status plants species are found, compensatory mitigation is required to offset losses to these populations. With implementation of these project-specific implementation measures recommended below, potential impacts to special-status plants would be less than significant.

MM BIO-1 **Protocol-level Rare Plant Surveys**

- Prior to the initiation of construction, a qualified botanist will conduct protocol-level rare plant surveys plants during the appropriate blooming period for the target species. Rare plant surveys shall be conducted following the California Department of Fish and Wildlife (CDFW) Protocol for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities. The results of the rare plant surveys shall be summarized in a rare plant report following the CDFW requirements defined in the protocol and shall be submitted to CDFW within 60 days after completion of field work.
- If a special-status or rare plant species is found, the project proponent shall hire a qualified Biologist to prepare and implement a compensatory mitigation plan (including monitoring and reporting requirements) submitted and approved by the CDFW) to offset any losses at a minimum of 1:1 ratio.

6.2 - Impact Analysis for Special-status Wildlife Species

6.2.1 - San Francisco Dusky-footed Woodrat

Although no active nests or individuals were observed on the site during the 2024 FCS general biological survey, foraging and nesting habitat is present within the Study Area and previous recorded occurrences of this species have been documented on-site in 2014. To avoid potential project-related impacts on San Francisco dusky-footed woodrats that may utilize the site the project proponent shall implement MM BIO-2, requiring pre-construction surveys and avoidance of direct and indirect impacts on nests. With implementation of MM BIO-2, potential project-related impacts on San Francisco dusky-footed woodrats would be reduce impacts to a less than significant level.

MM BIO-2 San Francisco dusky-footed Woodrat Protection Measures

- Prior to the onset of construction activities, a qualified Biologist will conduct a pre-construction survey for San Francisco dusky-footed woodrat nests. If active nests are determined to be present within the impact area the following measures shall be implemented.
- The project proponent shall avoid woodrat nests to the greatest extent feasible by installing a minimum 10-foot buffer with silt fencing or other material that will prohibit encroachment. In some situations, a smaller buffer may be permitted if in the opinion of the qualified Biologist removing the nest would be a greater impact than that anticipated as a result of project activities.
- If avoidance of active nests is not feasible, then, in coordination with the California Department of Fish and Wildlife (CDFW), the woodrats shall be evicted from their nests prior to the removal of the nests and onset of any clearing or ground-disturbing activities to avoid injury or mortality of the woodrats. The nests shall be dismantled and the nesting material moved to a new location outside the project's impact areas so that it can be used by woodrats to construct new nests. Prior to nest deconstruction, each active nest shall be disturbed by a qualified wildlife Biologist to the degree that all woodrats leave the nest and seek refuge out of the impact area. Whether the nest is on the ground or in a tree, the nest shall be nudged to cause the woodrats to flee. For tree nests, a tarp shall be placed below the nest and the nest dismantled using hand tools (either from the ground or from a lift). If feasible, the nest material shall then be piled at the base of a nearby hardwood tree or shrub (preferably an oak with refuge sites among the tree roots or with dense vegetation or other refugia nearby) outside of the impact area. The spacing between relocated nests shall not be less than 100 feet, unless a qualified Biologist has determined that the habitat can support higher densities of nests.

6.2.2 - California Giant Salamander and Santa Cruz Black Salamander

No California Giant Salamanders (CGS) or Santa Cruz black salamanders (SCBS) were observed during the 2024 field survey conducted by FCS. However, habitat for this species is present in the form of intermittent and ephemeral drainages, including riparian habitat within the Study Area. Since both of these species are mobile species that could move into the Study Area prior to development, pre-construction surveys would be recommended out of an abundance of caution. If either of these species are present on-site before grading, the proposed project may result in impacts to either the CGS or SCBS, which would be considered a potentially significant impact. However, with implementation of MM BIO-3, requiring pre-construction survey and avoidance and minimization measures impacts to either of these species would be reduced to less than significant.

MM BIO-3 California Giant Salamander and Santa Cruz Black Salamander Protection Measures

A qualified Biologist shall survey the project area no more than 3 days before the onset of work activities. If any life stage of the California Giant Salamander (CGS) or

Santa Cruz Black Salamander (SCBS) is detected, CGS or SCBS should be allowed to move out of the area on their own. If CGS or SCBS are unable to move out of the project area on their own, a qualified Biologist, in consultation with the California Department of Fish and Wildlife (CDFW), shall relocate CGS or SCBS out of the project area into habitat similar to where it was found. Construction activities shall not be allowed to commence until consultation among the CDFW and the project proponent has occurred to the satisfaction of the CDFW.

Before any construction activities begin, the project proponent shall retain a qualified Biologist to conduct a worker's environmental awareness program (WEAP) for all construction personnel. At a minimum, the training will include a description of the CGS and SCBS and their habitats, the specific measures that are being implemented to conserve these species for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in WEAP, provided that a qualified Biologist is on hand to answer any questions.

The project proponent shall limit the number of access routes, size of staging areas, and the total area of the construction activity to the minimum necessary to achieve the project goal. Environmentally sensitive areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction and to minimize the impact to CGS or SCBS habitats; this goal includes locating access routes and construction areas outside of riparian areas to the maximum extent practicable.

6.2.3 - Protected Nesting Birds

The vegetated habitats within the Study Area provide suitable nesting habitat for a variety of species of nesting birds. Woodland, grassland, and riparian habitat provide potential nesting opportunities for ground- and tree-nesting birds, including special-status species such as the white-tailed kite and Cooper's hawk. Construction activities that occur during the avian nesting season (generally February 1 to August 31) could disturb protected nesting sites within the construction footprint and within disturbance distance. Grading and the removal of vegetation during the nesting season could result in direct harm to nesting birds, while noise, light, and other construction-related disturbances may cause nesting birds adjacent to the vegetation removal areas to abandon their nests.

With implementation of MM BIO-4, requiring pre-construction nesting bird surveys and avoidance of direct and indirect impacts on nests, potential project-related impacts on protected bird nests can be reduced to a less than significant.

MM BIO-4 Protection of Active Bird Nests

- Removal of trees shall be limited to only those necessary to construct the proposed project as reflected in the relevant project approval documents.
- If the proposed project requires vegetation to be removed during the nesting season (February 1 to August 31), pre-construction surveys shall be conducted no

more than 5 days prior to the start of ground or vegetation disturbance (including tree removal) to determine whether or not active nests are present.

- If an active nest is located during pre-construction surveys, a qualified Biologist shall determine an appropriately sized avoidance buffer based on the species and anticipated disturbance level. (The California Department of Fish and Wildlife [CDFW] recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors.) A qualified Biologist shall delineate the avoidance buffer using Environmentally Sensitive Area fencing, pin flags, and/or yellow caution tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently. No construction activities or construction foot traffic is allowed to occur within the avoidance buffer(s).
- The qualified Biologist shall monitor the active nest during construction activities and modify the protection zone accordingly to prevent project-related nest disturbance, until the young have fledged.

6.2.4 - Protected Roosting Birds

The Study Area contains trees and an abandoned structure that could provide marginal roosting habitat, including for special-status bats such as Townsend's big-eared bat and pallid bat. Potential direct and indirect impacts could occur to roosting bats due to removal of potential roosting habitat during project construction. These activities could potentially subject bats to risk of death or injury, and they are likely to avoid using the area until such construction activities have dissipated or ceased. Relocation, in turn, could cause hunger or stress among individual bats by displacing them into adjacent territories belonging to other individuals.

With implementation of MM BIO-5, requiring pre-construction roosting bat surveys and avoidance of direct and indirect impacts on active bat roosts, potential project-related impacts on protected roosting bats can be reduced to a less than significant.

MM BIO-5 Roosting Bat Pre-construction Survey and Avoidance

No more than 7 days prior to beginning ground disturbance and/or construction, a qualified wildlife Biologist (i.e., one experienced with identification of species and signs of bats) shall conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine whether bat species are roosting near the relevant work area. Survey methodology may include visual surveys of bats (i.e., observation of bats during foraging period), inspection for suitable habitat, bat sign (i.e., guano), or use of ultrasonic detectors (Anabat, etc.). Visual surveys shall include trees and buildings within 100 feet of the relevant project construction activities. If no special-status bats are found during this pre-construction survey, then the relevant ground disturbance and/or construction-related to the subject proposal may proceed.

If the Biologist determines or presumes bats are present, the Biologist shall exclude the bats from suitable spaces by installing one-way exclusion devices. After the bats vacate the space, the Biologist shall close off the space to prevent recolonization. Tree and or building demolition shall only commence after the Biologist verifies 7 to 10 days later that the exclusion methods have successfully prevented bats from returning. To avoid impacts on non-volant (i.e., nonflying) bats, the Biologist shall only conduct bat exclusion and eviction from September 1 through March 31. Exclusion efforts may be restricted during periods of sensitive activity (i.e., during hibernation or while females in maternity colonies are nursing young).

6.3 - Impact Analysis for Sensitive Natural Communities

Project implementation proposes to impact 0.20 acre of riparian habitat, which is considered sensitive natural community. Impacts to sensitive natural communities would be considered a significant impact. However, with implementation of MM BIO-6, requiring compensatory mitigation for loss of riparian habitat, impacts to sensitive natural communities would be reduced to a less than significant level.

MM BIO-6 Compensatory Mitigation for loss of Riparian Habitat

- The project proponent shall compensate for the loss of 0.20 acre of riparian habitat by restoring and conserving native riparian vegetation at a ratio of at least 1:1, or by purchasing adequate mitigation credits as determined by the California Department of Fish and Wildlife (CDFW) through a Streambed Alteration Agreement. Restoration may include removal of invasive species from riparian areas and planting and maintenance of native riparian species, where feasible.
- The project proponent shall submit a Mitigation and Monitoring Plan (MMP) to CDFW. The MMP shall be prepared by a qualified restoration ecologist, and shall include planting and maintenance protocols, performance criteria, and a monitoring and reporting program. At a minimum, the planting and maintenance protocols shall define planting locations, density and spacing, a native species palette, browse protection, irrigation regime, replacement of dead plants, annually escalating performance criteria until the mitigation goal is achieved, long-term funding commitments, and monitoring and reporting based on the trajectory for achieving the 1:1 minimum replacement.

6.4 - Impact Analysis for State and Federally Protected Waters and Wetlands

The proposed project would result in direct impacts to potential State or federally protected waters through impacts to the intermittent and ephemeral drainage channels within the Study Area (Exhibit 7). These features are protected by State and federal laws and regulations as waters of the United States and State (see Section 5.4), and by CDFW's Streambed Alteration Program.

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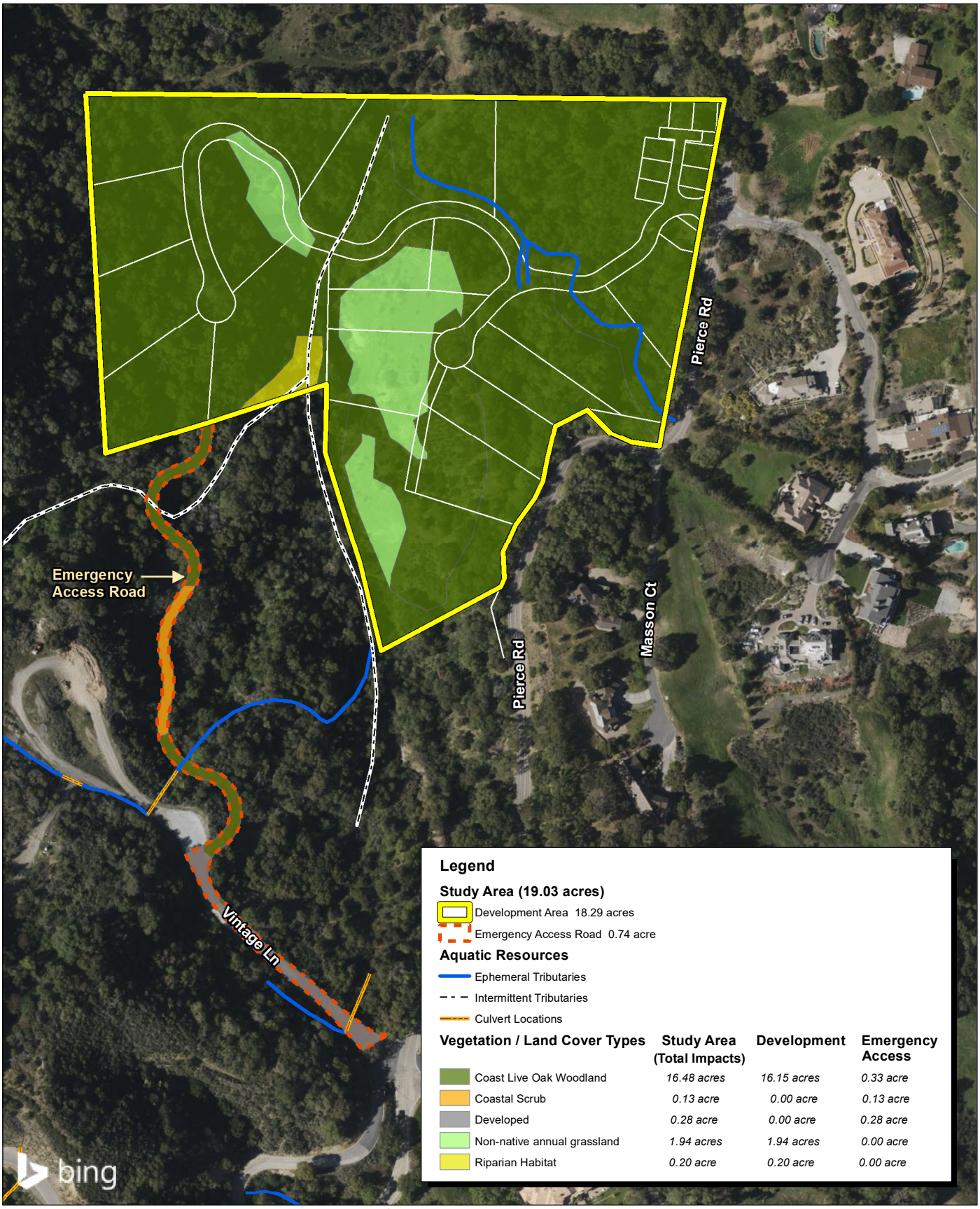

Vegetation / Land Cover Types	Study Area (Total Impacts)	Development	Emergency Access
Coast Live Oak Woodland	*16.48 acres*	*16.15 acres*	*0.33 acre*
Coastal Scrub	*0.13 acre*	*0.00 acre*	*0.13 acre*
Developed	*0.28 acre*	*0.00 acre*	*0.28 acre*
Non-native annual grassland	*1.94 acres*	*1.94 acres*	*0.00 acre*
Riparian Habitat	*0.20 acre*	*0.20 acre*	*0.00 acre*

Source: Bing Aerial Imagery. Hanna-Brunetti Civil Engineers, 02/2024.

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Exhibit 7
Impacts Map

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Impacts to these features are regulated pursuant the CWA, Porter-Cologne Water Quality Control Act, and Fish and Game Code Section 1602, *et seq*. and would require the project proponent to comply with the avoidance, minimization, and compensatory mitigation measures defined by the USACE, RWQCB, and CDFW (trustee agencies; see also Section 2). The agency-defined permitting regimes (including agency-defined enforceable mitigation measures) avoid and/or offset any impacts to a level of less than significant under CEQA because they require no-net-loss policies regarding aquatic area and function. Therefore, no additional mitigation measures to those required by the trustee agencies are warranted to reduce any potential impacts to less than significant under CEQA.

However, it is determined that impacts on these drainage features would constitute a significant impact under CEQA, which would be reduced to less than significant with implementation of MM BIO-7 (or mitigation measures required by the trustee agencies, whichever are more conservative).

MM BIO-7 Jurisdictional Waters

- The fill of jurisdictional waters in the form of ephemeral to intermittent streams shall be avoided and minimized to the extent feasible. Authorization for the fill of waters of the United States and/or State shall be obtained by the project proponent prior to the start of construction. Mitigation for the fill of jurisdictional waters shall be accomplished through creation or restoration of other waters at a minimum 1:1 ratio within the Study Area, at an approved mitigation bank or at another location within a San Francisco Bay Basin watershed as approved of by the United States Army Corp of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW). The mitigation goal shall be to create and/or enhance aquatic habitats with habitat functions and values greater than or equal to those that could be impacted by the proposed project. Compensatory mitigation within the Study Area or at another location within the watershed would be described in a stream mitigation plan that would:
  - Define the location of all restoration and creation activities.
  - Describe measures that would ensure that adjacent land uses would not adversely affect the ecological functions and values of the stream mitigation area so as to ensure consistency with the foregoing federal guidelines and rules. Such measures may include the use of appropriately sized buffers between the stream mitigation area and any adjacent development, the use of fencing or walls to prevent unauthorized access, lighting in adjacent development designed to avoid light spillage into the stream mitigation area, landscape-based Best Management Practices (BMPs) for adjacent development prior to discharge into the stream mitigation area, and signage describing the sensitive nature of the wetland mitigation area.
    - Provide evidence of a suitable water budget to support restored and created streams.
    - Identify the species, quantity, and location of plants to be installed in the stream habitats.

- Identify the time of year for planting and method for supplemental watering during the establishment period.
- Identify the monitoring so as to ensure consistency with the foregoing federal guidelines and rules, which shall be not less than 5 years for stream restoration.
- Define success criteria that shall be required for restoration efforts to be deemed a success.
- Identify adaptive management procedures that may be employed as needed to ensure the success of the mitigation project and its consistency with the foregoing federal guidelines and rules. These include, but are not limited to, remedial measures to address exotic invasive species, insufficient hydrology to support the attainment of performance standards, and wildlife harm.
- Define management and maintenance activities, including weeding, supplemental irrigation, and site protection.
- Define responsibility for maintaining, monitoring, and ensuring the preservation of the mitigation site in perpetuity. The project proponent shall comply with all terms of the permits issued by these agencies, including mitigation requirements, and shall provide proof of compliance to the applicable State agency prior to issuance of a grading permit.

6.5 - Impact Analysis for Wildlife Movement Corridors and Nursey Sites

The Study Area contains numerous drainage segments, with one drainage supporting riparian habitat. These drainages likely maintain a hydrological downstream connection to Calabazas Creek. Within the greater region, Calabazas Creek is expected to function as a wildlife movement corridor and the drainages within the Study Area that function as tributaries to Calabazas Creek are expected to facilitate wildlife movement. Although the drainage present within the Study Area are not expected to support the movement of local sensitive aquatic species such as CRLF or western pond turtle, they are likely to support other aquatic species.

Other natural upland habitats within the Study Area (i.e., coast live oak woodland, coastal scrub) may function as pathways for terrestrial wildlife movement. While these natural upland habitats may facilitate terrestrial wildlife movement, the Study Area is surrounded by large swaths of undeveloped natural habitats to the west and south with rural residential development to the north and east. Moreover, the Study Area does not provide funneled connectivity between two or more large areas of open space on a local scale, but rather allows larger-scale movement through the Study Area and surrounding areas. As such, the upland habitats of the Study Area does not function as, and is not part of, a well-defined movement corridor since wildlife are able to traverse through the Study Area and surrounding areas on a large scale. However, local aquatic species are expected to utilize the on-site drainage as a movement corridor through the Study Area given its connection to Calabazas Creek.

The Study Area does not contain unique breeding or nesting colony opportunities as no significant breeding or nesting colonies were observed during the 2024 field survey. However, individual nesting

birds and roosting bats have the potential of being present on-site and within disturbance distance seasonally.

Project implementation would require grading and the potential fill of some of the drainage features within the Study Area and therefore could result in direct impacts to individual wildlife species using these drainages for dispersal. Additionally, project implementation would require the removal of trees which may result in direct loss of nesting bird and roosting bat habitat. Implementation of MM BIO-1 through MM BIO-7and adherence to the City's Tree Preservation guidelines would reduce impacts to wildlife movement corridors and nursery sites to a less than significant level through avoidance and minimization of impacts to wildlife species and habitat, and compensatory mitigation for impacts to jurisdictional features (i.e., on-site drainages) and associated riparian habitat.

6.6 - Conflict with Local Policies or Ordinances

Local policies or ordinances applicable to the proposed project include the City of Saratoga General Plan (General Plan) and Municipal Code as described in Section 2.3 above. The proposed project would meet the General Plan Goals OSC 11-13 through the implementation of MM BIO-1 through MM BIO-7, which would protect and preserve sensitive habitat and special-status species with the potential to occur within the Study Area. Additionally, with adherence to Saratoga Municipal Code Section 15-50 and the Tree Inventory, Assessment, and Protection Report provided by Monarch Consulting Arborists, the proposed project would not conflict with the City's Tree Preservation guidelines. Therefore, with adherence to the General Plan and the Municipal Code, the proposed project would not conflict with the City's local policies or ordinances.

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Appendix A:
Special-status Species Occurrence Evaluation

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Table 1: Special-status Plant Species Habitat Value Evaluation

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Acanthomintha duttonii San Mateo thorn-mint	FE	CE	1B.1	Chaparral, valley and foothill grassland. Uncommon serpentinite vertisol clays; in relatively open areas. Elevation: 50-185 m. Blooming period: April-June	**None:** The Study Area does not contain suitable grassland habitat or serpentine soils to support this species.
Allium peninsulare var. franciscanum Franciscan onion	—	—	1B.2	Cismontane woodland, valley, and foothill grassland. Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. Elevation: 5-320 m. Blooming period: May-June	**None:** The Study Area does not contain suitable cismontane, grassland habitat, or soils to support this species.
Amsinckia lunaris bent-flowered fiddleneck	—	—	1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. Elevation: 3-795 m. Blooming period: March-June	**None:** The Study Area does not contain suitable coastal bluff scrub, cismontane, or grassland habitat to support this species.
Anomobryum julaceum slender silver moss	—	—	4.2	Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Moss which grows on damp rocks and soil; acidic substrates. Usually seen on roadcuts. Elevation: 100-1000 m. Blooming period: NA	**None**: Lack of suitable habitat. Lack of north coast coniferous forest or montane coniferous forest to support this species.
Arctostaphylos andersonii Anderson's manzanita	—	—	1B.2	Coastal dunes, marshes and swamps, coastal scrub, chaparral, redwood and evergreen forest communities. Mesic sites in dunes or along streams or coastal salt marshes. Elevation: 0-155 m. Blooming period: November-May	**Low:** The Study Area does not contain suitable coastal dune or marsh habitat, but the site does contain scrub habitat suitable to support this species. A known population has been recorded 4.5 miles west of the site adjacent to State Route (SR) 9.
Arctostaphylos glutinosa Schreiber's Manzanita	—	—	1B.2	Western slopes of the Santa Cruz Mountains, the chaparral of the limestone and diatomaceous shale ridges on the coastline. Elevation: 0-71 m. Blooming period: March-April	**None:** The Study Area does not contain suitable limestone or diatomaceous shale ridges to support this species.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Arctostaphylos ohloneana Ohlone manzanita	—	—	1B.1	Occurs in maritime chaparral and oak and pine forest habitat on whitish soils of siliceous shale origin. Elevation: 440–530 m. Blooming period: February-March	**None**: The Study Area does not contain suitable maritime chaparral to support this species on whitish soil or siliceous shale.
Arctostaphylos regismontana Kings Mountain manzanita	—	—	1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest on granitic or sandstone outcrops. Elevation: 240-7005 m. Blooming period: January-April	**None**: The Study Area does not contain northern coast coniferous forest on granitic or sandstone outcrops to support this species.
Arctostaphylos silvicola Bonny Doon manzanita	—	—	1B.2	Perennial evergreen shrub found in closed-cone and lower montane coniferous forests and chaparral. Elevation: 120-600 m. Blooming period: January-March	**None**: No suitable habitat is present within the Study Area such as perennial evergreen or coniferous forest to support this species.
Astragalus tener var. tener alkali milk-vetch	—	—	1B.1	Annual herb found in valley and foothill grassland, vernal pools, and playas. Occurs in alkaline and adobe clay soils. Elevation: 1-60 m. Blooming period: March-June	**None**: No suitable habitat is present within the Study Area such as foothill grassland, vernal pools, playas, or suitable soils to support this species.
Atriplex depressa brittlescale	—	—	1B.2	Annual herb found in valley and foothill grassland, chenopod scrub, meadows and seeps, playas, and vernal pools. Occurs in alkaline and clay soils. Elevation: 1-320 m. Blooming period: April-October	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland, chenopod scrub, meadows and seeps, playas, vernal pools or suitable soils to support this species.
Atriplex minuscula lesser saltscale	—	—	1B.1	Annual herb found in valley and foothill grassland, playas, and chenopod scrub. Occurs in alkaline and clay soils. Elevation: 15-200 m. Blooming period: May-October	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland, playas, chenopod scrub, or suitable soils to support this species.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Calyptridium parryi var. hesseae Santa Cruz Mountains pussypaws	—	—	1B.1	Annual herb found in chaparral and cismontane woodland openings. Occasionally occurs in gravelly and sandy soils. Elevation: 305-1530 m. Blooming period: May-August	**None**: No suitable habitat is present within the Study Area such as chaparral openings with gravelly or sandy soils to support this species.
Centromadia parryi ssp. congdonii Congdon's tarplant	—	—	1B.1	Annual herb found in valley and foothill grassland. Occasionally occurs in alkaline soils. Elevation: 0-32 m. Blooming period: May-October	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland with alkaline soils to support this species.
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	—	—	1B.2	Annual herb found in coastal marshes and swamps. Elevation: 0-10 m. Blooming period: June-October	**None**: No suitable habitat is present within the Study Area such as coastal marshes, swamps, or suitable soils to support this species.
Chorizanthe pungens var. hartwegiana Ben Lomond spineflower	FE	—	1B.1	Annual herb found in lower montane coniferous forests. Occurs in maritime ponderosa pine sandhills. Elevation: 90-610 m. Blooming period: April-June	**None**: No suitable habitat is present within the Study Area such as maritime ponderosa pine sandhills to support this species.
Chorizanthe robusta var. robusta robust spineflower	FE	—	1B.1	Annual herb found in maritime chaparral, coastal dunes, coastal scrub, and cismontane woodland openings. Elevation: 3-300 m. Blooming period: April-September	**None**: No suitable habitat is present within the Study Area such as maritime chaparral or coastal dunes to support this species.
Cirsium fontinale var. campylon Mt. Hamilton thistle	—	—	1B.2	Perennial herb found in valley and foothill grassland, cismontane woodland, and chaparral. Occurs in seeps and serpentinite soils. Elevation: 100-890 m. Blooming period: April-October	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland or chaparral with seeps or serpentinite soils to support this species.
Cirsium fontinale var. campylon Mt. Hamilton thistle	—	—	1B.2	Perennial herb found in valley and foothill grassland, cismontane woodland, and chaparral. Occurs in seeps and serpentinite soils. Elevation: 100-890 m. Blooming period: April-October	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland or chaparral with seeps or serpentinite soils to support this species.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Cirsium praeteriens lost thistle	—	—	1A	Beaches and grassland dunes along the shorelines Elevation: 1-100 m Blooming period is June-July	**None**: The Study Area does not contain coastal dune habitat to support this species.
Clarkia concinna ssp. automixa Santa Clara red ribbons	—	—	4.3	Foothill woodland, chaparral, scrub, on slopes and near drainages. Elevation: 90-1500 m. Blooming period: April-July	**Low**: The Study Area does contain woodland habitat with drainages that may support this species. Additionally, this species' occurrences were observed directly south of the Study Area on the other side of SR-9 in Congress Springs Canyon, 0.4 mile from the site. Other occurrences of this species were found within 2 miles of the site.
Collinsia corymbosa round-headed collinsia	—	—	1B.2	Coastal dunes. Elevation: 0-30 m. Blooming period: April-June	**None**: The Study Area does not contain coastal dune habitat.
Collinsia multicolor San Francisco collinsia	—	—	1B.2	Annual herb found in coastal scrub and closed-cone coniferous forest. Occasionally occurs in serpentinite soils. Elevation: 30-275 m. Blooming period: March-May	**None**: No suitable habitat is present within the Study Area such as closed-cone coniferous forest, or suitable soils to support this species.
Dirca occidentalis western leatherwood	—	—	1B.2	Perennial deciduous shrub found in broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland. Occurs in mesic soils. Elevation: 25-425 m. Blooming period: January-March	**Low**: There are two recent occurrences of this species within 5 miles of the Study Area. The nearest occurrence is 2.3 miles northwest of the site. The Study Area contains deciduous shrubs and broadleaf woodland to support this species. Additionally, the drainages on-site are likely partially fed by a seep which indicates potentially mesic soils.
Dudleya abramsii ssp. setchellii Santa Clara Valley dudleya	FE	—	1B.1	Perennial herb found in valley and foothill grassland, cismontane woodland. Occurs in rocky and serpentinite soils. Elevation: 60-535 m. Blooming period: April-October	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland, or cismontane woodland with rocky or serpentinite soils to support this species.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Eriophyllum latilobum San Mateo woolly sunflower	—	—	1B.1	Foothill Woodland Elevation: 34"-3526" Blooming period: May-June	**None**: The Study Area does not contain some woodland to support this species but there are no recorded occurrences of this species within 5 miles of the Study Area.
Eryngium aristulatum var. hooveri Hoover's button-celery	—	—	1B.1	Annual/perennial herb found in vernal pools. Elevation: 3-45 m. Blooming period: July	**None**: No suitable habitat is present within the Study Area such as vernal pools to support this species.
Eryngium jepsonii Jepson's coyote-thistle	—	—	1B.2	Vernal pools, valley and foothill grassland. In clay substrate. Elevation: 3-305 m. Blooming period: May-June	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of vernal pools, or clay substrate on-site.
Extriplex joaquinana San Joaquin spearscale	—	—	1B.2	Annual herb found in valley and foothill grassland, chenopod scrub, meadows and seeps, playas. Occurs in alkaline soils. Elevation: 1-835 m. Blooming period: April-October	**None**: No suitable habitat is present within the Study Area such as chenopod scrub, meadows or seeps, playas, or suitable soils to support this species.
Fissidens pauperculus minute pocket moss	—	—	1B.2	North Coast coniferous forest in damp, coastal soil. Elevation: 10-1024 m Blooming period: NA	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of coniferous forest with coastal soil on-site.
Fritillaria liliacea fragrant fritillary	—	—	1B.2	Perennial bulbiferous herb found in coastal scrub, valley and foothill grassland, coastal prairie, and cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. Elevation: 3-410 m. Blooming period: February-April	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland, coastal prairie, cismontane woodland with serpentine soils to support this species.
Grimmia torenii Toren's grimmia	—	—	1B.3	Chaparral, cismontane woodland, and lower montane woodland. Prefers carbonate, openings, and rocky and volcanic areas. Elevation: 325-1160 m Blooming period: NA	**None**: Lack of rocky areas on-site with carbonate openings or volcanic areas.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Grimmia vaginulata vaginulate grimmia	—	—	1B.2	Preferred habitat within the Butano Formation. Similar sandstone outcrops in the Los Padres National Forest. Chaparral (openings)/rocky, boulder and rock walls, carbonate. Elevation: 685 m. Blooming period: NA	**None**: The Study Area does not contain suitable sandstone outcrop or rocky, boulder walls to support this species.
Hesperevax sparsiflora var. brevifolia short-leaved evax	—	—	1B.2	Perennial herb found in coastal bluff scrub, coastal dunes and coastal prairie. Elevation: 0-215 m. Blooming period: Mar-June.	**None**: No suitable habitat such as coastal bluff scrub is present within the site to support this species.
Hesperocyparis abramsiana var. abramsiana Santa Cruz cypress	FT	CE	1B.2	Closed-cone Pine Forest Blooming period: October Elevation: 1624"-2475"	**None**: The Study Area does not contain suitable closed-cone pine forest habitat to support this species.
Hesperocyparis abramsiana var. butanoensis Butano Ridge cypress	FE	CE	1B.2	Occurs in sandstone in chaparral, closed-cone coniferous forest, and lower montane coniferous forest. Elevation: 400–490 meters Blooming period: October	**None**: The Study Area does not contain suitable chaparral or closed-cone coniferous forest habitat to support this species.
Hesperolinon congestum Marin western flax	FT	CT	1B.1	Chaparral, valley and foothill grassland. In serpentine barrens and in serpentine grassland and chaparral. Elevation: 60-400 m. Blooming period: April-July	**None**: The Study Area does not contain habitat suitable for this species such as chaparral, or valley or foothill grassland with serpentine soil.
Hoita strobilina Loma Prieta hoita	—	—	1B.1	Perennial herb found in chaparral, cismontane woodland, riparian woodland. Occurs in serpentine and mesic soils. Elevation: 30-860 m. Blooming period: May-July	**Low**: There are 3 recent occurrences of this species within 5 miles of the Study Area. The nearest occurrence is located historic and located 0.8 mile east of the site. The site contains cismontane woodland and riparian woodland. However, there is no serpentine on-site to support this species.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Lasthenia conjugens Contra Costa goldfields	FE	—	1B.1	Annual herb found in valley and foothill grassland, cismontane woodland, alkaline playas, and vernal pools. Occurs in mesic soils. Elevation: 0-470 m. Blooming period: March-June	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland, coastal prairie, or alkaline playas with mesic soils to support this species.
Legenere limosa legenere	—	—	1B.1	Vernal pools and in beds of vernal pools. Elevation: 1-1005 m. Blooming period: April-June	**None**: The Study Area does not contain suitable vernal pools or vernal pool habitat to support this species.
Lessingia micradenia var. glabrata smooth lessingia	—	—	1B.2	Annual herb found in valley and foothill grassland, cismontane woodland, chaparral. Occurs along roadsides and in serpentinite soils. Elevation: 120-420 m. Blooming period: July-November	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland or chaparral with serpentinite soils to support this species.
Malacothamnus arcuatus arcuate bush-mallow	—	—	1B.2	Perennial deciduous shrub found in chaparral, coastal scrub, and cismontane woodland. Elevation: 15-355 m. Blooming period: April-September	**Low**: The site does contain suitable coastal scrub and woodland to support this species. Three occurrences were identified within 5 miles of the site. OC#18 observed one individual in 2015 within the Rancho San Antonio Open Space Preserve.
Monolopia gracilens woodland woollythreads	—	—	1B.2	Annual herb found in openings of broadleafed upland forest, chaparral, and North Coast coniferous forest; cismontane woodland; valley and foothill grassland. Occurs in serpentinite soils. Elevation: 100-1200 m. Blooming period: March-July	**None**: There are 4 recent occurrences of this species within 5 miles of the Study Area. The nearest occurrence is located 1.35 miles north of the site. The site contain l some grassland to support this species. However, the site does not contain serpentinite soils to support this species.
Navarretia prostrata prostrate vernal pool navarretia	—	—	1B.2	Annual herb found in valley and foothill grassland, coastal scrub, meadows and seeps, vernal pools. Occurs in alkaline and mesic soils. Elevation: 3-1210 m. Blooming period: April-June	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland, meadows, seeps vernal pools, or suitable soils to support this species.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Orthotrichum kellmanii Kellman's bristle moss	—	—	1B.2	Occurs on sandstone and carbonate material in chaparral and cismontane woodland. Elevation: 343–685 m. Blooming period: January–February	**None**: The Study Area does not contain suitable sandstone or carbonate material habitat to support this species.
Pedicularis dudleyi Dudley's lousewort	—	SR	1B.2	Perennial herb found in valley and foothill grassland, North Coast coniferous forest, cismontane woodland, maritime chaparral. Elevation: 60-900 m. Blooming period: April-June	**None**: No suitable habitat is present within the Study Area such as North Coast coniferous forest or maritime chaparral to support this species.
Penstemon rattanii var. kleei Santa Cruz Mountains beardtongue	—	—	1B.2	Perennial herb found in lower montane and North Coast coniferous forest, chaparral. Elevation: 400-1100 m. Blooming period: May-June	**None**: No suitable habitat is present within the Study Area such as North Coast coniferous forest to support this species.
Pentachaeta bellidiflora white-rayed pentachaeta	FE	SE	1B.1	Annual herb found in serpentinite valley and foothill grassland and cismontane woodland. Elevation: 35-620 m. Blooming period: March-May	**None**: No suitable habitat is present within the Study Area such as serpentinite valley or grassland to support this species.
Piperia candida white-flowered rein orchid	—	—	1B.2	Perennial herb found in broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest. Elevation: 30-1310 m. Blooming period: May-September	**None**: No suitable habitat is present within the Study Area such as upland forest, lower montane coniferous forest, or North Coast coniferous forest to support this species.
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	—	—	1B.2	Chaparral, coastal scrub, coastal prairie. Mesic sites. Elevation: 5-705 m. Blooming period: March-June	**None**: The Study Area does not contain habitat suitable for this species such as mesic sites.
Plagiobothrys glaber hairless popcornflower	—	—	1A	Meadows and seeps in alkaline soils and marshes and swamps. Elevation: 15-180 m. Bloom period: March-May	**None**: The Study Area does not contain habitat suitable for this species such as alkaline soils, marshes, or swamps.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Puccinellia simplex California alkali grass	—	—	1B.2	Annual herb found in valley and foothill grassland, chenopod scrub, meadows and seeps, vernal pools. Occurs in alkaline and mesic soils along lake margins and flats. Elevation: 2-930 m. Blooming period: March-May	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland, chenopod scrub, meadows, seeps, vernal pools, or suitable soils to support this species.
Sagittaria sanfordii Sanford's arrowhead	—	—	1B.2	Perennial rhizomatous herb found in shallow, freshwater marshes and swamps. Elevation: 0-650 m. Blooming period: May-October	**None**: No suitable habitat is present within the Study Area such as freshwater marshes or swamps to support this species.
Sanicula saxatilis rock sanicle	—	—	1B.2	Perennial herb found in valley and foothill grassland, broadleafed upland forest, chaparral. Occurs in rocky, scree, and talus soils. Elevation: 27-104 m. Blooming period: April-May	**None**: No suitable habitat is present within the Study Area such as rocky, scree, or talus soils to support this species.
Senecio aphanactis chaparral ragwort	—	—	2B.2	Annual herb found in chaparral, cismontane woodland, coastal scrub. Sometimes occurs in alkaline soils. Elevation: 15-800 m. Blooming period: January-April	**None**: No suitable habitat is present within the Study Area such as chaparral with alkaline soils to support this species.
Stebbinsoseris decipiens Santa Cruz microseris	—	—	1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Open areas in loose or disturbed soil, usually derived from sandstone, shale or serpentine, on seaward slopes. Elevation: 90-750 m. Blooming period: April-May	**None**: The Study Area does not contain habitat suitable for this species such as broadleaf upland forest or coastal prairie.
Streptanthus albidus ssp. albidus Metcalf Canyon jewelflower	FE	—	1B.1	Annual herb found in serpentinite valley and foothill grassland. Elevation: 45-800 m. Blooming period: April-July	**None**: No suitable habitat is present within the Study Area such as valley or foothill grassland, or suitable soils to support this species.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Stuckenia filiformis ssp. alpina northern slender pondweed	—	—	2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels. Elevation: 5-2325 m. Blooming period: May-July	**None**: The Study Area does not contain marsh or swamp habitat to support this species.
Suaeda californica California seablite	FE	—	1B.1	Perennial evergreen shrub found in coastal marshes and swamps. Elevation: 0-15 m. Blooming period: July-October	**None**: No suitable habitat is present within the Study Area such as marshes or swamps to support this species.
Trifolium amoenum two-fork clover	FE	—	1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentinite). Elevation: 5-415 m. Blooming period: April–June	**None**: The Study Area does not contain habitat suitable for this species such as coastal bluff scrub.
Trifolium buckwestiorum Santa Cruz clover	—	—	1B.1	Annual herb found in broadleafed upland forest, cismontane woodland and coastal prairie. Elevation: 105-610 m. Blooming period: Apr-October	**None**: No suitable habitat is present within the Study Area such as broadleafed upland forest or coastal prairie to support this species.
Trifolium hydrophilum saline clover	—	—	1B.2	Annual herb found in mesic, alkaline valley and foothill grassland; marshes and swamps; vernal pools. Elevation: 0–300 m. Blooming period: April-June	**None**: No suitable habitat is present within the Study Area such as marsh, swamp, or vernal pools to support this species.
Trifolium polyodon Pacific Grove clover	—	—	1B.1	Closed-cone Pine Forest, Coastal Prairie, wetland-riparian, meadows. Occurs usually in wetlands. Elevation: 0-303 m. Blooming period: April-June	**None**: The Study Area does not contain suitable closed-cone pine forest or coastal prairie habitat to support this species.
Usnea longissima Methuselah's beard lichen	—	—	4.2	Moist, cool, old-growth forest habitat. Elevation: 45– 1465 m Blooming period: NA	**None**: The Study Area does not contain suitable habitat or conditions to support this species such as moist, cool, old-growth forest.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Code Designations					

[1] Federal Status: 2024 Endangered Species Act (ESA) Listing	[2] State Status: 2024 California Endangered Species Act (CESA) Listing	[3] California Rare Plant Rank (CRPR): 2024 CRPR Listing
ESU = Evolutionary Significant Unit is a distinctive population. **FE** = Listed as endangered under the Endangered Species Act. **FT** = Listed as threatened under the Endangered Species Act. **FC** = Candidate for listing (threatened or endangered) under the Endangered Species Act. **FD** = Delisted in accordance with the Endangered Species Act. **FPD** = Federally Proposed to be Delisted. **MBTA** = Protected by the Migratory Bird Treaty Act **—** = Not federally listed	**SE** = Listed as endangered under the California Endangered Species Act. **ST** = Listed as threatened under CESA. **SSC** = Species of Special Concern as identified by the CDFW. **FP** = Listed as fully protected under the Fish and Game Code. **CFG** = FGC =protected by Fish and Game Code 3503.5 **CR** = Rare in California. **—** = Not State-listed	**Rank 1A** = Plants presumed extirpated 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 more information is needed **Rank 4** = Watch List: Plants of limited distribution **Blooming period:** Months in parentheses are uncommon.

Notes:

[4] **Habitat Description**: Habitat description adapted from CNDDB and CNPS online inventory or other specified source.

[5] **Potential to Occur and Rationale**: Location of recorded species occurrences determined by geospatial information from BIOS 6 or other specified source.

Sources:

California Department of Fish and Wildlife (CDFW). 2024. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed March 1, 2024.
California Native Plant Society (CNPS). 2024. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed March 1, 2024.
California Department of Fish and Wildlife (CDFW). 2024. Biogeographic Information and Observation System (BIOS 6). Website: https://map.dfg.ca.gov/bios/. Accessed March 1, 2024.

Table 2: Special-status Wildlife Species Habitat Value Evaluation

Scientific Name Common Name	Status		Habitat Description3	Habitat Value and Rationale
	ESA[1]	CESA/ FGC[2]		
Amphibians				
Ambystoma californiense California tiger salamander	FT	ST	Need underground refuges, especially ground squirrel burrows, and vernal pools, ponds or other standing water bodies for breeding.	**None**: No suitable habitat is present within the Study Area. No recorded occurrences are within 5 miles of the Study Area.
Aneides niger Santa Cruz black salamander	—	SSC	Mixed deciduous and coniferous woodlands, riparian areas, and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara counties. Adults found under rocks, talus, and damp woody debris.	**Low:** The site does contain suitable habitat to support this species in the form of grassland, aquatic habitat, and woodland. The nearest occurrence is 0.5 mile west of the project site with 11 historic occurrences within 5 miles of the site.
Dicamptodon ensatus California giant salamander	—	SSC	Temperate forests, rivers, freshwater lakes, and freshwater marshes in northern California.	**Low:** There are 5 recent occurrences of this species within 5 miles of the Study Area. The nearest recent occurrence is 0.41 mile south of the Study Area. The site does contain riparian habitat to support this species.
Rana boylii pop. 4 foothill yellow-legged frog-central coast DPS	FC	CE	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	**None:** The site does not contain streams or riffles with a rocky substrate to support this species. No recorded occurrences are within 5 miles of the Study Area.
Rana draytonii California red-legged frog	FT	SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development	**None**: There are four recent occurrences of this species within 5 miles of the Study Area. The nearest recent occurrence is 0.5 mile north of the site located in Calabazas Creek. However, the elements separating the occurrences from the Study Area, the predation present on-site and within Calabazas Creek, and the lack of observed species on-site lower the likelihood of presence.
Taricha rivularis red-bellied newt	—	SSC	Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles generally underground, adults active at	**None:** The Study Area does not contain habitat suitable for this species such as streams with moderate flow and clean, rocky substrate.

Scientific Name Common Name	Status ESA[1]	Status CESA/ FGC[2]	Habitat Description3	Habitat Value and Rationale
			surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	
Birds				
Athene cunicularia Burrowing owl	–	SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**None**: The Study Area does not contain habitat such as desert or scrublands to support this species. No occurrences within 5 miles of the site.
Accipiter cooperii Cooper's hawk	— MBTA	— FGC	Found in woodlands, chiefly of the open, interrupted, or marginal types. Nest sites are mainly in riparian growths of deciduous trees, such as in canyon bottoms on river plains; also, in live oaks.	**Low**: The site does contain riparian growths and rocky outcrops to support this species. Additionally, there is 1 recent occurrence within 5 miles of the site. The occurrence is 3.6 miles northeast of the site.
Agelaius tricolor tricolored blackbird	MBTA	FT SSC FGC	Occurs and nests in large freshwater marshes with dense stands of hydrophytic vegetation (cattails, bulrushes, etc.). Short-distance migrant.	**None:** The Study Area does not contain suitable habitat(s) that would support occurrence of this species. There is no record within 5 miles of the Study Area.
Aquila chrysaetos Golden eagle	— MBTA	FP	Typically frequents rolling foothills, mountain areas, sage-juniper flats and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**None:** The site does not contain suitable habitat to support this species. The site lacks cliff-walled canyons, sage-juniper flats, or desert habitat.
Asio otus long-eared owl	— MBTA	SSC FGC	Found in riparian bottomlands with tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land with mice for foraging and the presence of old nests of crows, hawks, or magpies for breeding.	**None**: The site does contain riparian bottomlands to support this species. However, no recorded occurrences are within 5 miles of the Study Area.
Brachyramphus marmoratus Marbled murrelet	FT	SE	Old-growth coniferous forest	**None**: No suitable nesting or foraging habitat exists on-site such as old-growth coniferous forest.

Scientific Name Common Name	Status ESA[1]	Status CESA/ FGC[2]	Habitat Description3	Habitat Value and Rationale
Buteo swainsoni Swainson's hawk	— MBTA	ST	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**None:** Suitable foraging habitat is present within the Study Area. However, the site does not contain riparian areas and there are no recent occurrences within 5 miles of the site.
Charadrius nivosus nivosus western snowy Plover	FT MBTA	SSC FGC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	**None:** The Study Area does not contain suitable habitat(s) that would support occurrence of this species such as sandy beaches, salt pond levees or shores.
Circus hudsonius Northern harrier	— MBTA	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas	**None**: The site lacks meadows, wetlands, or marsh habitat to support this species.
Coccyzus americanus occidentalis Western Yellow-Billed Cuckoo	FT MBTA	SE	Riparian forest, nests along the flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	**None:** Lack of riparian habitat precludes this species.
Coturnicops noveboracensis yellow rail	MBTA	SSC FGC	Shallow marshes, and wet meadows; in winter, drier fresh-water and brackish marshes, as well as dense, deep grass, and rice fields.	**None:** The Study Area does not contain suitable habitat(s) that would support occurrence of this species such as shallow marshes and wet meadows.
Elanus leucurus white-tailed kite	–	FP	Grasslands and open coastal scrub in coastal and valley lowlands; rarely found away from agricultural areas. Inhabits herbaceous, open stages of most habitats mostly in cismontane California.	**Low:** There is one occurrence of this species within 5 miles of the Study Area. There is habitat present to support this species such as neighboring open areas, valley lowlands, and cismontane woodland. The nearest occurrence was recorded 3.8 miles north of the Study Area.
Falco peregrinus anatum American peregrine falcon	FD MBTA	SD FP FGC	Occurs near bodies of water, including wetlands, lakes, and rivers, in open areas with cliffs, ledges, and canyons nearby for cover and nesting. They will also nest on banks, dunes, and mounds. Their nests are a scrape on a depression or ledge on an open site. They will nest on human-made	**None:** The Study Area does not contain suitable habitat that would support occurrence of this species such as cliffs, ledges, or canyons.

Scientific Name Common Name	Status		Habitat Description3	Habitat Value and Rationale
	ESA[1]	CESA/ FGC[2]		
			structures, and occasionally uses tree or snag cavities or old nests of other raptors.	
Geothlypis trichas sinuosa saltmarsh common yellowthroat	—	SSC	Resident of the San Francisco Bay region, in fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**None**: Lack of marsh habitat precludes this species.
Haliaeetus leucocephalus bald eagle	FD	SE FP	Breeding habitat is usually within 4 km of a water source in a tall tree or cliffs; roosting in large numbers in winter is common.	**None:** No occurrence of this species was recorded under 5 mi away from the site. The site does not contain breeding habitat or water sources within 4 km.
Laterallus jamaicensis coturniculus California black rail	— MBTA	ST FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**None:** Lack of marsh habitat precludes this species.
Melospiza melodia pusillula Alameda song sparrow	—	SSC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia.	**None:** The Study Area does not contain Salicornia marsh habitat.
purple martin *Progne subis*	— MBTA	SSC	Found in towns, farms, semi-open country near water with isolated colonies breeding around woodland edges, clearings in mountain forest, and lowland desert. Nests in cavities, mostly old woodpecker holes, in trees (or in giant cactus in southwest). Sometimes nests in holes in buildings or cliffs.	**None**: No suitable habitat is present within the Study Area such as semi-open country near water sources or lowland desert.
Rallus obsoletus obsoletus California Ridgway's rail	FE	FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs	**None**: The site does not contain suitable habitat for this species such as salt water or brackish marshes. No occurrence of this species was recorded within 5 miles of the Study Area.
Rynchops niger black skimmer	—	SSC	Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs.	**None.** The Study Area does not contain beaches or waterways capable of supporting this species.

Scientific Name Common Name	Status ESA[1]	Status CESA/ FGC[2]	Habitat Description3	Habitat Value and Rationale
Sternula antillarum browni California least tern	FE	FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	**None:** The Study Area does not contain coastal habit including sand beaches, or alkali flats to support this species.
Fish				
Hesperoleucus parvipinnis Gualala roach	–	SSC	Gualala River and tributaries: a cool, forested coastal stream. Moderate gradient, medium river, low gradient, pools	**None**: No occurrence of this species was located within 5 miles of the Study Area. The site does not contain any riparian habitat to support this species.
Acipenser medirostris pop. 1 green sturgeon-southern DPS	FT	—	Spawning occurs primarily in cool (11-15 C) sections of mainstem rivers in deep pools (8-9 meters) with substrate containing small to medium sized sand, gravel, cobble, or boulder.	**None**: No occurrence of this species was located within 5 miles of the Study Area. The site does not contain any riparian habitat to support this species.
Oncorhynchus kisutch pop. 4 coho salmon-central California coast ESU	FE	SE	Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	**None**: No occurrence of this species was located within 5 miles of the Study Area. The site does not contain any riparian habitat to support this species.
Oncorhynchus mykiss irideus pop. 8 Steelhead-central California coast DPS	FT	—	Populations in the Sacramento and San Joaquin rivers and their tributaries.	**None:** The Study Area does not contain habitat suitable for this species. No freshwater systems run through the Study Area.
Spirinchus thaleichthys Longfin smelt	FC	ST	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	**None:** Lack of aquatic habitat precludes this species.
Hesperoleucus venustus navarroensis northern coastal roach	—	SSC	coastal watersheds, largely west of the coastal mountain range in California, specifically Navarro River.	**None**: No occurrence of this species was located within 5 miles of the Study Area. The site does not contain any riparian habitat to support this species.
Hysterocarpus traskii pomo Russian River tule perch	—	SSC	Confined to the Russian River and its tributaries. Inhabits mud- to gravel-bottomed pools and low-elevation rivers and lakes. Usually occurs near emergent aquatic plants or overhanging banks. Rarely enters brackish water. Viviparous, female carries the developing young.	**None**: No suitable habitat is present within the Study Area. No occurrence of this species was located within 5 miles of the Study Area. The site does not contain any riparian habitat to support this species.

Scientific Name Common Name	Status ESA[1]	Status CESA/ FGC[2]	Habitat Description3	Habitat Value and Rationale
Invertebrates				
Bombus crotchii Crotch bumble bee	—	SC	Occurs in grassland and scrubland habitats. Nests in abandoned rodent burrows.	**None.** The Study Area does not contain scrubland habitat to support this species. No occurrence of this species was located within 5 miles of the Study Area.
Bombus occidentalis western bumble bee	–	SC	Formerly found in large parts of California but has been reduced in abundance and is now mostly restricted to high meadows or coastal environments. Species requires floral resources, and undisturbed nest and overwintering sites	**None:** No historical records of this species were found within 5 miles of the Study Area. The Study Area is highly disturbed and does not provide habitat for this species in the form of high meadows or coastal environment.
Euphydryas editha bayensis Bay checkerspot butterfly	FT	—	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* & *O. purpurscens* are the secondary host plants.	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of native grasslands, serpentine soil, or prime host plants on-site.
Lepidurus packardi vernal pool tadpole shrimp	FE	—	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**None:** The Study Area does not contain the required aquatic features, including vernal pools to support this species.
Trimerotropis infantilis Zayante band-winged grasshopper	FE	—	Found in only in a small area of the Santa Cruz Mountains in California known as the Zayante sand hills.	**None**: Lack of suitable habitat such as Zayante sand hills.
Mammals				
Antrozous pallidus Pallid bat	–	SSC	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures and include trees and buildings. Species is very sensitive to disturbance of roosting sites.	**Low**: The Study Area does contain woodland, grasslands, and a vacant structure that could support this species. However, no historical records of this species were found within 5 miles of the Study Area.
Corynorhinus townsendii Townsend's big-eared bat	–	SSC	Throughout California in a wide variety of habitats. Most common in areas associated with mixed conifer forest, desert scrub, or pine forest habitat. Roosts in caves, mines, and buildings. Extremely sensitive to human disturbance.	**Low**: The Study Area does contain one vacant structure and trees that may be used as potential roosting habitat. There are two occurrences of this species within 5 miles of the Study Area. The nearest occurrence is 2.8 miles northwest of the Study Area.

Scientific Name Common Name	Status		Habitat Description3	Habitat Value and Rationale
	ESA[1]	CESA/ FGC[2]		
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	—	SSC	Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves and other material. May be limited by availability of nest-building materials.	**High**: The Study Area does contain suitable habitat to support this species and contains moderate to dense understory canopy and chaparral ecosystem. Additionally, a Woodrat Survey Letter Report for the Study Area determined that there is a potential of this species being present on-site.
Reithrodontomys raviventris salt-marsh harvest mouse	—	FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow; builds loosely organized nests. Requires higher areas for flood escape.	**None:** The Study Area does not contain suitable habitat to support this species such as saline emergent wetlands. The Study Area does not contain pickleweed or marsh habitat.
Sorex vagrans halicoetes salt-marsh wandering shrew	—	SSC	Salt marsh wandering shrews inhabit a narrow band of Salicornia marsh which is inundated daily by tidal waters. Salt marsh wandering shrews are most frequent in salt marshes that provide dense cover, an abundant source of invertebrates for food, suitable nesting and resting sites, and continuous ground moisture.	**None**: Lack of suitable habitat to support this species such as salt marshes and tidal waters.
Taxidea taxus American badger	—	SSC	Found in drier open stages of most shrub, forest, and herbaceous habitats with friable soils, specifically grassland environments. Natal dens occur on slopes.	**None**: There is 1 recent occurrence of this species within 5 miles of the Study Area. The site does contain herbaceous habitat with some forested and grassland habitat. However, the occurrence is 4.9 miles from the site and separated from the project by mountains and roadways. Therefore, the probability of dispersal is unlikely.
Reptiles				
Anniella pulchra Northern California legless lizard	—	SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	**None**: Lack of suitable habitat with high soil moisture to support this species.
Emys marmorata western pond turtle	—	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	**None.** There are 4 recent occurrences of this species within 5 miles of the Study Area. The nearest occurrence is 1.4 miles south of the site. Although the site does

Scientific Name Common Name	Status ESA[1]	Status CESA/ FGC[2]	Habitat Description3	Habitat Value and Rationale
				contain riparian habitat to support this species, the site is outside of disturbance distance for this species.
Thamnophis sirtalis tetrataenia San Francisco gartersnake	FE	FP	Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	**None**: There are 3 recent occurrences of this species within 5 miles of the Study Area. However, the site does not contain freshwater marshes, ponds, or slow-moving streams to support this species.

Code Designations

[1] Federal Status: 2024 Endangered Species Act (ESA) Listing		[2] State Status: 2024 California Endangered Species Act (CESA) Listing	
ESU	= Evolutionary Significant Unit is a distinctive population.	**SE**	= Listed as endangered under CESA.
FE	= Listed as endangered under the Endangered Species Act.	**ST**	= Listed as threatened under CESA.
FT	= Listed as threatened under the Endangered Species Act.	**SSC**	= Species of Special Concern as identified by the CDFW.
FC	= Candidate for listing (threatened or endangered) under the Endangered Species Act.	**FP**	= Listed as fully protected under the Fish and Game Code.
FD	= Delisted in accordance with the Endangered Species Act.	**CFG**	= FGC = protected by Fish and Game Code 3503.5
FPD	= Federally Proposed to be Delisted.	**CR**	= Rare in California.
MBTA	= protected by the Migratory Bird Treaty Act	**—**	= Not State-listed
—	= Not federally listed		

Notes:
[3] **Habitat Description**: Habitat description adapted from CNDDB or other specified source.
[4] **Potential to Occur and Rationale**: Location of recorded species occurrences determined by geospatial information from BIOS 6 or other specified source.

Sources:
California Department of Fish and Wildlife (CDFW). 2023. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed March 3, 2024.
California Department of Fish and Wildlife (CDFW). 2023. Biogeographic Information and Observation System (BIOS 6). Website: https://map.dfg.ca.gov/bios/. Accessed March 3, 2024.

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Appendix B:
Database Searches

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Los Gatos (3712128) OR San Jose West (3712138) OR Mountain View (3712241) OR Palo Alto (3712242) OR Castle Rock Ridge (3712221) OR Big Basin (3712222) OR Mindego Hill (3712232) OR Cupertino (3712231) OR Milpitas (3712148))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acanthomintha duttonii	PDLAM01040	Endangered	Endangered	G1	S1	1B.1
San Mateo thorn-mint						
Accipiter cooperii	ABNKC12040	None	None	G5	S4	WL
Cooper's hawk						
Acipenser medirostris pop. 1	AFCAA01031	Threatened	None	G2T1	S1	
green sturgeon - southern DPS						
Agelaius tricolor	ABPBXB0020	None	Threatened	G1G2	S2	SSC
tricolored blackbird						
Allium peninsulare var. franciscanum	PMLIL021R1	None	None	G4G5T2	S2	1B.2
Franciscan onion						
Ambystoma californiense pop. 1	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
California tiger salamander - central California DPS						
Amsinckia lunaris	PDBOR01070	None	None	G3	S3	1B.2
bent-flowered fiddleneck						
Aneides niger	AAAAD01070	None	None	G3	S3	SSC
Santa Cruz black salamander						
Anniella pulchra	ARACC01020	None	None	G3	S2S3	SSC
Northern California legless lizard						
Anomobryum julaceum	NBMUS80010	None	None	G5?	S2	4.2
slender silver moss						
Antrozous pallidus	AMACC10010	None	None	G4	S3	SSC
pallid bat						
Aquila chrysaetos	ABNKC22010	None	None	G5	S3	FP
golden eagle						
Arctostaphylos andersonii	PDERI04030	None	None	G2	S2	1B.2
Anderson's manzanita						
Arctostaphylos glutinosa	PDERI040G0	None	None	G1	S1	1B.2
Schreiber's manzanita						
Arctostaphylos ohloneana	PDERI042Y0	None	None	G1	S1	1B.1
Ohlone manzanita						
Arctostaphylos regismontana	PDERI041C0	None	None	G2	S2	1B.2
Kings Mountain manzanita						
Arctostaphylos silvicola	PDERI041F0	None	None	G1	S1	1B.2
Bonny Doon manzanita						
Ardea herodias	ABNGA04010	None	None	G5	S4	
great blue heron						

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Asio otus long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S2	SSC
Atriplex depressa brittlescale	PDCHE042L0	None	None	G2	S2	1B.2
Atriplex minuscula lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Brachyramphus marmoratus marbled murrelet	ABNNN06010	Threatened	Endangered	G3	S2	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
Calasellus californicus An isopod	ICMAL34010	None	None	G2	S3	
Calyptridium parryi var. hesseae Santa Cruz Mountains pussypaws	PDPOR09052	None	None	G3G4T2	S2	1B.1
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S3	SSC
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
Chorizanthe pungens var. hartwegiana Ben Lomond spineflower	PDPGN040M1	Endangered	None	G2T1	S1	1B.1
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Circus hudsonius northern harrier	ABNKC11011	None	None	G5	S3	SSC
Cirsium fontinale var. campylon Mt. Hamilton thistle	PDAST2E163	None	None	G2T2	S2	1B.2
Cirsium fontinale var. fontinale fountain thistle	PDAST2E161	Endangered	Endangered	G2T1	S1	1B.1
Cirsium praeteriens lost thistle	PDAST2E2B0	None	None	GX	SX	1A

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Clarkia concinna ssp. automixa Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Collinsia corymbosa round-headed collinsia	PDSCR0H060	None	None	G1	S1	1B.2
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S2	SSC
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G2G3	S2S3	SSC
Dipodomys venustus venustus Santa Cruz kangaroo rat	AMAFD03042	None	None	G4T1	S1	
Dirca occidentalis western leatherwood	PDTHY03010	None	None	G2	S2	1B.2
Dudleya abramsii ssp. setchellii Santa Clara Valley dudleya	PDCRA040Z0	Endangered	None	G4T2	S2	1B.1
Egretta thula snowy egret	ABNGA06030	None	None	G5	S4	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Eriophyllum latilobum San Mateo woolly sunflower	PDAST3N060	Endangered	Endangered	G1	S1	1B.1
Eryngium aristulatum var. hooveri Hoover's button-celery	PDAPI0Z043	None	None	G5T1	S1	1B.1
Eryngium jepsonii Jepson's coyote-thistle	PDAPI0Z130	None	None	G2	S2	1B.2
Euphydryas editha bayensis Bay checkerspot butterfly	IILEPK4055	Threatened	None	G5T1	S3	
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
Fissidens pauperculus minute pocket moss	NBMUS2W0U0	None	None	G3?	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S2	
Grimmia torenii Toren's grimmia	NBMUS32330	None	None	G2	S2	1B.3
Grimmia vaginulata vaginulate grimmia	NBMUS32340	None	None	G3	S1	1B.1
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Hesperevax sparsiflora var. brevifolia short-leaved evax	PDASTE5011	None	None	G4T3	S3	1B.2
Hesperocyparis abramsiana var. abramsiana Santa Cruz cypress	PGCUP04081	Threatened	Endangered	G1T1	S1	1B.2
Hesperocyparis abramsiana var. butanoensis Butano Ridge cypress	PGCUP04082	Threatened	Endangered	G1T1	S1	1B.2
Hesperolinon congestum Marin western flax	PDLIN01060	Threatened	Threatened	G1	S1	1B.1
Hoita strobilina Loma Prieta hoita	PDFAB5Z030	None	None	G2?	S2?	1B.1
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G3	S3	
Lessingia micradenia var. glabrata smooth lessingia	PDAST5S062	None	None	G2T2	S2	1B.2
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Malacothamnus arcuatus arcuate bush-mallow	PDMAL0Q0E0	None	None	G2Q	S2	1B.2
Malacothamnus hallii Hall's bush-mallow	PDMAL0Q0F0	None	None	G2	S2	1B.2
Melospiza melodia pusillula Alameda song sparrow	ABPBXA301S	None	None	G5T2T3	S2	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
N. Central Coast Calif. Roach/Stickleback/Steelhead Stream N. Central Coast Calif. Roach/Stickleback/Steelhead Stream	CARA2633CA	None	None	GNR	SNR	
Navarretia prostrata prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.2
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC
North Central Coast Drainage Sacramento Sucker/Roach River North Central Coast Drainage Sacramento Sucker/Roach River	CARA2623CA	None	None	GNR	SNR	
North Central Coast Steelhead/Sculpin Stream North Central Coast Steelhead/Sculpin Stream	CARA2637CA	None	None	GNR	SNR	
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
Northern Interior Cypress Forest Northern Interior Cypress Forest	CTT83220CA	None	None	G2	S2.2	
Oncorhynchus kisutch pop. 4 coho salmon - central California coast ESU	AFCHA02034	Endangered	Endangered	G5T2Q	S2	
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T3Q	S3	
Orthotrichum kellmanii Kellman's bristle moss	NBMUS56190	None	None	G1	S1	1B.2
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Pedicularis dudleyi Dudley's lousewort	PDSCR1K180	None	Rare	G2	S2	1B.2
Penstemon rattanii var. kleei Santa Cruz Mountains beardtongue	PDSCR1L5B1	None	None	G4T2	S2	1B.2
Pentachaeta bellidiflora white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
Piperia candida white-flowered rein orchid	PMORC1X050	None	None	G3?	S3	1B.2
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
Plagiobothrys glaber hairless popcornflower	PDBOR0V0B0	None	None	GX	SX	1A
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Puccinellia simplex California alkali grass	PMPOA53110	None	None	G2	S2	1B.2
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S2	FP
Rana boylii pop. 4 foothill yellow-legged frog - central coast DPS	AAABH01054	Threatened	Endangered	G3T2	S2	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S3	FP
Rynchops niger black skimmer	ABNNM14010	None	None	G5	S2	SSC
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Sanicula saxatilis rock sanicle	PDAPI1Z0H0	None	Rare	G2	S2	1B.2
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Serpentine Bunchgrass Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
Sorex vagrans halicoetes salt-marsh wandering shrew	AMABA01071	None	None	G5T1	S1	SSC
Speyeria adiaste adiaste unsilvered fritillary	IILEPJ6143	None	None	G1G2T1	S1S2	
Spirinchus thaleichthys longfin smelt	AFCHB03010	Proposed Endangered	Threatened	G5	S1	
Stebbinsoseris decipiens Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
Sternula antillarum browni California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
Stuckenia filiformis ssp. alpina northern slender pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
Suaeda californica California seablite	PDCHE0P020	Endangered	None	G1	S1	1B.1
Taricha rivularis red-bellied newt	AAAAF02020	None	None	G2	S2	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis sirtalis tetrataenia San Francisco gartersnake	ARADB3613B	Endangered	Endangered	G5T2Q	S2	FP

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Trifolium amoenum two-fork clover	PDFAB40040	Endangered	None	G1	S1	1B.1
Trifolium buckwestiorum Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Trifolium polyodon Pacific Grove clover	PDFAB402H0	None	Rare	G1	S1	1B.1
Trimerotropis infantilis Zayante band-winged grasshopper	IIORT36030	Endangered	None	G1	S1	
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
Usnea longissima Methuselah's beard lichen	NLLEC5P420	None	None	G4	S4	4.2
Valley Oak Woodland Valley Oak Woodland	CTT71130CA	None	None	G3	S2.1	

Record Count: 130

CALIFORNIA NATIVE PLANT SOCIETY

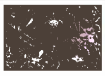
CNPS Rare Plant Inventory

Search Results

17 matches found. Click on scientific name for details

Search Criteria: Fed List is one of [**FE:FT:FC:FD**] **or** State List is one of [**CE:CT:CR:CC:CD**] , 9-Quad include [**3712128:3712138:3712241:3712242:3712221:3712222:3712232:3712231:3712148**]

▲ 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
Acanthomintha duttonii	San Mateo thorn-mint	Lamiaceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 © 2011 Aaron Schusteff
Astragalus agnicidus	Humboldt County milk-vetch	Fabaceae	perennial herb	(Mar)Apr-Sep	None	CE	G2	S2	1B.1	Yes	1974-01-01	 ©2004 Dean Wm. Taylor
Chorizanthe pungens var. *hartwegiana*	Ben Lomond spineflower	Polygonaceae	annual herb	Apr-Jul	FE	None	G2T1	S1	1B.1	Yes	1994-01-01	No Photo Available
Chorizanthe robusta var. *robusta*	robust spineflower	Polygonaceae	annual herb	Apr-Sep	FE	None	G2T1	S1	1B.1	Yes	1980-01-01	No Photo Available
Cirsium fontinale var. *fontinale*	fountain thistle	Asteraceae	perennial herb	(Apr)May-Oct	FE	CE	G2T1	S1	1B.1	Yes	1974-01-01	No Photo Available
Dudleya abramsii ssp. *setchellii*	Santa Clara Valley dudleya	Crassulaceae	perennial herb	Apr-Oct	FE	None	G4T2	S2	1B.1	Yes	1988-01-01	No Photo Available
Eriophyllum latilobum	San Mateo woolly sunflower	Asteraceae	perennial herb	May-Jun	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Hesperocyparis abramsiana var. *abramsiana*	Santa Cruz cypress	Cupressaceae	perennial evergreen tree		FT	CE	G1T1	S1	1B.2	Yes	1974-01-01	 © 2012 Neal Kramer

Hesperocyparis abramsiana var. *butanoensis*	Butano Ridge cypress	Cupressaceae	perennial evergreen tree	Oct	FT	CE	G1T1	S1	1B.2	Yes	2011-12-19	 © 2011 Joey Malone
Hesperolinon congestum	Marin western flax	Linaceae	annual herb	Apr-Jul	FT	CT	G1	S1	1B.1	Yes	1974-01-01	 © 2009 Neal Kramer
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	FE	None	G1	S1	1B.1	Yes	1974-01-01	 © 2013 Neal Kramer
Pedicularis dudleyi	Dudley's lousewort	Orobanchaceae	perennial herb	Apr-Jun	None	CR	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
Pentachaeta bellidiflora	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Sanicula saxatilis	rock sanicle	Apiaceae	perennial herb	Apr-May	None	CR	G2	S2	1B.2	Yes	1974-01-01	 © 1998 John Game
Suaeda californica	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	FE	None	G1	S1	1B.1	Yes	1988-01-01	No Photo Available
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	FE	None	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Trifolium polyodon	Pacific Grove clover	Fabaceae	annual herb	Apr-Jun(Jul)	None	CR	G1	S1	1B.1	Yes	1974-01-01	No Photo Available

Showing 1 to 17 of 17 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 1 March 2024].

IPaC resource list

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

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

NOT FOR CONSULTATION

Location

Santa Clara County, California



Local office

Sacramento Fish And Wildlife Office

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

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

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Endangered species

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

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

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

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

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

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

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

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

NOT FOR CONSULTATION

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

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

Birds

NAME	STATUS
California Condor Gymnogyps californianus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern Sternula antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
California Ridgway''s Rail Rallus obsoletus obsoletus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240	Endangered
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened

Reptiles

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

Amphibians

NAME	STATUS

NOT FOR CONSULTATION

California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened
Foothill Yellow-legged Frog Rana boylii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5133	Threatened

Insects

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

Critical habitats

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

There are no critical habitats at this location.

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

Bald & Golden Eagles

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

NOT FOR CONSULTATION

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

Additional information can be found using the following links:

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

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

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

NOT FOR CONSULTATION

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

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

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

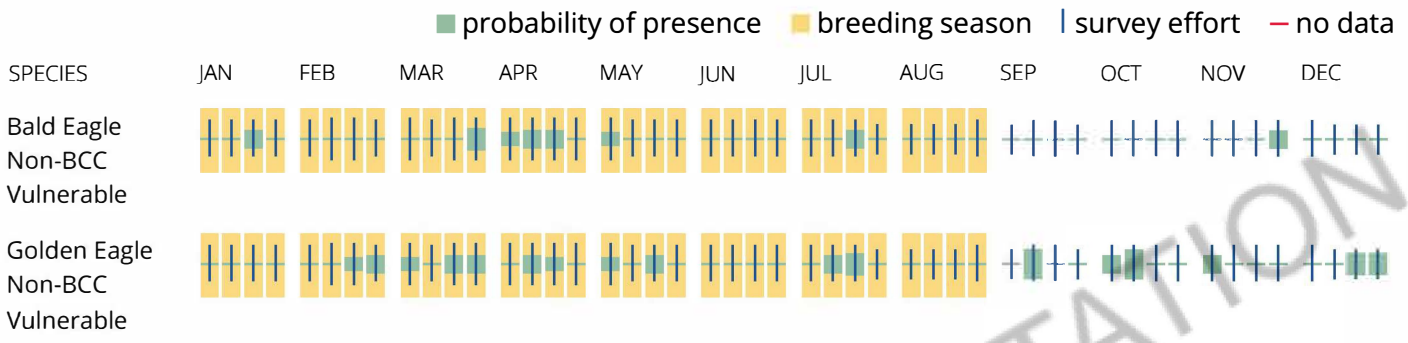
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

NOT FOR CONSULTATION

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

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

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



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

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

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

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

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

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

What if I have eagles on my list?

NOT FOR CONSULTATION

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

Migratory birds

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

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

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

Additional information can be found using the following links:

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

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

NOT FOR CONSULTATION

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

NAME	BREEDING SEASON
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
California Thrasher *Toxostoma redivivum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31

NOT FOR CONSULTATION

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

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Marbled Godwit Limosa fedoa — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

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Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

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

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

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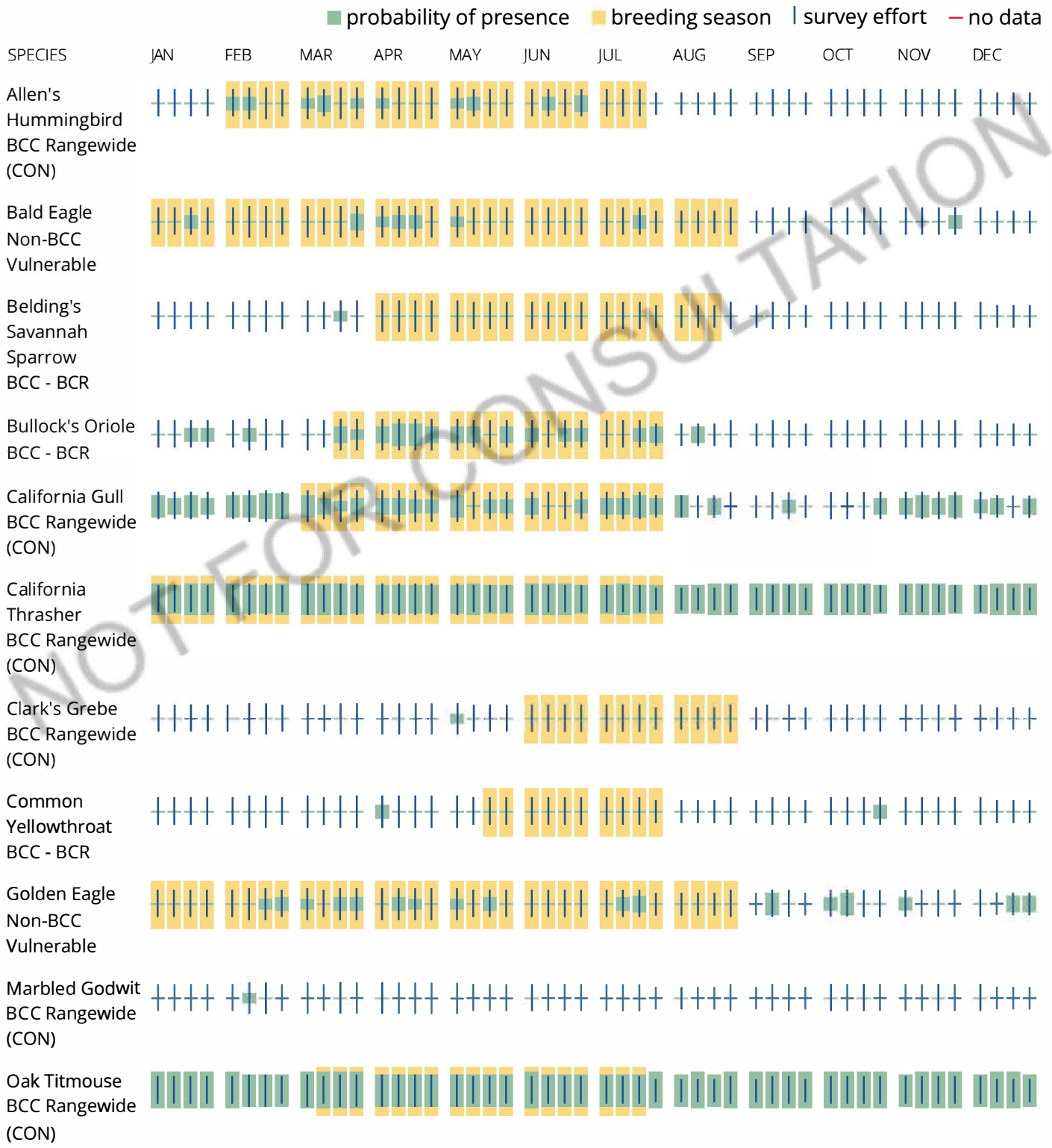
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

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

Survey Timeframe

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



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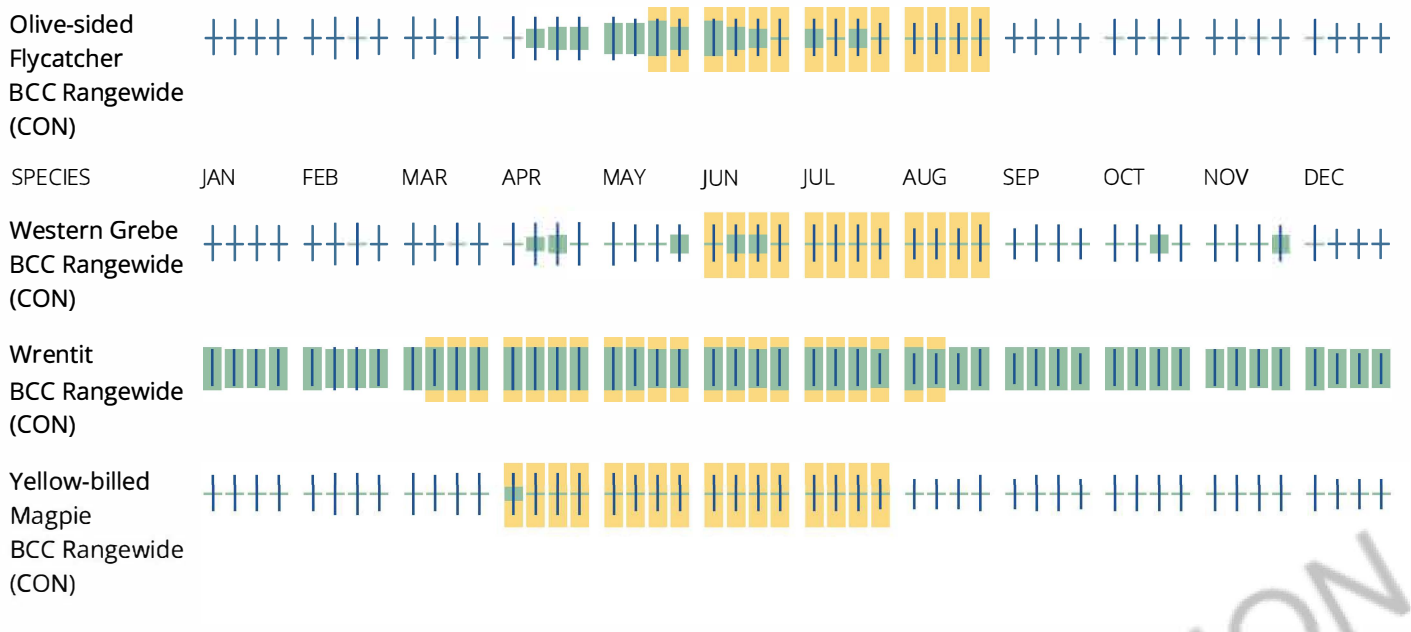

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

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

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

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

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

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

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Proper Interpretation and Use of Your Migratory Bird Report

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

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

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Wetlands in the National Wetlands Inventory (NWI)

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

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

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

This location overlaps the following wetlands:

RIVERINE

R4SBC

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

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

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Data limitations

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

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

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

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and

nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

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

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Appendix C:
Site Photographs

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Photograph 1: Non-native annual grassland located in the center of the project site, facing west



Photograph 2: Ephemeral Tributary located on the northeastern portion of the site, facing northwest



Photograph 3: Coast Live Oak Woodland



Photograph 4: Intermittent Tributary in center of project site, facing north



Photograph 5: Ephemeral Tributary near northern boundary of site, facing west



Photograph 6: Intermittent Tributary in southern portion of site, facing west



Photograph 7: Project site taken from Vintage Lane

Appendix D:
Aquatic Resource Delineation

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Aquatic Resources Delineation Report
Saratoga Mountain Winery Residential Project
City of Saratoga, Santa Clara County, California

Prepared for:
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258 Union Avenue
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925.357.2562

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Robert Carroll, Senior Biologist

Date: November 17, 2023

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SECTION 1: INTRODUCTION

At the request of Chateau Masson, LLC, FirstCarbon Solutions (FCS) completed a delineation of aquatic resources and proposes a jurisdictional determination for the 72.45-acre Saratoga Mountain Winery Residential Project Study Area (Study Area) as depicted on Exhibits 1 to 3.

The purpose of this report is to support jurisdictional determinations by the United States Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB); to support California Department of Fish and Wildlife (CDFW) evaluation pursuant to Fish and Game Code Sections 1602, *et seq*. (Streambed Alteration Program); and to support the project applicant's planning and permitting efforts for a proposed development project.

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SECTION 2: ENVIRONMENTAL SETTING

2.1 - Location

The 72.45-acre Study Area is located within the western periphery of the City of Saratoga, east of the Mountain Winery and north of California State Route 9 (CA-9). The Study Area is centered around 37.260926° latitude and -122.056802° longitude. The location of the Study Area within the southern San Francisco Bay Region is shown on Exhibit 1, and the Study Area boundaries on a recent high-resolution aerial image are shown on Exhibit 2.

2.2 - Vegetation and Land Cover Types

Vegetation of different parts of the Study Area are dominated by a mix of typical upland and riparian vegetation for this location. Dominant vegetation/landcover types include well developed mixed oak woodlands which co-occur with riparian woodland habitat within certain drainages in the Study Area. Species within these areas generally contain coast live oak (*Quercus agrifolia)*, valley oak (*Quercus lobata)*, California bay (*Umbellularia californica)*, arroyo willow (*Salix lasiolepis*), and others. Understory vegetation includes French broom (*Genista monspessulana*), poison oak (*Toxicodendron diversilobum*), common snowberry (*Symphoricarpos albus*), and others.

Coastal scrub present throughout the Study Area includes coyote brush (*Baccharis pilularis*), chamise (*Adenostoma fasciculatum*), California sagebrush (*Artemisia californica),* and others. Ruderal vegetation/landcover areas are present and associated with on-site access roads and contain weedy species such as yellow star thistle (*Centaurea solstitialis*), telegraph weed (*Heterotheca grandiflora*), stinkwort (*Dittrichia graveolens*), field bindweed (*Convolvulus arvensis)*, and others. Non-native annual grassland is also present and concentrated within the northern portion of the Study Area. Species observed within this vegetation/land cover type included wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus),* Italian ryegrass (*Festuca perennis),* and others. Vegetation associated with drainage channels is described for each feature in more detail, below.

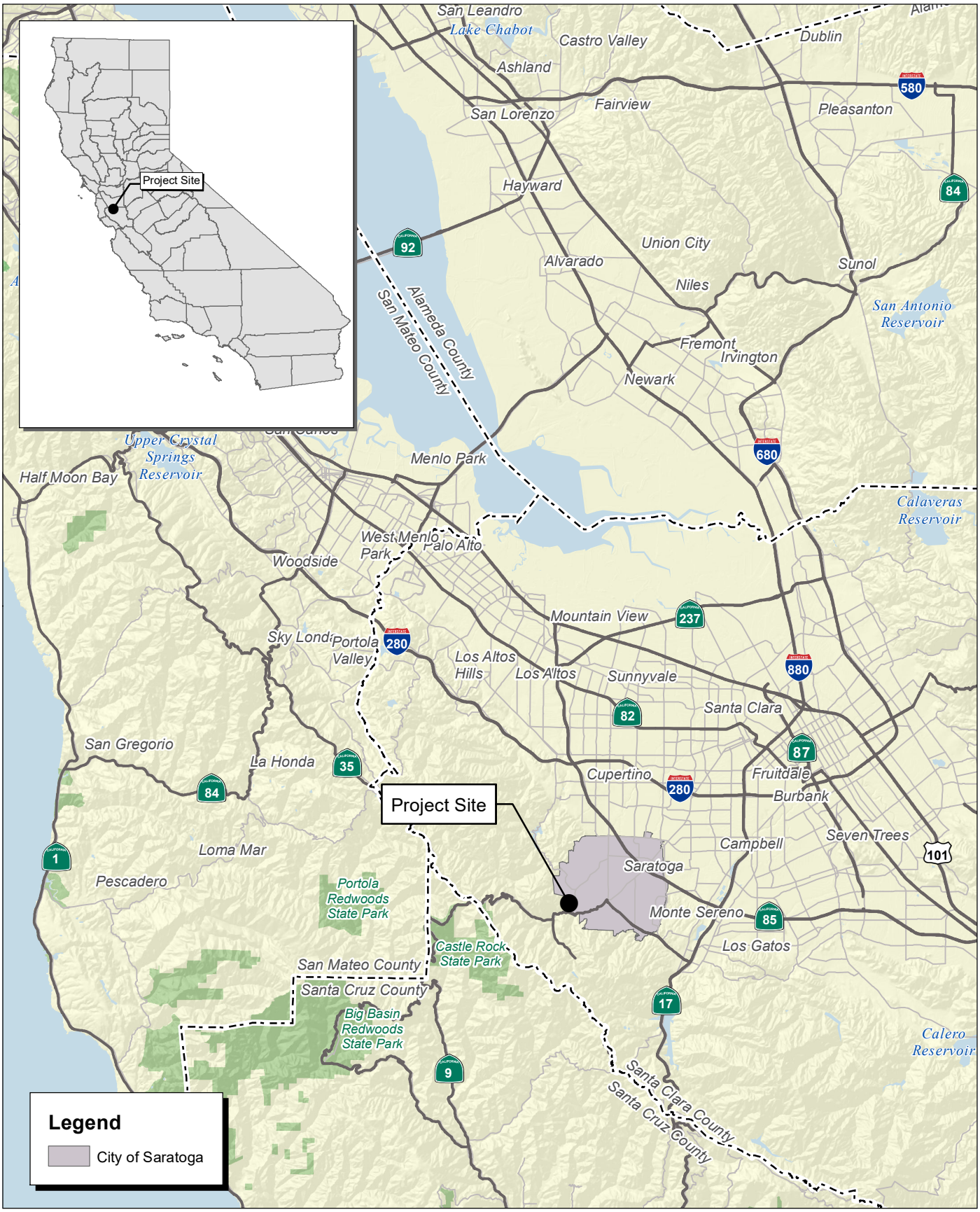
2.3 - Topography and Hydrogeomorphology

Elevation within the Study Area ranges from 1,118 feet above mean sea level (MSL) on the western boundary to 625 feet MSL along the northern boundary. Elevations along the eastern and southern boundary are approximately 865 and 750 feet MSL, respectively. A ridge occurs on the western boundary of the Study Area which extends in a southeasterly direction toward the center of the Study Area. Elevations are significantly reduced from the ridge to the north, south and east. Subsequently, existing topography indicates the Study Area generally drains direct precipitation to the north and south of the on-site ridge through a network of ephemeral and intermittent drainage channels. The majority of the Study Area conveys collected runoff to the north, ultimately emptying into Calabazas Creek, a tributary of the San Francisco Bay. Additionally, isolated ephemeral drainages due to the construction of Mountain Winery Road in the southern area of the Study Area likely drain direct precipitation and convey runoff to the southeast and southwest.

2.4 - Soils

The soils of 75 percent of the Study Area are mapped by Natural Resources Conservation Service (NRCS) as Mouser-Katykat-Sanikara complex. Approximately 18 percent of the Study Area were mapped as Literr-Urbanland-Merbeth complex. Smaller portions of the Study Area consist of Katykat-Sanikara complex and Sanikara-Rock Outcrop complex. None of the soil types mapped or observed are classified as hydric soils.[1]

[1] United States Department of Agriculture (USDA), Natural Resources Conservation Service. 2023. Web Soil Survey 3.3.2. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed October 2023.



Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

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Exhibit 1
Regional Location Map

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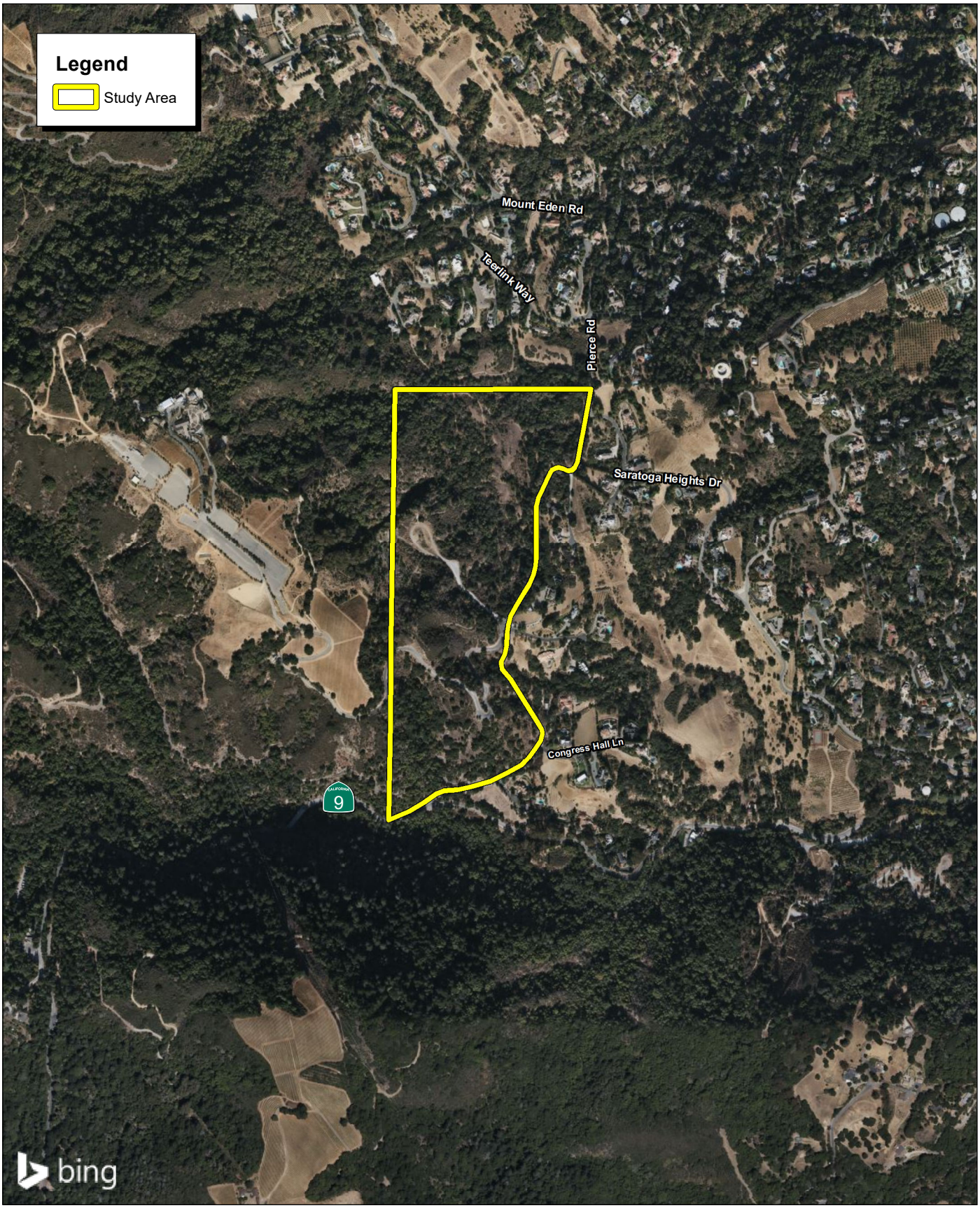

Source: Bing Aerial Imagery.

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1,000 500 0 1,000
Feet

Exhibit 2
Local Vicinity Map

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SECTION 3: REGULATORY SETTING

3.1 - Federal

3.1.1 - Clean Water Act

The USACE administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the United States.

As of the preparation of this report on November 9, 2023, the final "Revised Definition of Waters of the United States" rule was published in the Federal Register on January 18, 2023, and took effect on March 20, 2023. However, the final rule is not currently operative in certain states and for certain parties due to litigation. Moreover, the United States Environmental Protection Agency (EPA) and USACE (hereafter known as the agencies) are in receipt of the U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*. In light of this decision, the agencies will interpret the phrase "waters of the United States" consistent with the Supreme Court's decision in *Sackett*.[2] As a result of ongoing litigation, the agencies are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice.

Therefore, since the agencies are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice, our analysis follows 40 Code of Federal Regulations 230.3(s) in effect under the pre-2015 regulatory regime, which defines "waters of the United States" as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
2. All interstate waters including interstate wetlands.
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
   a) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
   b) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
   c) Which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under this definition.

[2] United States Environmental Protection Agency (EPA). 2023. Website: https://www.epa.gov/wotus/current-implementation-waters-united-states. Accessed July 12, 2023.

5. Tributaries of waters identified in paragraphs(s) (1) through (4) of this section.
6. The territorial sea.
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs(s) (1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 Code of Federal Regulations 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA and/or USACE.

"Wetland" refers to areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and seasonal wetlands. Wetlands are considered jurisdictional if they fall under one of the categories of waters of the United States defined above. The USACE jurisdiction typically extends up to the ordinary high water mark (OHWM).

In general, a USACE permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on the impacted acreage, the purpose of the proposed fill, and other factors. Additionally, Section 401 of the CWA states that "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, applicants seeking to fill waters of the United States are required to obtain a CWA Section 401 Water Quality Certification from the RWQCB.

3.2 - State

3.2.1 - California Porter-Cologne Water Quality Control Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State" (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)). In 2019, the California State Water Resources Control Board (State Water Board) published the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) to guide wetland waters of the State determinations and the permitting process.[3]

[3] California State Water Resources Control Board (State Water Board). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. October 20, 2023.

3.2.2 - California Fish and Game Code

Sections 1600-1617 of the California Fish and Game Code require that a Notification of Lake or Streambed Alteration be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions in the Notification and, if necessary, prepares a Lake or Streambed Agreement that includes measures to protect fish and wildlife resources.

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SECTION 4: METHODS

FCS Senior Biologist Robert Carroll, assisted by FCS GIS Analyst Sebastian Macias, surveyed the Study Area on October 26, 2023, as described in the following section.

4.1 - Wetlands

The presence/absence of wetlands was determined based on the requirements of the *Corps of Engineers Wetlands Delineation Manual* and revised procedures in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*.[4,5] These procedures include standards that define wetlands, including specific saturation and/or ponding regimes, and evaluate hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland indicator status of vegetation follows the 2018 National Wetland Plant List for the Arid West Region.[6]

4.2 - Drainage Channels and Tributaries

Drainage channels were characterized through presence/absence of bed, bank, and OHWM; hydrology; and hydrological connectivity. The OHWM is determined and characterized using definitions and guidance of *A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States*.[7] A discussion of what constitutes a potentially jurisdictional "tributary" pursuant to *Sackett v. EPA* and which features, such as ditches or ephemeral drainages, may be excluded from the definition of waters of the United States is provided in Section 5, below.

Culverted drainage sections were examined for evidence of concentrated flow, including presence of water stains, mineral or sediment deposits, and biofilm.

4.2.1 - Definitions of Hydrological Regimes

An ephemeral stream is defined as a watercourse that carries only surface runoff and flows during and immediately after periods of precipitation. An intermittent stream is defined as a watercourse that is temporally intermittent or seasonal and that flows during the wet season, continues to flow after the period of precipitation, and ceases surface flow during at least part of the dry season. Intermittent streams are typically shown as a dashed blue line on United States Geological Survey (USGS) quadrangle maps.

A perennial stream is a watercourse that flows throughout the year. Riparian vegetation is defined as vegetation associated with a watercourse and relying on the higher level of water provided by the watercourse. Riparian vegetation can include trees, shrubs, and/or herbaceous plants.

[4] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1.
[5] United States Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28.
[6] The National Wetland Plant List–Arid West Version 1. 2018. United States Army Corps of Engineers.
[7] Lichvar, R.W. and S.M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.

4.3 - Additional Background Information Review

Additional relevant information about the Study Area was reviewed, including current and historical aerial imagery, the Watershed Assessment, Tracking and Environmental Results System (WATERS), the EPA's National Hydrography Data Set Plus (NHDPlus Version 2), the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI),[8] and the NRCS Web Soil Survey and Climate Analysis for Wetlands (WETS).[9,10,11] Specifically, the standard NRCS WETS analysis includes a weighted comparison of historical rainfall to observed rainfall for the 3-month period before a wetland delineation field survey in order to evaluate if abnormal rainfall patterns may have contributed to observed presence or absence of wetland indicators.[12] The WETS analysis is based on data from the nearest WETS-listed station with a robust data set (e.g., over 30 years of precipitation data) located in San Jose, Santa Clara County. Additionally, the United States Drought Monitor data for Santa Clara County was incorporated into the analysis.

[8] United States Fish and Wildlife Service (USFWS). National Wetland Inventory. Website: https://www.fws.gov/wetlands/data/mapper.html. Accessed October 2023.

[9] United States Environmental Protection Agency (EPA). Watershed Assessment, Tracking and Environmental Results System (WATERS) Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed October 2023.

[10] United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2020. Web Soil Survey 3.3.2. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed October 2023.

[11] United States Department of Agriculture (USDA), Natural Resources Conservation Service. 1997. Part 650 Engineering Field Handbook - Chapter 19: Hydrology Test for Wetland Determination.

[12] Ibid.

SECTION 5: RESULTS

The following section describes the results of both the background research and analysis and the results of the protocol-level delineation field work. Representative photographs of current site conditions are included in Appendix A.

5.1 - Climatic Conditions

Results of the WETS analysis (Appendix B) indicate that conditions during the delineation survey were normal for the 3-month period prior the delineation (i.e., July through September 2023). The last rain event prior to the delineation occurred in June 2023, with an accumulated precipitation volume of 0.02 inch for the month, based on data of the nearest publicly available weather station located in San Jose. Santa Clara County has not experienced drought conditions throughout the 2023, and the United States Drought Monitor ranked the conditions in Santa Clara County as None.

5.2 - Aquatic Resources

Aquatic resources are shown in Exhibit 3. Dimensions of all aquatic resources occurring within the Study Area boundary are presented in Table 1 and described in more detail below.

Table 1: Summary of Aquatic Resources within the Study Area

Type	Segment ID	Length (linear feet)	Width (feet)	Area (square feet)	Area (acre)
Open Drainage Channel	1-1	878	2.5	2195	0.05
Open Drainage Channel	1-2	91	1	91	0.002
Open Drainage Channel	1-3	77	1.5	116	0.003
Open Drainage Channel	2-1	1366	3.5	4781	0.11
Open Drainage Channel	2-2	922	2	1844	0.042
Open Drainage Channel	2-3	339	1.25	271	0.006
Open Drainage Channel	2-5	113	1.25	141	0.003
Open Drainage Channel	2-7	579	2	1158	0.026
Open Drainage Channel	2-8	175	1	175	0.004
Open Drainage Channel	3-1	241	2.5	603	0.014
Sum Open Drainage Channels	**–**	**4,781**	**n/a**	**11,375**	**0.26**
Culvert Pipe	2-4	41	1	41	0.001
Culvert Pipe	2-6	98	1.5	147	0.003
Culvert Pipe	2-9	120	1	120	0.003
Culvert Pipe	4-1	148	1.5	222	0.005
Culvert Pipe	4-2	111	1.5	167	0.004

Type	Segment ID	Length (linear feet)	Width (feet)	Area (square feet)	Area (acre)
Sum Culvert Pipes	**–**	**518**	**n/a**	**697**	**0.016**
Sum All Potentially Jurisdictional Waters	**–**	**5,299**	**n/a**	**12,072**	**0.276**

5.2.1 - Open Drainage Channels

The following is a description and discussion of all observed open drainage channel segments. Dimensions of each segment are listed in Table 1, and locations are shown on Exhibit 3. A definition of ephemeral and intermittent flow regimes is provided in Section 4.2.1.

Ephemeral Drainage Segment 1-1

Ephemeral Drainage Segment 1-1 is a drainage segment mainly fed by two culverts, one on each side of Pierce Road. This segment drains the northeastern portion of the Study Area to the north/northwest. The channel is characterized by the presence of deeply incised bed and banks. The OHWM is characterized by scour and sediment deposits. At the time of the survey, no water or soil moisture were present. No signs of recent or seasonal surface flows were present. The presence of a predominantly undisturbed layer of oak and bay leaves indicated that this segment carries only surface runoff and flows during and immediately after periods of precipitation and, therefore, can be classified as ephemeral. This drainage segment is located under a predominately closed canopy of mixed oak woodland, with dominate species consisting of coast live oak, California bay, French brome, and others. No hydrophytic plants were observed in the drainage. Segment 1-1 provides ephemeral flows into Intermittent Drainage Segment 2-1, north of the Study Area boundary.

Ephemeral Drainage Segments 1-2 and 1-3

Ephemeral Drainage Segment 1-2 and 1-3 appear to be erosional gullies that have developed over time into natural headwater drainages collecting runoff from the terrace upslope. The drainages are characterized by the presence of a small bed and banks. The OHWM is characterized by scour and sediment deposits. At the time of the survey, no flowing water or soil moisture was present. These segments are located under the same closed canopy of mixed oak woodland described in Drainage Segment 1-1. No hydrophytic plants were observed in either drainage. Both Segments 1-2 and 1-3 convey ephemeral flows to Segment 1-1.

Intermittent Drainage Segment 2-1

Intermittent Drainage Segment 2-1 is part of a natural second order stream that conveys flows from the headwater sections upslope to the west. The drainage contains deeply incised bed and banks with OHWM characterized by scour and sediment deposits. At the time of the survey no flowing water was present, but small areas of stagnant water were observed in various reaches, indicating an intermittent hydrological regime. This drainage segment is located under an intermittently closed and open canopy of mixed oak woodland, with dominant species consisting of coast live oak, arroyo willow, coyote brush, pampas grass, and others. This drainage runs through the center of the project site, where it generally drains to the north, likely connecting to Calabazas Creek outside the northern

Study Area boundary. It should be noted that the toe of the ridge described in Section 2.3 was inaccessible due to site topography and vegetation. The continuation of the drainage segment at the toe of the ridge was mapped using topographic maps, breaks in vegetation, and the USFWS NWI.

Intermittent Drainage Segment 2-2

Intermittent Drainage Segment 2-2 is a naturally occurring intermittent headwater drainage. The drainage is characterized by the presence of deeply incised bed and banks. The OHWM is characterized by scour and sediment deposits. At the time of the survey, flowing water was observed and moist soils were present, indicating an intermittent hydrological regime. This drainage segment is located under a closed canopy of mixed oak woodland, with dominant species consisting of coast live oak, California bay, arroyo willow, and others. This segment likely drains the northern section of the westerly adjacent Mountain Winery property and conveys flows in a south/southeasterly direction. Segment 2-2 conveys intermittent flows into Segment 2-1. Much of the western reach of this drainage was inaccessible to due site topography and vegetation. The continuation of this drainage segment at inaccessible reaches was mapped using topographic maps, breaks in vegetation, and the USFWS NWI.

Ephemeral Drainage Segments 2-3 and 2-5

Ephemeral Drainage Segment 2-3 and 2-5 appear to be reaches of a constructed drainage ditch that has developed into a semi-vegetated headwater drainage, which parallels an on-site access road. These drainages are characterized by the presence of deeply incised bed and banks with the OHWM characterized by scouring. At the time of the survey, no standing or flowing water was observed, indicating an ephemeral hydrological regime. These segments are separated by an underground 24-inch culvert (Exhibit 3; Segment 2-4). These segments are located under a mostly open canopy; dominant vegetation included coyote brush, pampas grass, chamise, and arroyo willow. These segments likely channel ephemeral flows from the adjacent hillside to the southwest and convey water to the southeast into Segment 2-7.

Ephemeral Drainage Segment 2-7

Ephemeral Drainage Segment 2-7 is a continuation of the constructed drainage ditch that has developed into a headwater drainage (Segments 2-3 and 2-5). This segment is fed by a 24-inch culvert (Exhibit 3; Segment 2-6) that passes under the on-site access road that conveys ephemeral flows to the northeast where it meets Segment 2-1. This segment is located under a closed canopy of mixed oak woodland. The continuation of this drainage segment from the terminus of Culvert Segment 2-6 was inaccessible due to extremely steep slopes. As such, the reach in this segment was mapped using topographic maps, breaks in vegetation, and the USFWS NWI.

Ephemeral Drainage Segment 2-8

Ephemeral Drainage Segment 2-8 appears to an erosional gully that has developed over time into a natural headwater drainage collecting runoff from the western hillside. This segment is located under a semi-closed canopy of predominantly mixed oak woodland with marginal coastal scrub habitat features. Dominate woody vegetation included coast live oak and toyon. Understory vegetation observed within this segment included sticky monkey flower (*Mimulus aurantiacus*),

chamise, coyote brush, poison oak, and others. This segment also runs parallel to the on-site access road referenced in Segment 2-3 and 2-5 above. The drainage is characterized by the presence of a narrow bed and banks. The OHWM is characterized by scour and sediment deposits. At the time of the survey, no flowing water or soil moisture was present, indicating an ephemeral hydrological regime. This segment conveys flows under the on-site access road and into the adjacent culvert (Segment 2-9).

Ephemeral Drainage Segment 3-1

Ephemeral Drainage Segment 3-1 is a naturally occurring ephemeral headwater drainage which drains the hillside to the west. The drainage is characterized by moderately incised bed and banks and the OHWM was generally characterized by scour. At the time of the survey, no flowing water was observed and no soil moisture was observed, indicating an ephemeral hydrological regime. This segment is located under a semi-closed canopy of predominantly coast live oak trees. Understory vegetation was sparse, and where present, dominated by a mix of non-native upland grasses and forbs. This segment appears to terminate where it meets Pierce Road at the eastern boundary of the Study Area.

5.2.2 - Culverts

Culverts 2-4 and 2-6

Culvert 2-4 is a 24-inch corrugated pipe that hydrologically connects Segments 2-3 and 2-5 under a secondary access road (Exhibit 3). Culvert 2-6 is also a 24-inch corrugated pipe that hydrologically connects to Segment 2-7 under the on-site access road (Exhibit 3).

Culvert 2-9

Culvert 2-9 is a 24-inch corrugated pipe that conveys flows from the southern portion of the on-site access road and Segment 2-8 downslope to the north (Exhibit 3).

Culverts 4-1 and 4-2

Both Culverts 4-1 and 4-2 are fed by drop inlets on the northern side of the Mountain Winery Road. These culverts drain the adjacent northern hillside, where they convey water under the Mountain Winery Road down a steep valley in a southerly direction (Exhibit 3). Culverts 4-1 and 4-2 are both 24-inch corrugated pipes which daylight on the southern side of the Mountain Winery Road.

5.3 - United States Fish and Wildlife Service National Wetland Inventory

The USFWS NWI, did not depict any potential wetlands within the Study Area.[13] However, per the NWI, determinations are only made based on high altitude imagery, and according to the NWI Data Limitations information, “a margin of error is inherent in the use of imagery; thus, detailed on the ground inspection of any particular site may result in revision of the wetland boundaries or

[13] United States Fish and Wildlife Service (USFWS). National Wetland Inventory (NWI). Website: https://www.fws.gov/wetlands/data/mapper.html. Accessed October 2023.

classification established through image analysis." Additionally, the USFWS clarifies that NWI mapping is not adequate to be used to establish regulatory boundaries or jurisdiction.

The lack of NWI-mapped wetlands does not necessarily indicate the Study Area is devoid of actual existing jurisdictional wetlands, if confirmed on the ground through protocol-level delineation field work. Therefore, FCS established one wetland sample point within an area that showed evidence of a hydrological indicator due to the presence of surface soil cracks (Appendix C; SP-1). The results demonstrate that the area does not meet the USACE or RWQCB definitions of a wetland. Specifically, the area lacks the required combination of sufficient hydrophytic vegetation and/or hydric soil indicators. The absence of wetland indicators was not caused by abnormally dry conditions because the delineation was conducted following a period of normal aggregate rainfall, as demonstrated by the WETS analysis (see Section 5.1 and Appendix B).

Additionally, linear wetland/water features shown by NWI within the Study Area are somewhat inconsistent with conditions on the ground as established through the protocol-level wetland/water delineation presented here and are therefore used as another resource considered to determine location and extent of potential jurisdictional aquatic resources.

5.4 - Proposed Jurisdictional Determination

5.4.1 - Proposed United States Army Corps of Engineers Jurisdiction

As of the preparation of this report on November 9, 2023, the final "Revised Definition of Waters of the United States" rule was published in the Federal Register on January 18, 2023, and became effective March 20, 2023. On May 25, 2023, the U.S. Supreme Court issued a decision in the case of *Sackett v. Environmental Protection Agency* (*Sackett*). This decision determined that areas of federal jurisdiction under Section 404 of the CWA must have a "continuous surface connection" with navigable waters of the United States or relatively permanent tributaries to navigable waters. This report proposes preliminary conclusions regarding the jurisdictional status of non-wetland waters, based on the *Sackett* decision.

On August 29, 2023, the USACE and the EPA issued a release noting that a revised definition of waters of the United States would be issued in conformance with *Sackett*. On September 8, 2023, the USACE and EPA issued the final rule updating the definition of waters of the United States in conformance with *Sackett* in the Federal Register. The final rule is not currently operative in certain states and for certain parties due to litigation. California is excluded from this litigation and is currently operating under the guidance issued in the Federal Register on September 8, 2023.

Per the guidance outlined above, two drainage segments (Segments 2-1 and 2-2) contain a continuous surface connection with a navigable water of the United States given their intermittent hydrological status. As noted in Section 2.3 and 5.2.1 above, these intermittent segments are likely to connect to Calabazas Creek outside the northern Study Area boundary. Calabazas Creek is a tributary of the San Francisco Bay, a traditionally navigable water. For these reasons, Segments 2-1 and 2-2 would likely be classified as waters of the United States under the jurisdiction of the USACE. Note that a final jurisdictional determination can only be made by the USACE following verification.

5.4.2 - Features Proposed to be Exempt from United States Army Corps of Engineers Jurisdiction

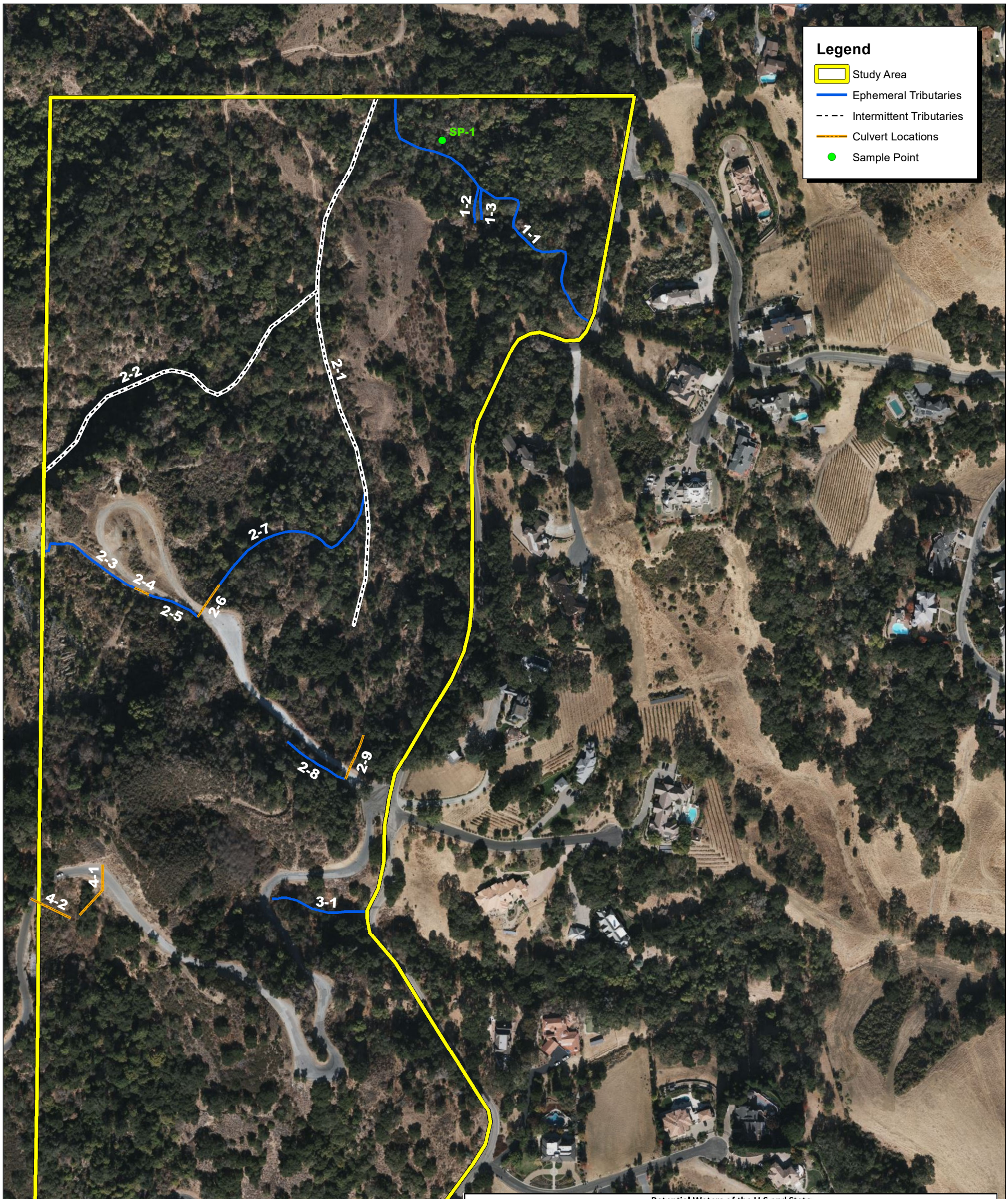
The remaining drainage segments delineated within the Study Area would likely be exempt from USACE jurisdiction as these drainages are ephemeral streambeds that would not be subject to USACE jurisdiction pursuant to the *Sackett* decision levied by the U.S. Supreme Court. Note that a final jurisdictional determination can only be made by the USACE following verification.

5.4.3 - Proposed Regional Water Quality Control Board Jurisdiction

Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)) and are under the jurisdiction of the RWQCB. Therefore, FCS proposes that all drainages within the Study Area boundary as shown on Exhibit 3 would fall under the jurisdiction of the RWQCB. This proposed jurisdictional determination is preliminary until confirmed by the RWQCB.

5.4.4 - California Department of Fish and Wildlife Streambed Alteration Program Considerations

Because of the presence of drainage beds and banks, it is expected that the CDFW will assert regulatory oversight over potential impacts on all drainage channels and associated vegetation pursuant to California Fish and Game Code Section 1602, *et seq*. (Streambed Alteration Program). It is expected that the CDFW will classify all vegetation in the drainages and trees with canopies overhanging the drainages as "riparian vegetation" and that the CDFW will require a Notification of Streambed Alteration and subsequent Streambed Alteration Agreement for any work that could adversely affect the drainages on-site and associated riparian vegetation.



Potential Waters of the U.S and State					
Type	Segment ID	Length (Linear Feet)	Average Width (feet)	Area (square feet)	Area (acre)
Open Drainage Channel	1-1	878	2.5	2,195	0.05
Open Drainage Channel	1-2	91	1	91	0.002
Open Drainage Channel	1-3	77	1.5	116	0.003
Open Drainage Channel	2-1	1,366	3.5	4,781	0.11
Open Drainage Channel	2-2	922	2	1,844	0.042
Open Drainage Channel	2-3	339	1.25	271	0.006
Open Drainage Channel	2-5	113	1.25	141	0.003
Open Drainage Channel	2-7	579	2	1,158	0.026
Open Drainage Channel	2-8	175	1	175	0.004
Open Drainage Channel	3-1	241	2.5	603	0.014
Sum Open Drainage Channels		**4,781**	**N/A**	**11,375**	**0.26**
Culvert Pipe	2-4	41	1	41	0.001
Culvert Pipe	2-6	98	1.5	147	0.003
Culvert Pipe	2-9	120	1	120	0.003
Culvert Pipe	4-1	148	1.5	222	0.005
Culvert Pipe	4-2	111	1.5	167	0.004
Sum Culvert Pipes		**518**	**N/A**	**697**	**0.016**
Sum All Pot. Jurisdictional Waters		**5,299**	**N/A**	**12,072**	**0.276**

Source: Bing Aerial Imagery.

FIRSTCARBON SOLUTIONS™

250 125 0 250 Feet

Exhibit 3
Aquatic Resources Delineation Map Overview

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SECTION 6: CONCLUSION

The Study Area includes 10 open and vegetated ephemeral and intermittent channels (with five segments consisting of culvert pipes), for a total length of 5,299 feet, covering an aggregate area of approximately 12,072 square feet (0.276 acre), as shown on Exhibit 3. No additional aquatic features, including wetlands, were observed within the Study Area.

The Study Area includes include 3,011 feet, 5,447 square feet (0.124 acre) of potential waters of the United States and 5,299 feet, 12,072 square feet (0.276 acre) of potential waters of the State.

Additionally, any impacts on drainage channels and associated riparian vegetation are expected to be regulated by the CDFW pursuant to the Streambed Alteration Program, California Fish and Game Code Section 1602, *et seq*.

The findings and conclusions presented in this report, including the location and extent of waters subject to regulatory jurisdiction, represent the professional opinion of FCS. These findings and conclusions should be considered preliminary until confirmed by the USACE, RWQCB, and CDFW.

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Appendix A:
Site Photographs

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Photograph 1: Looking South upstream on Northern boundary. Drainage channel segment 1-1.



Photograph 2: Looking Southwest upstream on Northern boundary. An erosional gully turns into drainage with a bed and bank. Drainage channel segment 1-2.



Photograph 3: Looking Northeast downstream on Northern boundary. An erosional gully turns into drainage with a bed and bank. Drainage channel segment 1-2.



Photograph 4: Looking Southwest upstream on Northern boundary. An erosional gully turns into drainage with a bed and bank. Drainage channel segment 1-3.



Photograph 5: Looking Northeast downstream on Northern boundary.
An erosional gully turns into drainage with a bed and bank.
Drainage channel segment 1-3.



Photograph 6: Looking South upstream on Northern boundary.
Drainage channel segment 2-1.



Photograph 7: Looking North downstream on Northern boundary.
Drainage channel segment 2-1.



Photograph 8: Looking West of stream on Northern boundary.
Drainage channel segment 2-1.



Photograph 9: Looking Southwest upstream on Northern boundary. Drainage channel segment 2-2.



Photograph 10: Looking Northeast downstream on Northern boundary. Steep grade. Drainage channel segment 2-2.



Photograph 11: Looking East downstream within Western middle boundary. Upper portion of drainage. Open drainage channel 2-3.



Photograph 12: Looking West upstream within Western middle boundary. Upper portion of drainage. Open drainage channel 2-3.



Photograph 13: Looking East downstream within Northern middle boundary. Culvert segment 2-4.



Photograph 14: Looking West upstream within northern middle boundary. Culvert segment 2-4.



Photograph 15: Looking North downstream within Northern middle boundary. Culvert out impassible. Culvert segment 2-6.



Photograph 16: Looking South upstream within Northern middle boundary. Culvert out impassible. Culvert segment 2-6.



Photograph 17: Looking Southeast downstream within Southern middle boundary. Open drainage channel 2-8.



Photograph 18: Looking Northwest upstream within Southern middle boundary. Open drainage channel 2-8.



Photograph 19: Looking Northeast downstream on middle portion of boundary. Culvert out 30ft. Area not passable. Culvert segment 2-9.



Photograph 20: Looking Northwest upstream within Southern middle boundary. Culvert segment 2-9.



Photograph 21: Looking Southeast downstream within Southern middle boundary. Culvert segment 2-9.



Photograph 22: Looking West upstream within Southern portion of boundary. Drainage becomes narrower and fans out towards Pierce Road. Open drainage channel 3-1.



Photograph 23: Looking East downstream within Southern portion of boundary. Open drainage channel 3-1.



Photograph 24: Looking East down Mountain Winery Rd within Southern portion of boundary. Culvert segment 4-1.



Photograph 25: Looking South downstream within Southern portion of boundary. Culvert segment 4-1.



Photograph 26: Looking West on Mountain Winery Rd within Southern portion of boundary. Culvert segment 4-2.



Photograph 27: Looking East downstream within Southern portion of boundary. Culvert segment 4-2.

Appendix B:
WETS Analysis

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WETS Analysis for Saratoga Mountain Winery Residential Project JD, Santa Clara County, CA based on 30 year averages of San Jose, WETS Station

Month	30% Chance Precipitation is less or equal than (in)	Average	30% Chance Precipitation more than (in)	Observed rainfall (inch)	Condition (dry, wet, normal)	Condition Value*	Weighting Factor	Product of previous 2 columns
September	0.00	0.01	0.08	0.05	normal	2	3	6
August	0.00	0.00	0.00	0.01	normal	2	2	4
July	0.00	0.00	0.00	0	normal	2	1	2
							Sum=**	**12**

**If sum is:	
6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

*Condition Values:
Dry=1
Normal=2
Wet=3

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Appendix C:
Wetland Delineation Data Forms

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Saratoga Mountain Winery City/County: Saratoga/Santa Clara County Sampling Date: 10/26/2023

Applicant/Owner: Chateau Mason State: CA Sampling Point: SP-1

Investigator(s): R. Carroll Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 1-2%

Subregion (LRR): Lat: 37°15'38.31"N Long: 122° 3'21.53"W Datum: NAD 83

Soil Map Unit Name: Literr-Urbanland-Merbeth Complex, 15-30% slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Sample point taken on bench outside of bed and bank.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Umbellularia californica (overstory)	30	Y	FAC
2. Quercus agrifolia (overstory)	20	Y	NL
3.			
4.			
Total Cover:	50		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Rubus ursinus	15		FAC
2. Leymus tritcoides	10		FAC
3. Toxicodendron diversilobum	10		FACU
4. Polypogon monspeliensis	5		FACW
5.			
6.			
7.			
8.			
Total Cover:	40		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 5	x 2 =	10
FAC species 55	x 3 =	165
FACU species 10	X 4 =	40
UPL species	X 5=	
Column Totals: 70		215

Prevalence Index = B/A = 3.07

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
12	10YR 3/2	90					Sandy loam	
12	10 YR 4/2	10					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

No soil mottles evident at depth, not meeting F6

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface soil cracks present on surface within first 2 inches

Appendix E:
Habitat Assessment for the California Red-legged Frog

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HABITAT ASSESSMENT
FOR THE CALIFORNIA RED-LEGGED FROG,
AT THE PROPOSED MOUNTAIN WINERY DEVELOPMENT,
14850 PIERCE ROAD, SARATOGA, SANTA CLARA COUNTY,
CALIFORNIA

April 24, 2019

Prepared for:

Chateau Masson, LLC
Bill Hirschman, Managing Partner
2470 S. Winchester Blvd., Suite D
Campbell, CA 95008

Prepared by:

Mark Jennings
Rana Resources
P.O. Box 2185
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SUMMARY

This report is a Habitat Assessment for the federally threatened California red-legged frog (*Rana draytonii*, hereafter CRLF) at the location of the approximately 75-acre development site at 14850 Pierce Road, in Saratoga, Santa Clara County (Project). The Project is surrounded by vineyards, The Mountain Winery, and numerous single family residential neighborhoods. An unnamed, 1st order, intermittent stream runs through the Project and drains into an adjacent residential neighborhood. Pierce Road forms the eastern and southern boundaries, while The Mountain Winery and adjacent property owners form the western and northern boundaries.

The Project site consists of with mixed coast live oak (*Quercus agrifolia*), California bay (*Umbellularia californica*), and Pacific madrone (*Arbutus menziesii*) woodlands with scattered clumps of willows (*Salix* sp.) and non-native pampas grass (*Cortaderia selloana*) in some of the moister soils of the riparian corridor. Non-native Scotch broom (*Cytisus scoparius*) is very abundant along the edges of the woodland areas that are exposed to direct sunlight. Elevations on the property range from 640-700 feet.

No CRLF were observed during my daytime visit of the Project site and adjacent quarry on April 17, 2019. Instead, I found Pacific treefrog (*Hyla regilla*) larvae in a seep at the base of the old quarry in an area used as a sediment basin. Additionally, my survey confirmed that the adjacent 2nd order tributary stream to the west of the Project site boundary (and shown to be perennial on topo maps), is very steep (>60% slope) and unstable, and therefore is unsuitable as CRLF breeding or rearing habitat.

Although there are 3 CRLF records within 0.6-1.5 miles of the Project site, they are all from perennial ponded aquatic habitats within the major stream channels of Calabasas and Saratoga Creeks. Both of these streams also contain bullfrogs (*Lithobates catesbeiana*) and are separated from the Project by a combination of roads, vineyards, dry (and steep terrain), and urban development. Given that the Project site is in the uppermost part of a 1st order drainage that contains flowing water for only about 6 months of the year, and there is relatively steep and dry terrain to the west and south, and urbanized areas with vineyards to the east and north, there is no chance that any CRLF would attempt to move through the area or utilize surrounding uplands for foraging from occupied habitats in nearby Saratoga Creek or Calabasas Creek.

Also, with the nearby urban development, there are many CRLF predators, such as raccoons (*Procyon lotor*) and domestic cats (*Felis catus*). These animals likely ensure that any juvenile or adult CRLF that attempt to move out of perennial, deep water, aquatic habitats into intermittent, shallow water habitats (such as tributary streams) are eaten.

Given the above conditions, it is my professional opinion that CRLF are not present within the vicinity of the Project site, nor would they be able to move across or disperse into the area. Thus, the proposed Project would have no effects on CRLF populations in this part of Santa Clara County.

1.0 INTRODUCTION

A development for 7 houses on 7 separate lots (approximately 17.5 acres total) along the western edge of the 14850 block of Pierce Road on 75 acres owned by The Mountain Winery in Saratoga, Santa Clara County, has been proposed (Figure 1). Since the 75-acre site lies within the known historic range of the California red-legged frog (*Rana draytonii*, hereafter CRLF) [Stebbins 2003], and there are records for this species in the general vicinity (Jennings, unpubl. data), a habitat assessment was conducted for this species.

2.0 PROJECT DESCRIPTION AND SETTING

The 75-acre Project site is located along the western and southern edges of the 14850 block of Pierce Road in the City of Saratoga (Figure 1). The property is owned by The Mountain Winery and is zoned "Residential Hillside Conservation" by the City (General Map Plan on the City of Saratoga website). The proposed Project is composed of 7 separate lots that would be accessed via new roadways from Pierce Road.

The overall Project area is surrounded by vineyards, The Mountain Winery, an old quarry, and numerous single family residential neighborhoods (Figure 2). An unnamed 1st order stream runs north through the Project site and drains for approximately 0.2 mile into the adjacent residential neighborhood. Pierce Road forms the eastern and southern boundaries, while The Mountain Winery and adjacent property owners form the western and northern boundaries. There are no structures on the property.

Elevations range from 640 feet at the northern property boundary, to 700 feet at the western property boundary. The central portion of the property contains an intermittent, 1st order stream which normally dries by early summer (=June; W. LeClerc, pers. comm.). Most of the Project site is covered with mixed coast live oak (*Quercus agrifolia*), California bay (*Umbellularia californica*), and Pacific madrone (*Arbutus menziesii*) woodlands with scattered clumps of willows (*Salix* sp.) and non-native pampas grass (*Cortaderia selloana*) in some of the moister soils of the riparian corridor. Non-native Scotch broom (*Cytisus scoparius*) is very abundant along the edges of the woodland areas that are exposed to direct sunlight.

The understory includes western poison oak (*Toxicodendron diversilobum*), non-native Himalayan blackberry (*Rubus discolor*), and small patches of coyote bush (*Baccharis pilularis*). The small grasslands patches outside the mixed woodland areas consist of non-native grasslands.

Immediately to the southwest of the Project site lies an old quarry (Figure 1). Although no longer active, it contains mixed stands of California bay, coast live oak, Pacific madrone, and Douglas-fir (*Pseudotsuga menziesii*), along with scattered coyote brush and many stands non-native pampas grass and Scotch broom. The hillside here is deeply eroded and contains a number of seeps, as well as an depression used as a sediment basin. However, I observed no ponded habitats here.

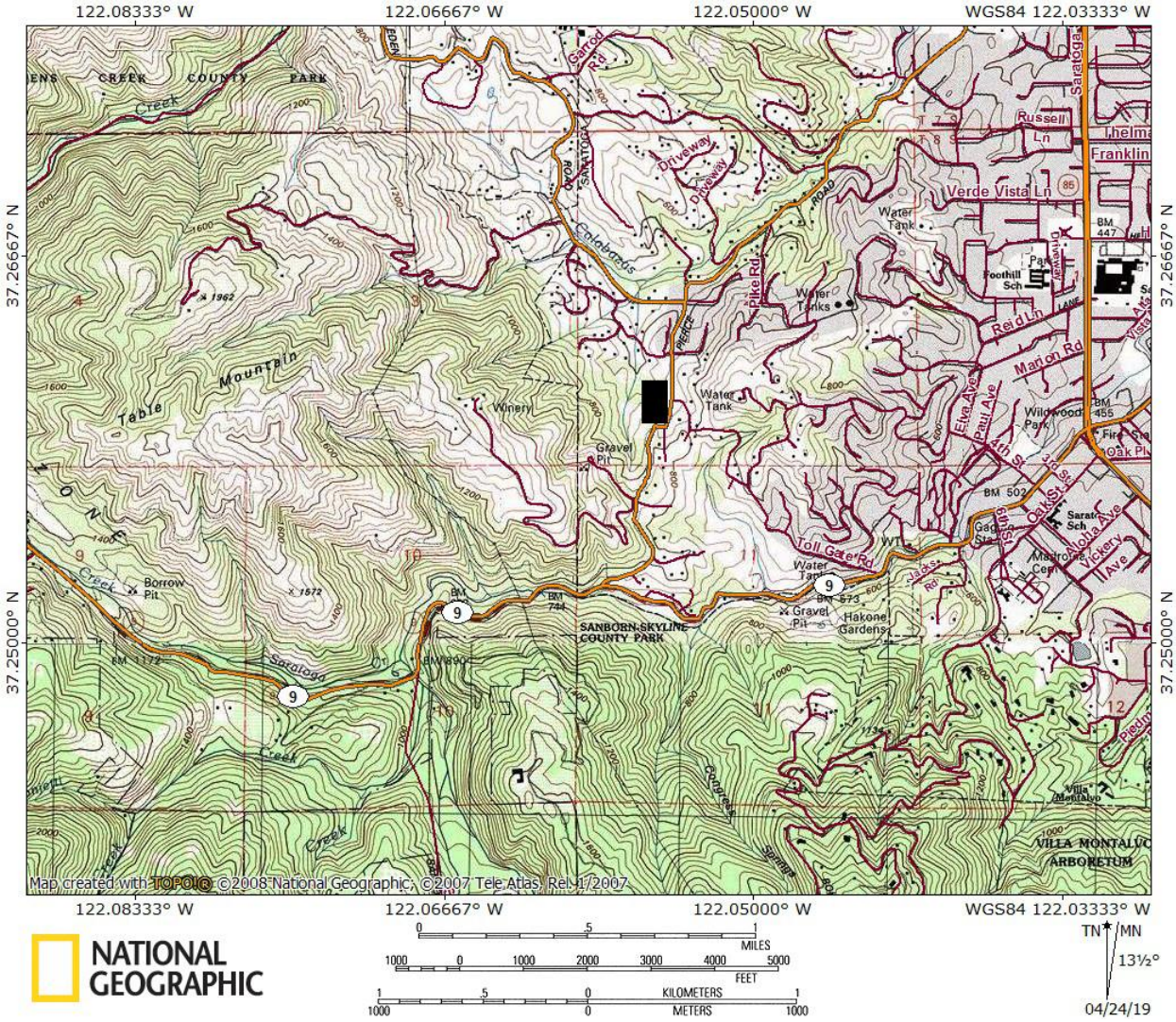

Figure 1. Location of 75-acre parcel at 14850 Pierce Road, in the City of Saratoga.



Figure 2. Location of the 75-acre parcel (black rectangle) and surrounding single family residences.

Just to the west of the Project is a 2nd order stream (shown to be perennial on topo maps) which starts adjacent to the old quarry, and drains north about 0.5 mile into the residential area and subsequently into Calabasas Creek (Figure 1). None of this drainage lies within the Project area.

3.0 METHODS

The methods employed to produce this report include evaluating the suitability of habitat for CRLF on site by conducting a reconnaissance-level site visit during the day by me on 17 April 2019. I followed the U.S. Fish and Wildlife Service protocol for the CRLF habitat assessment (USFWS 2005) and made observations regarding any amphibians and reptiles observed, or potentially inhabiting the vicinity. Additionally, CRLF occurrence records within 3.1 miles of the Project site (CNDDB 2019) were mapped. Finally, I examined 7.5' USGS quadrangles and aerial photographs for potentially suitable aquatic habitats within a 3.1-mile radius of the site and connectivity of these habitats with the Project site.

4.0 RESULTS

No CRLF were observed during my daytime visit of the Project and adjacent quarry on April 17, 2019 (see Appendix). Instead, I found Pacific treefrog (*Hyla regilla*) larvae in a seep in the sediment basin at the base of the old quarry. I also observed juvenile and adult Coast Range fence lizards (*Sceloporus occidentalis bocourtii*), and a juvenile California kingsnake (*Lampropeltis getula californiae*).

Suitable breeding and rearing habitat for CRLF is generally characterized by dense, shrubby riparian vegetation associated with deep (>2.3 feet), still or slow-moving water (see Jennings and Hayes 1994, Jennings 1988, Hayes and Jennings 1988). The aquatic habitats observed along the intermittent tributary and seeps at the old quarry did not contain any deep (>3 feet) water pools that are most suited for breeding populations of CRLF, largely due to the small size of the steep (>10 degrees) stream channels here, and the presence of large amounts of sand and silt on the stream bottoms. While CRLF can occur in shallow water ponds—including those devoid of vegetation (Jennings 2000), such habitats make CRLF extremely vulnerable to predation by raccoons (*Procyon lotor*) and avian predators (Jennings and Hayes 1994).

My survey confirmed that the adjacent 2nd order tributary stream to the west of the Project boundary (and shown to be perennial on topo maps), begins just north of the old quarry. The terrain here in the uppermost part of this drainage is very steep (>60% slope) and unstable, and therefore is unsuitable as CRLF breeding or rearing habitat.

Based on a review of the most recent California Natural Diversity Database files (CNDDB 2019) and other published records, only 3 CRLF occurrences are located within a 3.1-mile radius of the Study Area (Figure 3). All of these are within 2.0 miles of the Project site. The closest CRLF occurrence that I'm aware of is a 2007 record (CNDDB #961), approximately 0.6 miles to the north, northwest from the Project in Calabasas Creek at Mt. Eden Road. The second closest occurrence is a 1997 record filed by me (CNDDB #211), approximately 0.75 miles to the southeast of the Project in Saratoga Creek. Finally, the third record is a from an EIR for the proposed Conservation Center for Wildlife (Santa Clara County 2014). It is a artificial pond located about 1.5 miles southwest of the Project.

Although CRLF are known to be present relatively close to the Project site, they are all from perennial ponded aquatic habitats within major stream channels (Calabasas and Saratoga Creek). Both of these streams also contain bullfrogs (*Lithobates catesbeiana*) (CNDDB #211, Jennings, pers. observ.) and are separated from the Project by a combination of roads, vineyards, dry (and steep terrain), and urban development. Given that the Project is in the uppermost part of a 1st order drainage that contains flowing water for only about 6 months of the year, and there is relatively steep and dry terrain to the west and south, and urbanized areas with vineyards to the east and north, there is no chance that any CRLF would attempt to move through the area or utilize upland areas for foraging from occupied habitats in nearby Saratoga Creek or Calabasas Creek.

Finally, I observed no artificial stock ponds, water storage ponds, or small "koi ponds" within 2 miles of the Project via 2018 Google Earth aerial photographs. Instead, I noted dozens of swimming pools in the urbanized areas adjacent to the east and north sides of the Project site.

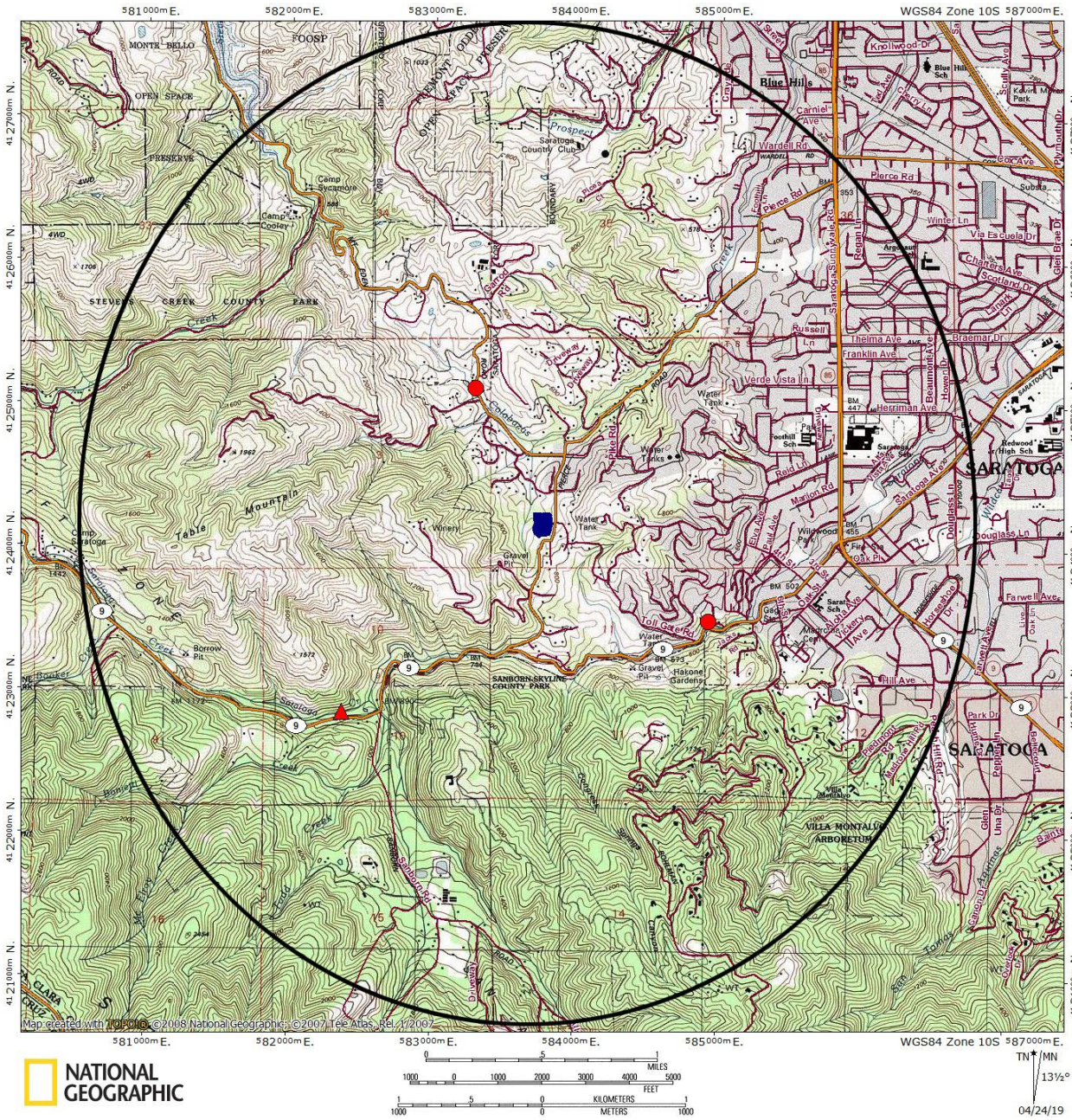

Figure 3. Locations of CRLF within 3.1 miles of the Project site. The red circles are CNDDB records and the red triangle is from a final EIR. The black circle denotes a 2-mile radius around the Project (denoted in blue).

5.0 CONCLUSIONS

Although there are nearby records for CRLF in Calabasas and Saratoga Creeks, I found no evidence of CRLF on the Project site or in the general vicinity. This is due to the Project being

located in the uppermost part of a 1st order drainage that contains flowing water for only about 6 months of the year. Additionally, there is relatively steep and dry terrain to the west and south, and urbanized areas with vineyards to the east and north, that would preclude any CRLF from attempting to move through the area or utilize upland areas for foraging from occupied habitats in nearby Saratoga Creek or Calabasas Creek.

Finally, with all the urban development nearby, there are many CRLF predators in the vicinity, including raccoons and domestic cats (*Felis catus*). Given the high numbers of these predators within the Project vicinity, they likely ensure that any juvenile or adult CRLF that attempt to move out of perennial, deep water, aquatic habitats into intermittent, shallow water habitats (such as tributary streams) are eaten.

Given the above conditions, it is my professional opinion that CRLF are not present within the vicinity of the Project site, nor would they be able to move across or disperse into the area. Thus, the proposed Project would have no effects on CRLF populations in this part of Santa Clara County.

6.0 REFERENCES

California Natural Diversity Database (CNDDB). 2019. Database printout for the Cupertino, California 7.5' USGS quadrangle.

Hayes, M. P., and M. R. Jennings. 1988. Habitat correlates of distribution of the California red-legged frog *(Rana aurora draytonii)* and the foothill yellow-legged frog (*Rana boylii*): implications for management. Pages 144-158 In: R. C. Szaro, K. E. Severson, and D. R. Patton (technical coordinators). Management of Amphibians, Reptiles and Small Mammals in North America. Proceedings of the Symposium, July 19-21, 1988, Flagstaff, Arizona. U. S. Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado. General Technical Report (RM-166):1-458.

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Santa Clara County 2014. Conservation Center for Wildlife Care. Final Environmental Impact Report. State Clearinghouse No. 2013112002. August 2014. 59 p.

Stebbins, R. C. 2003. A field guide to western reptiles and amphibians. Third edition. Houghton Mifflin Company, Boston, Massachusetts. xiii+533 p.

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7.0 APPENDIX

Data Sheet from Appendix D of the *Revised guidance on site assessment and field surveys for the California red-legged frog* (USFWS 2005) completed on 17 April 2019.

California Red-Legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Site Assessment: 04/17/2019 (mm/dd/yyyy)

Site Assessment Biologists: Jennings, Mark (Last name) (first name) _____ (Last name) (first name)

_____ (Last name) (first name) _____ (Last name) (first name)

Site Location: Santa Clara County, 14850 block of Pierce Road, Saratoga
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S)

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: The Mountain Winery Development
Brief description of proposed action:
Proposed development of 7 houses on 7 lots (about 2.5 acres each in size) on a 75-acre site just west of the 14850 block of Pierce Road within the city limits of Saratoga.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
   - If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

Old Quarry
POND:

Size: 25' x 35' Maximum depth: 1 foot (when full)

Vegetation: emergent, overhanging, dominant species: None -- pond is dry except for small seep of water, (It is used as a sediment basin).

Substrate: Silt, sand, gravel, cobble, and bedrock.

Perennial or Ephemeral *(circle one)*. If ephemeral, date it goes dry: June

California Red-Legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: 5 feet
Depth at bank full: 1 foot
Stream gradient: 9%

Are there pools (circle one)? (YES) NO

If yes,

Size of stream pools: 3 feet x 2 feet
Maximum Depth of stream Pools: 3 inches

Characterize non-pool habitat: run, riffle, glide, other: Riffles and waterfalls 95%, pools 5%

Vegetation: emergent, overhanging, dominant species: Oak, California bay, Pacific madrone woodlands, with scattered patches of willows and pampas grass. Also some coyote brush, western poison oak, and Himalayan blackberries. Lots of Scotch broom.

Substrate: Boulders 25%, cobbles 20%, gravel 25%, and sand/silt 30%

Bank description: Mainly covered with woodlands described above. Very few spots are open to direct sunlight.

Perennial or (Ephemeral) (*circle one*). If ephemeral, date it goes dry: June

Other aquatic habitat characteristics, species observations, drawings, or comments:

Noted about 2 dozen Pacific treefrog larvae of varying sizes in the seep at the old quarry pond. The rest of the seep area was covered with algae.

Both the old quarry sediment basin and tributary stream are much too shallow and intermittent to serve as suitable CRLF habitat. Water is probably present only 6 months out of the year during even the wettest years.

Lots of vineyards and single family homes to the east and north. There is a perennial tributary just to the west of the project area (starts at the old quarry) that is very steep and contains rock slide slopes. It's too steep for CRLF to breed or rear at >60% slope.

All drainages in the vicinity flow from 0.2-0.5 miles north directly into a residential neighborhood.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs.
3. Maps with important habitat features and species locations

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Appendix F:
Mountain Winery Pre-Construction Dusky-footed Woodrat Survey

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OLBERDING ENVIRONMENTAL, INC.
Wetland Regulation and Permitting

March 10, 2014

Mr. David Guthridge
Light, Air and Space Construction
P.O. Box 36303
San Jose, CA 95158

SUBJECT: The Mountain Winery Property - Pre-Construction Dusky-footed Woodrat Survey

Dear Mr. Guthridge:

This letter report has been prepared to present the results of Olberding Environmental's pre-construction survey for the dusky-footed woodrat (*Neotoma fuscipes ssp.*) within the northern portion of the larger Mountain Winery Property (Survey Area), located within the Saratoga foothills, Santa Clara County, California (Figure 1). The Mountain Winery Property occurs within the know range of the dusky-footed woodrat and as a result, it was deemed necessary to verify the occupancy of the on-site woodrat nests prior to vegetation clearing. The Santa Clara County Assessor Parcel Number for the survey area is 503-47-007.

The survey area boundary is roughly rectangular in shape bound by Pierce Road to the east situated in a north to south fashion. The Property is currently undeveloped containing no structures. The surveyed portion of the Property is located on a moderately sloped hillside east of the on-site unnamed creek. This creek flows in a south to north direction exiting the Property to the north.

All shrubby vegetation surrounding the woodrat nests located within the survey area has been removed leaving the woodrat nests intact. All observed woodrat nests occurred within previously existing dense stands of coyote brush (*Baccharis pilularis*) and poison oak (*Toxicodendron diversilobum*). The habitat within the survey area was dominated by annual grassland with inclusions of coastal scrub which contained both coyote brush and poison oak. Dominant plant species observed within the annual grassland habitat included species such as but not limited to rip-gut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and field hedge parsley (*Torilis perennis*). Mixed oak woodland habitat occurred immediately adjacent to the survey area. The mixed oak woodland habitat was dominated by tree species such as coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), and California bay (*Umbellularia californica*) with an occasional pacific madrone (*Arbutus menziesii*). Sticky monkey flower (*Mimulus aurantiacus*) was scattered throughout these habitat types.

193 Blue Ravine Road, Suite 165 · Folsom, CA 95630 · Office: (916) 985-1188 · Fax: (916) 985-2288
Email: jeff@olberdingenv.com

METHODS

A pre-construction survey of the project site was conducted by Olberding Environmental staff wildlife biologist, Mr. Josh Goodwin, from February 24 to March 3 of 2014 to determine the occupancy status of the dusky-footed woodrat nests occurring within the project site. Mr. Goodwin has extensive tracking and survey experience with the various woodrat species. All woodrat nests were pin flagged to be made clearly visible. A total of four woodrat stick nests were monitored nightly with motion censored wildlife trail cameras also having infrared capabilities for night time photos. After the cameras were up for a period of 24-hours, they were removed and placed on four new nests. The old memory cards were removed and new cards were installed. The old memory cards were then reviewed to see if the cameras captured any woodrat activity. After close evaluation of the photos captured by each camera, each of the surveyed nests was flagged with orange flagging tape indicating the nest number and whether the nest was active or not. If a nest was determined to host the dusky-foot woodrat, the word "active" was written on the orange flagging tape. This process was repeated until all of the nests were adequately surveyed. The presence of fresh woodrat scat outside the entrance to the nest was also used to determine whether a nest was active or not. Typically a large accumulation of woodrat scat, known as a latrine, can be found near the entrance of the woodrat nest. However not all woodrat nests determined to be active, had a latrine near the entrance to the nest but rather a smaller accumulation of scat near the entrance that was less noticeable.

SURVEY RESULTS

Out of a total of 22 dusky-footed woodrat nests surveyed, 13 of the nests were determined to be active (Figure 2).

CONCLUSION

A total of 22 woodrat nests were observed within the survey area with 13 of the nests determined to be active. These nests ranged in size from being roughly two to six feet in diameter and roughly one to six feet in height. These nests were constructed within concealing vegetation in which the vegetation has been removed surrounding these nests. Occupancy of the nests was determined by pictures taken by the motion censored cameras and/or accumulation of scat outside of the entrances to the nest (refer to photo 6).

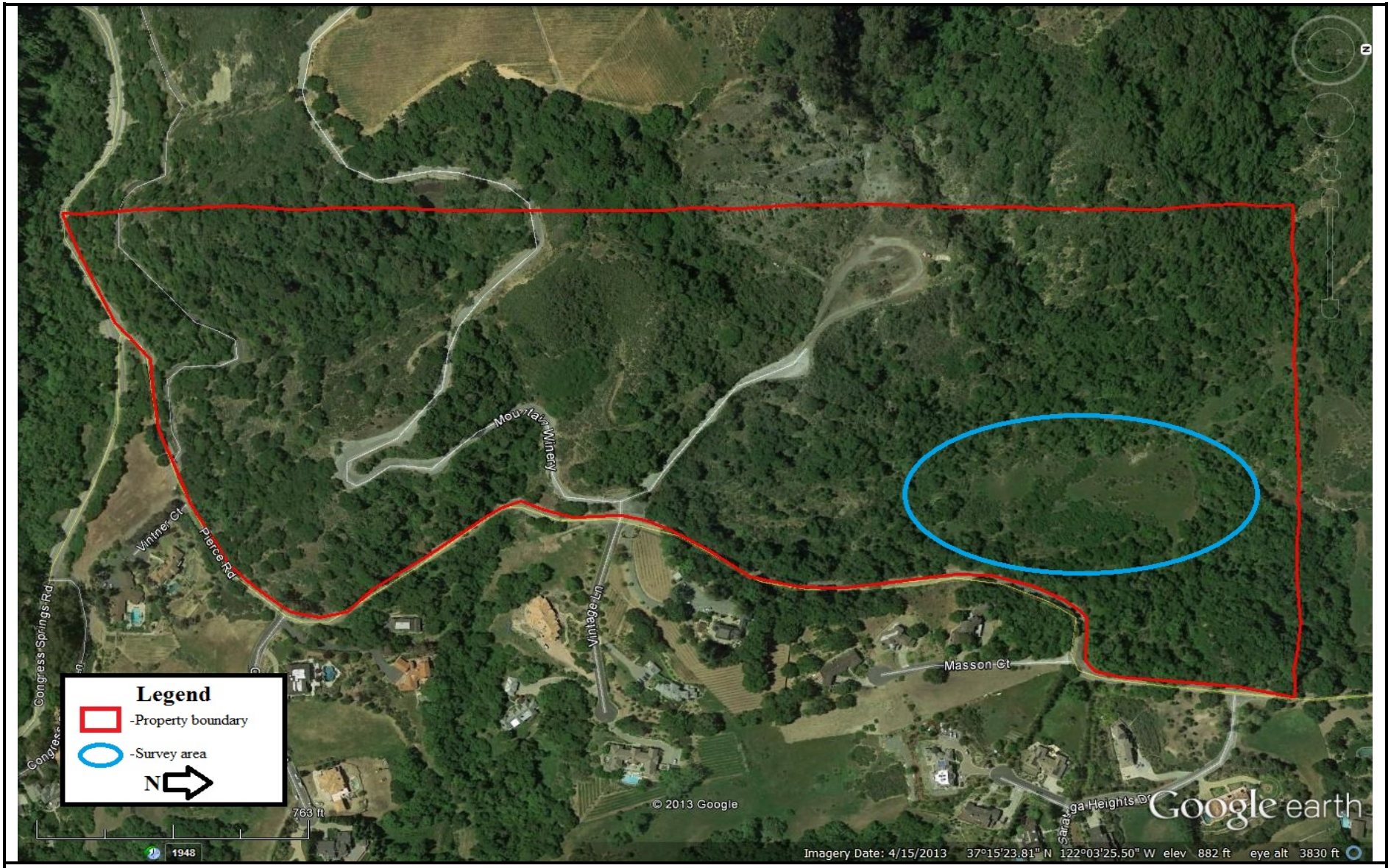
In order to protect the dusky-footed woodrat, mitigation measures implemented by Santa Clara County recommend that prior to tree and shrub removal or ground disturbance, active woodrat nests should be flagged and avoided if possible. If avoidance is not possible, it is further recommended that each of the active nests be dismantled to the best of your ability under the supervision of a biologist. If young are encountered during the dismantling process, the material shall be placed back, a buffer of 15 feet should be placed surrounding the nest in which no project activities shall occur, and the nest will remain undisturbed for two to three weeks in order to give the young enough time to mature and leave the nest on their own accord. After two to three weeks, the empty nest can be dismantled. Nest material should be moved to suitable adjacent areas within the mixed oak woodland habitat that will not be disturbed.

If you have any questions, please feel free to contact me at (925) 866-2111 (office), (408) 472-4343, or jeff@olberdingenv.com.

Sincerely,



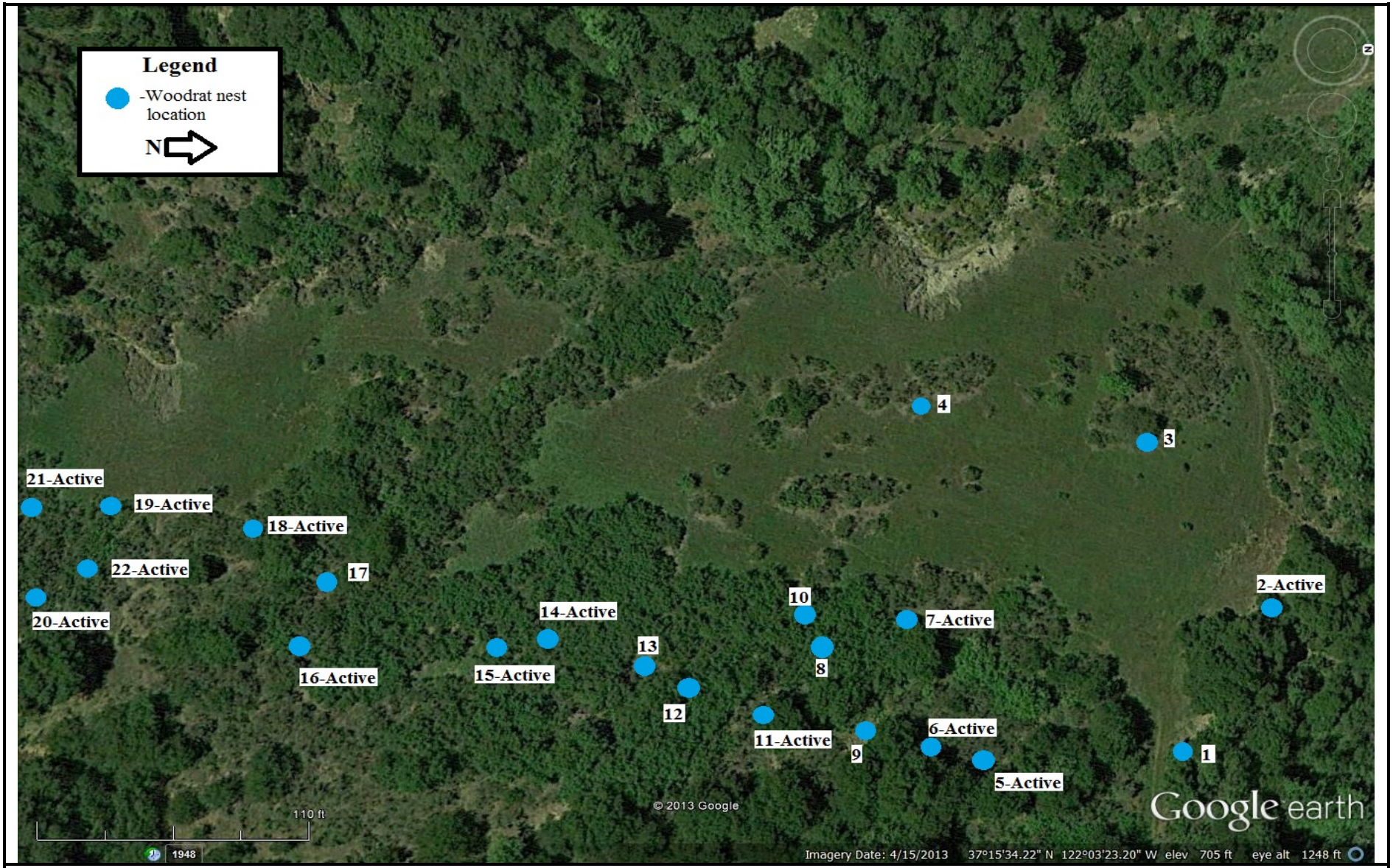
Jeff Olberding
Wetland Regulatory Scientist



Olberding Environmental, Inc.
3170 Crow Canyon Place, Suite 260
San Ramon, CA 94583
(925) 866-2111 office

This document is not intended for detail design work.

Figure 1
Aerial Map of the Mountain Winery Survey Area
Santa Clara County, California



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This document is not intended for detail design work.

Figure 2
Woodrat Nest Location Map of the Mountain Winery Survey Area
Santa Clara County, California



Photo 1: This photo shows a dusky-footed woodrat at nest 6, taken at night with the infrared motion censored camera. This woodrat is indicated by the red circle. The large pile of sticks shown in the middle of the photo is the woodrat stick nest.



Photo 2: This photo shows a dusky-footed woodrat present at nest 7 also indicated by the red circle.



Photo 3: This photo shows nest 6 during the day. A second woodrat nest can be seen in the background.



Photo 4: This photo shows nest 7 during the day



Photo 5: This photo shows nest 16 determined to be active. The orange flagging tape placed next to the nest indicates the nest number and the occupation status of the nest.



Photo 6: This photo shows an example of woodrat scat found near the entrance to one of the nests.

Appendix G:
Tree Inventory, Assessment, and Protection Report

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Tree Inventory, Assessment and Protection Report

APN 503-46-005
Pierce Road and Saratoga Heights Drive
Saratoga, CA 95070

December 13, 2023

Prepared for:

Chateau Masson LLC

Prepared By:

Richard Gessner
ASCA - Registered Consulting Arborist ® #496
ISA - Board Certified Master Arborist® WE-4341B

Monarch Consulting Arborists

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Arborist's Cover Sheet

Arborist

Prepared by: Richard Gessner (on cover sheet)
ISA Certification Number: WE-4341B (on cover sheet)
Date of Arborist's Report: September 6, 2023
Phone: 831.331.8982
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Owner

Project Address: APN 503-46-005
Property owner: Chateau Masson LLC/Lexor Builders
Phone Number:
Email: whirschman@lexorbuilders.com

Date of plans and plan sheets reviewed:

Brief description of work: Divide the property into 25 lots and develop new roads and residences

Summary Table

Total number of trees inventoried (Observations):	683
Total number of protected trees (Observations):	683
Total appraised value of protected trees (Analysis):	$1,108,415.00
Recommended security deposit (Conclusion/ Summary):	$1,108,415.00
Number of protected trees requested for removal (Discussion/Conclusion/Summary):	367
Total value of protected trees requested for removal (Discussion/Conclusion/Summary):	$593,430.00

Summary

The plan is to subdivide the property into 25 lots and construct new residences. There were 682 trees comprised of 11 different species inventoried and assessed for this assignment. Sixty-seven percent (67%) of the trees assessed are coast live oaks (*Quercus agrifolia*). Most of the trees are in good condition and naturally growing specimens. There were 353 trees in good condition, 192 fair, 52 poor, 47 very poor and 38 are dead.

The proposed improvements will require at least 367 trees to be removed which the majority of are within the footprint of the proposed building pads and infrastructure improvements (roads and utilities). An additional 85 trees are within close proximity of grading or other activities and could be moderate or moderate to highly impacted. Of the the 367 highly impacted 205 are in good condition, 92 are fair, 18 are dead or unstable, 26 are poor, and 26 are in very poor shape.

Tree protection zones and specified fence locations have been placed on the tree plan (Appendix A). Calculated tree protection zones are indicated in Appendix B. There are 85 trees dead, unstable, or in very poor condition which meet both findings in the absence of a development application. The 297 trees in good or fair condition within the footprint of the proposed improvements could meet the findings as stated in both subsections 1 and 9 of 15-50.080 - Determination on permit, or one or the other. In total there are 367 trees that will likely require removal due to their locations within the footprint of proposed structures (infrastructure and building pads).

My opinion of value including interest over 15 years is $1,108,415.00 using the cost compounding technique.

Introduction

Background

Chateau Masson LLC asked me to assess the site, trees, and proposed plan, and to provide a report with my findings and recommendations to help satisfy planning requirements.

Assignment

- Provide an arborist's report including an assessment of the trees within the project area and on the adjacent sites where necessary. The assessment is to include the species, size (trunk diameter), condition (health, structure and form), and suitability for preservation ratings.
- Provide tree protection specifications, guidelines, and expected impact ratings for those affected by the project. Provide appraised values Cost Approach in the *Guide for Plant Appraisal, Tenth Edition* (2019).

Limits of the assignment

- The information in this report is limited to the condition of the trees during my inspection on October and November, 2023. No tree risk assessments were performed.
- The plans reviewed for this assignment were as follows in Table 1:

Table 1: Plans Reviewed Checklist

Plan	Date	Sheet	Reviewed	Source
Existing Site Topographic Map or A.L.T.A with tree locations	07/30/2023	Sheet 2	Yes	Hannah Brunetti Civil Engineers
Proposed Site Plan	07/30/2024	Sheet 3	Yes	Hannah Brunetti Civil Engineers
Demolition Plan	07/30/2025	Sheet 8, 9, 10	Yes	Hannah Brunetti Civil Engineers
Construction Staging			No	
Grading and Drainage	07/30/2025	Sheet 4, 5, 6	Yes	Hannah Brunetti Civil Engineers
Utility Plan and Hook-up locations	07/30/2026	Sheet 7	Yes	Hannah Brunetti Civil Engineers
Exterior Elevations			No	
Landscape Plan			No	
Irrigation Plan			No	
T-1 Tree Protection Plan			No	

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the property owners, owner's agents, and the City of Saratoga as a reference for existing tree and site conditions to help satisfy planning requirements.

Observations

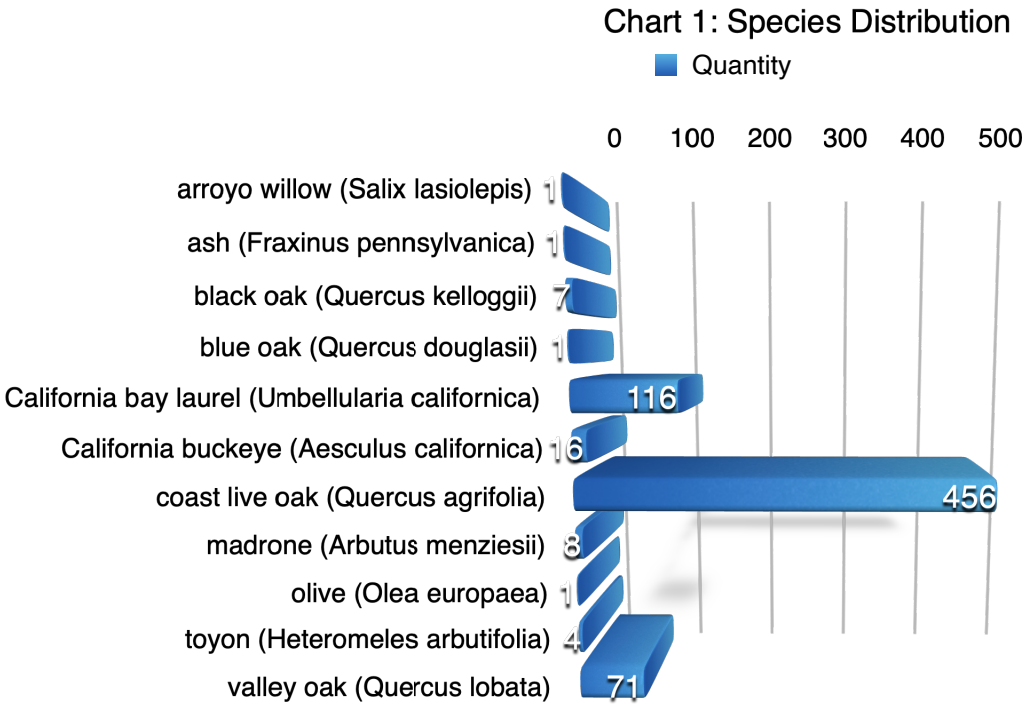
Plans

The plan is to subdivide the property and construct new residences on the vacant lot.

Tree Inventory

The tree inventory lists trees that are considered protected by the City of Saratoga municipal code 15-50.050 (Appendix A and B). The Saratoga municipal code protects “native trees” with trunk diameters greater than six inches and all other trees ten inches in diameter and greater. The tree diameters were measured at four and one half feet above grade (diameter at breast height DBH) on the high sides of the trees. The diameters of multi-stem trees were calculated according to the City of Saratoga’s definition, which is the sum of the full diameter of the largest stem and half the diameters of the remaining stems or measured at their smallest point below the bifurcation.

There were 682 trees comprised of 11 different species inventoried and assessed for this assignment (Chart 1). Sixty-seven percent of the trees assessed are coast live oaks. The trees assessed have aluminum number tags affixed to them with their corresponding identification numbers assigned in this report and on the plans. The inventory does not contain every tree on the property because there are vast regions not affected by the proposed development.



Analysis

Tree appraisal was performed according to the Council of Tree & Landscape Appraisers *Guide for Plant Appraisal 10th Edition, 2019* (CLTA) along with Western Chapter International Society of Arboriculture *Species Classification and Group Assignment, 2004*. The trees were appraised using the "Cost Approach" and more specifically the "Cost Compounding Technique" (CCT) (Appendix B).

The cost compounding technique, an extrapolation technique that relates the cost of money over a specific time period to tree growth, is utilized for the valuation of trees larger than those commonly available in nurseries which cannot be replaced by near-identical specimens. CCT extrapolates all establishment costs, not just the cost of the tree at the nursery. The appraiser estimates the time required for a new planting to either attain equivalent size or provide similar benefits to or utility as the subject tree and then compounds installed cost for that time period using an appropriate interest rate. The number of years to attain equivalent size or benefit is referred to as "years to parity."

For this assignment the years to parity was established at fifteen, and the interest rate established at three percent. Dead or unstable trees have been removed from the overall value. Those in "very poor" condition were arbitrarily assigned a twenty-four inch box replacement based on their utility within the context of the future land use, and they would likely meet findings for removal outside of a development application within the city code. To keep the year to parity constant the tree sized were stratified as follows:

- Trees less than twelve inches in diameter were appraised using twenty-four inch box specimens at an installed tree cost of $350.00.
- Trees between twelve and eighteen inches in diameter were appraised using thirty-six inch box specimens at an installed tree cost of $1,200.00
- Trees greater than eighteen inches in diameter were appraised using forty-eight inch box specimens at an installed tree cost of $4,000.00

My opinion of value including interest over 15 years is $1,108,415.00 using the cost compounding technique.

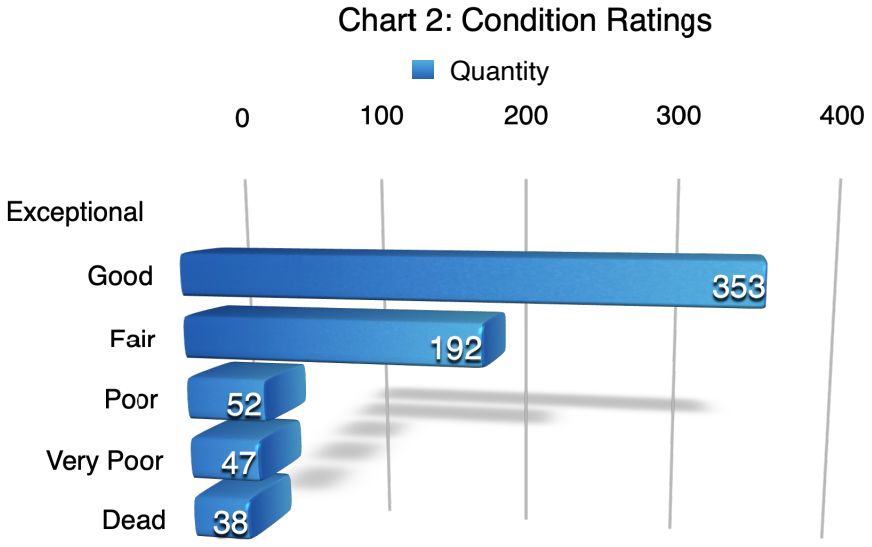
Discussion

Condition Rating

A tree's condition is a determination of its overall health, structure, and form (ISA 2018). The assessment considered all three characteristics for a combined condition rating.

- 100% - Exceptional = Good health and structure with significant size, location or quality.
- 61-80% - Good = Normal vigor, well-developed structure, function and aesthetics not compromised with good longevity for the site.
- 41-60 % - Fair = Reduced vigor, damage, dieback, or pest problems, at least one significant structural problem or multiple moderate defects requiring treatment. Major asymmetry or deviation from the species normal habit, function and aesthetics compromised.
- 21-40% - Poor = Unhealthy and declining appearance with poor vigor, abnormal foliar color, size or density with potential irreversible decline. One serious structural defect or multiple significant defects that cannot be corrected and failure may occur at any time. Significant asymmetry and compromised aesthetics and intended use.
- 6-20% - Very Poor = Poor vigor and dying with little foliage in irreversible decline. Severe defects with the likelihood of failure being probable or imminent. Aesthetically poor with little or no function in the landscape.
- 0-5% - Dead/Unstable = Dead or imminently ready to fail.

Most of the trees are in good condition and naturally growing specimens. There were 353 trees in good condition, 192 fair, 52 poor, 47 very poor and 38 are dead. The setting is a mixed oak forest and the trees have not been maintained as if they were amenity specimens in a formal landscape.

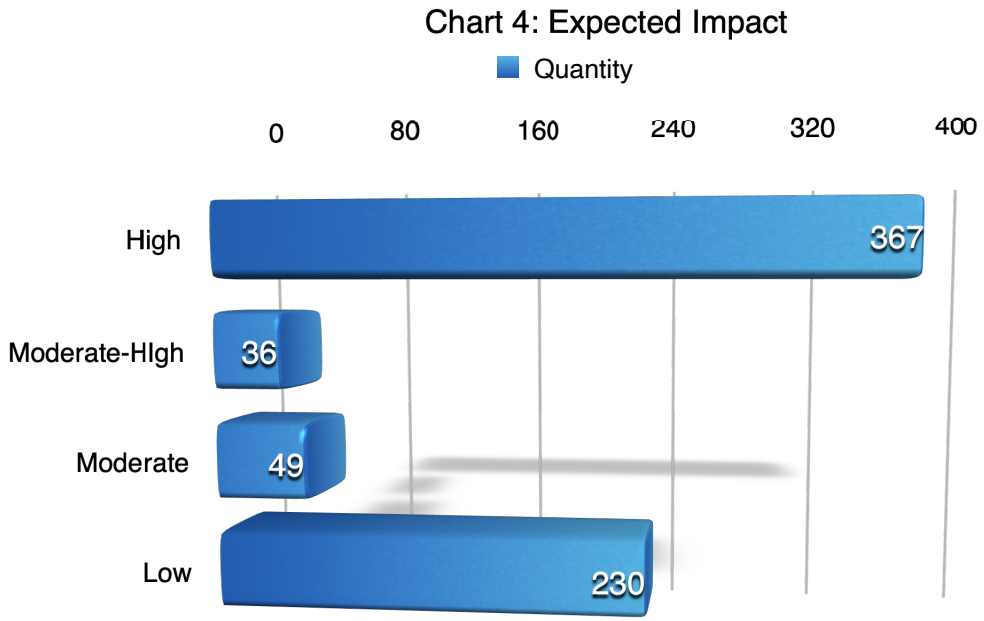


Expected Impact Level

Impact level defines how a tree may be affected by construction activity and proximity to the tree, and is described as low, moderate, or high. The following scale defines the impact rating:

- Low = The construction activity will have little influence on the tree.
- Moderate = The construction may cause future health or structural problems, and steps must be taken to protect the tree to reduce future problems.
- High = Tree structure and health will be compromised and removal is recommended, or other actions must be taken for the tree to remain. The tree is located in the building envelope.

The proposed improvements will require at least 367 trees to be removed which the majority of are within the footprint of the proposed building pads and infrastructure improvements (roads and utilities). An additional 85 trees are within close proximity of grading or other activities and could be moderate or moderate to highly impacted. The remaining 230 assessed will not be affected by the proposed plan. Of the the 367 highly impacted 205 are in good condition, 92 are fair, 18 are dead or unstable, 26 are poor, and 26 are in very poor shape.



Tree Protection

Tree protection focuses on avoiding damage to the roots, trunk, or scaffold branches from heavy equipment (Appendix D). The tree protection zone (TPZ) is the defined area in which certain activities are prohibited to minimize potential injury to the tree and should encompass the critical root zone. There are two tree protection zones determined which include the “calculated” and “specified” tree protection zones. The “calculated” tree protection zone is determined by a multiplication factor based on species tolerance, tree age/vigor/health, and trunk diameter (Table 3). The “specified” tree protection zone is adjusted in size and shape to accommodate the existing infrastructure, planned construction, and specific site constraints. This “specified” zone includes tree canopy conformation, visible root orientation, size, condition, maturity, and species tolerances (Gilpin, R, Hauer, R, Matheny, N, and Smiley, E.T. 2023).

Tree protection zones and specified fence locations have been placed on the tree plan. Calculated tree protection zones are indicated in Appendix B.

Tree Removal and Justification

Two trees are to be removed and could meet the findings for removal as stated in 15-50.080 - Determination on permit. (A) (Appendix D of this report). Because the trees are within the footprint of the proposed structures they meet the findings in section 1 and 9 (both listed below).

1. The condition of the tree with respect to disease, imminent danger of falling, proximity to existing or proposed structures and interference with utility services, and whether the tree is a Dead tree or a Fallen tree.
9. The necessity to remove the tree for economic or other enjoyment of the property when there is no other feasible alternative to the removal.

There are 85 trees dead, unstable, or in very poor condition which meet both findings in the absence of a development application. The 297 trees in good or fair condition within the footprint of the proposed improvements could meet the findings as stated in both 1 and 9 or one or the other. In total there are 367 trees that will likely require removal due to their locations within the footprint of proposed structures (infrastructure and building pads).

Conclusion

The plan is to subdivide the property into 25 lots and construct new residences.

There were 682 trees comprised of 11 different species inventoried and assessed for this assignment. Sixty-seven percent (67%) of the trees assessed are coast live oaks. The inventory does not contain every tree on the property because there are vast regions not affected by the proposed development.

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The proposed improvements will require at least 367 trees to be removed which the majority of are within the footprint of the proposed building pads and infrastructure improvements (roads and utilities). An additional 85 trees are within close proximity of grading or other activities and could be moderate or moderate to highly impacted. The remaining 230 assessed will not be affected by the proposed plan. Of the the 367 highly impacted 205 are in good condition, 92 are fair, 18 are dead or unstable, 26 are poor, and 26 are in very poor shape.

Tree protection zones and specified fence locations have been placed on the tree plan (Appendix A). Calculated tree protection zones are indicated in Appendix B.

There are 85 trees dead, unstable, or in very poor condition which meet both findings in the absence of a development application. The 297 trees in good or fair condition within the footprint of the proposed improvements could meet the findings as stated in both subsections 1 and 9 of 15-50.080 - Determination on permit, or one or the other. In total there are 367 trees that will likely require removal due to their locations within the footprint of proposed structures (infrastructure and building pads).

My opinion of value including interest over 15 years is $1,108,415.00 using the cost compounding technique.

Recommendations

1. Place tree identification numbers and tree protection fence locations and guidelines on the plans including the grading, drainage, and utility plans. Alternatively create a separate plan sheet that includes all three protection measures labeled “T-1 Tree Protection Plan.”

2. Once plans are finalized more specific tree protection locations and mitigation should be determined.

3. Install temporary irrigation or soaker hoses in the TPZ’s. Monitor watering times or amounts to ensure adequate soil saturation. (A 5/8” soaker hose requires about 200 minutes to deliver one inch of water to a garden. This number is affected by the length of the hose and the overall rate of flow from the faucet. A good rule of thumb is to expect about ½ GPM as a standard faucet flow rate.). Infrequent deeper watering is preferred.

4. All tree maintenance and care shall be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree maintenance and care shall be specified in writing according to American National Standard for Tree Care Operations: *Tree, Shrub and Other Woody Plant Management: Standard Practices* parts 1 through 10 and adhere to ANSI Z133.1 safety standards and local regulations. All maintenance is to be performed according to ISA Best Management Practices.

5. Refer to Appendix D for general tree protection guidelines including recommendations for arborist assistance while working under trees, trenching, or excavation within a trees drip line or designated TPZ/CRZ.

6. Provide a copy of this report to all contractors and project managers, including the architect, civil engineer, and landscape designer or architect. It is the responsibility of the owner to ensure all parties are familiar with this document.

7. Arrange a pre-construction meeting with the project arborist or landscape architect to verify tree protection is in place, with the correct materials, and at the proper distances.

Bibliography

American National Standard for Tree Care Operations: Tree, Shrub and Other Woody Plant Management : Standard Practices (Management of Trees and Shrubs During Site Planning, Site Development, and Construction)(Part 5). Londonderry, NH: Secretariat, Tree Care Industry Association, 2019. Print.

Gilpin, R, Hauer, R, Matheny, N, and Smiley, E.T. *Managing trees during construction*, Third edition. Champaign, IL: International Society of Arboriculture, 2023.

ISA. *Guide For Plant Appraisal*. Savoy, IL: International Society of Arboriculture, 2000. Print.

ISA. *Guide For Plant Appraisal*. Savoy, IL: International Society of Arboriculture, 2018. Print.

ISA. Species Classification and Group Assignment, 2004 Western Chapter Regional Supplement. Western Chapter ISA

Matheny, Nelda P., Clark, James R. Trees and development: A technical guide to preservation of trees during land development. Bedminster, PA: International Society of Arboriculture 1998.

Smiley, E, Matheny, N, Lilly, S, *Best Management Practices: Tree Risk Assessment:* International Society of Arboriculture, 2017. Print

Glossary of Terms

calculated tree protection zone: A TPZ calculated using the trunk diameter and a multiplication factor based on species tolerance to construction and tree age. It is often plotted on a plan as a circle or other arbitrary shape and can be used as a guide for establishing the specified TPZ.

critical root zone: a conceptual soil area containing the minimal amount of all the essential parts of the root zone needed to sustain tree health and structural integrity. There are no universally accepted methods to calculate the CRZ.

Cost Approach: An indication of value by adding the land value to the depreciated value of improvements.

defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

diameter at breast height (DBH): Measures at 1.4 meters (4.5 feet) above ground in the United States, Australia (arboriculture), New Zealand, and when using the Guide for Plant Appraisal, 9th edition; at 1.3 meters (4.3 feet) above ground in Australia (forestry), Canada, the European Union, and in UK forestry; and at 1.5 meters (5 feet) above ground in UK arboriculture.

drip Line: Imaginary line defined by the branch spread or a single plant or group of plants. The outer extent of the tree crown.

form: Describes a plant's habit, shape or silhouette defined by its genetics, environment, or management.

health: Assessment is based on the overall appearance of the tree, its leaf and twig growth, and the presence and severity of insects or disease

mechanical damage: Physical damage caused by outside forces such as cutting, chopping or any mechanized device that may strike the tree trunk, roots or branches.

scaffold branches: Permanent or structural branches that for the scaffold architecture or structure of a tree.

specified tree protection zone (specified TPZ): a TPZ that is adjusted in size or shape to accommodate the existing infrastructure, planned construction, and aspects of the site, as well as the tree canopy conformation, visible root orientation, size, condition, maturity, and species response to construction.

straw wattle: also known as straw worms, bio-logs, straw noodles, or straw tubes are man made cylinders of compressed, weed free straw (wheat or rice), 8 to 12 inches in diameter and 20 to 25 feet long. They are encased in jute, nylon, or other photo degradable materials, and have an average weight of 35 pounds.

structure: Evaluation focused on the crown, trunk, trunk flare, above ground roots and the site conditions contributing to conditions and/or defects that may contribute to failure.

Tree Protection Zone (TPZ): Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

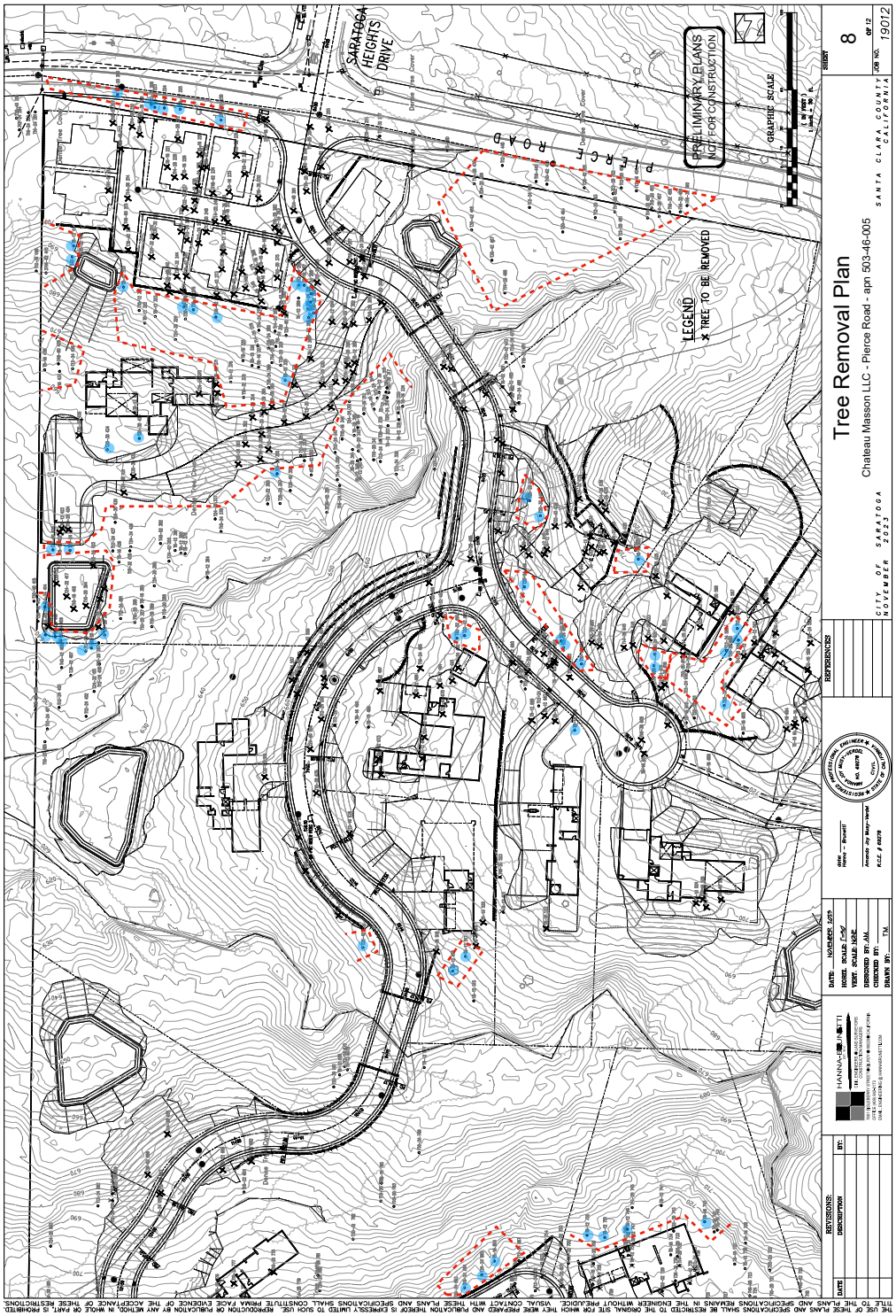
Tree Risk Assessment: Process of evaluating what unexpected things could happen, how likely it is, and what the likely outcomes are. In tree management, the systematic process to determine the level of risk posed by a tree, tree part, or group of trees.

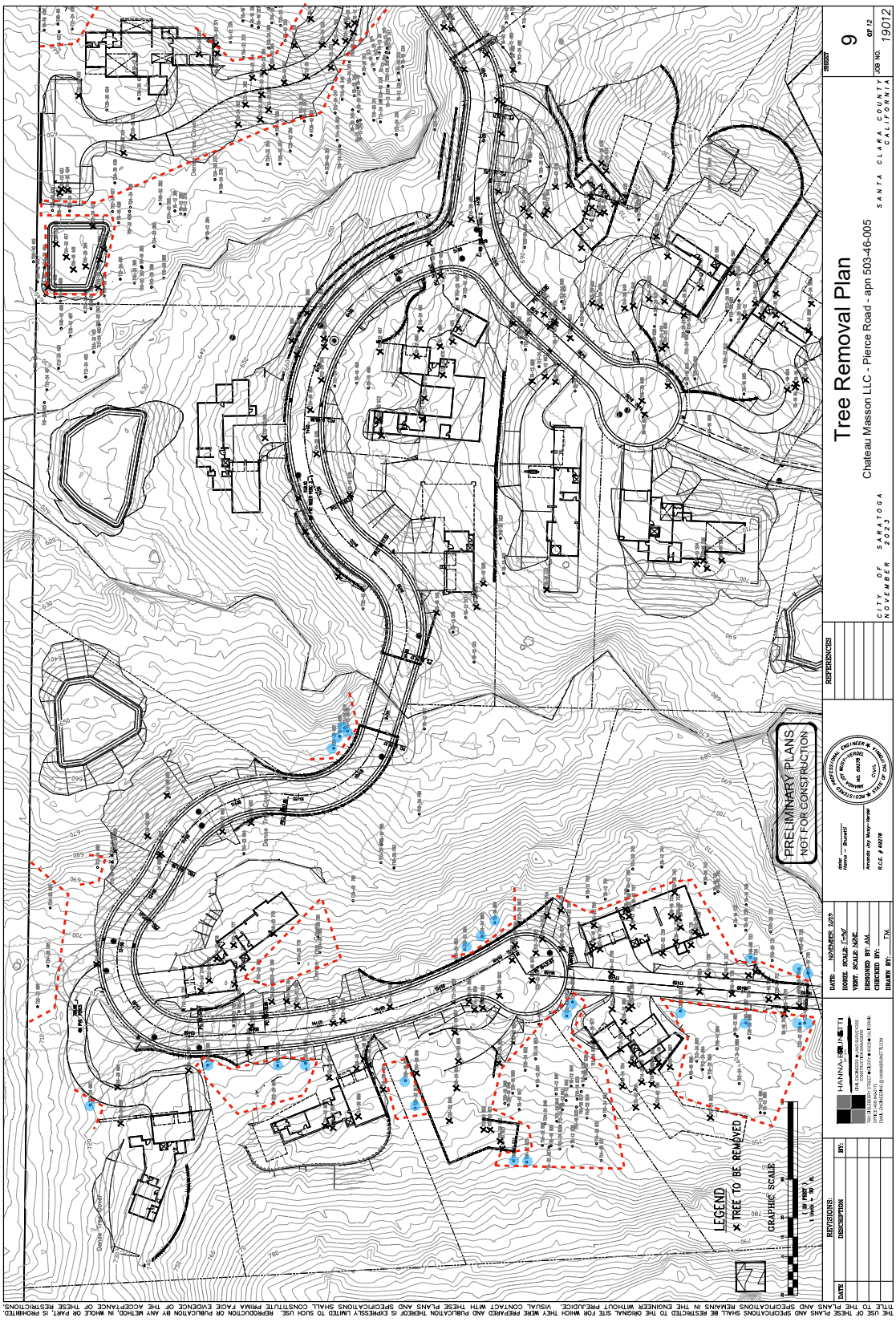
trunk: Stem of a tree.

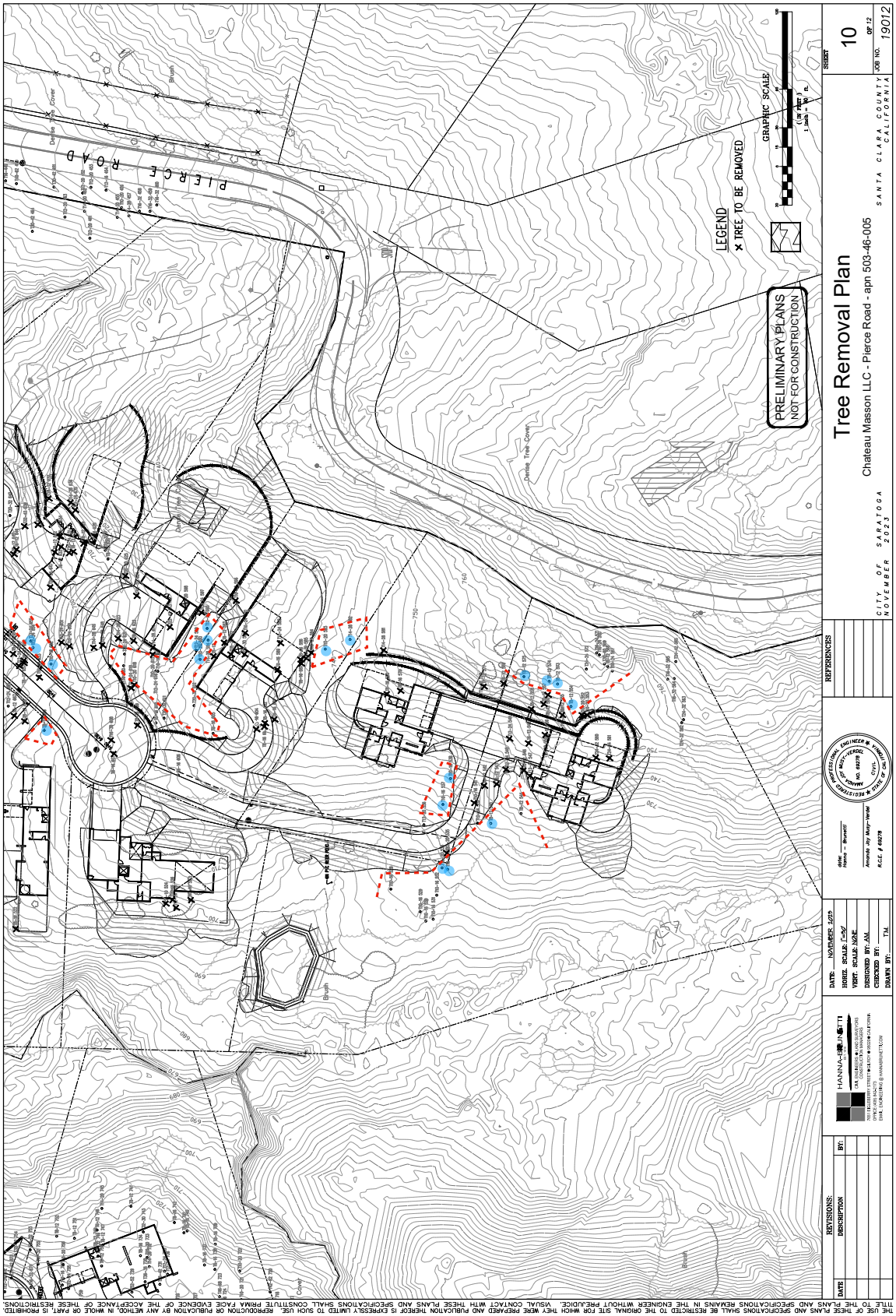
volunteer: A tree, not planted by human hands, that begins to grow on residential or commercial property. Unlike trees that are b drought in and installed on property, volunteer trees usually spring up on their own from seeds placed onto the ground by natural causes or accidental transport by people. Normally, volunteer trees are considered weeds and removed, but many desirable and attractive specimens have gone on to become permanent residents on many public and private grounds.

Appendix A: Tree Locations and Protection

For greater detail of tree and site conditions see full size plans. Blue dots are moderately impacted and red dashed lines are tree protection fence locations.




Tree Removal Plan
Chateau Masson LLC - Pierce Road - apn 503-46-005
CITY OF SARATOGA
NOVEMBER 2023
SANTA CLARA COUNTY
CALIFORNIA
SHEET 9
JOB NO. 19012
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
LEGEND
TREE TO BE REMOVED
GRAPHIC SCALE
REVISIONS:
DATE
DESCRIPTION
BY:
DATE: NOVEMBER 2023
HORIZ. SCALE: 1"=50'
VERT. SCALE: NONE
DESIGNED BY: AM
CHECKED BY:
DRAWN BY: TM
HANNA-BRUNETTI


PIERCE ROAD
LEGEND
× TREE TO BE REMOVED
GRAPHIC SCALE
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
Tree Removal Plan
Chateau Masson LLC - Pierce Road - apn 503-46-005
CITY OF SARATOGA
NOVEMBER 2023
SANTA CLARA COUNTY
CALIFORNIA
SHEET 10 OF 12
JOB NO. 19012
REVISIONS:
DATE
DESCRIPTION
BY:
REFERENCES
DATE: NOVEMBER 2023
HORIZ. SCALE: 1"=50'
VERT. SCALE: NONE
DESIGNED BY: AM
CHECKED BY:
DRAWN BY: TM
Amanda Jay Mary-Verdier
R.C.E. # 69278
Civil
HANNA BROPHY
Monarch Consulting Arborists LLC - P.O Box 1010, Felton, CA 95018
831.331.8982 - rick@monarcharborist.com

Appendix B: Summary Table

Table 1

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	201	16	25	Fair	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	202	17, 7	25	Fair	Low	12	$1869.56
coast live oak (*Quercus agrifolia*)	203	14, 13	25	Good	Low	13	$1869.56
arroyo willow (*Salix lasiolepis*)	204	14	25	Very poor	Low	9	$545.29
coast live oak (*Quercus agrifolia*)	205	28	25	Good	Low	19	$6231.87
coast live oak (*Quercus agrifolia*)	206	21	25	Fair	Moderate	14	$6231.87
coast live oak (*Quercus agrifolia*)	207	8	10	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	208	12	20	Fair	Moderate	8	$1869.56
coast live oak (*Quercus agrifolia*)	209	36	25	Fair	High	24	$6231.87
coast live oak (*Quercus agrifolia*)	210	16	20	Poor	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	211	27	25	Good	High	18	$6231.87
coast live oak (*Quercus agrifolia*)	212	24	35	Good	High	16	$6231.87
valley oak (*Quercus lobata*)	213	36	35	Good	High	24	$6231.87
coast live oak (*Quercus agrifolia*)	214	16	10	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	215	24, 18	35	Poor	High	20	$1869.56
California bay laurel (*Umbellularia californica*)	216	11, 11, 11	25	Fair	High	13	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	217	27, 12	35	Fair	High	20	$1869.56
coast live oak (*Quercus agrifolia*)	218	15, 10, 12	20	Very poor	High	14	$545.29
coast live oak (*Quercus agrifolia*)	219	20, 8	35	Fair	High	14	$1869.56
coast live oak (*Quercus agrifolia*)	220	15	20	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	221	7	10	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	222	15	25	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	223	17	35	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	224	9	10	Fair	High	6	$545.29
coast live oak (*Quercus agrifolia*)	225	18	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	226	8	20	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	227	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	228	9	20	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	229	8	10	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	230	11, 8	20	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	231	11	20	Poor	High	7	$545.29
coast live oak (*Quercus agrifolia*)	232	18	25	Good	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	233	8	15	Good	High	5	$545.29
valley oak (*Quercus lobata*)	234	22, 14, 16	30	Fair	High	20	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	235	14	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	236	7	10	Fair	High	5	$545.29
California bay laurel (*Umbellularia californica*)	237	12, 10, 9	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	238	8	15	Very poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	239	8	15	Fair	High	5	$545.29
valley oak (*Quercus lobata*)	240	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	241	8	10	Good	High	5	$545.29
California bay laurel (*Umbellularia californica*)	242	11, 20	25	Fair	High	15	$1869.56
coast live oak (*Quercus agrifolia*)	243	22, 13	20	Very poor	High	17	$545.29
coast live oak (*Quercus agrifolia*)	244	12	15	Very poor	High	8	$545.29
coast live oak (*Quercus agrifolia*)	245	24, 9, 14	35	Fair	High	19	$1869.56
coast live oak (*Quercus agrifolia*)	246	14	25	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	247	11, 7	20	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	248	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	249	14	25	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	250	16	25	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	251	8	20	Fair	High	5	$545.29

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coast live oak (*Quercus agrifolia*)	252	21	25	Good	High	14	$6231.87
coast live oak (*Quercus agrifolia*)	253	7, 6	20	Fair	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	254	10	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	255	8	20	Good	High	5	$545.29
valley oak (*Quercus lobata*)	256	34, 12	45	Fair	High	24	$1869.56
coast live oak (*Quercus agrifolia*)	257	15	20	Fair	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	258	13, 13	35	Fair	High	12	$1869.56
valley oak (*Quercus lobata*)	259	32	35	Good	High	21	$6231.87
coast live oak (*Quercus agrifolia*)	260	10	25	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	261	18	25	Good	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	262	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	263	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	264	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	265	14, 12	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	266	10	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	267	8	15	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	268	8	15	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	269	11	25	Good	High	7	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
valley oak (*Quercus lobata*)	270	10, 9	0	Dead/ Unstable	High	9	
toyon (*Heteromeles arbutifolia*)	271	6, 4, 4	15	Fair	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	272	20	30	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	273	18, 18	35	Fair	High	17	$1869.56
coast live oak (*Quercus agrifolia*)	274	10, 10	20	Poor	Moderate-high	9	$1869.56
coast live oak (*Quercus agrifolia*)	275	15	10	Dead/ Unstable	Moderate-high	10	
coast live oak (*Quercus agrifolia*)	276	24	35	Good	Low	16	$6231.87
coast live oak (*Quercus agrifolia*)	277	18, 18	35	Fair	Moderate	17	$1869.56
coast live oak (*Quercus agrifolia*)	278	10	8	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	279	15	25	Good	Low	10	$1869.56
California bay laurel (*Umbellularia californica*)	280	14	25	Good	Low	9	$1869.56
California bay laurel (*Umbellularia californica*)	281	11	25	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	282	18	35	Good	Low	12	$1869.56
valley oak (*Quercus lobata*)	283	14	20	Good	Low	9	$1869.56
valley oak (*Quercus lobata*)	284	7	0	Dead/ Unstable	High	5	
valley oak (*Quercus lobata*)	285	8	10	Very poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	286	18	30	Good	Moderate-high	12	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	287	9	20	Good	Moderate-high	6	$545.29
valley oak (*Quercus lobata*)	288	10, 12	30	Poor	Moderate-high	10	$1869.56
coast live oak (*Quercus agrifolia*)	289	8	20	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	290	8	15	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	291	15	20	Fair	Low	10	$1869.56
coast live oak (*Quercus agrifolia*)	292	13	15	Fair	Moderate	9	$1869.56
coast live oak (*Quercus agrifolia*)	293	10	15	Fair	Moderate-high	7	$545.29
California bay laurel (*Umbellularia californica*)	294	10	10	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	295	12, 12	25	Poor	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	296	11, 16	30	Good	High	13	$1869.56
coast live oak (*Quercus agrifolia*)	297	10	10	Poor	High	7	$545.29
coast live oak (*Quercus agrifolia*)	298	14, 10	25	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	299	10, 10	20	Poor	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	300	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	301	8	10	Good	High	5	$545.29
valley oak (*Quercus lobata*)	302	12	10	Dead/ Unstable	High	8	
coast live oak (*Quercus agrifolia*)	303	9	20	Dead/ Unstable	High	6	

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	304	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	305	9	0	Dead/ Unstable	High	6	
coast live oak (*Quercus agrifolia*)	306	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	307	6	8	Good	High	4	$545.29
California bay laurel (*Umbellularia californica*)	308	6	20	Good	High	4	$545.29
California bay laurel (*Umbellularia californica*)	309	15, 4, 6, 5	30	Good	High	12	$1869.56
valley oak (*Quercus lobata*)	310	9	0	Dead/ Unstable	High	6	
valley oak (*Quercus lobata*)	311	10	0	Dead/ Unstable	Low	7	
coast live oak (*Quercus agrifolia*)	312	10	20	Fair	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	313	9	20	Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	314	13	25	Good	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	315	7	10	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	316	6	10	Good	Low	4	$545.29
coast live oak (*Quercus agrifolia*)	317	17	25	Fair	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	318	5, 4	10	Fair	Low	4	$1869.56
valley oak (*Quercus lobata*)	319	7, 10	20	Fair	Low	8	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	320	8	20	Good	Moderate	5	$545.29
California bay laurel (*Umbellularia californica*)	321	6, 4	10	Good	Low	5	$1869.56
California bay laurel (*Umbellularia californica*)	322	7	10	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	323	6, 2	10	Good	Low	4	$1869.56
coast live oak (*Quercus agrifolia*)	324	24	35	Fair	Low	16	$6231.87
coast live oak (*Quercus agrifolia*)	325	10	25	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	326	9	25	Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	327	9	25	Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	328	10	20	Good	Low	7	$545.29
valley oak (*Quercus lobata*)	329	10	20	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	330	9	20	Fair	Moderate	6	$545.29
California buckeye (*Aesculus californica*)	331	4, 2, 2, 2, 2	15	Good	High	4	$1869.56
California bay laurel (*Umbellularia californica*)	332	13	20	Good	High	9	$1869.56
California bay laurel (*Umbellularia californica*)	333	11, 14	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	334	7	15	Fair	Low	5	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	335	12	20	Fair	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	336	6	10	Good	Low	4	$545.29
valley oak (*Quercus lobata*)	337	8	15	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	338	10, 12	20	Fair	Low	10	$1869.56
California bay laurel (*Umbellularia californica*)	339	13	20	Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	340	16	30	Dead/ Unstable	Low	11	
California bay laurel (*Umbellularia californica*)	341	11	20	Fair	Low	7	$545.29
California bay laurel (*Umbellularia californica*)	342	6	10	Good	Low	4	$545.29
coast live oak (*Quercus agrifolia*)	343	10	25	Good	Low	7	$545.29
valley oak (*Quercus lobata*)	344	9	20	Fair	Low	6	$545.29
valley oak (*Quercus lobata*)	345	8	20	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	346	10	20	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	347	12	25	Good	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	348	7	15	Fair	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	349	4, 4, 7, 7	20	Fair	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	350	9, 8, 6, 6	20	Fair	Low	10	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	351	9, 9, 10, 10, 10	35	Fair	Low	14	$1869.56
California bay laurel (*Umbellularia californica*)	352	7, 10, 8, 8	35	Fair	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	353	9	10	Fair	High	6	$545.29
valley oak (*Quercus lobata*)	354	13	0	Dead/ Unstable	High	9	
coast live oak (*Quercus agrifolia*)	355	10	20	Good	Moderate	7	$545.29
black oak (*Quercus kelloggii*)	356	20	30	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	357	18, 8, 6	10	Dead/ Unstable	Low	14	
California bay laurel (*Umbellularia californica*)	358	15, 15	30	Good	Low	14	$1869.56
California bay laurel (*Umbellularia californica*)	359	14, 8	20	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	360	14		Good	High	9	$1869.56
California bay laurel (*Umbellularia californica*)	361	12	20	Very poor	High	8	$545.29
coast live oak (*Quercus agrifolia*)	362	16	25	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	363	15	25	Good	High	10	$1869.56
California bay laurel (*Umbellularia californica*)	364	6, 6, 4	10	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	365	12	20	Fair	High	8	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	366	12, 9	35	Fair	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	367	8	1	Fair	High	5	$545.29
valley oak (*Quercus lobata*)	368	14	20	Poor	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	369	19	30	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	370	18	30	Good	Low	12	$1869.56
California bay laurel (*Umbellularia californica*)	371	20, 20, 20	35	Fair	High	23	$1869.56
California bay laurel (*Umbellularia californica*)	372	8	10	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	373	30	30	Fair	High	20	$6231.87
coast live oak (*Quercus agrifolia*)	374	6, 2	20	Fair	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	375	10	20	Good	High	7	$545.29
toyon (*Heteromeles arbutifolia*)	376	7	8	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	377	30	0	Dead/ Unstable	Low	20	
coast live oak (*Quercus agrifolia*)	378	18	35	Fair	Low	12	$1869.56
coast live oak (*Quercus agrifolia*)	379	7	20	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	380	6	20	Good	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	381	6	15	Good	Low	4	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	382	12, 15, 24	45	Fair	Low	20	$1869.56
coast live oak (*Quercus agrifolia*)	383	21	35	Very poor	Low	14	$545.29
coast live oak (*Quercus agrifolia*)	384	13	25	Good	Low	9	$1869.56
valley oak (*Quercus lobata*)	385	15, 8	25	Fair	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	386	6	15	Good	Low	4	$545.29
valley oak (*Quercus lobata*)	387	12	20	Fair	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	388	8	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	389	11	20	Fair	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	390	10	15	Poor	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	391	16	30	Good	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	392	10	20	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	393	8	15	Very poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	394	9	15	Very poor	High	6	$545.29
valley oak (*Quercus lobata*)	395	6	10	Good	High	4	$545.29
valley oak (*Quercus lobata*)	396	16	30	Poor	Moderate	11	$1869.56
California bay laurel (*Umbellularia californica*)	397	9	10	Good	Low	6	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	398	10	20	Poor	Moderate	7	$545.29
valley oak (*Quercus lobata*)	399	21	35	Good	Moderate	14	$6231.87
California buckeye (*Aesculus californica*)	400	7, 7, 7	15	Fair	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	401	24	3	Good	Low	16	$6231.87
coast live oak (*Quercus agrifolia*)	402	16	30	Good	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	403	17	0	Dead/ Unstable	Low	11	
coast live oak (*Quercus agrifolia*)	404	13	25	Good	Low	9	$1869.56
valley oak (*Quercus lobata*)	405	13	20	Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	406	16	30	Fair	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	407	12, 17	25	Fair	Low	14	$1869.56
valley oak (*Quercus lobata*)	408	15, 15	30	Good	Low	14	$1869.56
valley oak (*Quercus lobata*)	409	11	20	Fair	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	410	10	15	Fair	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	411	11	0	Dead/ Unstable	Moderate	7	
coast live oak (*Quercus agrifolia*)	412	11, 5	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	413	20	35	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	414	11,6	20	Fair	Moderate-high	8	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	415	16, 10	25	Good	Low	13	$1869.56
coast live oak (*Quercus agrifolia*)	416	17, 8	25	Fair	High	13	$1869.56
coast live oak (*Quercus agrifolia*)	417	23	35	Good	High	15	$6231.87
coast live oak (*Quercus agrifolia*)	418	7	10	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	419	10	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	420	22, 21, 13, 7	55	Poor	Moderate-high	23	$1869.56
coast live oak (*Quercus agrifolia*)	421	11, 14	20	Very poor	High	12	$545.29
California bay laurel (*Umbellularia californica*)	422	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	423	7	15	Fair	High	5	$545.29
valley oak (*Quercus lobata*)	424	10	25	Very poor	High	7	$545.29
coast live oak (*Quercus agrifolia*)	425	10	20	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	426	8	20	Fair	Low	5	$545.29
black oak (*Quercus kelloggii*)	427	15	35	Fair	Low	10	$1869.56
California bay laurel (*Umbellularia californica*)	428	12	20	Very poor	Low	8	$545.29
coast live oak (*Quercus agrifolia*)	429	24	20	Dead/ Unstable	Low	16	
coast live oak (*Quercus agrifolia*)	430	16	30	Very poor	Low	11	$545.29
black oak (*Quercus kelloggii*)	431	19	25	Fair	High	13	$6231.87

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	432	18, 10	0	Dead/ Unstable	High	14	
California bay laurel (*Umbellularia californica*)	433	30	45	Fair	Moderate	20	$6231.87
coast live oak (*Quercus agrifolia*)	434	23	35	Fair	Moderate	15	$6231.87
valley oak (*Quercus lobata*)	435	20, 15	35	Fair	High	17	$1869.56
California bay laurel (*Umbellularia californica*)	436	10	20	Good	Low	7	$545.29
California bay laurel (*Umbellularia californica*)	437	6	10	Poor	Low	4	$545.29
coast live oak (*Quercus agrifolia*)	438	20, 20, 18	30	Dead/ Unstable	Low	22	
California bay laurel (*Umbellularia californica*)	439	8	15	Poor	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	440	7	15	Good	High	5	$545.29
ash (*Fraxinus pennsylvanica*)	441	17, 14, 8	35	Good	Low	16	$1869.56
coast live oak (*Quercus agrifolia*)	442	25	35	Fair	High	17	$6231.87
California bay laurel (*Umbellularia californica*)	443	7, 4	20	Fair	Moderate	5	$1869.56
California bay laurel (*Umbellularia californica*)	444	6	10	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	445	30, 18, 22	65	Fair	Low	28	$1869.56
California bay laurel (*Umbellularia californica*)	446	9	20	Very poor	Low	6	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	447	8	10	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	448	16	25	Good	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	449	17	25	Fair	Low	11	$1869.56
valley oak (*Quercus lobata*)	450	44	45	Fair	Low	29	$6231.87
coast live oak (*Quercus agrifolia*)	451	30	30	Poor	Low	20	$6231.87
coast live oak (*Quercus agrifolia*)	452	12	20	Poor	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	453	12	20	Poor	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	454	12	20	Poor	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	455	18	20	Fair	Low	12	$1869.56
coast live oak (*Quercus agrifolia*)	456	12	20	Fair	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	457	20	25	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	458	20	25	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	459	14	20	Good	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	460	15	25	Fair	Low	10	$1869.56
valley oak (*Quercus lobata*)	461	12	25	Fair	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	462	19	25	Fair	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	463	14	20	Poor	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	464	34	45	Good	Low	23	$6231.87



Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	465	16	20	Fair	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	466	14	20	Poor	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	467	17	20	Poor	Low	11	$1869.56
valley oak (*Quercus lobata*)	468	20, 10	35	Good	Low	15	$1869.56
coast live oak (*Quercus agrifolia*)	469	20, 17	25	Fair	Low	17	$1869.56
coast live oak (*Quercus agrifolia*)	470	17	25	Fair	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	471	13	20	Fair	Low	9	$1869.56
toyon (*Heteromeles arbutifolia*)	472	6, 4, 4, 4, 4	15	Fair	Low	7	$1869.56
valley oak (*Quercus lobata*)	473	12, 17, 12, 10, 8	35	Fair	Low	18	$1869.56
coast live oak (*Quercus agrifolia*)	474	12	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	475	12	20	Good	High	8	$1869.56
California bay laurel (*Umbellularia californica*)	476	12	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	477	8	15	Poor	High	5	$545.29
valley oak (*Quercus lobata*)	478	16, 11, 13	30	Fair	High	16	$1869.56
coast live oak (*Quercus agrifolia*)	479	12	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	480	8	10	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	481	13	20	Fair	High	9	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	482	18	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	483	19	25	Fair	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	484	16, 14, 12, 8	35	Fair	High	17	$1869.56
coast live oak (*Quercus agrifolia*)	485	10	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	486	24	30	Very poor	High	16	$545.29
California bay laurel (*Umbellularia californica*)	487	10, 10	35	Poor	High	9	$1869.56
California buckeye (*Aesculus californica*)	488	7, 10	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	489	17	25	Fair	High	11	$1869.56
California bay laurel (*Umbellularia californica*)	490	Multi 6, 8	25	Very poor	Moderate	10	$545.29
coast live oak (*Quercus agrifolia*)	491	17, 13	20	Dead/ Unstable	Moderate	14	
coast live oak (*Quercus agrifolia*)	492	13	20	Good	Moderate	9	$1869.56
California bay laurel (*Umbellularia californica*)	493	6, 6, 6	15	Fair	Moderate	7	$1869.56
valley oak (*Quercus lobata*)	494	8	0	Dead/ Unstable	Moderate	5	
coast live oak (*Quercus agrifolia*)	495	15, 12	20	Fair	Moderate	13	$1869.56
valley oak (*Quercus lobata*)	496	9	15	Fair	Moderate	6	$545.29
coast live oak (*Quercus agrifolia*)	497	18	25	Fair	Moderate	12	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	498	10	10	Good	Low	7	$545.29
California buckeye (*Aesculus californica*)	499	8	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	500	12	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	501	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	502	9	10	Dead/ Unstable	High	6	
California buckeye (*Aesculus californica*)	503	6	20	Poor	High	4	$545.29
coast live oak (*Quercus agrifolia*)	504	14, 12	25	Very poor	High	12	$545.29
coast live oak (*Quercus agrifolia*)	505	20, 12	35	Fair	High	16	$1869.56
coast live oak (*Quercus agrifolia*)	506	9	20	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	507	15	25	Poor	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	508	12	25	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	509	20	25	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	510	20	25	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	511	9, 8	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	512	18	20	Good	High	12	$1869.56
California buckeye (*Aesculus californica*)	513	8, 6, 8, 4	20	Good	High	9	$1869.56
valley oak (*Quercus lobata*)	514	20	35	Good	Moderate	13	$6231.87

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	515	6	8	Good	Low	4	$545.29
valley oak (*Quercus lobata*)	516	6	8	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	517	6	8	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	518	7	10	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	519	4, 4	10	Good	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	520	6	8	Good	High	4	$545.29
valley oak (*Quercus lobata*)	521	10	10	Good	High	7	$545.29
valley oak (*Quercus lobata*)	522	6	8	Good	High	4	$545.29
blue oak (*Quercus douglasii*)	523	6, 6, 6, 4	20	Good	High	7	$1869.56
coast live oak (*Quercus agrifolia*)	524	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	525	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	526	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	527	6, 4	15	Good	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	528	6, 4	15	Good	Low	5	$1869.56
coast live oak (*Quercus agrifolia*)	529	8	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	530	8, 4, 4	15	Good	Low	7	$1869.56
coast live oak (*Quercus agrifolia*)	531	6, 4	15	Good	Low	5	$1869.56
coast live oak (*Quercus agrifolia*)	532	10	15	Good	Low	7	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	533	6, 4	15	Good	Moderate-high	5	$1869.56
coast live oak (*Quercus agrifolia*)	534	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	535	11, 7	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	536	10, 10	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	537	5, 4	15	Good	Moderate	4	$1869.56
coast live oak (*Quercus agrifolia*)	538	8	15	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	539	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	540	6	15	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	541	6, 6	15	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	542	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	543	7, 7	15	Good	High	7	$1869.56
coast live oak (*Quercus agrifolia*)	544	8	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	545	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	546	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	547	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	548	5, 2	15	Good	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	549	5, 4	15	Good	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	550	8	15	Good	High	5	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	551	8, 6	15	Good	High	7	$1869.56
coast live oak (*Quercus agrifolia*)	552	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	553	4, 5, 3	15	Good	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	554	6	15	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	555	8	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	556	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	557	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	558	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	559	8	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	560	8, 12	15	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	561	22	15	Good	High	15	$6231.87
coast live oak (*Quercus agrifolia*)	562	16, 6	15	Fair	Low	11	$1869.56
valley oak (*Quercus lobata*)	563	19	35	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	564	13	20	Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	565	20	30	Fair	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	566	20	35	Good	Low	13	$6231.87
California buckeye (*Aesculus californica*)	567	8, 12	20	Very poor	Low	10	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California buckeye (*Aesculus californica*)	568	7	20	Very poor	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	569	21, 15, 19, 17	35	Fair	Low	24	$1869.56
coast live oak (*Quercus agrifolia*)	570	16	25	Good	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	571	15	25	Good	Low	10	$1869.56
California buckeye (*Aesculus californica*)	572	10, 10, 8	25	Fair	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	573	7	10	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	574	7	10	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	575	6, 5	10	Good	Moderate	5	$1869.56
coast live oak (*Quercus agrifolia*)	576	9	10	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	577	8	10	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	578	8, 8	10	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	579	12	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	580	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	581	11, 8, 8, 9	25	Good	High	12	$1869.56
valley oak (*Quercus lobata*)	582	11	15	Good	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	583	11	15	Good	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	584	12	15	Good	High	8	$1869.56



Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	585	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	586	10, 10	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	587	13	15	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	588	16	15	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	589	8	15	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	590	10, 9, 9	15	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	591	9, 10	15	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	592	10, 9, 10	15	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	593	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	594	9, 7	15	Fair	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	595	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	596	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	597	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	598	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	599	8	20	Good	Moderate-high	5	$545.29
coast live oak (*Quercus agrifolia*)	600	8	20	Good	Moderate-high	5	$545.29
coast live oak (*Quercus agrifolia*)	601	6	10	Poor	High	4	$545.29
coast live oak (*Quercus agrifolia*)	602	6, 4	10	Fair	High	5	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
valley oak (*Quercus lobata*)	603	8	10	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	604	6	10	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	605	8	10	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	606	8	10	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	607	6	10	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	608	12, 8, 4	20	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	609	6, 6, 2	20	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	610	9	20	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	611	14	20	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	612	18	20	Good	Moderate-high	12	$1869.56
coast live oak (*Quercus agrifolia*)	613	13, 14	15	Fair	High	13	$1869.56
coast live oak (*Quercus agrifolia*)	614	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	615	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	616	13	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	617	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	618	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	619	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	620	9	15	Good	Moderate-high	6	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	621	15	15	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	622	5, 7	15	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	623	9, 8	15	Good	High	8	$1869.56
California bay laurel (*Umbellularia californica*)	624	12, 12, 10, 10, 14	35	Fair	High	17	$1869.56
coast live oak (*Quercus agrifolia*)	625	27	35	Very poor	High	18	$545.29
California bay laurel (*Umbellularia californica*)	626	8	15	Good	Moderate-high	5	$545.29
coast live oak (*Quercus agrifolia*)	627	8, 8	15	Very poor	High	8	$545.29
California bay laurel (*Umbellularia californica*)	628	8	15	Good	High	5	$545.29
California bay laurel (*Umbellularia californica*)	629	8, 4	15	Good	High	6	$1869.56
California bay laurel (*Umbellularia californica*)	630	8	15	Good	High	5	$545.29
California buckeye (*Aesculus californica*)	631	12, 8	15	Good	High	10	$1869.56
California buckeye (*Aesculus californica*)	632	7	10	Good	High	5	$545.29
California buckeye (*Aesculus californica*)	633	7	10	Good	High	5	$545.29
California bay laurel (*Umbellularia californica*)	634	7	15	Good	High	5	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	635	9	15	Good	High	6	$545.29
California bay laurel (*Umbellularia californica*)	636	20	15	Good	High	13	$6231.87
California bay laurel (*Umbellularia californica*)	637	10, 10	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	638	16, 20, 8	30	Good	High	18	$1869.56
California bay laurel (*Umbellularia californica*)	639	8, 13	20	Good	High	10	$1869.56
California bay laurel (*Umbellularia californica*)	640	7, 7, 7	15	Fair	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	641	20	15	Very poor	Moderate-high	13	$545.29
coast live oak (*Quercus agrifolia*)	642	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	643	7	15	Good	High	5	$545.29
California buckeye (*Aesculus californica*)	644	7	15	Fair	High	5	$545.29
California bay laurel (*Umbellularia californica*)	645	7	15	Fair	High	5	$545.29
black oak (*Quercus kelloggii*)	646	12, 8	20	Fair	Moderate-high	10	$1869.56
California buckeye (*Aesculus californica*)	647	7, 7, 8, 6	15	Poor	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	648	5, 10	15	Good	High	7	$1869.56
coast live oak (*Quercus agrifolia*)	649	14	15	Good	High	9	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	650	16	15	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	651	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	652	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	653	11	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	654	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	655	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	656	7	15	Good	High	5	$545.29
valley oak (*Quercus lobata*)	657	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	658	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	659	7, 9	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	660	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	661	10	8	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	662	7	8	Good	High	5	$545.29
valley oak (*Quercus lobata*)	663	6	8	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	664	13		Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	665	10		Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	666	6, 2	8	Good	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	667	7	10	Good	High	5	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	668	6, 5, 5	10	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	669	6, 5, 5	10	Good	Moderate-high	6	$1869.56
coast live oak (*Quercus agrifolia*)	670	30	35	Good	Low	20	$6231.87
coast live oak (*Quercus agrifolia*)	671	23	25	Good	Low	15	$6231.87
coast live oak (*Quercus agrifolia*)	672	7	8	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	673	22	20	Fair	Low	15	$6231.87
coast live oak (*Quercus agrifolia*)	674	28	20	Fair	Low	19	$6231.87
coast live oak (*Quercus agrifolia*)	675	10	1	Fair	Low	7	$545.29
toyon (*Heteromeles arbutifolia*)	676	6, 6	15	Good	Low	6	$1869.56
California bay laurel (*Umbellularia californica*)	677	8	10	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	678	9	15	Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	679	12	25	Fair	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	680	8	10	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	681	20	30	Good	Low	13	$6231.87
valley oak (*Quercus lobata*)	682	20	25	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	683	12	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	684	12	20	Good	Low	8	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	685	14	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	686	12, 12, 12	30	Poor	High	14	$1869.56
coast live oak (*Quercus agrifolia*)	687	10	20	Fair	High	7	$545.29
valley oak (*Quercus lobata*)	688	8	20	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	689	20	35	Good	High	13	$6231.87
valley oak (*Quercus lobata*)	690	14	35	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	691	20, 15	25	Very poor	High	17	$545.29
coast live oak (*Quercus agrifolia*)	692	10	25	Very poor	Low	7	$545.29
valley oak (*Quercus lobata*)	693	20	25	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	694	12, 8	15	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	695	12, 10, 8, 8, 8	20	Fair	Low	14	$1869.56
coast live oak (*Quercus agrifolia*)	696	19	30	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	697	8	15	Good	Moderate-high	5	$545.29
coast live oak (*Quercus agrifolia*)	698	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	699	10, 10	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	700	14	20	Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	701	16	20	Poor	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	702	16, 14	10	Dead/ Unstable	Low	14	

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	703	12	20	Poor	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	704	54	45	Fair	Low	36	$6231.87
coast live oak (*Quercus agrifolia*)	705	24, 24	20	Dead/ Unstable	Low	23	
coast live oak (*Quercus agrifolia*)	706	32	20	Dead/ Unstable	Low	21	
valley oak (*Quercus lobata*)	707	8	10	Dead/ Unstable	Low	5	
coast live oak (*Quercus agrifolia*)	708	27	35	Good	Moderate	18	$6231.87
coast live oak (*Quercus agrifolia*)	709	24	35	Good	Moderate-high	16	$6231.87
California bay laurel (*Umbellularia californica*)	710	9	15	Good	High	6	$545.29
California bay laurel (*Umbellularia californica*)	711	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	712	22	20	Dead/ Unstable	High	15	
California bay laurel (*Umbellularia californica*)	713	6, 4		Good	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	714	22	35	Good	High	15	$6231.87
coast live oak (*Quercus agrifolia*)	715	18	25	Very poor	High	12	$545.29
coast live oak (*Quercus agrifolia*)	716	8	10	Very poor	Low	5	$545.29
California buckeye (*Aesculus californica*)	717	7	10	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	718	7, 4	20	Fair	Moderate	5	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	719	10	15	Fair	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	720	30, 17	35	Fair	Low	23	$1869.56
California bay laurel (*Umbellularia californica*)	721	9	10	Fair	Low	6	$545.29
California bay laurel (*Umbellularia californica*)	722	7	10	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	723	32, 23	30	Dead/ Unstable	Moderate	26	
coast live oak (*Quercus agrifolia*)	724	10	15	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	725	8	10	Dead/ Unstable	High	5	
California bay laurel (*Umbellularia californica*)	726	7, 4	15	Good	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	727	11	15	Very poor	High	7	$545.29
California bay laurel (*Umbellularia californica*)	728	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	729	24, 24	45	Very poor	High	23	$545.29
California bay laurel (*Umbellularia californica*)	730	22	35	Good	High	15	$6231.87
California bay laurel (*Umbellularia californica*)	731	48	45	Fair	High	32	$6231.87
coast live oak (*Quercus agrifolia*)	732	13	35	Fair	High	9	$1869.56
valley oak (*Quercus lobata*)	733	18	0	Dead/ Unstable	High	12	

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	734	8	20	Good	High	5	$545.29
valley oak (*Quercus lobata*)	735	16	20	Fair	High	11	$1869.56
valley oak (*Quercus lobata*)	736	12	20	Fair	High	8	$1869.56
California bay laurel (*Umbellularia californica*)	737	7	15	Fair	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	738	7	15	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	739	10	20	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	740	10	15	Fair	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	741	18	20	Fair	Low	12	$1869.56
California bay laurel (*Umbellularia californica*)	742	7	10	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	743	19	0	Dead/ Unstable	Low	13	
coast live oak (*Quercus agrifolia*)	744	8	10	Poor	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	745	16	25	Very poor	Low	11	$545.29
coast live oak (*Quercus agrifolia*)	746	7	15	Poor	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	747	10	15	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	748	9	10	Good	High	6	$545.29
valley oak (*Quercus lobata*)	749	30	35	Good	High	20	$6231.87

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	750	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	751	10	15	Good	Moderate	7	$545.29
California bay laurel (*Umbellularia californica*)	752	8	15	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	753	15, 15, 13	35	Fair	High	17	$1869.56
coast live oak (*Quercus agrifolia*)	754	12, 12, 14	35	Fair	High	15	$1869.56
olive (*Olea europaea*)	755	11	25	Good	High	7	$545.29
California bay laurel (*Umbellularia californica*)	756	12	15	Good	High	8	$1869.56
California bay laurel (*Umbellularia californica*)	757	8	15	Good	High	5	$545.29
valley oak (*Quercus lobata*)	758	14	25	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	759	16	25	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	760	10, 8	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	761	12	15	Very poor	High	8	$545.29
valley oak (*Quercus lobata*)	762	12, 12	25	Poor	High	11	$1869.56
valley oak (*Quercus lobata*)	763	16		Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	764	5, 12		Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	765	17, 16		Poor	High	16	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	766	22		Good	High	15	$6231.87
coast live oak (*Quercus agrifolia*)	767	13		Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	768	6		Good	High	4	$545.29
California bay laurel (*Umbellularia californica*)	769	15, 12, 8, 6		Poor	High	14	$1869.56
coast live oak (*Quercus agrifolia*)	770	9		Dead/ Unstable	Moderate	6	
coast live oak (*Quercus agrifolia*)	771	12		Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	772	13		Dead/ Unstable	High	9	
coast live oak (*Quercus agrifolia*)	773	12		Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	774	12		Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	775	12		Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	776	9		Very poor	High	6	$545.29
coast live oak (*Quercus agrifolia*)	777	8, 6		Very poor	High	7	$545.29
coast live oak (*Quercus agrifolia*)	778	12		Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	779	12, 6		Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	780	6, 6, 6, 8		Good	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	781	15		Good	Low	10	$1869.56
coast live oak (*Quercus agrifolia*)	782	14		Good	Low	9	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	801	12, 10	25	Very poor	Moderate-high	10	$545.29
coast live oak (*Quercus agrifolia*)	802	11	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	803	11	15	Fair	Moderate-high	7	$545.29
coast live oak (*Quercus agrifolia*)	804	15	20	Poor	Low	10	$1869.56
coast live oak (*Quercus agrifolia*)	805	18	15	Poor	Moderate-high	12	$1869.56
coast live oak (*Quercus agrifolia*)	806	10, 6	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	807	23	20	Good	High	15	$6231.87
California bay laurel (*Umbellularia californica*)	808	10	15	Good	High	7	$545.29
madrone (*Arbutus menziesii)*	809	13	5	Dead/ Unstable	High	9	
madrone (*Arbutus menziesii)*	810	10	5	Dead/ Unstable	High	7	
coast live oak (*Quercus agrifolia*)	811	19	30	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	812	18	30	Good	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	813	8, 8, 8, 10	30	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	814	22	30	Poor	High	15	$6231.87
California bay laurel (*Umbellularia californica*)	815	6, 6	15	Fair	Moderate-high	6	$1869.56
valley oak (*Quercus lobata*)	816	10	15	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	817	18	25	Good	Moderate-high	12	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	818	16	20	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	819	13	25	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	820	14	25	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	821	6	10	Very poor	High	4	$545.29
coast live oak (*Quercus agrifolia*)	822	13	20	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	823	8	15	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	824	16	20	Good	Moderate-high	11	$1869.56
coast live oak (*Quercus agrifolia*)	825	16	20	Good	Moderate-high	11	$1869.56
coast live oak (*Quercus agrifolia*)	826	9		Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	827	13		Good	Low	9	$1869.56
California bay laurel (*Umbellularia californica*)	828	9	15	Good	Low	6	$545.29
California bay laurel (*Umbellularia californica*)	829	13	15	Good	Low	9	$1869.56
California bay laurel (*Umbellularia californica*)	830	8	15	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	831	7, 5	15	Fair	Low	6	$1869.56
California bay laurel (*Umbellularia californica*)	832	14, 12	25	Fair	Low	12	$1869.56
California bay laurel (*Umbellularia californica*)	833	11	20	Good	Low	7	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	834	19, 24, 30	30	Dead/ Unstable	Low	29	
California bay laurel (*Umbellularia californica*)	835	6	10	Fair	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	836	6	10	Fair	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	837	6	10	Fair	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	838	8	10	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	839	26, 15	20	Very poor	Low	20	$545.29
California bay laurel (*Umbellularia californica*)	840	6	15	Good	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	841	6	15	Good	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	842	6, 5	15	Good	Low	5	$1869.56
California bay laurel (*Umbellularia californica*)	843	8	15	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	844	9	15	Good	Low	6	$545.29
California bay laurel (*Umbellularia californica*)	845	12	15	Very poor	Low	8	$545.29
California bay laurel (*Umbellularia californica*)	846	8	15	Good	Low	5	$545.29
madrone (*Arbutus menziesii)*	847	6	15	Poor	Low	4	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
madrone (*Arbutus menziesii)*	848	8	15	Poor	Low	5	$545.29
madrone (*Arbutus menziesii)*	849	10	15	Poor	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	850	9	15	Fair	Low	6	$545.29
madrone (*Arbutus menziesii)*	851	8	20	Dead/ Unstable	Low	5	
valley oak (*Quercus lobata*)	852	10, 10	20	Good	Low	9	$1869.56
madrone (*Arbutus menziesii)*	853	10	15	Good	Low	7	$545.29
madrone (*Arbutus menziesii)*	854	9	15	Fair	High	6	$545.29
valley oak (*Quercus lobata*)	855	12, 12	15	Dead/ Unstable	High	11	
coast live oak (*Quercus agrifolia*)	856	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	857	10	20	Good	High	7	$545.29
California buckeye (*Aesculus californica*)	858	6, 6, 8	25	Good	High	8	$1869.56
black oak (*Quercus kelloggii*)	859	15, 11	20	Very poor	High	12	$545.29
California bay laurel (*Umbellularia californica*)	860	12	20	Good	High	8	$1869.56
black oak (*Quercus kelloggii*)	861	42	35	Good	High	28	$6231.87
California bay laurel (*Umbellularia californica*)	862	16	25	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	863	8, 8	20	Very poor	High	8	$545.29
valley oak (*Quercus lobata*)	864	12	15	Very poor	Moderate	8	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	865	12, 10	20	Fair	Moderate	10	$1869.56
California bay laurel (*Umbellularia californica*)	866	8	20	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	867	20	20	Very poor	High	13	$545.29
valley oak (*Quercus lobata*)	868	14	25	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	869	22	20	Dead/ Unstable	High	15	
black oak (*Quercus kelloggii*)	870	30	45	Good	High	20	$6231.87
California bay laurel (*Umbellularia californica*)	871	6	20	Fair	High	4	$545.29
valley oak (*Quercus lobata*)	872	12	35	Poor	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	873	19	25	Fair	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	874	18	25	Fair	High	12	$1869.56
valley oak (*Quercus lobata*)	875	19	35	Fair	Moderate-high	13	$6231.87
coast live oak (*Quercus agrifolia*)	876	18, 18, 18	45	Very poor	Moderate-high	21	$545.29
coast live oak (*Quercus agrifolia*)	877	24	20	Dead/ Unstable	High	16	
California bay laurel (*Umbellularia californica*)	878	8, 6, 6, 4, 4	20	Fair	High	9	$1869.56
valley oak (*Quercus lobata*)	879	14	20	Poor	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	880	19	20	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	881	30	35	Good	High	20	$6231.87

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	882	32, 24	35	Fair	Moderate-high	27	$1869.56
coast live oak (*Quercus agrifolia*)	883	24	25	Fair	High	16	$6231.87
coast live oak (*Quercus agrifolia*)	884	16	20	Poor	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	885	7		Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	886	7		Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	887	22, 22	25	Very poor	Moderate	21	$545.29
coast live oak (*Quercus agrifolia*)	888	34	35	Very poor	Low	23	$545.29
coast live oak (*Quercus agrifolia*)	889	13	20	Good	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	890	6	10	Good	Low	4	$545.29
coast live oak (*Quercus agrifolia*)	891	6, 4	10	Good	Low	5	$1869.56
coast live oak (*Quercus agrifolia*)	892	13	25	Good	High	9	$1869.56
California bay laurel (*Umbellularia californica*)	893	6, 8, 12	25	Fair	Low	10	$1869.56
California bay laurel (*Umbellularia californica*)	894	8	15	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	895	10	15	Good	Low	7	$545.29
California bay laurel (*Umbellularia californica*)	896	7	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	897	17	8	Very poor	High	11	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	898	17	8	Very poor	Low	11	$545.29
coast live oak (*Quercus agrifolia*)	899	13	15	Poor	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	900	24, 24	35	Very poor	Low	23	$545.29

Appendix C: Photographs

C1: General tree and site conditions



C2: General tree and site conditions



C3: General tree and site conditions

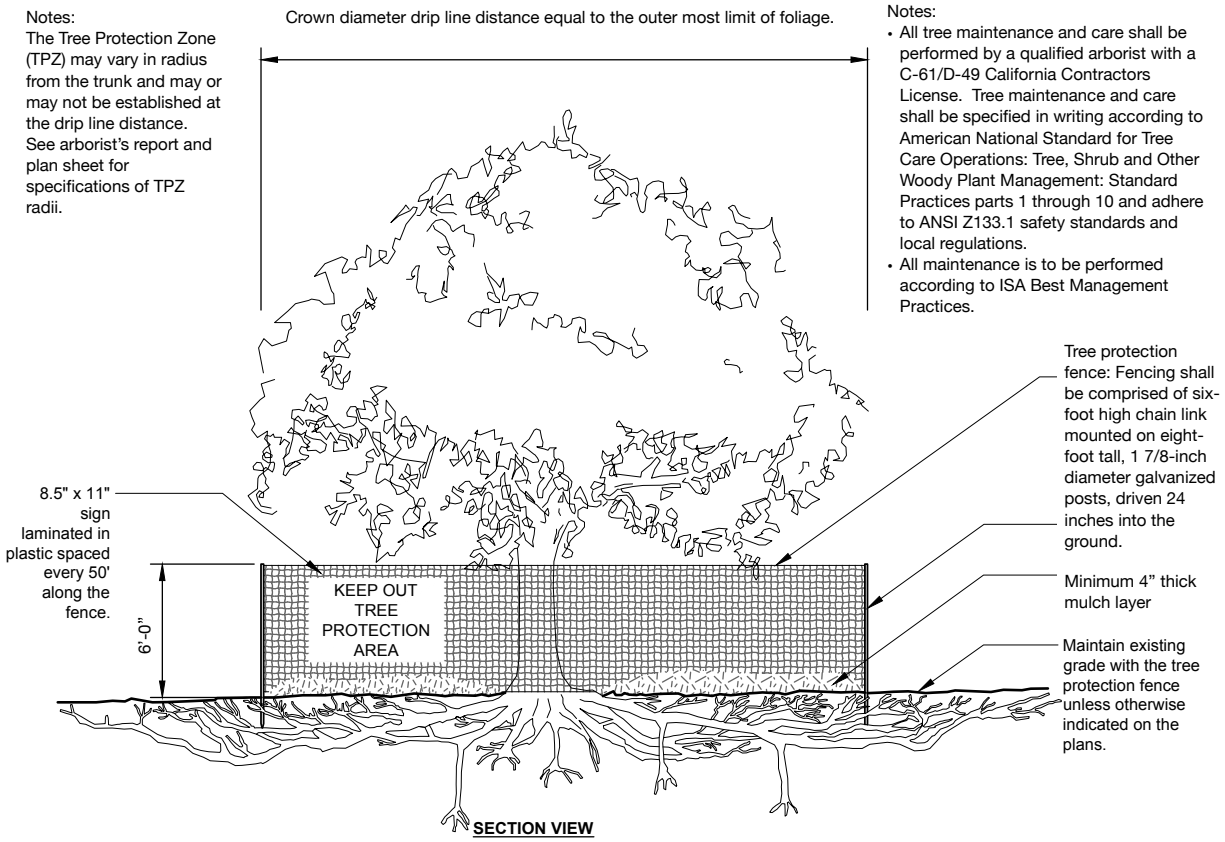


C4: General tree and site conditions



Appendix D: Tree Protection Guidelines

D1: Tree Protection Plan Sheet Detail



S-X TREE PROTECTION

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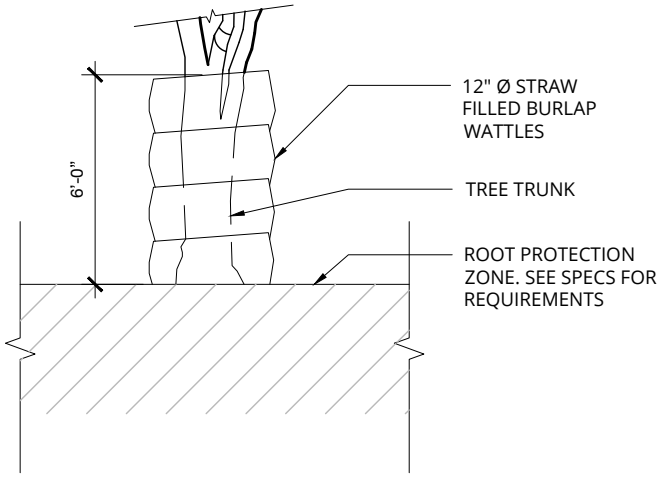
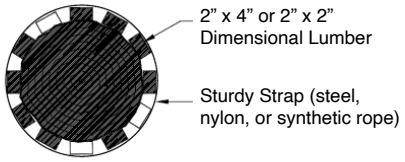
D2: Trunk Protection Detail



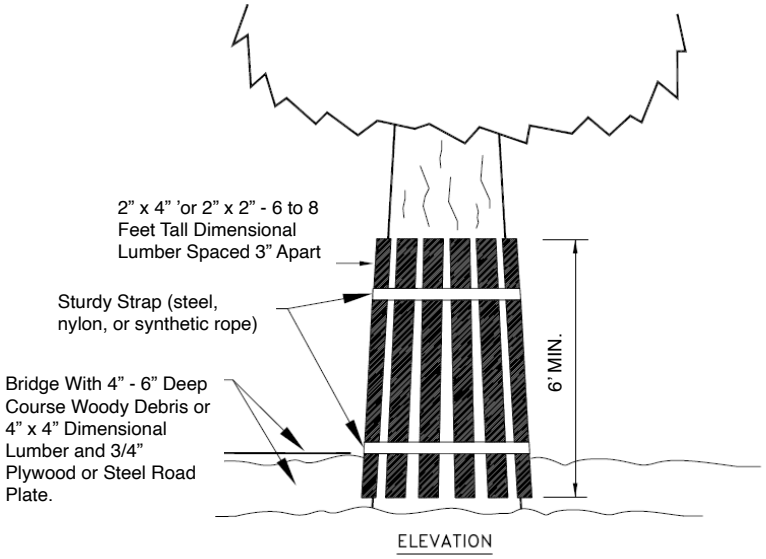
SECTION VIEW

S-Y TRUNK PROTECTION WITH WATTLE

Note: See Local Ordinance Requirements and Arborist's Report for Additional Protection Specifications and Guidelines.



PLAN



ELEVATION

Trunk Protection Vertical Timber Detail

15-50.120 - Setback of new construction from existing trees

Unless otherwise permitted by the approving authority, no structure, excavation or impervious surface areas of any kind shall be constructed or installed within the root zone of any protected tree without mitigating special design, such as post and beam footings that bridge the roots. No parking, storing of vehicles, equipment or other materials shall be permitted within the dripline of any protected tree without special design considerations approved by the Community Development Director and the City Arborist.

15-50.140 - Tree preservation plan.

A. A Tree Preservation Plan shall be required for any project approved pursuant to Chapters 14, 15 and 16 of the Code on any site on which an Arborist Report is prepared.
B. The Tree Preservation Plan shall consist of a separate detailed plan drawn to a sufficient scale but no larger than twenty feet to the inch, with any details to be shown at least ten to the inch) to clearly indicate all protection and mitigation measures to be taken as required by the Community Development Director and/or the Arborist Report for the project.
C. When a project has been submitted for approval pursuant to Chapters 14, 15, or 16, there shall be no permits issued for grading or site improvements until a Tree Preservation Plan for the project has been approved by the Community Development Director and the required protection measures are determined to be in place throughout City inspection. Protection measures required shall remain in place for the duration of the construction activity at the project site, or as otherwise required by the City and shall not be removed until authorized by the Community Development Director.
D. The Tree Preservation Plan and any permits for tree removal shall be maintained at the project site at all times during construction activities and until all work has been completed, inspected and approved by the City.
E. At least three scheduled inspections shall be made by the City to ensure compliance with the Tree Preservation Plan. The inspections shall, at a minimum include the following: (1) Initial inspection prior to any construction or grading, (2) After completion of drought grading and/or trenching, and (3) Completion of all work including planting and irrigation system installation. Other inspections may be conducted as required by the Community Development Director.

Pre-Construction Meeting with the Project Arborist

Tree protection locations should be marked before any fencing contractor arrives.

Prior to beginning work, all contractors involved with the project should attend a pre construction meeting with the project arborist to review the tree protection guidelines. Access routes, storage areas, and work procedures will be discussed.

Tree Protection Zones and Fencing

Tree protection fencing should be established prior to the arrival of construction equipment or materials on site. Fencing should be comprised of six-foot high chain link fencing mounted on eight-foot tall, 1 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced no more than 10 feet apart. Once established, the fencing must remain undisturbed and be maintained throughout the construction process until final inspection.

The fencing should be maintained throughout the site during the construction period and should be inspected periodically for damage and proper functions.

Fencing should be repaired, as necessary, to provide a physical barrier from construction activities.

A final inspection by the city arborist at the end of the project will be required prior to removing any tree protection fence and replacement tree shall be planted at this time.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Restrictions Within the Tree Protection Zone

No storage of construction materials, debris, or excess soil will be allowed within the Tree Protection Zone. Spoils from the trenching shall not be placed within the tree protection zone either temporarily or permanently. Construction personnel and equipment shall be routed outside the tree protection zones.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Boring or Tunneling

Boring machines should be set up outside the drip line or established Tree Protection Zone. Boring may also be performed by digging a trench on both sides of the tree until roots one inch in diameter are encountered and then hand dug or excavated with an Air Spade® or similar air or water excavation tool. Bore holes should be adjacent to the trunk and never go directly under the main stem to avoid oblique (heart) roots. Bore holes should be a minimum of three feet deep.

Timing

If the construction is to occur during the summer months supplemental watering and bark beetle treatments should be applied to help ensure survival during and after construction.

Tree Pruning and Removal Operations

All tree pruning or removals should be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree pruning should be specified according to ANSI A-300A pruning standards and adhere to ANSI Z133.1 safety standards. Trees that need to be removed or pruned should be identified in the pre-construction walk th drought.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited. Text on the signs should be in both English and Spanish (Appendix C) and read TREE PROTECTION ZONE
DO NOT MOVE OR REMOVE FENCE WITHOUT PRIOR APPROVAL FROM THE CITY ARBORIST, THE CITY ARBORIST (408) 868-1276. DO NOT MOVE WITHOUT APPROVAL FROM THE PROJECT ARBORIST

Security Deposit

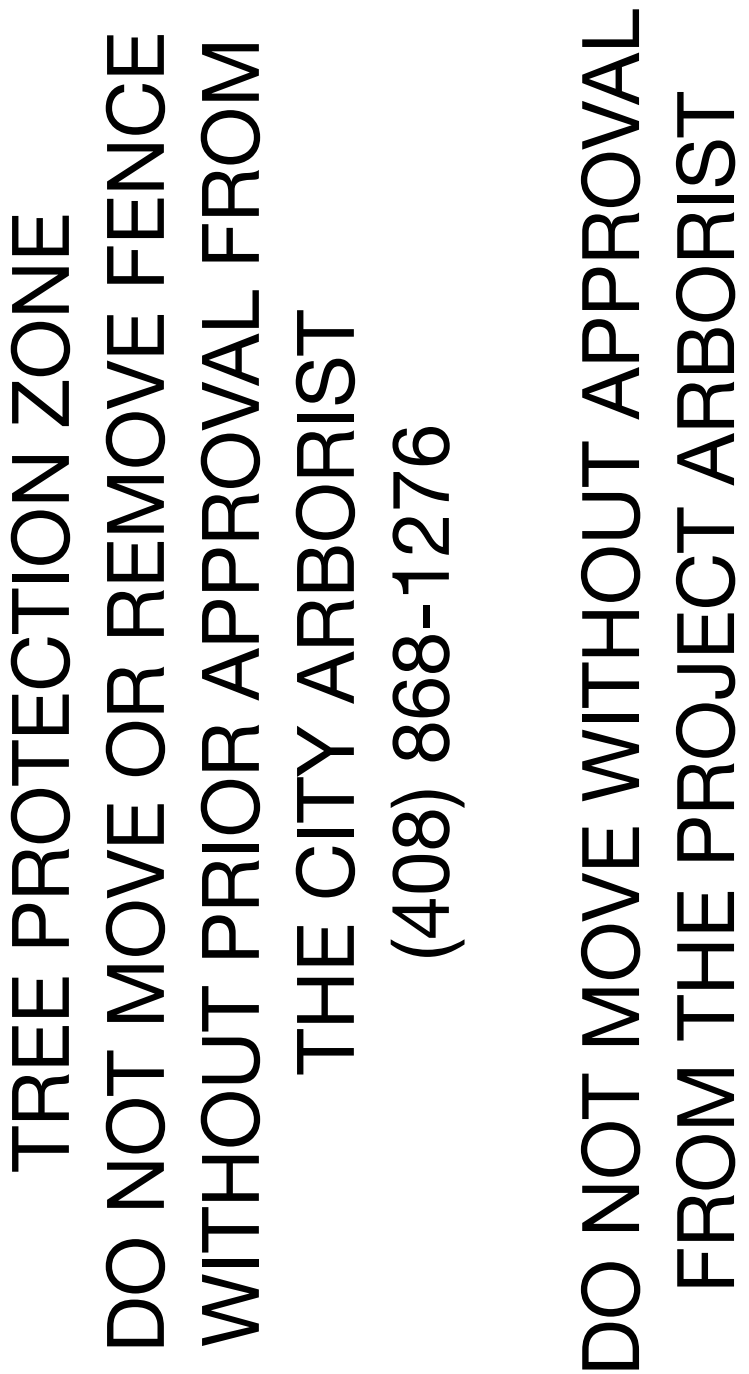
The tree protection security deposit is to remain in place for the duration of the project to ensure protection. Once the project is completed, inspected, and approved by the city arborist (a building inspector cannot release the tree security deposit) the bond will be released. Trees damaged by construction activity will require replanting equal to the appraised value state herein.

15-50.080 - Determination on permit

(d) Security deposits and maintenance bonds. In the case of an application for, or a project involving encroachment on one or more protected trees, the applicant shall post a security deposit with the City in an amount equal to twenty-five percent to one hundred percent of the ISA valuation of the trees involved at the discretion of the approving authority; provided, however, that any project involving multiple structures or a multi-family structure shall post a security deposit with the City in an amount equal to one hundred percent of the ISA valuation of the trees involved. The City may also require posting of a maintenance bond or security deposit of at least five years designed to ensure long term maintenance of the affected or replacement trees. Security deposits or maintenance bonds required for protected trees or replacement trees in public or private development may, in the reasonable discretion of the Community Development Director, be refunded upon a determination that the project is in compliance with the City Arborist's requirements and/or Tree Preservation Plan. In the case of violations of this Article or where replacement, restitution, or other remedy required pursuant to Section 15-50.170 cannot be made on the project site, then such payments shall be made from the deposit or bond being held before any refund is made.

Appendix E: Tree Protection Signs

E1: English



E2: Spanish

ÁRBOL DE ZONA DE PROTECCIÓN
NO trasladar o eliminar cerca sin la aprobación previa Del ARBORISTA CIUDAD, (408) 868-1276

NO MUEVA sin la aprobación del ARBORISTA PROYECTO

Qualifications, Assumptions, and Limiting Conditions

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or attend meetings, hearings, conferences, mediations, arbitration, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only examined items and their condition at the time of inspection; and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.

Certification of Performance

I Richard Gessner, Certify:

That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and/or appraisal is stated in the attached report and Terms of Assignment;

That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;

That the analysis, opinions and conclusions stated herein are my own;

That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;

That no one provided significant professional assistance to the consultant, except as indicated within the report.

That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any other subsequent events;

I further certify that I am a Registered Consulting Arborist® with the American Society of Consulting Arborists, and that I acknowledge, accept and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Board Certified Master Arborist® and Tree Risk Assessor Qualified. I have been involved with the practice of Arboriculture and the care and study of trees since 1998.

Richard J. Gessner 

ASCA Registered Consulting Arborist® #496
ISA Board Certified Master Arborist® WE-4341B

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C.2 - Aquatic Resources Delineation Report

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Aquatic Resources Delineation Report
Saratoga Mountain Winery Residential Project
City of Saratoga, Santa Clara County, California

Prepared for:
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Los Gatos, CA 95032

Contact: William Hirschman

Prepared by:
FirstCarbon Solutions
2999 Oak Road, Suite 250
Walnut Creek, CA 94597
925.357.2562

Contact: Jason Brandman, Project Director
Robert Carroll, Senior Biologist

Date: November 17, 2023

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SECTION 1: INTRODUCTION

At the request of Chateau Masson, LLC, FirstCarbon Solutions (FCS) completed a delineation of aquatic resources and proposes a jurisdictional determination for the 72.45-acre Saratoga Mountain Winery Residential Project Study Area (Study Area) as depicted on Exhibits 1 to 3.

The purpose of this report is to support jurisdictional determinations by the United States Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB); to support California Department of Fish and Wildlife (CDFW) evaluation pursuant to Fish and Game Code Sections 1602, *et seq*. (Streambed Alteration Program); and to support the project applicant's planning and permitting efforts for a proposed development project.

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SECTION 2: ENVIRONMENTAL SETTING

2.1 - Location

The 72.45-acre Study Area is located within the western periphery of the City of Saratoga, east of the Mountain Winery and north of California State Route 9 (CA-9). The Study Area is centered around 37.260926° latitude and -122.056802° longitude. The location of the Study Area within the southern San Francisco Bay Region is shown on Exhibit 1, and the Study Area boundaries on a recent high-resolution aerial image are shown on Exhibit 2.

2.2 - Vegetation and Land Cover Types

Vegetation of different parts of the Study Area are dominated by a mix of typical upland and riparian vegetation for this location. Dominant vegetation/landcover types include well developed mixed oak woodlands which co-occur with riparian woodland habitat within certain drainages in the Study Area. Species within these areas generally contain coast live oak (*Quercus agrifolia)*, valley oak (*Quercus lobata)*, California bay (*Umbellularia californica)*, arroyo willow (*Salix lasiolepis*), and others. Understory vegetation includes French broom (*Genista monspessulana*), poison oak (*Toxicodendron diversilobum*), common snowberry (*Symphoricarpos albus*), and others.

Coastal scrub present throughout the Study Area includes coyote brush (*Baccharis pilularis*), chamise (*Adenostoma fasciculatum*), California sagebrush (*Artemisia californica),* and others. Ruderal vegetation/landcover areas are present and associated with on-site access roads and contain weedy species such as yellow star thistle (*Centaurea solstitialis*), telegraph weed (*Heterotheca grandiflora*), stinkwort (*Dittrichia graveolens*), field bindweed (*Convolvulus arvensis)*, and others. Non-native annual grassland is also present and concentrated within the northern portion of the Study Area. Species observed within this vegetation/land cover type included wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus),* Italian ryegrass (*Festuca perennis),* and others. Vegetation associated with drainage channels is described for each feature in more detail, below.

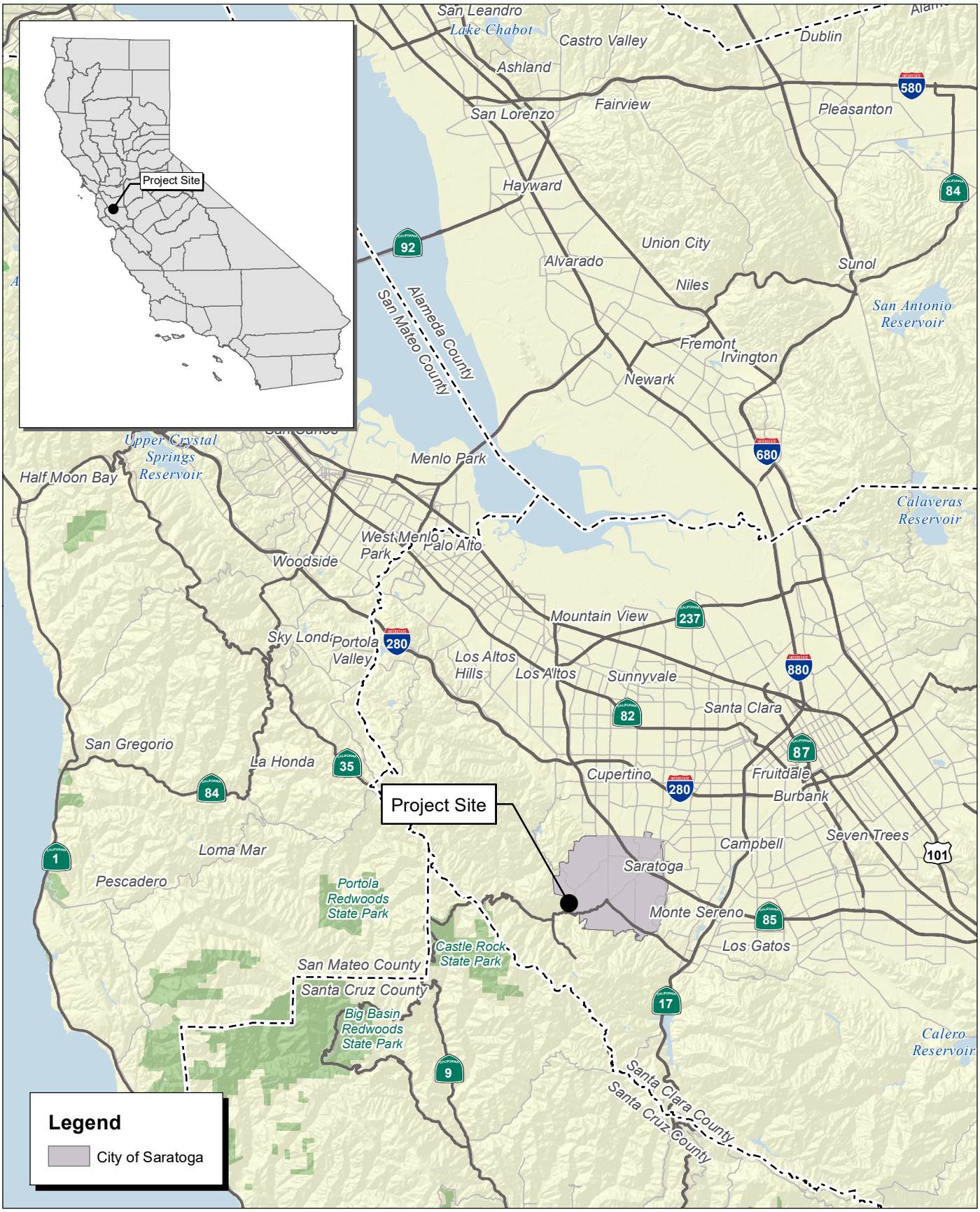
2.3 - Topography and Hydrogeomorphology

Elevation within the Study Area ranges from 1,118 feet above mean sea level (MSL) on the western boundary to 625 feet MSL along the northern boundary. Elevations along the eastern and southern boundary are approximately 865 and 750 feet MSL, respectively. A ridge occurs on the western boundary of the Study Area which extends in a southeasterly direction toward the center of the Study Area. Elevations are significantly reduced from the ridge to the north, south and east. Subsequently, existing topography indicates the Study Area generally drains direct precipitation to the north and south of the on-site ridge through a network of ephemeral and intermittent drainage channels. The majority of the Study Area conveys collected runoff to the north, ultimately emptying into Calabazas Creek, a tributary of the San Francisco Bay. Additionally, isolated ephemeral drainages due to the construction of Mountain Winery Road in the southern area of the Study Area likely drain direct precipitation and convey runoff to the southeast and southwest.

2.4 - Soils

The soils of 75 percent of the Study Area are mapped by Natural Resources Conservation Service (NRCS) as Mouser-Katykat-Sanikara complex. Approximately 18 percent of the Study Area were mapped as Literr-Urbanland-Merbeth complex. Smaller portions of the Study Area consist of Katykat-Sanikara complex and Sanikara-Rock Outcrop complex. None of the soil types mapped or observed are classified as hydric soils.[1]

[1] United States Department of Agriculture (USDA), Natural Resources Conservation Service. 2023. Web Soil Survey 3.3.2. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed October 2023.



Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

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5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

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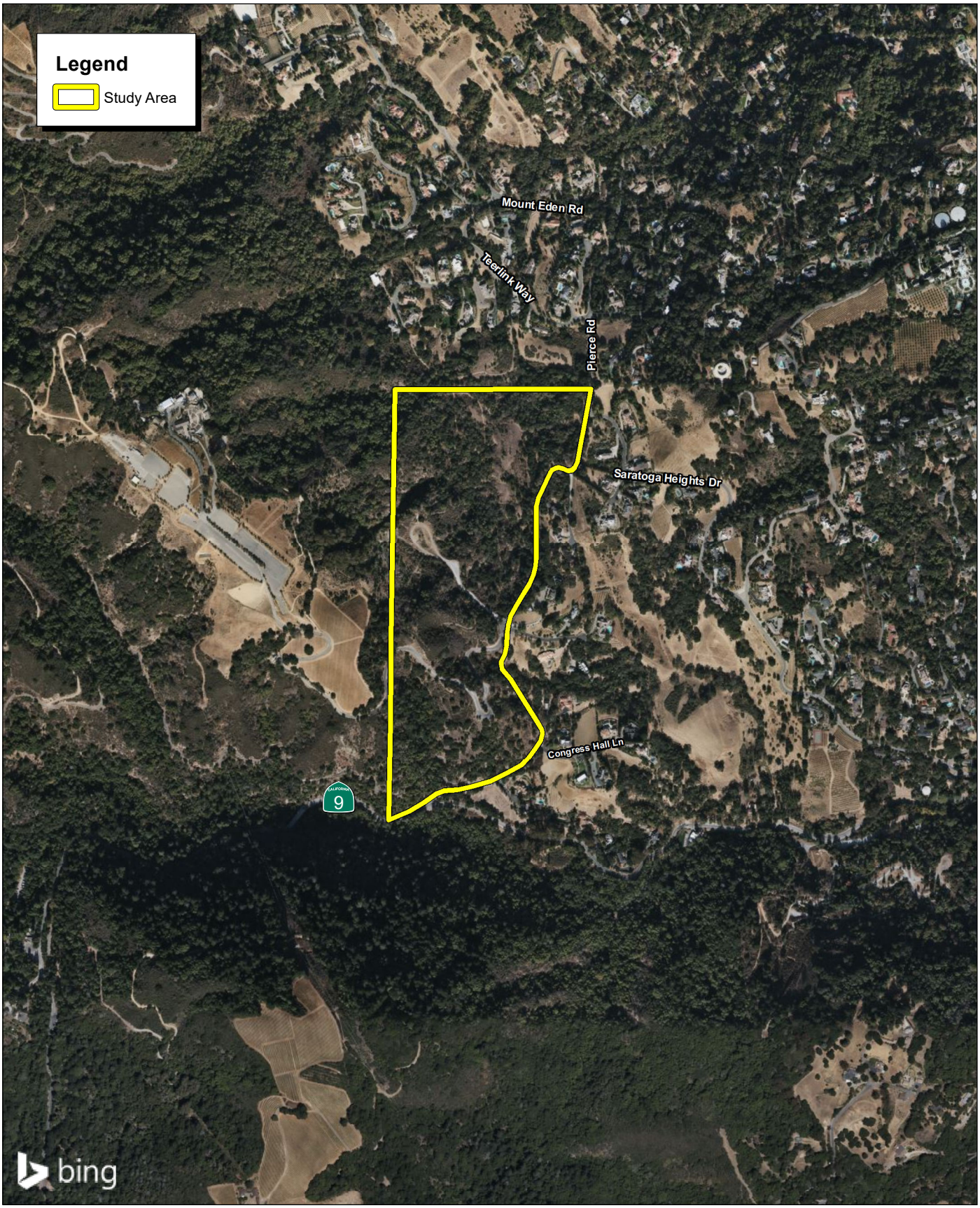

Source: Bing Aerial Imagery.

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1,000 500 0 1,000
Feet

Exhibit 2
Local Vicinity Map

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SECTION 3: REGULATORY SETTING

3.1 - Federal

3.1.1 - Clean Water Act

The USACE administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the United States.

As of the preparation of this report on November 9, 2023, the final "Revised Definition of Waters of the United States" rule was published in the Federal Register on January 18, 2023, and took effect on March 20, 2023. However, the final rule is not currently operative in certain states and for certain parties due to litigation. Moreover, the United States Environmental Protection Agency (EPA) and USACE (hereafter known as the agencies) are in receipt of the U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*. In light of this decision, the agencies will interpret the phrase "waters of the United States" consistent with the Supreme Court's decision in *Sackett*.[2] As a result of ongoing litigation, the agencies are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice.

Therefore, since the agencies are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice, our analysis follows 40 Code of Federal Regulations 230.3(s) in effect under the pre-2015 regulatory regime, which defines "waters of the United States" as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
2. All interstate waters including interstate wetlands.
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
   a) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
   b) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
   c) Which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under this definition.

[2] United States Environmental Protection Agency (EPA). 2023. Website: https://www.epa.gov/wotus/current-implementation-waters-united-states. Accessed July 12, 2023.

5. Tributaries of waters identified in paragraphs(s) (1) through (4) of this section.
6. The territorial sea.
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs(s) (1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 Code of Federal Regulations 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA and/or USACE.

"Wetland" refers to areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and seasonal wetlands. Wetlands are considered jurisdictional if they fall under one of the categories of waters of the United States defined above. The USACE jurisdiction typically extends up to the ordinary high water mark (OHWM).

In general, a USACE permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on the impacted acreage, the purpose of the proposed fill, and other factors. Additionally, Section 401 of the CWA states that "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, applicants seeking to fill waters of the United States are required to obtain a CWA Section 401 Water Quality Certification from the RWQCB.

3.2 - State

3.2.1 - California Porter-Cologne Water Quality Control Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State" (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)). In 2019, the California State Water Resources Control Board (State Water Board) published the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) to guide wetland waters of the State determinations and the permitting process.[3]

[3] California State Water Resources Control Board (State Water Board). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. October 20, 2023.

3.2.2 - California Fish and Game Code

Sections 1600-1617 of the California Fish and Game Code require that a Notification of Lake or Streambed Alteration be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions in the Notification and, if necessary, prepares a Lake or Streambed Agreement that includes measures to protect fish and wildlife resources.

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SECTION 4: METHODS

FCS Senior Biologist Robert Carroll, assisted by FCS GIS Analyst Sebastian Macias, surveyed the Study Area on October 26, 2023, as described in the following section.

4.1 - Wetlands

The presence/absence of wetlands was determined based on the requirements of the *Corps of Engineers Wetlands Delineation Manual* and revised procedures in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*.[4,5] These procedures include standards that define wetlands, including specific saturation and/or ponding regimes, and evaluate hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland indicator status of vegetation follows the 2018 National Wetland Plant List for the Arid West Region.[6]

4.2 - Drainage Channels and Tributaries

Drainage channels were characterized through presence/absence of bed, bank, and OHWM; hydrology; and hydrological connectivity. The OHWM is determined and characterized using definitions and guidance of *A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States*.[7] A discussion of what constitutes a potentially jurisdictional "tributary" pursuant to *Sackett v. EPA* and which features, such as ditches or ephemeral drainages, may be excluded from the definition of waters of the United States is provided in Section 5, below.

Culverted drainage sections were examined for evidence of concentrated flow, including presence of water stains, mineral or sediment deposits, and biofilm.

4.2.1 - Definitions of Hydrological Regimes

An ephemeral stream is defined as a watercourse that carries only surface runoff and flows during and immediately after periods of precipitation. An intermittent stream is defined as a watercourse that is temporally intermittent or seasonal and that flows during the wet season, continues to flow after the period of precipitation, and ceases surface flow during at least part of the dry season. Intermittent streams are typically shown as a dashed blue line on United States Geological Survey (USGS) quadrangle maps.

A perennial stream is a watercourse that flows throughout the year. Riparian vegetation is defined as vegetation associated with a watercourse and relying on the higher level of water provided by the watercourse. Riparian vegetation can include trees, shrubs, and/or herbaceous plants.

[4] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1.
[5] United States Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28.
[6] The National Wetland Plant List–Arid West Version 1. 2018. United States Army Corps of Engineers.
[7] Lichvar, R.W. and S.M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.

4.3 - Additional Background Information Review

Additional relevant information about the Study Area was reviewed, including current and historical aerial imagery, the Watershed Assessment, Tracking and Environmental Results System (WATERS), the EPA's National Hydrography Data Set Plus (NHDPlus Version 2), the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI),[8] and the NRCS Web Soil Survey and Climate Analysis for Wetlands (WETS).[9,10,11] Specifically, the standard NRCS WETS analysis includes a weighted comparison of historical rainfall to observed rainfall for the 3-month period before a wetland delineation field survey in order to evaluate if abnormal rainfall patterns may have contributed to observed presence or absence of wetland indicators.[12] The WETS analysis is based on data from the nearest WETS-listed station with a robust data set (e.g., over 30 years of precipitation data) located in San Jose, Santa Clara County. Additionally, the United States Drought Monitor data for Santa Clara County was incorporated into the analysis.

[8] United States Fish and Wildlife Service (USFWS). National Wetland Inventory. Website: https://www.fws.gov/wetlands/data/mapper.html. Accessed October 2023.

[9] United States Environmental Protection Agency (EPA). Watershed Assessment, Tracking and Environmental Results System (WATERS) Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed October 2023.

[10] United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2020. Web Soil Survey 3.3.2. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed October 2023.

[11] United States Department of Agriculture (USDA), Natural Resources Conservation Service. 1997. Part 650 Engineering Field Handbook - Chapter 19: Hydrology Test for Wetland Determination.

[12] Ibid.

SECTION 5: RESULTS

The following section describes the results of both the background research and analysis and the results of the protocol-level delineation field work. Representative photographs of current site conditions are included in Appendix A.

5.1 - Climatic Conditions

Results of the WETS analysis (Appendix B) indicate that conditions during the delineation survey were normal for the 3-month period prior the delineation (i.e., July through September 2023). The last rain event prior to the delineation occurred in June 2023, with an accumulated precipitation volume of 0.02 inch for the month, based on data of the nearest publicly available weather station located in San Jose. Santa Clara County has not experienced drought conditions throughout the 2023, and the United States Drought Monitor ranked the conditions in Santa Clara County as None.

5.2 - Aquatic Resources

Aquatic resources are shown in Exhibit 3. Dimensions of all aquatic resources occurring within the Study Area boundary are presented in Table 1 and described in more detail below.

Table 1: Summary of Aquatic Resources within the Study Area

Type	Segment ID	Length (linear feet)	Width (feet)	Area (square feet)	Area (acre)
Open Drainage Channel	1-1	878	2.5	2195	0.05
Open Drainage Channel	1-2	91	1	91	0.002
Open Drainage Channel	1-3	77	1.5	116	0.003
Open Drainage Channel	2-1	1366	3.5	4781	0.11
Open Drainage Channel	2-2	922	2	1844	0.042
Open Drainage Channel	2-3	339	1.25	271	0.006
Open Drainage Channel	2-5	113	1.25	141	0.003
Open Drainage Channel	2-7	579	2	1158	0.026
Open Drainage Channel	2-8	175	1	175	0.004
Open Drainage Channel	3-1	241	2.5	603	0.014
Sum Open Drainage Channels	**–**	**4,781**	**n/a**	**11,375**	**0.26**
Culvert Pipe	2-4	41	1	41	0.001
Culvert Pipe	2-6	98	1.5	147	0.003
Culvert Pipe	2-9	120	1	120	0.003
Culvert Pipe	4-1	148	1.5	222	0.005
Culvert Pipe	4-2	111	1.5	167	0.004

Type	Segment ID	Length (linear feet)	Width (feet)	Area (square feet)	Area (acre)
Sum Culvert Pipes	**–**	**518**	**n/a**	**697**	**0.016**
Sum All Potentially Jurisdictional Waters	**–**	**5,299**	**n/a**	**12,072**	**0.276**

5.2.1 - Open Drainage Channels

The following is a description and discussion of all observed open drainage channel segments. Dimensions of each segment are listed in Table 1, and locations are shown on Exhibit 3. A definition of ephemeral and intermittent flow regimes is provided in Section 4.2.1.

Ephemeral Drainage Segment 1-1

Ephemeral Drainage Segment 1-1 is a drainage segment mainly fed by two culverts, one on each side of Pierce Road. This segment drains the northeastern portion of the Study Area to the north/northwest. The channel is characterized by the presence of deeply incised bed and banks. The OHWM is characterized by scour and sediment deposits. At the time of the survey, no water or soil moisture were present. No signs of recent or seasonal surface flows were present. The presence of a predominantly undisturbed layer of oak and bay leaves indicated that this segment carries only surface runoff and flows during and immediately after periods of precipitation and, therefore, can be classified as ephemeral. This drainage segment is located under a predominately closed canopy of mixed oak woodland, with dominate species consisting of coast live oak, California bay, French brome, and others. No hydrophytic plants were observed in the drainage. Segment 1-1 provides ephemeral flows into Intermittent Drainage Segment 2-1, north of the Study Area boundary.

Ephemeral Drainage Segments 1-2 and 1-3

Ephemeral Drainage Segment 1-2 and 1-3 appear to be erosional gullies that have developed over time into natural headwater drainages collecting runoff from the terrace upslope. The drainages are characterized by the presence of a small bed and banks. The OHWM is characterized by scour and sediment deposits. At the time of the survey, no flowing water or soil moisture was present. These segments are located under the same closed canopy of mixed oak woodland described in Drainage Segment 1-1. No hydrophytic plants were observed in either drainage. Both Segments 1-2 and 1-3 convey ephemeral flows to Segment 1-1.

Intermittent Drainage Segment 2-1

Intermittent Drainage Segment 2-1 is part of a natural second order stream that conveys flows from the headwater sections upslope to the west. The drainage contains deeply incised bed and banks with OHWM characterized by scour and sediment deposits. At the time of the survey no flowing water was present, but small areas of stagnant water were observed in various reaches, indicating an intermittent hydrological regime. This drainage segment is located under an intermittently closed and open canopy of mixed oak woodland, with dominant species consisting of coast live oak, arroyo willow, coyote brush, pampas grass, and others. This drainage runs through the center of the project site, where it generally drains to the north, likely connecting to Calabazas Creek outside the northern

Study Area boundary. It should be noted that the toe of the ridge described in Section 2.3 was inaccessible due to site topography and vegetation. The continuation of the drainage segment at the toe of the ridge was mapped using topographic maps, breaks in vegetation, and the USFWS NWI.

Intermittent Drainage Segment 2-2

Intermittent Drainage Segment 2-2 is a naturally occurring intermittent headwater drainage. The drainage is characterized by the presence of deeply incised bed and banks. The OHWM is characterized by scour and sediment deposits. At the time of the survey, flowing water was observed and moist soils were present, indicating an intermittent hydrological regime. This drainage segment is located under a closed canopy of mixed oak woodland, with dominant species consisting of coast live oak, California bay, arroyo willow, and others. This segment likely drains the northern section of the westerly adjacent Mountain Winery property and conveys flows in a south/southeasterly direction. Segment 2-2 conveys intermittent flows into Segment 2-1. Much of the western reach of this drainage was inaccessible to due site topography and vegetation. The continuation of this drainage segment at inaccessible reaches was mapped using topographic maps, breaks in vegetation, and the USFWS NWI.

Ephemeral Drainage Segments 2-3 and 2-5

Ephemeral Drainage Segment 2-3 and 2-5 appear to be reaches of a constructed drainage ditch that has developed into a semi-vegetated headwater drainage, which parallels an on-site access road. These drainages are characterized by the presence of deeply incised bed and banks with the OHWM characterized by scouring. At the time of the survey, no standing or flowing water was observed, indicating an ephemeral hydrological regime. These segments are separated by an underground 24-inch culvert (Exhibit 3; Segment 2-4). These segments are located under a mostly open canopy; dominant vegetation included coyote brush, pampas grass, chamise, and arroyo willow. These segments likely channel ephemeral flows from the adjacent hillside to the southwest and convey water to the southeast into Segment 2-7.

Ephemeral Drainage Segment 2-7

Ephemeral Drainage Segment 2-7 is a continuation of the constructed drainage ditch that has developed into a headwater drainage (Segments 2-3 and 2-5). This segment is fed by a 24-inch culvert (Exhibit 3; Segment 2-6) that passes under the on-site access road that conveys ephemeral flows to the northeast where it meets Segment 2-1. This segment is located under a closed canopy of mixed oak woodland. The continuation of this drainage segment from the terminus of Culvert Segment 2-6 was inaccessible due to extremely steep slopes. As such, the reach in this segment was mapped using topographic maps, breaks in vegetation, and the USFWS NWI.

Ephemeral Drainage Segment 2-8

Ephemeral Drainage Segment 2-8 appears to an erosional gully that has developed over time into a natural headwater drainage collecting runoff from the western hillside. This segment is located under a semi-closed canopy of predominantly mixed oak woodland with marginal coastal scrub habitat features. Dominate woody vegetation included coast live oak and toyon. Understory vegetation observed within this segment included sticky monkey flower (*Mimulus aurantiacus*),

chamise, coyote brush, poison oak, and others. This segment also runs parallel to the on-site access road referenced in Segment 2-3 and 2-5 above. The drainage is characterized by the presence of a narrow bed and banks. The OHWM is characterized by scour and sediment deposits. At the time of the survey, no flowing water or soil moisture was present, indicating an ephemeral hydrological regime. This segment conveys flows under the on-site access road and into the adjacent culvert (Segment 2-9).

Ephemeral Drainage Segment 3-1

Ephemeral Drainage Segment 3-1 is a naturally occurring ephemeral headwater drainage which drains the hillside to the west. The drainage is characterized by moderately incised bed and banks and the OHWM was generally characterized by scour. At the time of the survey, no flowing water was observed and no soil moisture was observed, indicating an ephemeral hydrological regime. This segment is located under a semi-closed canopy of predominantly coast live oak trees. Understory vegetation was sparse, and where present, dominated by a mix of non-native upland grasses and forbs. This segment appears to terminate where it meets Pierce Road at the eastern boundary of the Study Area.

5.2.2 - Culverts

Culverts 2-4 and 2-6

Culvert 2-4 is a 24-inch corrugated pipe that hydrologically connects Segments 2-3 and 2-5 under a secondary access road (Exhibit 3). Culvert 2-6 is also a 24-inch corrugated pipe that hydrologically connects to Segment 2-7 under the on-site access road (Exhibit 3).

Culvert 2-9

Culvert 2-9 is a 24-inch corrugated pipe that conveys flows from the southern portion of the on-site access road and Segment 2-8 downslope to the north (Exhibit 3).

Culverts 4-1 and 4-2

Both Culverts 4-1 and 4-2 are fed by drop inlets on the northern side of the Mountain Winery Road. These culverts drain the adjacent northern hillside, where they convey water under the Mountain Winery Road down a steep valley in a southerly direction (Exhibit 3). Culverts 4-1 and 4-2 are both 24-inch corrugated pipes which daylight on the southern side of the Mountain Winery Road.

5.3 - United States Fish and Wildlife Service National Wetland Inventory

The USFWS NWI, did not depict any potential wetlands within the Study Area.[13] However, per the NWI, determinations are only made based on high altitude imagery, and according to the NWI Data Limitations information, “a margin of error is inherent in the use of imagery; thus, detailed on the ground inspection of any particular site may result in revision of the wetland boundaries or

[13] United States Fish and Wildlife Service (USFWS). National Wetland Inventory (NWI). Website: https://www.fws.gov/wetlands/data/mapper.html. Accessed October 2023.

classification established through image analysis." Additionally, the USFWS clarifies that NWI mapping is not adequate to be used to establish regulatory boundaries or jurisdiction.

The lack of NWI-mapped wetlands does not necessarily indicate the Study Area is devoid of actual existing jurisdictional wetlands, if confirmed on the ground through protocol-level delineation field work. Therefore, FCS established one wetland sample point within an area that showed evidence of a hydrological indicator due to the presence of surface soil cracks (Appendix C; SP-1). The results demonstrate that the area does not meet the USACE or RWQCB definitions of a wetland. Specifically, the area lacks the required combination of sufficient hydrophytic vegetation and/or hydric soil indicators. The absence of wetland indicators was not caused by abnormally dry conditions because the delineation was conducted following a period of normal aggregate rainfall, as demonstrated by the WETS analysis (see Section 5.1 and Appendix B).

Additionally, linear wetland/water features shown by NWI within the Study Area are somewhat inconsistent with conditions on the ground as established through the protocol-level wetland/water delineation presented here and are therefore used as another resource considered to determine location and extent of potential jurisdictional aquatic resources.

5.4 - Proposed Jurisdictional Determination

5.4.1 - Proposed United States Army Corps of Engineers Jurisdiction

As of the preparation of this report on November 9, 2023, the final "Revised Definition of Waters of the United States" rule was published in the Federal Register on January 18, 2023, and became effective March 20, 2023. On May 25, 2023, the U.S. Supreme Court issued a decision in the case of *Sackett v. Environmental Protection Agency* (*Sackett*). This decision determined that areas of federal jurisdiction under Section 404 of the CWA must have a "continuous surface connection" with navigable waters of the United States or relatively permanent tributaries to navigable waters. This report proposes preliminary conclusions regarding the jurisdictional status of non-wetland waters, based on the *Sackett* decision.

On August 29, 2023, the USACE and the EPA issued a release noting that a revised definition of waters of the United States would be issued in conformance with *Sackett*. On September 8, 2023, the USACE and EPA issued the final rule updating the definition of waters of the United States in conformance with *Sackett* in the Federal Register. The final rule is not currently operative in certain states and for certain parties due to litigation. California is excluded from this litigation and is currently operating under the guidance issued in the Federal Register on September 8, 2023.

Per the guidance outlined above, two drainage segments (Segments 2-1 and 2-2) contain a continuous surface connection with a navigable water of the United States given their intermittent hydrological status. As noted in Section 2.3 and 5.2.1 above, these intermittent segments are likely to connect to Calabazas Creek outside the northern Study Area boundary. Calabazas Creek is a tributary of the San Francisco Bay, a traditionally navigable water. For these reasons, Segments 2-1 and 2-2 would likely be classified as waters of the United States under the jurisdiction of the USACE. Note that a final jurisdictional determination can only be made by the USACE following verification.

5.4.2 - Features Proposed to be Exempt from United States Army Corps of Engineers Jurisdiction

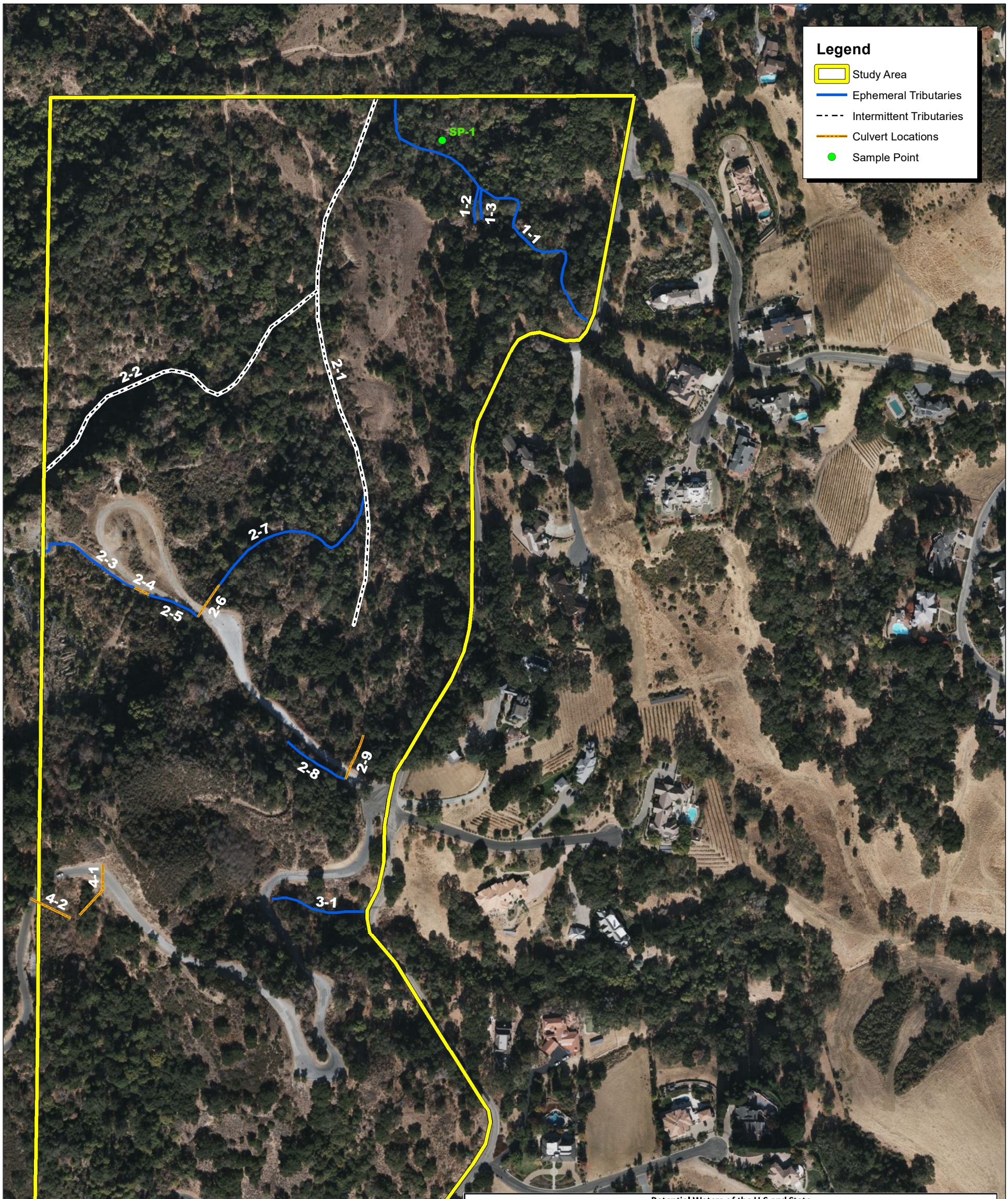
The remaining drainage segments delineated within the Study Area would likely be exempt from USACE jurisdiction as these drainages are ephemeral streambeds that would not be subject to USACE jurisdiction pursuant to the *Sackett* decision levied by the U.S. Supreme Court. Note that a final jurisdictional determination can only be made by the USACE following verification.

5.4.3 - Proposed Regional Water Quality Control Board Jurisdiction

Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)) and are under the jurisdiction of the RWQCB. Therefore, FCS proposes that all drainages within the Study Area boundary as shown on Exhibit 3 would fall under the jurisdiction of the RWQCB. This proposed jurisdictional determination is preliminary until confirmed by the RWQCB.

5.4.4 - California Department of Fish and Wildlife Streambed Alteration Program Considerations

Because of the presence of drainage beds and banks, it is expected that the CDFW will assert regulatory oversight over potential impacts on all drainage channels and associated vegetation pursuant to California Fish and Game Code Section 1602, *et seq*. (Streambed Alteration Program). It is expected that the CDFW will classify all vegetation in the drainages and trees with canopies overhanging the drainages as "riparian vegetation" and that the CDFW will require a Notification of Streambed Alteration and subsequent Streambed Alteration Agreement for any work that could adversely affect the drainages on-site and associated riparian vegetation.



Potential Waters of the U.S and State					
Type	Segment ID	Length (Linear Feet)	Average Width (feet)	Area (square feet)	Area (acre)
Open Drainage Channel	1-1	878	2.5	2,195	0.05
Open Drainage Channel	1-2	91	1	91	0.002
Open Drainage Channel	1-3	77	1.5	116	0.003
Open Drainage Channel	2-1	1,366	3.5	4,781	0.11
Open Drainage Channel	2-2	922	2	1,844	0.042
Open Drainage Channel	2-3	339	1.25	271	0.006
Open Drainage Channel	2-5	113	1.25	141	0.003
Open Drainage Channel	2-7	579	2	1,158	0.026
Open Drainage Channel	2-8	175	1	175	0.004
Open Drainage Channel	3-1	241	2.5	603	0.014
Sum Open Drainage Channels		**4,781**	**N/A**	**11,375**	**0.26**
Culvert Pipe	2-4	41	1	41	0.001
Culvert Pipe	2-6	98	1.5	147	0.003
Culvert Pipe	2-9	120	1	120	0.003
Culvert Pipe	4-1	148	1.5	222	0.005
Culvert Pipe	4-2	111	1.5	167	0.004
Sum Culvert Pipes		**518**	**N/A**	**697**	**0.016**
Sum All Pot. Jurisdictional Waters		**5,299**	**N/A**	**12,072**	**0.276**

Source: Bing Aerial Imagery.

FIRSTCARBON SOLUTIONS™

250 125 0 250 Feet

Exhibit 3
Aquatic Resources Delineation Map Overview

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SECTION 6: CONCLUSION

The Study Area includes 10 open and vegetated ephemeral and intermittent channels (with five segments consisting of culvert pipes), for a total length of 5,299 feet, covering an aggregate area of approximately 12,072 square feet (0.276 acre), as shown on Exhibit 3. No additional aquatic features, including wetlands, were observed within the Study Area.

The Study Area includes include 3,011 feet, 5,447 square feet (0.124 acre) of potential waters of the United States and 5,299 feet, 12,072 square feet (0.276 acre) of potential waters of the State.

Additionally, any impacts on drainage channels and associated riparian vegetation are expected to be regulated by the CDFW pursuant to the Streambed Alteration Program, California Fish and Game Code Section 1602, *et seq*.

The findings and conclusions presented in this report, including the location and extent of waters subject to regulatory jurisdiction, represent the professional opinion of FCS. These findings and conclusions should be considered preliminary until confirmed by the USACE, RWQCB, and CDFW.

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Appendix A:
Site Photographs

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Photograph 1: Looking South upstream on Northern boundary. Drainage channel segment 1-1.



Photograph 2: Looking Southwest upstream on Northern boundary. An erosional gully turns into drainage with a bed and bank. Drainage channel segment 1-2.



Photograph 3: Looking Northeast downstream on Northern boundary. An erosional gully turns into drainage with a bed and bank. Drainage channel segment 1-2.



Photograph 4: Looking Southwest upstream on Northern boundary. An erosional gully turns into drainage with a bed and bank. Drainage channel segment 1-3.



Photograph 5: Looking Northeast downstream on Northern boundary.
An erosional gully turns into drainage with a bed and bank.
Drainage channel segment 1-3.



Photograph 6: Looking South upstream on Northern boundary.
Drainage channel segment 2-1.



Photograph 7: Looking North downstream on Northern boundary.
Drainage channel segment 2-1.



Photograph 8: Looking West of stream on Northern boundary.
Drainage channel segment 2-1.



Photograph 9: Looking Southwest upstream on Northern boundary. Drainage channel segment 2-2.



Photograph 10: Looking Northeast downstream on Northern boundary. Steep grade. Drainage channel segment 2-2.



Photograph 11: Looking East downstream within Western middle boundary. Upper portion of drainage. Open drainage channel 2-3.



Photograph 12: Looking West upstream within Western middle boundary. Upper portion of drainage. Open drainage channel 2-3.



Photograph 13: Looking East downstream within Northern middle boundary. Culvert segment 2-4.



Photograph 14: Looking West upstream within northern middle boundary. Culvert segment 2-4.



Photograph 15: Looking North downstream within Northern middle boundary. Culvert out impassible. Culvert segment 2-6.



Photograph 16: Looking South upstream within Northern middle boundary. Culvert out impassible. Culvert segment 2-6.



Photograph 17: Looking Southeast downstream within Southern middle boundary. Open drainage channel 2-8.



Photograph 18: Looking Northwest upstream within Southern middle boundary. Open drainage channel 2-8.



Photograph 19: Looking Northeast downstream on middle portion of boundary. Culvert out 30ft. Area not passable. Culvert segment 2-9.



Photograph 20: Looking Northwest upstream within Southern middle boundary. Culvert segment 2-9.



Photograph 21: Looking Southeast downstream within Southern middle boundary. Culvert segment 2-9.



Photograph 22: Looking West upstream within Southern portion of boundary. Drainage becomes narrower and fans out towards Pierce Road. Open drainage channel 3-1.



Photograph 23: Looking East downstream within Southern portion of boundary. Open drainage channel 3-1.



Photograph 24: Looking East down Mountain Winery Rd within Southern portion of boundary. Culvert segment 4-1.



Photograph 25: Looking South downstream within Southern portion of boundary. Culvert segment 4-1.



Photograph 26: Looking West on Mountain Winery Rd within Southern portion of boundary. Culvert segment 4-2.



Photograph 27: Looking East downstream within Southern portion of boundary. Culvert segment 4-2.

Appendix B:
WETS Analysis

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WETS Analysis for Saratoga Mountain Winery Residential Project JD, Santa Clara County, CA based on 30 year averages of San Jose, WETS Station

Month	30% Chance Precipitation is less or equal than (in)	Average	30% Chance Precipitation more than (in)	Observed rainfall (inch)	Condition (dry, wet, normal)	Condition Value*	Weighting Factor	Product of previous 2 columns
September	0.00	0.01	0.08	0.05	normal	2	3	6
August	0.00	0.00	0.00	0.01	normal	2	2	4
July	0.00	0.00	0.00	0	normal	2	1	2
							Sum=**	**12**

**If sum is:	
6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

*Condition Values:
Dry=1
Normal=2
Wet=3

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Appendix C:
Wetland Delineation Data Forms

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Saratoga Mountain Winery City/County: Saratoga/Santa Clara County Sampling Date: 10/26/2023

Applicant/Owner: Chateau Mason State: CA Sampling Point: SP-1

Investigator(s): R. Carroll Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 1-2%

Subregion (LRR): Lat: 37°15'38.31"N Long: 122° 3'21.53"W Datum: NAD 83

Soil Map Unit Name: Literr-Urbanland-Merbeth Complex, 15-30% slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Sample point taken on bench outside of bed and bank.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Umbellularia californica (overstory)	30	Y	FAC
2. Quercus agrifolia (overstory)	20	Y	NL
3.			
4.			
Total Cover:	50		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Rubus ursinus	15		FAC
2. Leymus tritcoides	10		FAC
3. Toxicodendron diversilobum	10		FACU
4. Polypogon monspeliensis	5		FACW
5.			
6.			
7.			
8.			
Total Cover:	40		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 5	x 2 =	10
FAC species 55	x 3 =	165
FACU species 10	X 4 =	40
UPL species	X 5=	
Column Totals: 70		215

Prevalence Index = B/A = 3.07

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
12	10YR 3/2	90					Sandy loam	
12	10 YR 4/2	10					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

No soil mottles evident at depth, not meeting F6

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface soil cracks present on surface within first 2 inches

C.3 - California Red-legged Frog Habitat Assessment

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HABITAT ASSESSMENT
FOR THE CALIFORNIA RED-LEGGED FROG,
AT THE PROPOSED MOUNTAIN WINERY DEVELOPMENT,
14850 PIERCE ROAD, SARATOGA, SANTA CLARA COUNTY,
CALIFORNIA

April 24, 2019

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6.0 REFERENCES **7**

7.0 APPENDIX **9**

California Red-Legged Frog Habitat Assessment Form **10**

FIGURES

Figure 1. Location of 75-acre parcel at 14850 Pierce Road, in the City of Saratoga.……..….3

Figure 2. Location of the 75-acre parcel and surrounding single family residences…….……4

Figure 3. Locations of CRLF within 3.1 miles of the Project site.……..…….....…..6

SUMMARY

This report is a Habitat Assessment for the federally threatened California red-legged frog (*Rana draytonii*, hereafter CRLF) at the location of the approximately 75-acre development site at 14850 Pierce Road, in Saratoga, Santa Clara County (Project). The Project is surrounded by vineyards, The Mountain Winery, and numerous single family residential neighborhoods. An unnamed, 1st order, intermittent stream runs through the Project and drains into an adjacent residential neighborhood. Pierce Road forms the eastern and southern boundaries, while The Mountain Winery and adjacent property owners form the western and northern boundaries.

The Project site consists of with mixed coast live oak (*Quercus agrifolia*), California bay (*Umbellularia californica*), and Pacific madrone (*Arbutus menziesii*) woodlands with scattered clumps of willows (*Salix* sp.) and non-native pampas grass (*Cortaderia selloana*) in some of the moister soils of the riparian corridor. Non-native Scotch broom (*Cytisus scoparius*) is very abundant along the edges of the woodland areas that are exposed to direct sunlight. Elevations on the property range from 640-700 feet.

No CRLF were observed during my daytime visit of the Project site and adjacent quarry on April 17, 2019. Instead, I found Pacific treefrog (*Hyla regilla*) larvae in a seep at the base of the old quarry in an area used as a sediment basin. Additionally, my survey confirmed that the adjacent 2nd order tributary stream to the west of the Project site boundary (and shown to be perennial on topo maps), is very steep (>60% slope) and unstable, and therefore is unsuitable as CRLF breeding or rearing habitat.

Although there are 3 CRLF records within 0.6-1.5 miles of the Project site, they are all from perennial ponded aquatic habitats within the major stream channels of Calabasas and Saratoga Creeks. Both of these streams also contain bullfrogs (*Lithobates catesbeiana*) and are separated from the Project by a combination of roads, vineyards, dry (and steep terrain), and urban development. Given that the Project site is in the uppermost part of a 1st order drainage that contains flowing water for only about 6 months of the year, and there is relatively steep and dry terrain to the west and south, and urbanized areas with vineyards to the east and north, there is no chance that any CRLF would attempt to move through the area or utilize surrounding uplands for foraging from occupied habitats in nearby Saratoga Creek or Calabasas Creek.

Also, with the nearby urban development, there are many CRLF predators, such as raccoons (*Procyon lotor*) and domestic cats (*Felis catus*). These animals likely ensure that any juvenile or adult CRLF that attempt to move out of perennial, deep water, aquatic habitats into intermittent, shallow water habitats (such as tributary streams) are eaten.

Given the above conditions, it is my professional opinion that CRLF are not present within the vicinity of the Project site, nor would they be able to move across or disperse into the area. Thus, the proposed Project would have no effects on CRLF populations in this part of Santa Clara County.

1.0 INTRODUCTION

A development for 7 houses on 7 separate lots (approximately 17.5 acres total) along the western edge of the 14850 block of Pierce Road on 75 acres owned by The Mountain Winery in Saratoga, Santa Clara County, has been proposed (Figure 1). Since the 75-acre site lies within the known historic range of the California red-legged frog (*Rana draytonii*, hereafter CRLF) [Stebbins 2003], and there are records for this species in the general vicinity (Jennings, unpubl. data), a habitat assessment was conducted for this species.

2.0 PROJECT DESCRIPTION AND SETTING

The 75-acre Project site is located along the western and southern edges of the 14850 block of Pierce Road in the City of Saratoga (Figure 1). The property is owned by The Mountain Winery and is zoned "Residential Hillside Conservation" by the City (General Map Plan on the City of Saratoga website). The proposed Project is composed of 7 separate lots that would be accessed via new roadways from Pierce Road.

The overall Project area is surrounded by vineyards, The Mountain Winery, an old quarry, and numerous single family residential neighborhoods (Figure 2). An unnamed 1st order stream runs north through the Project site and drains for approximately 0.2 mile into the adjacent residential neighborhood. Pierce Road forms the eastern and southern boundaries, while The Mountain Winery and adjacent property owners form the western and northern boundaries. There are no structures on the property.

Elevations range from 640 feet at the northern property boundary, to 700 feet at the western property boundary. The central portion of the property contains an intermittent, 1st order stream which normally dries by early summer (=June; W. LeClerc, pers. comm.). Most of the Project site is covered with mixed coast live oak (*Quercus agrifolia*), California bay (*Umbellularia californica*), and Pacific madrone (*Arbutus menziesii*) woodlands with scattered clumps of willows (*Salix* sp.) and non-native pampas grass (*Cortaderia selloana*) in some of the moister soils of the riparian corridor. Non-native Scotch broom (*Cytisus scoparius*) is very abundant along the edges of the woodland areas that are exposed to direct sunlight.

The understory includes western poison oak (*Toxicodendron diversilobum*), non-native Himalayan blackberry (*Rubus discolor*), and small patches of coyote bush (*Baccharis pilularis*). The small grasslands patches outside the mixed woodland areas consist of non-native grasslands.

Immediately to the southwest of the Project site lies an old quarry (Figure 1). Although no longer active, it contains mixed stands of California bay, coast live oak, Pacific madrone, and Douglas-fir (*Pseudotsuga menziesii*), along with scattered coyote brush and many stands non-native pampas grass and Scotch broom. The hillside here is deeply eroded and contains a number of seeps, as well as an depression used as a sediment basin. However, I observed no ponded habitats here.

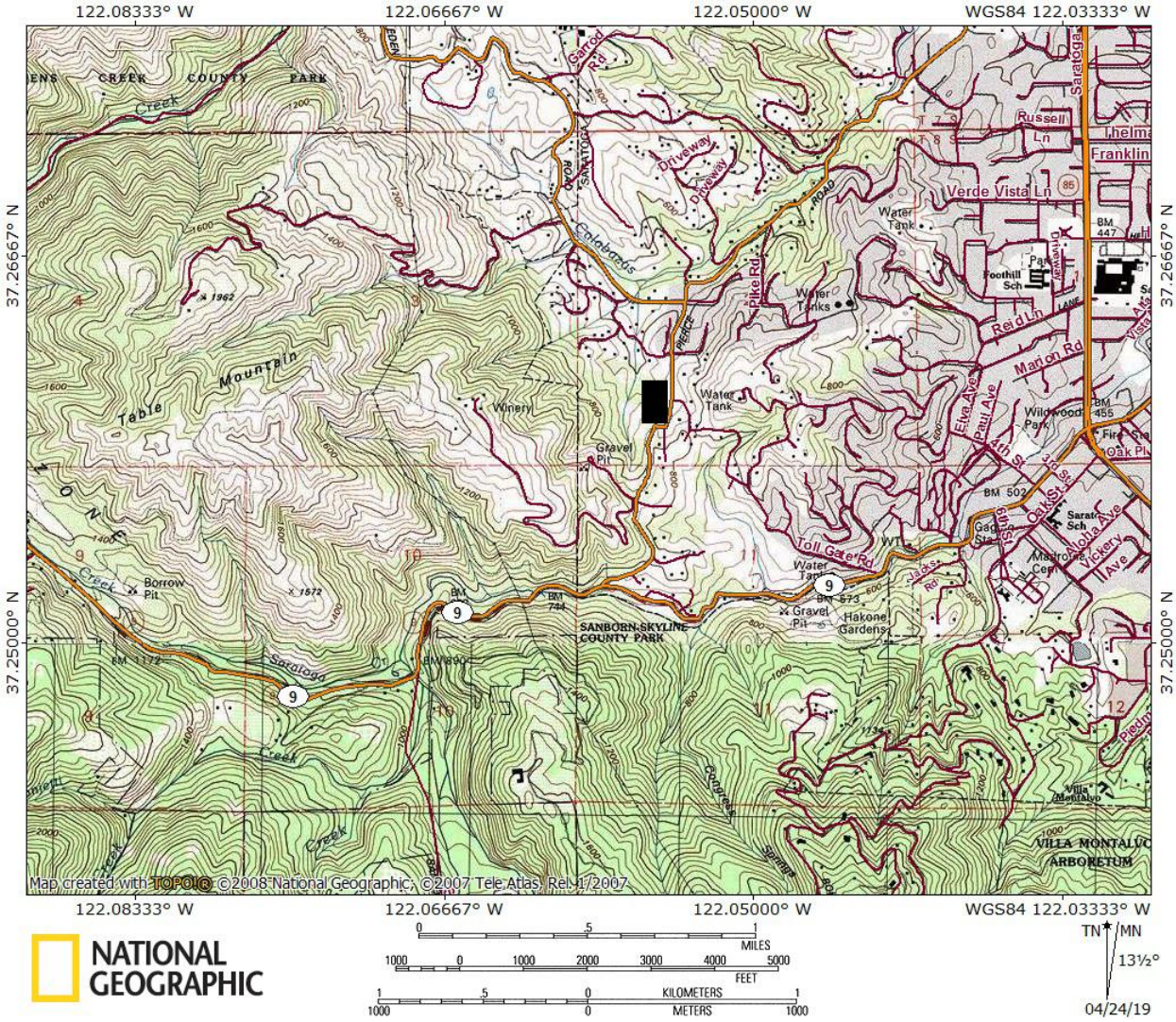

Figure 1. Location of 75-acre parcel at 14850 Pierce Road, in the City of Saratoga.



Figure 2. Location of the 75-acre parcel (black rectangle) and surrounding single family residences.

Just to the west of the Project is a 2nd order stream (shown to be perennial on topo maps) which starts adjacent to the old quarry, and drains north about 0.5 mile into the residential area and subsequently into Calabasas Creek (Figure 1). None of this drainage lies within the Project area.

3.0 METHODS

The methods employed to produce this report include evaluating the suitability of habitat for CRLF on site by conducting a reconnaissance-level site visit during the day by me on 17 April 2019. I followed the U.S. Fish and Wildlife Service protocol for the CRLF habitat assessment (USFWS 2005) and made observations regarding any amphibians and reptiles observed, or potentially inhabiting the vicinity. Additionally, CRLF occurrence records within 3.1 miles of the Project site (CNDDB 2019) were mapped. Finally, I examined 7.5' USGS quadrangles and aerial photographs for potentially suitable aquatic habitats within a 3.1-mile radius of the site and connectivity of these habitats with the Project site.

4.0 RESULTS

No CRLF were observed during my daytime visit of the Project and adjacent quarry on April 17, 2019 (see Appendix). Instead, I found Pacific treefrog (*Hyla regilla*) larvae in a seep in the sediment basin at the base of the old quarry. I also observed juvenile and adult Coast Range fence lizards (*Sceloporus occidentalis bocourtii*), and a juvenile California kingsnake (*Lampropeltis getula californiae*).

Suitable breeding and rearing habitat for CRLF is generally characterized by dense, shrubby riparian vegetation associated with deep (>2.3 feet), still or slow-moving water (see Jennings and Hayes 1994, Jennings 1988, Hayes and Jennings 1988). The aquatic habitats observed along the intermittent tributary and seeps at the old quarry did not contain any deep (>3 feet) water pools that are most suited for breeding populations of CRLF, largely due to the small size of the steep (>10 degrees) stream channels here, and the presence of large amounts of sand and silt on the stream bottoms. While CRLF can occur in shallow water ponds—including those devoid of vegetation (Jennings 2000), such habitats make CRLF extremely vulnerable to predation by raccoons (*Procyon lotor*) and avian predators (Jennings and Hayes 1994).

My survey confirmed that the adjacent 2nd order tributary stream to the west of the Project boundary (and shown to be perennial on topo maps), begins just north of the old quarry. The terrain here in the uppermost part of this drainage is very steep (>60% slope) and unstable, and therefore is unsuitable as CRLF breeding or rearing habitat.

Based on a review of the most recent California Natural Diversity Database files (CNDDB 2019) and other published records, only 3 CRLF occurrences are located within a 3.1-mile radius of the Study Area (Figure 3). All of these are within 2.0 miles of the Project site. The closest CRLF occurrence that I'm aware of is a 2007 record (CNDDB #961), approximately 0.6 miles to the north, northwest from the Project in Calabasas Creek at Mt. Eden Road. The second closest occurrence is a 1997 record filed by me (CNDDB #211), approximately 0.75 miles to the southeast of the Project in Saratoga Creek. Finally, the third record is a from an EIR for the proposed Conservation Center for Wildlife (Santa Clara County 2014). It is a artificial pond located about 1.5 miles southwest of the Project.

Although CRLF are known to be present relatively close to the Project site, they are all from perennial ponded aquatic habitats within major stream channels (Calabasas and Saratoga Creek). Both of these streams also contain bullfrogs (*Lithobates catesbeiana*) (CNDDB #211, Jennings, pers. observ.) and are separated from the Project by a combination of roads, vineyards, dry (and steep terrain), and urban development. Given that the Project is in the uppermost part of a 1st order drainage that contains flowing water for only about 6 months of the year, and there is relatively steep and dry terrain to the west and south, and urbanized areas with vineyards to the east and north, there is no chance that any CRLF would attempt to move through the area or utilize upland areas for foraging from occupied habitats in nearby Saratoga Creek or Calabasas Creek.

Finally, I observed no artificial stock ponds, water storage ponds, or small "koi ponds" within 2 miles of the Project via 2018 Google Earth aerial photographs. Instead, I noted dozens of swimming pools in the urbanized areas adjacent to the east and north sides of the Project site.

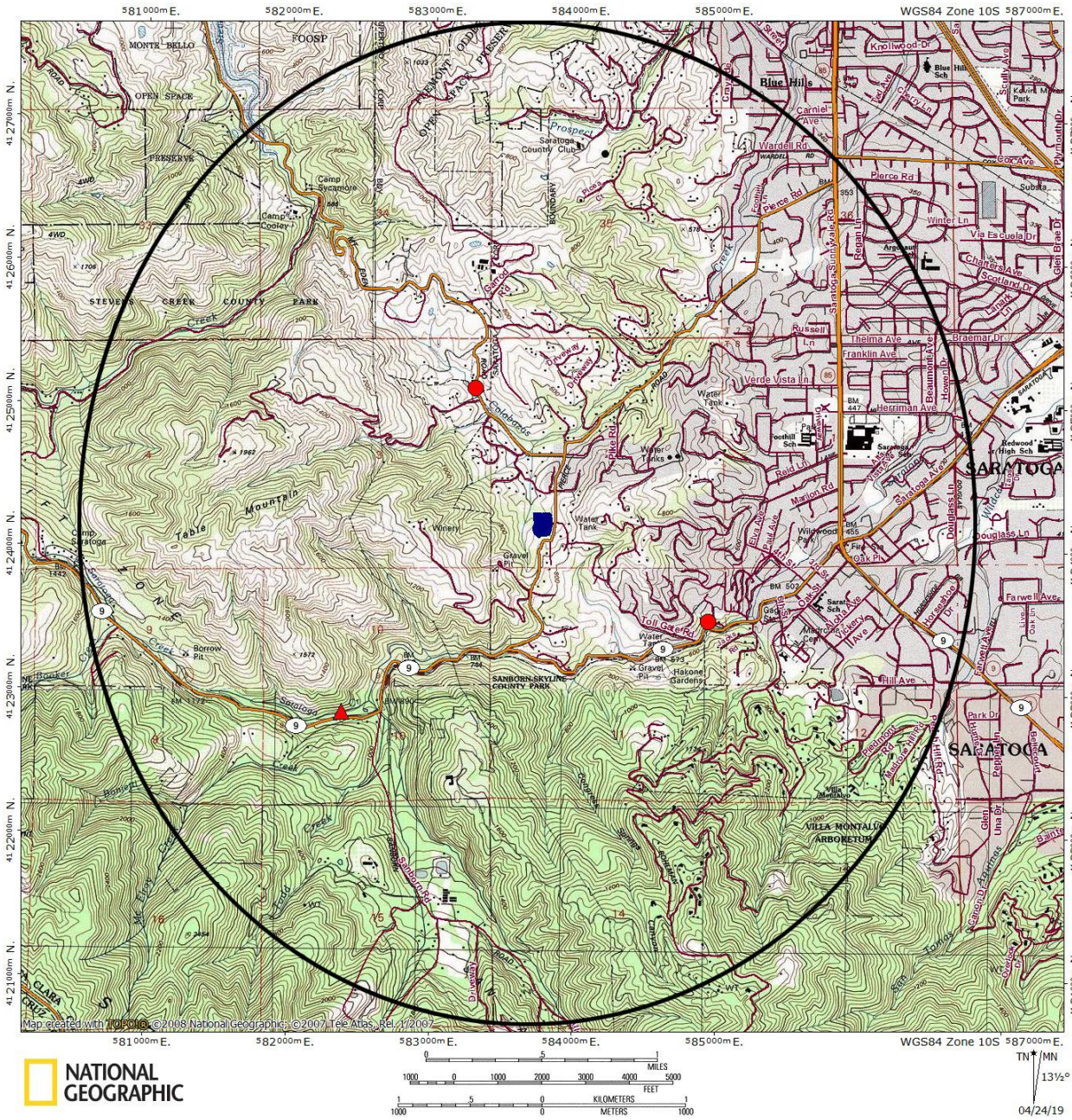

Figure 3. Locations of CRLF within 3.1 miles of the Project site. The red circles are CNDDB records and the red triangle is from a final EIR. The black circle denotes a 2-mile radius around the Project (denoted in blue).

5.0 CONCLUSIONS

Although there are nearby records for CRLF in Calabasas and Saratoga Creeks, I found no evidence of CRLF on the Project site or in the general vicinity. This is due to the Project being

located in the uppermost part of a 1st order drainage that contains flowing water for only about 6 months of the year. Additionally, there is relatively steep and dry terrain to the west and south, and urbanized areas with vineyards to the east and north, that would preclude any CRLF from attempting to move through the area or utilize upland areas for foraging from occupied habitats in nearby Saratoga Creek or Calabasas Creek.

Finally, with all the urban development nearby, there are many CRLF predators in the vicinity, including raccoons and domestic cats (*Felis catus*). Given the high numbers of these predators within the Project vicinity, they likely ensure that any juvenile or adult CRLF that attempt to move out of perennial, deep water, aquatic habitats into intermittent, shallow water habitats (such as tributary streams) are eaten.

Given the above conditions, it is my professional opinion that CRLF are not present within the vicinity of the Project site, nor would they be able to move across or disperse into the area. Thus, the proposed Project would have no effects on CRLF populations in this part of Santa Clara County.

6.0 REFERENCES

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7.0 APPENDIX

Data Sheet from Appendix D of the *Revised guidance on site assessment and field surveys for the California red-legged frog* (USFWS 2005) completed on 17 April 2019.

California Red-Legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Site Assessment: 04/17/2019 (mm/dd/yyyy)

Site Assessment Biologists: Jennings, Mark (Last name) (first name) _____ (Last name) (first name)

_____ (Last name) (first name) _____ (Last name) (first name)

Site Location: Santa Clara County, 14850 block of Pierce Road, Saratoga
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S)

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: The Mountain Winery Development
Brief description of proposed action:
Proposed development of 7 houses on 7 lots (about 2.5 acres each in size) on a 75-acre site just west of the 14850 block of Pierce Road within the city limits of Saratoga.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
   - If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

Old Quarry
POND:

Size: 25' x 35' Maximum depth: 1 foot (when full)

Vegetation: emergent, overhanging, dominant species: None -- pond is dry except for small seep of water, (It is used as a sediment basin).

Substrate: Silt, sand, gravel, cobble, and bedrock.

Perennial or Ephemeral *(circle one)*. If ephemeral, date it goes dry: June

California Red-Legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: 5 feet
Depth at bank full: 1 foot
Stream gradient: 9%

Are there pools (circle one)? (YES) NO

If yes,

Size of stream pools: 3 feet x 2 feet
Maximum Depth of stream Pools: 3 inches

Characterize non-pool habitat: run, riffle, glide, other: Riffles and waterfalls 95%, pools 5%

Vegetation: emergent, overhanging, dominant species: Oak, California bay, Pacific madrone woodlands, with scattered patches of willows and pampas grass. Also some coyote brush, western poison oak, and Himalayan blackberries. Lots of Scotch broom.

Substrate: Boulders 25%, cobbles 20%, gravel 25%, and sand/silt 30%

Bank description: Mainly covered with woodlands described above. Very few spots are open to direct sunlight.

Perennial or (Ephemeral) (*circle one*). If ephemeral, date it goes dry: June

Other aquatic habitat characteristics, species observations, drawings, or comments:

Noted about 2 dozen Pacific treefrog larvae of varying sizes in the seep at the old quarry pond. The rest of the seep area was covered with algae.

Both the old quarry sediment basin and tributary stream are much too shallow and intermittent to serve as suitable CRLF habitat. Water is probably present only 6 months out of the year during even the wettest years.

Lots of vineyards and single family homes to the east and north. There is a perennial tributary just to the west of the project area (starts at the old quarry) that is very steep and contains rock slide slopes. It's too steep for CRLF to breed or rear at >60% slope.

All drainages in the vicinity flow from 0.2-0.5 miles north directly into a residential neighborhood.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs.
3. Maps with important habitat features and species locations

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C.4 - Pre-construction Dusky-footed Woodrat Survey

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OLBERDING ENVIRONMENTAL, INC.
Wetland Regulation and Permitting

March 10, 2014

Mr. David Guthridge
Light, Air and Space Construction
P.O. Box 36303
San Jose, CA 95158

SUBJECT: The Mountain Winery Property - Pre-Construction Dusky-footed Woodrat Survey

Dear Mr. Guthridge:

This letter report has been prepared to present the results of Olberding Environmental's pre-construction survey for the dusky-footed woodrat (*Neotoma fuscipes ssp.*) within the northern portion of the larger Mountain Winery Property (Survey Area), located within the Saratoga foothills, Santa Clara County, California (Figure 1). The Mountain Winery Property occurs within the know range of the dusky-footed woodrat and as a result, it was deemed necessary to verify the occupancy of the on-site woodrat nests prior to vegetation clearing. The Santa Clara County Assessor Parcel Number for the survey area is 503-47-007.

The survey area boundary is roughly rectangular in shape bound by Pierce Road to the east situated in a north to south fashion. The Property is currently undeveloped containing no structures. The surveyed portion of the Property is located on a moderately sloped hillside east of the on-site unnamed creek. This creek flows in a south to north direction exiting the Property to the north.

All shrubby vegetation surrounding the woodrat nests located within the survey area has been removed leaving the woodrat nests intact. All observed woodrat nests occurred within previously existing dense stands of coyote brush (*Baccharis pilularis*) and poison oak (*Toxicodendron diversilobum*). The habitat within the survey area was dominated by annual grassland with inclusions of coastal scrub which contained both coyote brush and poison oak. Dominant plant species observed within the annual grassland habitat included species such as but not limited to rip-gut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and field hedge parsley (*Torilis perennis*). Mixed oak woodland habitat occurred immediately adjacent to the survey area. The mixed oak woodland habitat was dominated by tree species such as coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), and California bay (*Umbellularia californica*) with an occasional pacific madrone (*Arbutus menziesii*). Sticky monkey flower (*Mimulus aurantiacus*) was scattered throughout these habitat types.

193 Blue Ravine Road, Suite 165 · Folsom, CA 95630 · Office: (916) 985-1188 · Fax: (916) 985-2288
Email: jeff@olberdingenv.com

METHODS

A pre-construction survey of the project site was conducted by Olberding Environmental staff wildlife biologist, Mr. Josh Goodwin, from February 24 to March 3 of 2014 to determine the occupancy status of the dusky-footed woodrat nests occurring within the project site. Mr. Goodwin has extensive tracking and survey experience with the various woodrat species. All woodrat nests were pin flagged to be made clearly visible. A total of four woodrat stick nests were monitored nightly with motion censored wildlife trail cameras also having infrared capabilities for night time photos. After the cameras were up for a period of 24-hours, they were removed and placed on four new nests. The old memory cards were removed and new cards were installed. The old memory cards were then reviewed to see if the cameras captured any woodrat activity. After close evaluation of the photos captured by each camera, each of the surveyed nests was flagged with orange flagging tape indicating the nest number and whether the nest was active or not. If a nest was determined to host the dusky-foot woodrat, the word "active" was written on the orange flagging tape. This process was repeated until all of the nests were adequately surveyed. The presence of fresh woodrat scat outside the entrance to the nest was also used to determine whether a nest was active or not. Typically a large accumulation of woodrat scat, known as a latrine, can be found near the entrance of the woodrat nest. However not all woodrat nests determined to be active, had a latrine near the entrance to the nest but rather a smaller accumulation of scat near the entrance that was less noticeable.

SURVEY RESULTS

Out of a total of 22 dusky-footed woodrat nests surveyed, 13 of the nests were determined to be active (Figure 2).

CONCLUSION

A total of 22 woodrat nests were observed within the survey area with 13 of the nests determined to be active. These nests ranged in size from being roughly two to six feet in diameter and roughly one to six feet in height. These nests were constructed within concealing vegetation in which the vegetation has been removed surrounding these nests. Occupancy of the nests was determined by pictures taken by the motion censored cameras and/or accumulation of scat outside of the entrances to the nest (refer to photo 6).

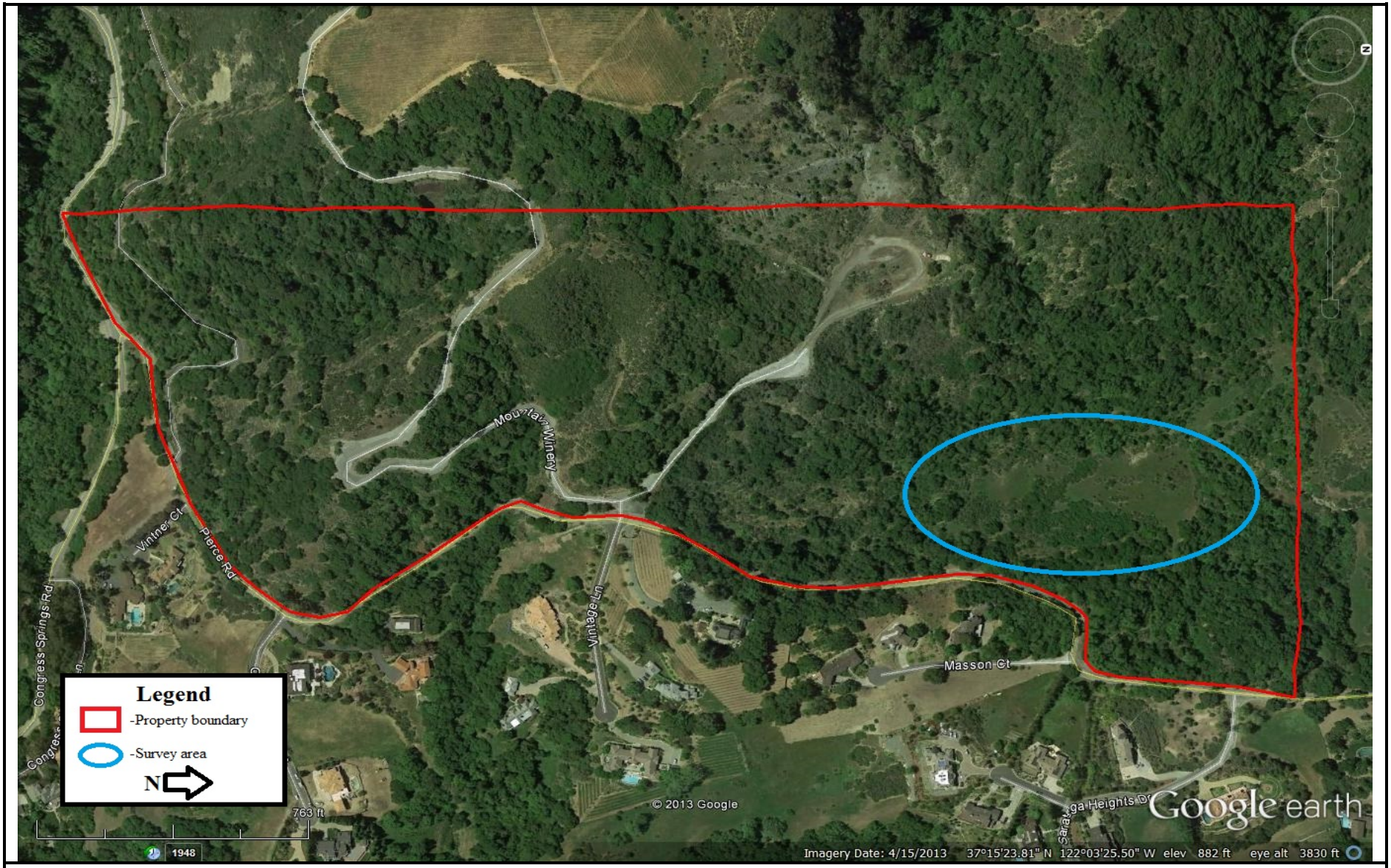
In order to protect the dusky-footed woodrat, mitigation measures implemented by Santa Clara County recommend that prior to tree and shrub removal or ground disturbance, active woodrat nests should be flagged and avoided if possible. If avoidance is not possible, it is further recommended that each of the active nests be dismantled to the best of your ability under the supervision of a biologist. If young are encountered during the dismantling process, the material shall be placed back, a buffer of 15 feet should be placed surrounding the nest in which no project activities shall occur, and the nest will remain undisturbed for two to three weeks in order to give the young enough time to mature and leave the nest on their own accord. After two to three weeks, the empty nest can be dismantled. Nest material should be moved to suitable adjacent areas within the mixed oak woodland habitat that will not be disturbed.

If you have any questions, please feel free to contact me at (925) 866-2111 (office), (408) 472-4343, or jeff@olberdingenv.com.

Sincerely,



Jeff Olberding
Wetland Regulatory Scientist



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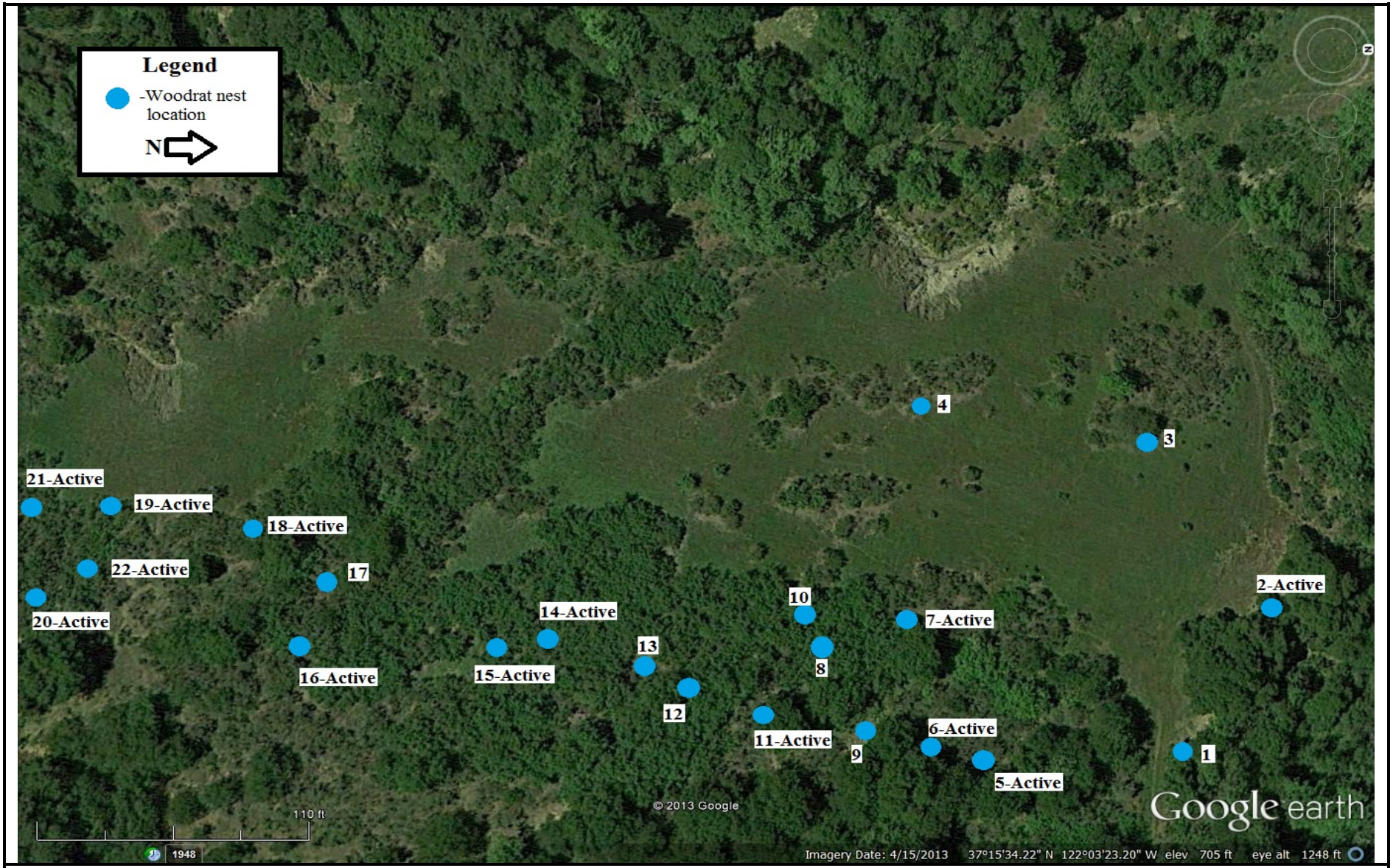
3170 Crow Canyon Place, Suite 260
San Ramon, CA 94583
(925) 866-2111 office

This document is not intended for detail design work.

Figure 1
Aerial Map of the Mountain Winery Survey Area
Santa Clara County, California



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This document is not intended for detail design work.

Figure 2
Woodrat Nest Location Map of the Mountain Winery Survey Area
Santa Clara County, California



Photo 1: This photo shows a dusky-footed woodrat at nest 6, taken at night with the infrared motion censored camera. This woodrat is indicated by the red circle. The large pile of sticks shown in the middle of the photo is the woodrat stick nest.



Photo 2: This photo shows a dusky-footed woodrat present at nest 7 also indicated by the red circle.



Photo 3: This photo shows nest 6 during the day. A second woodrat nest can be seen in the background.



Photo 4: This photo shows nest 7 during the day



Photo 5: This photo shows nest 16 determined to be active. The orange flagging tape placed next to the nest indicates the nest number and the occupation status of the nest.



Photo 6: This photo shows an example of woodrat scat found near the entrance to one of the nests.

C.5 - Tree Inventory

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Tree Inventory, Assessment and Protection Report

APN 503-46-005
Pierce Road and Saratoga Heights Drive
Saratoga, CA 95070

December 13, 2023

Prepared for:

Chateau Masson LLC

Prepared By:

Richard Gessner
ASCA - Registered Consulting Arborist ® #496
ISA - Board Certified Master Arborist® WE-4341B

Monarch Consulting Arborists

Richard Gessner
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Arborist's Cover Sheet

Arborist

Prepared by: Richard Gessner (on cover sheet)
ISA Certification Number: WE-4341B (on cover sheet)
Date of Arborist's Report: September 6, 2023
Phone: 831.331.8982
Email: rick@monacharborist.com (on every page of report)

Owner

Project Address: APN 503-46-005
Property owner: Chateau Masson LLC/Lexor Builders
Phone Number:
Email: whirschman@lexorbuilders.com

Date of plans and plan sheets reviewed:

Brief description of work: Divide the property into 25 lots and develop new roads and residences

Summary Table

Total number of trees inventoried (Observations):	683
Total number of protected trees (Observations):	683
Total appraised value of protected trees (Analysis):	$1,108,415.00
Recommended security deposit (Conclusion/ Summary):	$1,108,415.00
Number of protected trees requested for removal (Discussion/Conclusion/Summary):	367
Total value of protected trees requested for removal (Discussion/Conclusion/Summary):	$593,430.00

Summary

The plan is to subdivide the property into 25 lots and construct new residences. There were 682 trees comprised of 11 different species inventoried and assessed for this assignment. Sixty-seven percent (67%) of the trees assessed are coast live oaks (*Quercus agrifolia*). Most of the trees are in good condition and naturally growing specimens. There were 353 trees in good condition, 192 fair, 52 poor, 47 very poor and 38 are dead.

The proposed improvements will require at least 367 trees to be removed which the majority of are within the footprint of the proposed building pads and infrastructure improvements (roads and utilities). An additional 85 trees are within close proximity of grading or other activities and could be moderate or moderate to highly impacted. Of the the 367 highly impacted 205 are in good condition, 92 are fair, 18 are dead or unstable, 26 are poor, and 26 are in very poor shape.

Tree protection zones and specified fence locations have been placed on the tree plan (Appendix A). Calculated tree protection zones are indicated in Appendix B. There are 85 trees dead, unstable, or in very poor condition which meet both findings in the absence of a development application. The 297 trees in good or fair condition within the footprint of the proposed improvements could meet the findings as stated in both subsections 1 and 9 of 15-50.080 - Determination on permit, or one or the other. In total there are 367 trees that will likely require removal due to their locations within the footprint of proposed structures (infrastructure and building pads).

My opinion of value including interest over 15 years is $1,108,415.00 using the cost compounding technique.

Introduction

Background

Chateau Masson LLC asked me to assess the site, trees, and proposed plan, and to provide a report with my findings and recommendations to help satisfy planning requirements.

Assignment

- Provide an arborist's report including an assessment of the trees within the project area and on the adjacent sites where necessary. The assessment is to include the species, size (trunk diameter), condition (health, structure and form), and suitability for preservation ratings.
- Provide tree protection specifications, guidelines, and expected impact ratings for those affected by the project. Provide appraised values Cost Approach in the *Guide for Plant Appraisal, Tenth Edition* (2019).

Limits of the assignment

- The information in this report is limited to the condition of the trees during my inspection on October and November, 2023. No tree risk assessments were performed.
- The plans reviewed for this assignment were as follows in Table 1:

Table 1: Plans Reviewed Checklist

Plan	Date	Sheet	Reviewed	Source
Existing Site Topographic Map or A.L.T.A with tree locations	07/30/2023	Sheet 2	Yes	Hannah Brunetti Civil Engineers
Proposed Site Plan	07/30/2024	Sheet 3	Yes	Hannah Brunetti Civil Engineers
Demolition Plan	07/30/2025	Sheet 8, 9, 10	Yes	Hannah Brunetti Civil Engineers
Construction Staging			No	
Grading and Drainage	07/30/2025	Sheet 4, 5, 6	Yes	Hannah Brunetti Civil Engineers
Utility Plan and Hook-up locations	07/30/2026	Sheet 7	Yes	Hannah Brunetti Civil Engineers
Exterior Elevations			No	
Landscape Plan			No	
Irrigation Plan			No	
T-1 Tree Protection Plan			No	

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the property owners, owner's agents, and the City of Saratoga as a reference for existing tree and site conditions to help satisfy planning requirements.

Observations

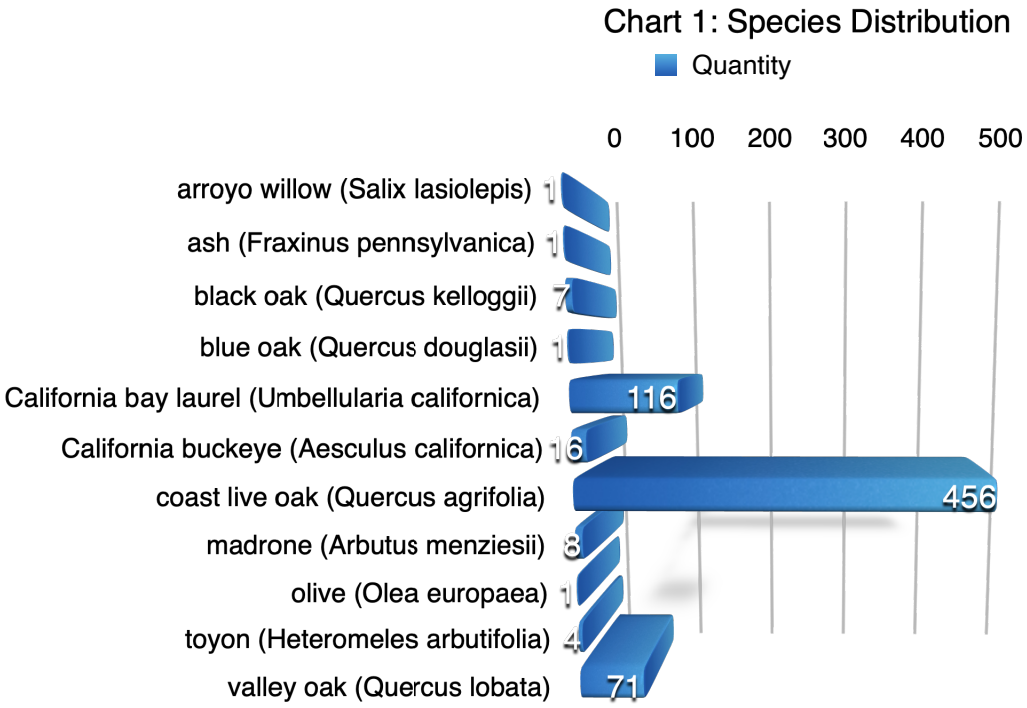
Plans

The plan is to subdivide the property and construct new residences on the vacant lot.

Tree Inventory

The tree inventory lists trees that are considered protected by the City of Saratoga municipal code 15-50.050 (Appendix A and B). The Saratoga municipal code protects “native trees” with trunk diameters greater than six inches and all other trees ten inches in diameter and greater. The tree diameters were measured at four and one half feet above grade (diameter at breast height DBH) on the high sides of the trees. The diameters of multi-stem trees were calculated according to the City of Saratoga’s definition, which is the sum of the full diameter of the largest stem and half the diameters of the remaining stems or measured at their smallest point below the bifurcation.

There were 682 trees comprised of 11 different species inventoried and assessed for this assignment (Chart 1). Sixty-seven percent of the trees assessed are coast live oaks. The trees assessed have aluminum number tags affixed to them with their corresponding identification numbers assigned in this report and on the plans. The inventory does not contain every tree on the property because there are vast regions not affected by the proposed development.



Analysis

Tree appraisal was performed according to the Council of Tree & Landscape Appraisers *Guide for Plant Appraisal 10th Edition, 2019* (CLTA) along with Western Chapter International Society of Arboriculture *Species Classification and Group Assignment, 2004*. The trees were appraised using the "Cost Approach" and more specifically the "Cost Compounding Technique" (CCT) (Appendix B).

The cost compounding technique, an extrapolation technique that relates the cost of money over a specific time period to tree growth, is utilized for the valuation of trees larger than those commonly available in nurseries which cannot be replaced by near-identical specimens. CCT extrapolates all establishment costs, not just the cost of the tree at the nursery. The appraiser estimates the time required for a new planting to either attain equivalent size or provide similar benefits to or utility as the subject tree and then compounds installed cost for that time period using an appropriate interest rate. The number of years to attain equivalent size or benefit is referred to as "years to parity."

For this assignment the years to parity was established at fifteen, and the interest rate established at three percent. Dead or unstable trees have been removed from the overall value. Those in "very poor" condition were arbitrarily assigned a twenty-four inch box replacement based on their utility within the context of the future land use, and they would likely meet findings for removal outside of a development application within the city code. To keep the year to parity constant the tree sized were stratified as follows:

- Trees less than twelve inches in diameter were appraised using twenty-four inch box specimens at an installed tree cost of $350.00.
- Trees between twelve and eighteen inches in diameter were appraised using thirty-six inch box specimens at an installed tree cost of $1,200.00
- Trees greater than eighteen inches in diameter were appraised using forty-eight inch box specimens at an installed tree cost of $4,000.00

My opinion of value including interest over 15 years is $1,108,415.00 using the cost compounding technique.

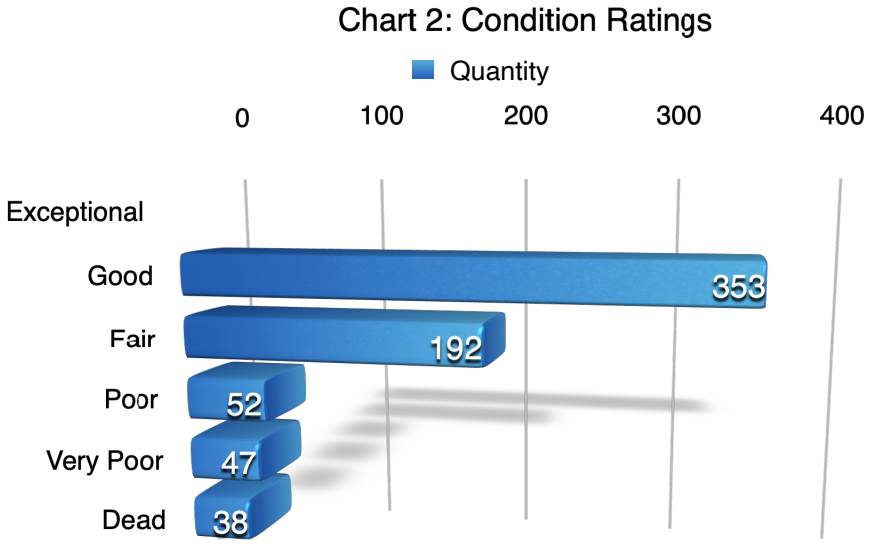
Discussion

Condition Rating

A tree's condition is a determination of its overall health, structure, and form (ISA 2018). The assessment considered all three characteristics for a combined condition rating.

- 100% - Exceptional = Good health and structure with significant size, location or quality.
- 61-80% - Good = Normal vigor, well-developed structure, function and aesthetics not compromised with good longevity for the site.
- 41-60 % - Fair = Reduced vigor, damage, dieback, or pest problems, at least one significant structural problem or multiple moderate defects requiring treatment. Major asymmetry or deviation from the species normal habit, function and aesthetics compromised.
- 21-40% - Poor = Unhealthy and declining appearance with poor vigor, abnormal foliar color, size or density with potential irreversible decline. One serious structural defect or multiple significant defects that cannot be corrected and failure may occur at any time. Significant asymmetry and compromised aesthetics and intended use.
- 6-20% - Very Poor = Poor vigor and dying with little foliage in irreversible decline. Severe defects with the likelihood of failure being probable or imminent. Aesthetically poor with little or no function in the landscape.
- 0-5% - Dead/Unstable = Dead or imminently ready to fail.

Most of the trees are in good condition and naturally growing specimens. There were 353 trees in good condition, 192 fair, 52 poor, 47 very poor and 38 are dead. The setting is a mixed oak forest and the trees have not been maintained as if they were amenity specimens in a formal landscape.

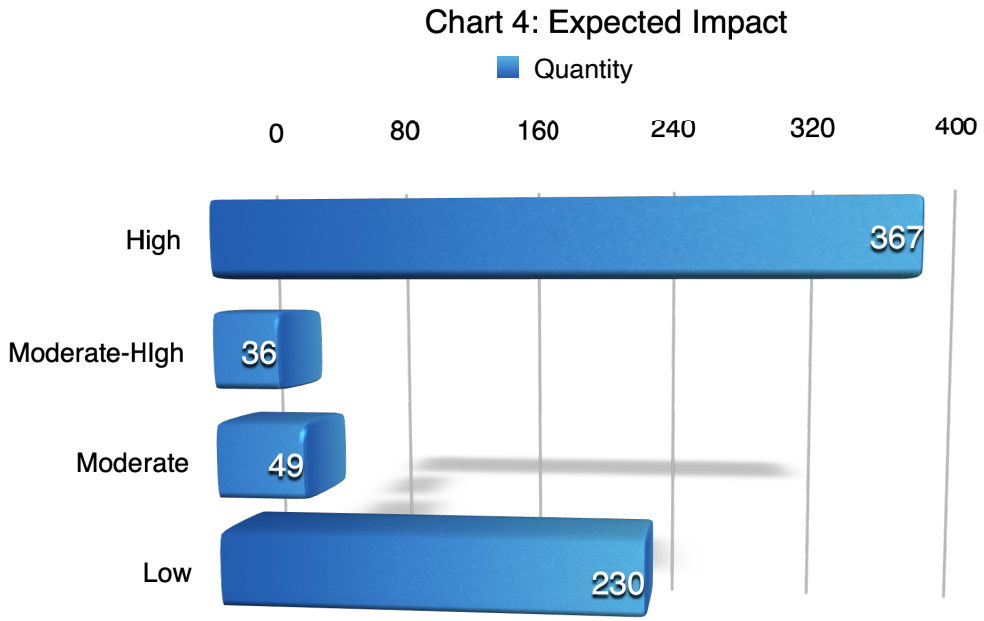


Expected Impact Level

Impact level defines how a tree may be affected by construction activity and proximity to the tree, and is described as low, moderate, or high. The following scale defines the impact rating:

- Low = The construction activity will have little influence on the tree.
- Moderate = The construction may cause future health or structural problems, and steps must be taken to protect the tree to reduce future problems.
- High = Tree structure and health will be compromised and removal is recommended, or other actions must be taken for the tree to remain. The tree is located in the building envelope.

The proposed improvements will require at least 367 trees to be removed which the majority of are within the footprint of the proposed building pads and infrastructure improvements (roads and utilities). An additional 85 trees are within close proximity of grading or other activities and could be moderate or moderate to highly impacted. The remaining 230 assessed will not be affected by the proposed plan. Of the the 367 highly impacted 205 are in good condition, 92 are fair, 18 are dead or unstable, 26 are poor, and 26 are in very poor shape.



Tree Protection

Tree protection focuses on avoiding damage to the roots, trunk, or scaffold branches from heavy equipment (Appendix D). The tree protection zone (TPZ) is the defined area in which certain activities are prohibited to minimize potential injury to the tree and should encompass the critical root zone. There are two tree protection zones determined which include the “calculated” and “specified” tree protection zones. The “calculated” tree protection zone is determined by a multiplication factor based on species tolerance, tree age/vigor/health, and trunk diameter (Table 3). The “specified” tree protection zone is adjusted in size and shape to accommodate the existing infrastructure, planned construction, and specific site constraints. This “specified” zone includes tree canopy conformation, visible root orientation, size, condition, maturity, and species tolerances (Gilpin, R, Hauer, R, Matheny, N, and Smiley, E.T. 2023).

Tree protection zones and specified fence locations have been placed on the tree plan. Calculated tree protection zones are indicated in Appendix B.

Tree Removal and Justification

Two trees are to be removed and could meet the findings for removal as stated in 15-50.080 - Determination on permit. (A) (Appendix D of this report). Because the trees are within the footprint of the proposed structures they meet the findings in section 1 and 9 (both listed below).

1. The condition of the tree with respect to disease, imminent danger of falling, proximity to existing or proposed structures and interference with utility services, and whether the tree is a Dead tree or a Fallen tree.
9. The necessity to remove the tree for economic or other enjoyment of the property when there is no other feasible alternative to the removal.

There are 85 trees dead, unstable, or in very poor condition which meet both findings in the absence of a development application. The 297 trees in good or fair condition within the footprint of the proposed improvements could meet the findings as stated in both 1 and 9 or one or the other. In total there are 367 trees that will likely require removal due to their locations within the footprint of proposed structures (infrastructure and building pads).

Conclusion

The plan is to subdivide the property into 25 lots and construct new residences.

There were 682 trees comprised of 11 different species inventoried and assessed for this assignment. Sixty-seven percent (67%) of the trees assessed are coast live oaks. The inventory does not contain every tree on the property because there are vast regions not affected by the proposed development.

Most of the trees are in good condition and naturally growing specimens. There were 353 trees in good condition, 192 fair, 52 poor, 47 very poor and 38 are dead. The setting is a mixed oak forest and the trees have not been maintained as if they were amenity specimens in a formal landscape.

The proposed improvements will require at least 367 trees to be removed which the majority of are within the footprint of the proposed building pads and infrastructure improvements (roads and utilities). An additional 85 trees are within close proximity of grading or other activities and could be moderate or moderate to highly impacted. The remaining 230 assessed will not be affected by the proposed plan. Of the the 367 highly impacted 205 are in good condition, 92 are fair, 18 are dead or unstable, 26 are poor, and 26 are in very poor shape.

Tree protection zones and specified fence locations have been placed on the tree plan (Appendix A). Calculated tree protection zones are indicated in Appendix B.

There are 85 trees dead, unstable, or in very poor condition which meet both findings in the absence of a development application. The 297 trees in good or fair condition within the footprint of the proposed improvements could meet the findings as stated in both subsections 1 and 9 of 15-50.080 - Determination on permit, or one or the other. In total there are 367 trees that will likely require removal due to their locations within the footprint of proposed structures (infrastructure and building pads).

My opinion of value including interest over 15 years is $1,108,415.00 using the cost compounding technique.

Recommendations

1. Place tree identification numbers and tree protection fence locations and guidelines on the plans including the grading, drainage, and utility plans. Alternatively create a separate plan sheet that includes all three protection measures labeled “T-1 Tree Protection Plan.”

2. Once plans are finalized more specific tree protection locations and mitigation should be determined.

3. Install temporary irrigation or soaker hoses in the TPZ’s. Monitor watering times or amounts to ensure adequate soil saturation. (A 5/8” soaker hose requires about 200 minutes to deliver one inch of water to a garden. This number is affected by the length of the hose and the overall rate of flow from the faucet. A good rule of thumb is to expect about ½ GPM as a standard faucet flow rate.). Infrequent deeper watering is preferred.

4. All tree maintenance and care shall be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree maintenance and care shall be specified in writing according to American National Standard for Tree Care Operations: *Tree, Shrub and Other Woody Plant Management: Standard Practices* parts 1 through 10 and adhere to ANSI Z133.1 safety standards and local regulations. All maintenance is to be performed according to ISA Best Management Practices.

5. Refer to Appendix D for general tree protection guidelines including recommendations for arborist assistance while working under trees, trenching, or excavation within a trees drip line or designated TPZ/CRZ.

6. Provide a copy of this report to all contractors and project managers, including the architect, civil engineer, and landscape designer or architect. It is the responsibility of the owner to ensure all parties are familiar with this document.

7. Arrange a pre-construction meeting with the project arborist or landscape architect to verify tree protection is in place, with the correct materials, and at the proper distances.

Bibliography

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Glossary of Terms

calculated tree protection zone: A TPZ calculated using the trunk diameter and a multiplication factor based on species tolerance to construction and tree age. It is often plotted on a plan as a circle or other arbitrary shape and can be used as a guide for establishing the specified TPZ.

critical root zone: a conceptual soil area containing the minimal amount of all the essential parts of the root zone needed to sustain tree health and structural integrity. There are no universally accepted methods to calculate the CRZ.

Cost Approach: An indication of value by adding the land value to the depreciated value of improvements.

defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

diameter at breast height (DBH): Measures at 1.4 meters (4.5 feet) above ground in the United States, Australia (arboriculture), New Zealand, and when using the Guide for Plant Appraisal, 9th edition; at 1.3 meters (4.3 feet) above ground in Australia (forestry), Canada, the European Union, and in UK forestry; and at 1.5 meters (5 feet) above ground in UK arboriculture.

drip Line: Imaginary line defined by the branch spread or a single plant or group of plants. The outer extent of the tree crown.

form: Describes a plant's habit, shape or silhouette defined by its genetics, environment, or management.

health: Assessment is based on the overall appearance of the tree, its leaf and twig growth, and the presence and severity of insects or disease

mechanical damage: Physical damage caused by outside forces such as cutting, chopping or any mechanized device that may strike the tree trunk, roots or branches.

scaffold branches: Permanent or structural branches that for the scaffold architecture or structure of a tree.

specified tree protection zone (specified TPZ): a TPZ that is adjusted in size or shape to accommodate the existing infrastructure, planned construction, and aspects of the site, as well as the tree canopy conformation, visible root orientation, size, condition, maturity, and species response to construction.

straw wattle: also known as straw worms, bio-logs, straw noodles, or straw tubes are man made cylinders of compressed, weed free straw (wheat or rice), 8 to 12 inches in diameter and 20 to 25 feet long. They are encased in jute, nylon, or other photo degradable materials, and have an average weight of 35 pounds.

structure: Evaluation focused on the crown, trunk, trunk flare, above ground roots and the site conditions contributing to conditions and/or defects that may contribute to failure.

Tree Protection Zone (TPZ): Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

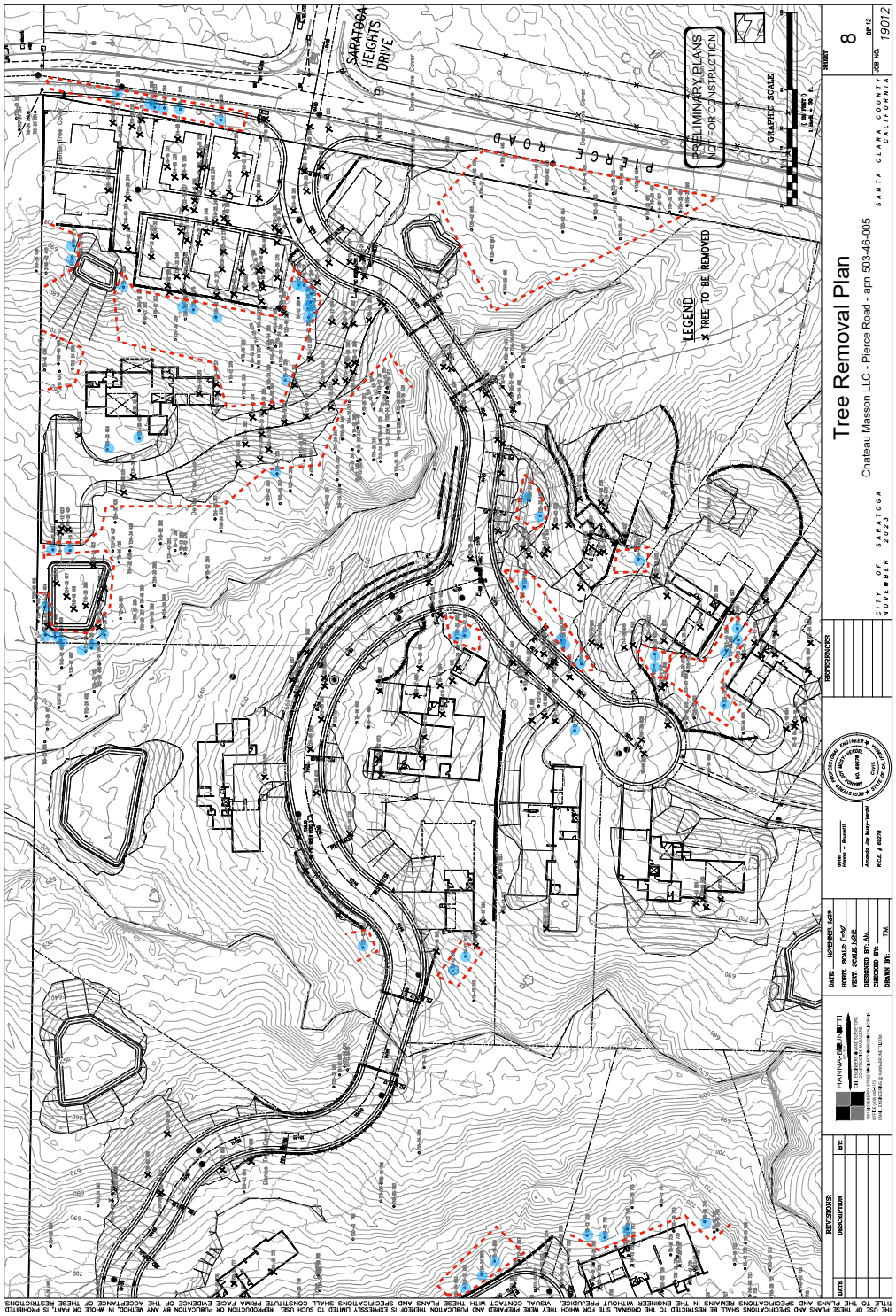
Tree Risk Assessment: Process of evaluating what unexpected things could happen, how likely it is, and what the likely outcomes are. In tree management, the systematic process to determine the level of risk posed by a tree, tree part, or group of trees.

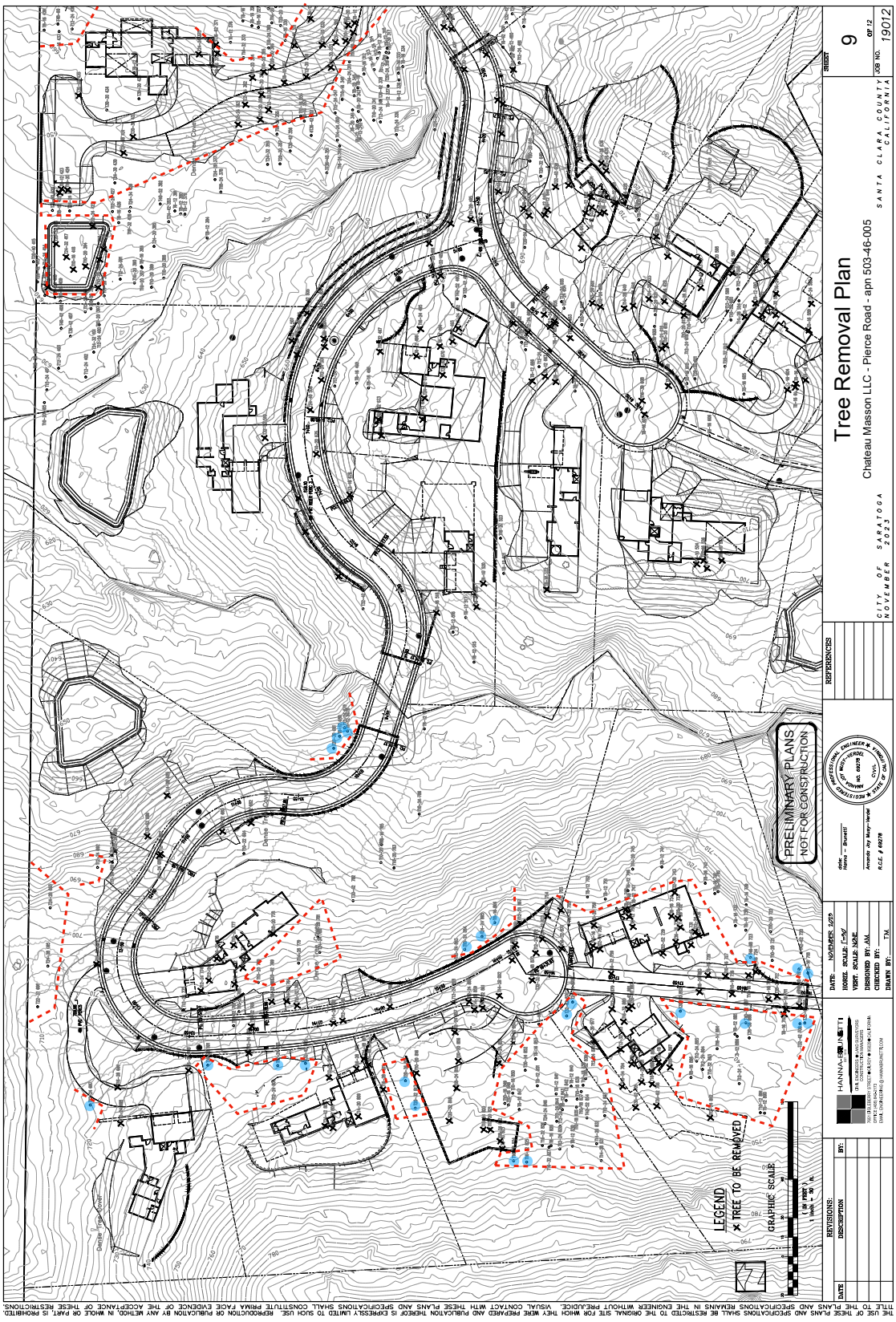
trunk: Stem of a tree.

volunteer: A tree, not planted by human hands, that begins to grow on residential or commercial property. Unlike trees that are b drought in and installed on property, volunteer trees usually spring up on their own from seeds placed onto the ground by natural causes or accidental transport by people. Normally, volunteer trees are considered weeds and removed, but many desirable and attractive specimens have gone on to become permanent residents on many public and private grounds.

Appendix A: Tree Locations and Protection

For greater detail of tree and site conditions see full size plans. Blue dots are moderately impacted and red dashed lines are tree protection fence locations.

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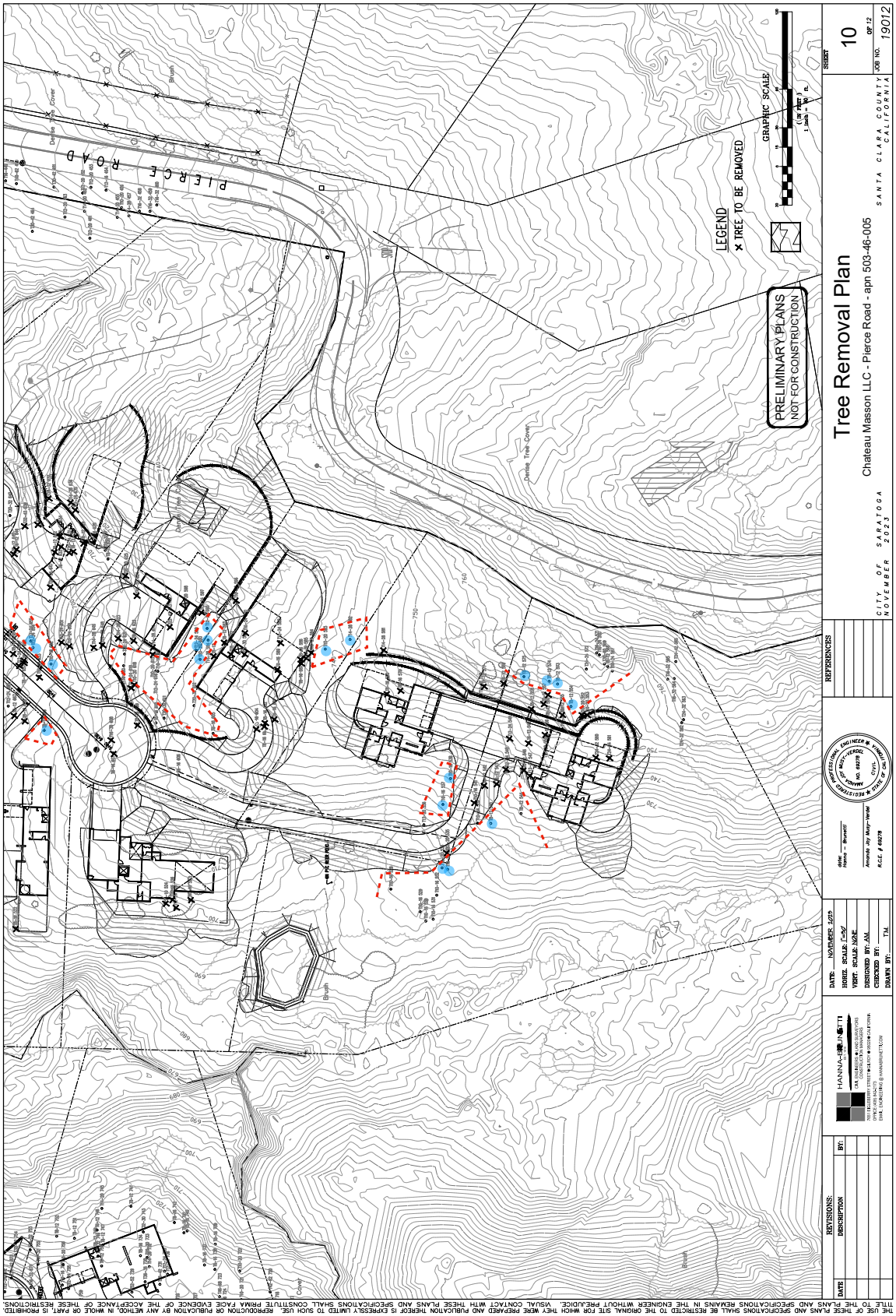
Chateau Masson LLC - Pierce Road - apn 503-46-005
CITY OF SARATOGA
NOVEMBER 2023
SANTA CLARA COUNTY
CALIFORNIA
SHEET 9
JOB NO. 19012
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
LEGEND
TREE TO BE REMOVED
GRAPHIC SCALE
REVISIONS:
DATE
DESCRIPTION
BY:
DATE: NOVEMBER 2023
HORIZ. SCALE: 1"=50'
VERT. SCALE: NONE
DESIGNED BY: AM
CHECKED BY:
DRAWN BY: TM
HANNA-BRUNETTI


PIERCE ROAD
LEGEND
× TREE TO BE REMOVED
GRAPHIC SCALE
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
Tree Removal Plan
Chateau Masson LLC - Pierce Road - apn 503-46-005
CITY OF SARATOGA
NOVEMBER 2023
SANTA CLARA COUNTY
CALIFORNIA
SHEET 10 OF 12
JOB NO. 19012
REVISIONS:
DATE
DESCRIPTION
BY:
REFERENCES
DATE: NOVEMBER 2023
HORIZ. SCALE: 1"=50'
VERT. SCALE: NONE
DESIGNED BY: AM
CHECKED BY:
DRAWN BY: TM
Amanda Jay Mary-Verdier
R.C.E. # 69278
Civil
HANNA BROPHY
Monarch Consulting Arborists LLC - P.O Box 1010, Felton, CA 95018
831.331.8982 - rick@monarcharborist.com

Appendix B: Summary Table

Table 1

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	201	16	25	Fair	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	202	17, 7	25	Fair	Low	12	$1869.56
coast live oak (*Quercus agrifolia*)	203	14, 13	25	Good	Low	13	$1869.56
arroyo willow (*Salix lasiolepis*)	204	14	25	Very poor	Low	9	$545.29
coast live oak (*Quercus agrifolia*)	205	28	25	Good	Low	19	$6231.87
coast live oak (*Quercus agrifolia*)	206	21	25	Fair	Moderate	14	$6231.87
coast live oak (*Quercus agrifolia*)	207	8	10	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	208	12	20	Fair	Moderate	8	$1869.56
coast live oak (*Quercus agrifolia*)	209	36	25	Fair	High	24	$6231.87
coast live oak (*Quercus agrifolia*)	210	16	20	Poor	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	211	27	25	Good	High	18	$6231.87
coast live oak (*Quercus agrifolia*)	212	24	35	Good	High	16	$6231.87
valley oak (*Quercus lobata*)	213	36	35	Good	High	24	$6231.87
coast live oak (*Quercus agrifolia*)	214	16	10	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	215	24, 18	35	Poor	High	20	$1869.56
California bay laurel (*Umbellularia californica*)	216	11, 11, 11	25	Fair	High	13	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	217	27, 12	35	Fair	High	20	$1869.56
coast live oak (*Quercus agrifolia*)	218	15, 10, 12	20	Very poor	High	14	$545.29
coast live oak (*Quercus agrifolia*)	219	20, 8	35	Fair	High	14	$1869.56
coast live oak (*Quercus agrifolia*)	220	15	20	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	221	7	10	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	222	15	25	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	223	17	35	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	224	9	10	Fair	High	6	$545.29
coast live oak (*Quercus agrifolia*)	225	18	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	226	8	20	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	227	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	228	9	20	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	229	8	10	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	230	11, 8	20	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	231	11	20	Poor	High	7	$545.29
coast live oak (*Quercus agrifolia*)	232	18	25	Good	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	233	8	15	Good	High	5	$545.29
valley oak (*Quercus lobata*)	234	22, 14, 16	30	Fair	High	20	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	235	14	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	236	7	10	Fair	High	5	$545.29
California bay laurel (*Umbellularia californica*)	237	12, 10, 9	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	238	8	15	Very poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	239	8	15	Fair	High	5	$545.29
valley oak (*Quercus lobata*)	240	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	241	8	10	Good	High	5	$545.29
California bay laurel (*Umbellularia californica*)	242	11, 20	25	Fair	High	15	$1869.56
coast live oak (*Quercus agrifolia*)	243	22, 13	20	Very poor	High	17	$545.29
coast live oak (*Quercus agrifolia*)	244	12	15	Very poor	High	8	$545.29
coast live oak (*Quercus agrifolia*)	245	24, 9, 14	35	Fair	High	19	$1869.56
coast live oak (*Quercus agrifolia*)	246	14	25	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	247	11, 7	20	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	248	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	249	14	25	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	250	16	25	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	251	8	20	Fair	High	5	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	252	21	25	Good	High	14	$6231.87
coast live oak (*Quercus agrifolia*)	253	7, 6	20	Fair	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	254	10	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	255	8	20	Good	High	5	$545.29
valley oak (*Quercus lobata*)	256	34, 12	45	Fair	High	24	$1869.56
coast live oak (*Quercus agrifolia*)	257	15	20	Fair	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	258	13, 13	35	Fair	High	12	$1869.56
valley oak (*Quercus lobata*)	259	32	35	Good	High	21	$6231.87
coast live oak (*Quercus agrifolia*)	260	10	25	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	261	18	25	Good	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	262	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	263	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	264	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	265	14, 12	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	266	10	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	267	8	15	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	268	8	15	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	269	11	25	Good	High	7	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
valley oak (*Quercus lobata*)	270	10, 9	0	Dead/ Unstable	High	9	
toyon (*Heteromeles arbutifolia*)	271	6, 4, 4	15	Fair	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	272	20	30	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	273	18, 18	35	Fair	High	17	$1869.56
coast live oak (*Quercus agrifolia*)	274	10, 10	20	Poor	Moderate-high	9	$1869.56
coast live oak (*Quercus agrifolia*)	275	15	10	Dead/ Unstable	Moderate-high	10	
coast live oak (*Quercus agrifolia*)	276	24	35	Good	Low	16	$6231.87
coast live oak (*Quercus agrifolia*)	277	18, 18	35	Fair	Moderate	17	$1869.56
coast live oak (*Quercus agrifolia*)	278	10	8	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	279	15	25	Good	Low	10	$1869.56
California bay laurel (*Umbellularia californica*)	280	14	25	Good	Low	9	$1869.56
California bay laurel (*Umbellularia californica*)	281	11	25	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	282	18	35	Good	Low	12	$1869.56
valley oak (*Quercus lobata*)	283	14	20	Good	Low	9	$1869.56
valley oak (*Quercus lobata*)	284	7	0	Dead/ Unstable	High	5	
valley oak (*Quercus lobata*)	285	8	10	Very poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	286	18	30	Good	Moderate-high	12	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	287	9	20	Good	Moderate-high	6	$545.29
valley oak (*Quercus lobata*)	288	10, 12	30	Poor	Moderate-high	10	$1869.56
coast live oak (*Quercus agrifolia*)	289	8	20	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	290	8	15	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	291	15	20	Fair	Low	10	$1869.56
coast live oak (*Quercus agrifolia*)	292	13	15	Fair	Moderate	9	$1869.56
coast live oak (*Quercus agrifolia*)	293	10	15	Fair	Moderate-high	7	$545.29
California bay laurel (*Umbellularia californica*)	294	10	10	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	295	12, 12	25	Poor	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	296	11, 16	30	Good	High	13	$1869.56
coast live oak (*Quercus agrifolia*)	297	10	10	Poor	High	7	$545.29
coast live oak (*Quercus agrifolia*)	298	14, 10	25	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	299	10, 10	20	Poor	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	300	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	301	8	10	Good	High	5	$545.29
valley oak (*Quercus lobata*)	302	12	10	Dead/ Unstable	High	8	
coast live oak (*Quercus agrifolia*)	303	9	20	Dead/ Unstable	High	6	

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	304	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	305	9	0	Dead/ Unstable	High	6	
coast live oak (*Quercus agrifolia*)	306	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	307	6	8	Good	High	4	$545.29
California bay laurel (*Umbellularia californica*)	308	6	20	Good	High	4	$545.29
California bay laurel (*Umbellularia californica*)	309	15, 4, 6, 5	30	Good	High	12	$1869.56
valley oak (*Quercus lobata*)	310	9	0	Dead/ Unstable	High	6	
valley oak (*Quercus lobata*)	311	10	0	Dead/ Unstable	Low	7	
coast live oak (*Quercus agrifolia*)	312	10	20	Fair	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	313	9	20	Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	314	13	25	Good	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	315	7	10	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	316	6	10	Good	Low	4	$545.29
coast live oak (*Quercus agrifolia*)	317	17	25	Fair	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	318	5, 4	10	Fair	Low	4	$1869.56
valley oak (*Quercus lobata*)	319	7, 10	20	Fair	Low	8	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	320	8	20	Good	Moderate	5	$545.29
California bay laurel (*Umbellularia californica*)	321	6, 4	10	Good	Low	5	$1869.56
California bay laurel (*Umbellularia californica*)	322	7	10	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	323	6, 2	10	Good	Low	4	$1869.56
coast live oak (*Quercus agrifolia*)	324	24	35	Fair	Low	16	$6231.87
coast live oak (*Quercus agrifolia*)	325	10	25	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	326	9	25	Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	327	9	25	Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	328	10	20	Good	Low	7	$545.29
valley oak (*Quercus lobata*)	329	10	20	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	330	9	20	Fair	Moderate	6	$545.29
California buckeye (*Aesculus californica*)	331	4, 2, 2, 2, 2	15	Good	High	4	$1869.56
California bay laurel (*Umbellularia californica*)	332	13	20	Good	High	9	$1869.56
California bay laurel (*Umbellularia californica*)	333	11, 14	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	334	7	15	Fair	Low	5	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	335	12	20	Fair	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	336	6	10	Good	Low	4	$545.29
valley oak (*Quercus lobata*)	337	8	15	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	338	10, 12	20	Fair	Low	10	$1869.56
California bay laurel (*Umbellularia californica*)	339	13	20	Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	340	16	30	Dead/ Unstable	Low	11	
California bay laurel (*Umbellularia californica*)	341	11	20	Fair	Low	7	$545.29
California bay laurel (*Umbellularia californica*)	342	6	10	Good	Low	4	$545.29
coast live oak (*Quercus agrifolia*)	343	10	25	Good	Low	7	$545.29
valley oak (*Quercus lobata*)	344	9	20	Fair	Low	6	$545.29
valley oak (*Quercus lobata*)	345	8	20	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	346	10	20	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	347	12	25	Good	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	348	7	15	Fair	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	349	4, 4, 7, 7	20	Fair	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	350	9, 8, 6, 6	20	Fair	Low	10	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	351	9, 9, 10, 10, 10	35	Fair	Low	14	$1869.56
California bay laurel (*Umbellularia californica*)	352	7, 10, 8, 8	35	Fair	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	353	9	10	Fair	High	6	$545.29
valley oak (*Quercus lobata*)	354	13	0	Dead/ Unstable	High	9	
coast live oak (*Quercus agrifolia*)	355	10	20	Good	Moderate	7	$545.29
black oak (*Quercus kelloggii*)	356	20	30	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	357	18, 8, 6	10	Dead/ Unstable	Low	14	
California bay laurel (*Umbellularia californica*)	358	15, 15	30	Good	Low	14	$1869.56
California bay laurel (*Umbellularia californica*)	359	14, 8	20	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	360	14		Good	High	9	$1869.56
California bay laurel (*Umbellularia californica*)	361	12	20	Very poor	High	8	$545.29
coast live oak (*Quercus agrifolia*)	362	16	25	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	363	15	25	Good	High	10	$1869.56
California bay laurel (*Umbellularia californica*)	364	6, 6, 4	10	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	365	12	20	Fair	High	8	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	366	12, 9	35	Fair	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	367	8	1	Fair	High	5	$545.29
valley oak (*Quercus lobata*)	368	14	20	Poor	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	369	19	30	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	370	18	30	Good	Low	12	$1869.56
California bay laurel (*Umbellularia californica*)	371	20, 20, 20	35	Fair	High	23	$1869.56
California bay laurel (*Umbellularia californica*)	372	8	10	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	373	30	30	Fair	High	20	$6231.87
coast live oak (*Quercus agrifolia*)	374	6, 2	20	Fair	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	375	10	20	Good	High	7	$545.29
toyon (*Heteromeles arbutifolia*)	376	7	8	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	377	30	0	Dead/ Unstable	Low	20	
coast live oak (*Quercus agrifolia*)	378	18	35	Fair	Low	12	$1869.56
coast live oak (*Quercus agrifolia*)	379	7	20	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	380	6	20	Good	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	381	6	15	Good	Low	4	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	382	12, 15, 24	45	Fair	Low	20	$1869.56
coast live oak (*Quercus agrifolia*)	383	21	35	Very poor	Low	14	$545.29
coast live oak (*Quercus agrifolia*)	384	13	25	Good	Low	9	$1869.56
valley oak (*Quercus lobata*)	385	15, 8	25	Fair	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	386	6	15	Good	Low	4	$545.29
valley oak (*Quercus lobata*)	387	12	20	Fair	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	388	8	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	389	11	20	Fair	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	390	10	15	Poor	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	391	16	30	Good	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	392	10	20	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	393	8	15	Very poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	394	9	15	Very poor	High	6	$545.29
valley oak (*Quercus lobata*)	395	6	10	Good	High	4	$545.29
valley oak (*Quercus lobata*)	396	16	30	Poor	Moderate	11	$1869.56
California bay laurel (*Umbellularia californica*)	397	9	10	Good	Low	6	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	398	10	20	Poor	Moderate	7	$545.29
valley oak (*Quercus lobata*)	399	21	35	Good	Moderate	14	$6231.87
California buckeye (*Aesculus californica*)	400	7, 7, 7	15	Fair	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	401	24	3	Good	Low	16	$6231.87
coast live oak (*Quercus agrifolia*)	402	16	30	Good	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	403	17	0	Dead/ Unstable	Low	11	
coast live oak (*Quercus agrifolia*)	404	13	25	Good	Low	9	$1869.56
valley oak (*Quercus lobata*)	405	13	20	Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	406	16	30	Fair	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	407	12, 17	25	Fair	Low	14	$1869.56
valley oak (*Quercus lobata*)	408	15, 15	30	Good	Low	14	$1869.56
valley oak (*Quercus lobata*)	409	11	20	Fair	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	410	10	15	Fair	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	411	11	0	Dead/ Unstable	Moderate	7	
coast live oak (*Quercus agrifolia*)	412	11, 5	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	413	20	35	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	414	11,6	20	Fair	Moderate-high	8	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	415	16, 10	25	Good	Low	13	$1869.56
coast live oak (*Quercus agrifolia*)	416	17, 8	25	Fair	High	13	$1869.56
coast live oak (*Quercus agrifolia*)	417	23	35	Good	High	15	$6231.87
coast live oak (*Quercus agrifolia*)	418	7	10	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	419	10	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	420	22, 21, 13, 7	55	Poor	Moderate-high	23	$1869.56
coast live oak (*Quercus agrifolia*)	421	11, 14	20	Very poor	High	12	$545.29
California bay laurel (*Umbellularia californica*)	422	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	423	7	15	Fair	High	5	$545.29
valley oak (*Quercus lobata*)	424	10	25	Very poor	High	7	$545.29
coast live oak (*Quercus agrifolia*)	425	10	20	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	426	8	20	Fair	Low	5	$545.29
black oak (*Quercus kelloggii*)	427	15	35	Fair	Low	10	$1869.56
California bay laurel (*Umbellularia californica*)	428	12	20	Very poor	Low	8	$545.29
coast live oak (*Quercus agrifolia*)	429	24	20	Dead/ Unstable	Low	16	
coast live oak (*Quercus agrifolia*)	430	16	30	Very poor	Low	11	$545.29
black oak (*Quercus kelloggii*)	431	19	25	Fair	High	13	$6231.87

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	432	18, 10	0	Dead/ Unstable	High	14	
California bay laurel (*Umbellularia californica*)	433	30	45	Fair	Moderate	20	$6231.87
coast live oak (*Quercus agrifolia*)	434	23	35	Fair	Moderate	15	$6231.87
valley oak (*Quercus lobata*)	435	20, 15	35	Fair	High	17	$1869.56
California bay laurel (*Umbellularia californica*)	436	10	20	Good	Low	7	$545.29
California bay laurel (*Umbellularia californica*)	437	6	10	Poor	Low	4	$545.29
coast live oak (*Quercus agrifolia*)	438	20, 20, 18	30	Dead/ Unstable	Low	22	
California bay laurel (*Umbellularia californica*)	439	8	15	Poor	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	440	7	15	Good	High	5	$545.29
ash (*Fraxinus pennsylvanica*)	441	17, 14, 8	35	Good	Low	16	$1869.56
coast live oak (*Quercus agrifolia*)	442	25	35	Fair	High	17	$6231.87
California bay laurel (*Umbellularia californica*)	443	7, 4	20	Fair	Moderate	5	$1869.56
California bay laurel (*Umbellularia californica*)	444	6	10	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	445	30, 18, 22	65	Fair	Low	28	$1869.56
California bay laurel (*Umbellularia californica*)	446	9	20	Very poor	Low	6	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	447	8	10	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	448	16	25	Good	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	449	17	25	Fair	Low	11	$1869.56
valley oak (*Quercus lobata*)	450	44	45	Fair	Low	29	$6231.87
coast live oak (*Quercus agrifolia*)	451	30	30	Poor	Low	20	$6231.87
coast live oak (*Quercus agrifolia*)	452	12	20	Poor	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	453	12	20	Poor	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	454	12	20	Poor	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	455	18	20	Fair	Low	12	$1869.56
coast live oak (*Quercus agrifolia*)	456	12	20	Fair	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	457	20	25	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	458	20	25	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	459	14	20	Good	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	460	15	25	Fair	Low	10	$1869.56
valley oak (*Quercus lobata*)	461	12	25	Fair	Low	8	$1869.56
coast live oak (*Quercus agrifolia*)	462	19	25	Fair	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	463	14	20	Poor	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	464	34	45	Good	Low	23	$6231.87



Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	465	16	20	Fair	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	466	14	20	Poor	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	467	17	20	Poor	Low	11	$1869.56
valley oak (*Quercus lobata*)	468	20, 10	35	Good	Low	15	$1869.56
coast live oak (*Quercus agrifolia*)	469	20, 17	25	Fair	Low	17	$1869.56
coast live oak (*Quercus agrifolia*)	470	17	25	Fair	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	471	13	20	Fair	Low	9	$1869.56
toyon (*Heteromeles arbutifolia*)	472	6, 4, 4, 4, 4	15	Fair	Low	7	$1869.56
valley oak (*Quercus lobata*)	473	12, 17, 12, 10, 8	35	Fair	Low	18	$1869.56
coast live oak (*Quercus agrifolia*)	474	12	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	475	12	20	Good	High	8	$1869.56
California bay laurel (*Umbellularia californica*)	476	12	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	477	8	15	Poor	High	5	$545.29
valley oak (*Quercus lobata*)	478	16, 11, 13	30	Fair	High	16	$1869.56
coast live oak (*Quercus agrifolia*)	479	12	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	480	8	10	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	481	13	20	Fair	High	9	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	482	18	25	Fair	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	483	19	25	Fair	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	484	16, 14, 12, 8	35	Fair	High	17	$1869.56
coast live oak (*Quercus agrifolia*)	485	10	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	486	24	30	Very poor	High	16	$545.29
California bay laurel (*Umbellularia californica*)	487	10, 10	35	Poor	High	9	$1869.56
California buckeye (*Aesculus californica*)	488	7, 10	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	489	17	25	Fair	High	11	$1869.56
California bay laurel (*Umbellularia californica*)	490	Multi 6, 8	25	Very poor	Moderate	10	$545.29
coast live oak (*Quercus agrifolia*)	491	17, 13	20	Dead/ Unstable	Moderate	14	
coast live oak (*Quercus agrifolia*)	492	13	20	Good	Moderate	9	$1869.56
California bay laurel (*Umbellularia californica*)	493	6, 6, 6	15	Fair	Moderate	7	$1869.56
valley oak (*Quercus lobata*)	494	8	0	Dead/ Unstable	Moderate	5	
coast live oak (*Quercus agrifolia*)	495	15, 12	20	Fair	Moderate	13	$1869.56
valley oak (*Quercus lobata*)	496	9	15	Fair	Moderate	6	$545.29
coast live oak (*Quercus agrifolia*)	497	18	25	Fair	Moderate	12	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	498	10	10	Good	Low	7	$545.29
California buckeye (*Aesculus californica*)	499	8	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	500	12	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	501	13	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	502	9	10	Dead/ Unstable	High	6	
California buckeye (*Aesculus californica*)	503	6	20	Poor	High	4	$545.29
coast live oak (*Quercus agrifolia*)	504	14, 12	25	Very poor	High	12	$545.29
coast live oak (*Quercus agrifolia*)	505	20, 12	35	Fair	High	16	$1869.56
coast live oak (*Quercus agrifolia*)	506	9	20	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	507	15	25	Poor	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	508	12	25	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	509	20	25	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	510	20	25	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	511	9, 8	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	512	18	20	Good	High	12	$1869.56
California buckeye (*Aesculus californica*)	513	8, 6, 8, 4	20	Good	High	9	$1869.56
valley oak (*Quercus lobata*)	514	20	35	Good	Moderate	13	$6231.87

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	515	6	8	Good	Low	4	$545.29
valley oak (*Quercus lobata*)	516	6	8	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	517	6	8	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	518	7	10	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	519	4, 4	10	Good	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	520	6	8	Good	High	4	$545.29
valley oak (*Quercus lobata*)	521	10	10	Good	High	7	$545.29
valley oak (*Quercus lobata*)	522	6	8	Good	High	4	$545.29
blue oak (*Quercus douglasii*)	523	6, 6, 6, 4	20	Good	High	7	$1869.56
coast live oak (*Quercus agrifolia*)	524	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	525	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	526	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	527	6, 4	15	Good	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	528	6, 4	15	Good	Low	5	$1869.56
coast live oak (*Quercus agrifolia*)	529	8	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	530	8, 4, 4	15	Good	Low	7	$1869.56
coast live oak (*Quercus agrifolia*)	531	6, 4	15	Good	Low	5	$1869.56
coast live oak (*Quercus agrifolia*)	532	10	15	Good	Low	7	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	533	6, 4	15	Good	Moderate-high	5	$1869.56
coast live oak (*Quercus agrifolia*)	534	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	535	11, 7	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	536	10, 10	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	537	5, 4	15	Good	Moderate	4	$1869.56
coast live oak (*Quercus agrifolia*)	538	8	15	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	539	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	540	6	15	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	541	6, 6	15	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	542	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	543	7, 7	15	Good	High	7	$1869.56
coast live oak (*Quercus agrifolia*)	544	8	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	545	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	546	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	547	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	548	5, 2	15	Good	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	549	5, 4	15	Good	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	550	8	15	Good	High	5	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	551	8, 6	15	Good	High	7	$1869.56
coast live oak (*Quercus agrifolia*)	552	6	15	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	553	4, 5, 3	15	Good	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	554	6	15	Good	Moderate	4	$545.29
coast live oak (*Quercus agrifolia*)	555	8	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	556	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	557	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	558	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	559	8	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	560	8, 12	15	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	561	22	15	Good	High	15	$6231.87
coast live oak (*Quercus agrifolia*)	562	16, 6	15	Fair	Low	11	$1869.56
valley oak (*Quercus lobata*)	563	19	35	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	564	13	20	Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	565	20	30	Fair	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	566	20	35	Good	Low	13	$6231.87
California buckeye (*Aesculus californica*)	567	8, 12	20	Very poor	Low	10	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California buckeye (*Aesculus californica*)	568	7	20	Very poor	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	569	21, 15, 19, 17	35	Fair	Low	24	$1869.56
coast live oak (*Quercus agrifolia*)	570	16	25	Good	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	571	15	25	Good	Low	10	$1869.56
California buckeye (*Aesculus californica*)	572	10, 10, 8	25	Fair	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	573	7	10	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	574	7	10	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	575	6, 5	10	Good	Moderate	5	$1869.56
coast live oak (*Quercus agrifolia*)	576	9	10	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	577	8	10	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	578	8, 8	10	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	579	12	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	580	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	581	11, 8, 8, 9	25	Good	High	12	$1869.56
valley oak (*Quercus lobata*)	582	11	15	Good	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	583	11	15	Good	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	584	12	15	Good	High	8	$1869.56



Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	585	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	586	10, 10	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	587	13	15	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	588	16	15	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	589	8	15	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	590	10, 9, 9	15	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	591	9, 10	15	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	592	10, 9, 10	15	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	593	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	594	9, 7	15	Fair	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	595	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	596	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	597	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	598	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	599	8	20	Good	Moderate-high	5	$545.29
coast live oak (*Quercus agrifolia*)	600	8	20	Good	Moderate-high	5	$545.29
coast live oak (*Quercus agrifolia*)	601	6	10	Poor	High	4	$545.29
coast live oak (*Quercus agrifolia*)	602	6, 4	10	Fair	High	5	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
valley oak (*Quercus lobata*)	603	8	10	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	604	6	10	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	605	8	10	Poor	High	5	$545.29
coast live oak (*Quercus agrifolia*)	606	8	10	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	607	6	10	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	608	12, 8, 4	20	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	609	6, 6, 2	20	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	610	9	20	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	611	14	20	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	612	18	20	Good	Moderate-high	12	$1869.56
coast live oak (*Quercus agrifolia*)	613	13, 14	15	Fair	High	13	$1869.56
coast live oak (*Quercus agrifolia*)	614	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	615	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	616	13	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	617	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	618	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	619	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	620	9	15	Good	Moderate-high	6	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	621	15	15	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	622	5, 7	15	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	623	9, 8	15	Good	High	8	$1869.56
California bay laurel (*Umbellularia californica*)	624	12, 12, 10, 10, 14	35	Fair	High	17	$1869.56
coast live oak (*Quercus agrifolia*)	625	27	35	Very poor	High	18	$545.29
California bay laurel (*Umbellularia californica*)	626	8	15	Good	Moderate-high	5	$545.29
coast live oak (*Quercus agrifolia*)	627	8, 8	15	Very poor	High	8	$545.29
California bay laurel (*Umbellularia californica*)	628	8	15	Good	High	5	$545.29
California bay laurel (*Umbellularia californica*)	629	8, 4	15	Good	High	6	$1869.56
California bay laurel (*Umbellularia californica*)	630	8	15	Good	High	5	$545.29
California buckeye (*Aesculus californica*)	631	12, 8	15	Good	High	10	$1869.56
California buckeye (*Aesculus californica*)	632	7	10	Good	High	5	$545.29
California buckeye (*Aesculus californica*)	633	7	10	Good	High	5	$545.29
California bay laurel (*Umbellularia californica*)	634	7	15	Good	High	5	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	635	9	15	Good	High	6	$545.29
California bay laurel (*Umbellularia californica*)	636	20	15	Good	High	13	$6231.87
California bay laurel (*Umbellularia californica*)	637	10, 10	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	638	16, 20, 8	30	Good	High	18	$1869.56
California bay laurel (*Umbellularia californica*)	639	8, 13	20	Good	High	10	$1869.56
California bay laurel (*Umbellularia californica*)	640	7, 7, 7	15	Fair	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	641	20	15	Very poor	Moderate-high	13	$545.29
coast live oak (*Quercus agrifolia*)	642	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	643	7	15	Good	High	5	$545.29
California buckeye (*Aesculus californica*)	644	7	15	Fair	High	5	$545.29
California bay laurel (*Umbellularia californica*)	645	7	15	Fair	High	5	$545.29
black oak (*Quercus kelloggii*)	646	12, 8	20	Fair	Moderate-high	10	$1869.56
California buckeye (*Aesculus californica*)	647	7, 7, 8, 6	15	Poor	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	648	5, 10	15	Good	High	7	$1869.56
coast live oak (*Quercus agrifolia*)	649	14	15	Good	High	9	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	650	16	15	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	651	12	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	652	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	653	11	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	654	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	655	12	15	Good	Moderate-high	8	$1869.56
coast live oak (*Quercus agrifolia*)	656	7	15	Good	High	5	$545.29
valley oak (*Quercus lobata*)	657	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	658	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	659	7, 9	15	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	660	7	15	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	661	10	8	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	662	7	8	Good	High	5	$545.29
valley oak (*Quercus lobata*)	663	6	8	Good	High	4	$545.29
coast live oak (*Quercus agrifolia*)	664	13		Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	665	10		Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	666	6, 2	8	Good	High	4	$1869.56
coast live oak (*Quercus agrifolia*)	667	7	10	Good	High	5	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	668	6, 5, 5	10	Good	High	6	$1869.56
coast live oak (*Quercus agrifolia*)	669	6, 5, 5	10	Good	Moderate-high	6	$1869.56
coast live oak (*Quercus agrifolia*)	670	30	35	Good	Low	20	$6231.87
coast live oak (*Quercus agrifolia*)	671	23	25	Good	Low	15	$6231.87
coast live oak (*Quercus agrifolia*)	672	7	8	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	673	22	20	Fair	Low	15	$6231.87
coast live oak (*Quercus agrifolia*)	674	28	20	Fair	Low	19	$6231.87
coast live oak (*Quercus agrifolia*)	675	10	1	Fair	Low	7	$545.29
toyon (*Heteromeles arbutifolia*)	676	6, 6	15	Good	Low	6	$1869.56
California bay laurel (*Umbellularia californica*)	677	8	10	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	678	9	15	Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	679	12	25	Fair	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	680	8	10	Good	Low	5	$545.29
valley oak (*Quercus lobata*)	681	20	30	Good	Low	13	$6231.87
valley oak (*Quercus lobata*)	682	20	25	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	683	12	20	Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	684	12	20	Good	Low	8	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	685	14	20	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	686	12, 12, 12	30	Poor	High	14	$1869.56
coast live oak (*Quercus agrifolia*)	687	10	20	Fair	High	7	$545.29
valley oak (*Quercus lobata*)	688	8	20	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	689	20	35	Good	High	13	$6231.87
valley oak (*Quercus lobata*)	690	14	35	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	691	20, 15	25	Very poor	High	17	$545.29
coast live oak (*Quercus agrifolia*)	692	10	25	Very poor	Low	7	$545.29
valley oak (*Quercus lobata*)	693	20	25	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	694	12, 8	15	Good	High	10	$1869.56
coast live oak (*Quercus agrifolia*)	695	12, 10, 8, 8, 8	20	Fair	Low	14	$1869.56
coast live oak (*Quercus agrifolia*)	696	19	30	Good	Low	13	$6231.87
coast live oak (*Quercus agrifolia*)	697	8	15	Good	Moderate-high	5	$545.29
coast live oak (*Quercus agrifolia*)	698	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	699	10, 10	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	700	14	20	Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	701	16	20	Poor	Low	11	$1869.56
coast live oak (*Quercus agrifolia*)	702	16, 14	10	Dead/ Unstable	Low	14	

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	703	12	20	Poor	Low	8	$1869.56
California bay laurel (*Umbellularia californica*)	704	54	45	Fair	Low	36	$6231.87
coast live oak (*Quercus agrifolia*)	705	24, 24	20	Dead/ Unstable	Low	23	
coast live oak (*Quercus agrifolia*)	706	32	20	Dead/ Unstable	Low	21	
valley oak (*Quercus lobata*)	707	8	10	Dead/ Unstable	Low	5	
coast live oak (*Quercus agrifolia*)	708	27	35	Good	Moderate	18	$6231.87
coast live oak (*Quercus agrifolia*)	709	24	35	Good	Moderate-high	16	$6231.87
California bay laurel (*Umbellularia californica*)	710	9	15	Good	High	6	$545.29
California bay laurel (*Umbellularia californica*)	711	10	15	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	712	22	20	Dead/ Unstable	High	15	
California bay laurel (*Umbellularia californica*)	713	6, 4		Good	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	714	22	35	Good	High	15	$6231.87
coast live oak (*Quercus agrifolia*)	715	18	25	Very poor	High	12	$545.29
coast live oak (*Quercus agrifolia*)	716	8	10	Very poor	Low	5	$545.29
California buckeye (*Aesculus californica*)	717	7	10	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	718	7, 4	20	Fair	Moderate	5	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	719	10	15	Fair	Moderate	7	$545.29
coast live oak (*Quercus agrifolia*)	720	30, 17	35	Fair	Low	23	$1869.56
California bay laurel (*Umbellularia californica*)	721	9	10	Fair	Low	6	$545.29
California bay laurel (*Umbellularia californica*)	722	7	10	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	723	32, 23	30	Dead/ Unstable	Moderate	26	
coast live oak (*Quercus agrifolia*)	724	10	15	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	725	8	10	Dead/ Unstable	High	5	
California bay laurel (*Umbellularia californica*)	726	7, 4	15	Good	High	5	$1869.56
coast live oak (*Quercus agrifolia*)	727	11	15	Very poor	High	7	$545.29
California bay laurel (*Umbellularia californica*)	728	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	729	24, 24	45	Very poor	High	23	$545.29
California bay laurel (*Umbellularia californica*)	730	22	35	Good	High	15	$6231.87
California bay laurel (*Umbellularia californica*)	731	48	45	Fair	High	32	$6231.87
coast live oak (*Quercus agrifolia*)	732	13	35	Fair	High	9	$1869.56
valley oak (*Quercus lobata*)	733	18	0	Dead/ Unstable	High	12	

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	734	8	20	Good	High	5	$545.29
valley oak (*Quercus lobata*)	735	16	20	Fair	High	11	$1869.56
valley oak (*Quercus lobata*)	736	12	20	Fair	High	8	$1869.56
California bay laurel (*Umbellularia californica*)	737	7	15	Fair	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	738	7	15	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	739	10	20	Good	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	740	10	15	Fair	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	741	18	20	Fair	Low	12	$1869.56
California bay laurel (*Umbellularia californica*)	742	7	10	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	743	19	0	Dead/ Unstable	Low	13	
coast live oak (*Quercus agrifolia*)	744	8	10	Poor	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	745	16	25	Very poor	Low	11	$545.29
coast live oak (*Quercus agrifolia*)	746	7	15	Poor	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	747	10	15	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	748	9	10	Good	High	6	$545.29
valley oak (*Quercus lobata*)	749	30	35	Good	High	20	$6231.87

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
California bay laurel (*Umbellularia californica*)	750	8	20	Good	High	5	$545.29
coast live oak (*Quercus agrifolia*)	751	10	15	Good	Moderate	7	$545.29
California bay laurel (*Umbellularia californica*)	752	8	15	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	753	15, 15, 13	35	Fair	High	17	$1869.56
coast live oak (*Quercus agrifolia*)	754	12, 12, 14	35	Fair	High	15	$1869.56
olive (*Olea europaea*)	755	11	25	Good	High	7	$545.29
California bay laurel (*Umbellularia californica*)	756	12	15	Good	High	8	$1869.56
California bay laurel (*Umbellularia californica*)	757	8	15	Good	High	5	$545.29
valley oak (*Quercus lobata*)	758	14	25	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	759	16	25	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	760	10, 8	15	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	761	12	15	Very poor	High	8	$545.29
valley oak (*Quercus lobata*)	762	12, 12	25	Poor	High	11	$1869.56
valley oak (*Quercus lobata*)	763	16		Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	764	5, 12		Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	765	17, 16		Poor	High	16	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	766	22		Good	High	15	$6231.87
coast live oak (*Quercus agrifolia*)	767	13		Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	768	6		Good	High	4	$545.29
California bay laurel (*Umbellularia californica*)	769	15, 12, 8, 6		Poor	High	14	$1869.56
coast live oak (*Quercus agrifolia*)	770	9		Dead/ Unstable	Moderate	6	
coast live oak (*Quercus agrifolia*)	771	12		Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	772	13		Dead/ Unstable	High	9	
coast live oak (*Quercus agrifolia*)	773	12		Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	774	12		Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	775	12		Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	776	9		Very poor	High	6	$545.29
coast live oak (*Quercus agrifolia*)	777	8, 6		Very poor	High	7	$545.29
coast live oak (*Quercus agrifolia*)	778	12		Good	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	779	12, 6		Fair	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	780	6, 6, 6, 8		Good	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	781	15		Good	Low	10	$1869.56
coast live oak (*Quercus agrifolia*)	782	14		Good	Low	9	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	801	12, 10	25	Very poor	Moderate-high	10	$545.29
coast live oak (*Quercus agrifolia*)	802	11	20	Good	High	7	$545.29
coast live oak (*Quercus agrifolia*)	803	11	15	Fair	Moderate-high	7	$545.29
coast live oak (*Quercus agrifolia*)	804	15	20	Poor	Low	10	$1869.56
coast live oak (*Quercus agrifolia*)	805	18	15	Poor	Moderate-high	12	$1869.56
coast live oak (*Quercus agrifolia*)	806	10, 6	20	Fair	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	807	23	20	Good	High	15	$6231.87
California bay laurel (*Umbellularia californica*)	808	10	15	Good	High	7	$545.29
madrone (*Arbutus menziesii)*	809	13	5	Dead/ Unstable	High	9	
madrone (*Arbutus menziesii)*	810	10	5	Dead/ Unstable	High	7	
coast live oak (*Quercus agrifolia*)	811	19	30	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	812	18	30	Good	High	12	$1869.56
coast live oak (*Quercus agrifolia*)	813	8, 8, 8, 10	30	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	814	22	30	Poor	High	15	$6231.87
California bay laurel (*Umbellularia californica*)	815	6, 6	15	Fair	Moderate-high	6	$1869.56
valley oak (*Quercus lobata*)	816	10	15	Fair	High	7	$545.29
coast live oak (*Quercus agrifolia*)	817	18	25	Good	Moderate-high	12	$1869.56

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	818	16	20	Good	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	819	13	25	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	820	14	25	Good	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	821	6	10	Very poor	High	4	$545.29
coast live oak (*Quercus agrifolia*)	822	13	20	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	823	8	15	Fair	High	5	$545.29
coast live oak (*Quercus agrifolia*)	824	16	20	Good	Moderate-high	11	$1869.56
coast live oak (*Quercus agrifolia*)	825	16	20	Good	Moderate-high	11	$1869.56
coast live oak (*Quercus agrifolia*)	826	9		Good	Low	6	$545.29
coast live oak (*Quercus agrifolia*)	827	13		Good	Low	9	$1869.56
California bay laurel (*Umbellularia californica*)	828	9	15	Good	Low	6	$545.29
California bay laurel (*Umbellularia californica*)	829	13	15	Good	Low	9	$1869.56
California bay laurel (*Umbellularia californica*)	830	8	15	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	831	7, 5	15	Fair	Low	6	$1869.56
California bay laurel (*Umbellularia californica*)	832	14, 12	25	Fair	Low	12	$1869.56
California bay laurel (*Umbellularia californica*)	833	11	20	Good	Low	7	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	834	19, 24, 30	30	Dead/ Unstable	Low	29	
California bay laurel (*Umbellularia californica*)	835	6	10	Fair	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	836	6	10	Fair	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	837	6	10	Fair	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	838	8	10	Fair	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	839	26, 15	20	Very poor	Low	20	$545.29
California bay laurel (*Umbellularia californica*)	840	6	15	Good	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	841	6	15	Good	Low	4	$545.29
California bay laurel (*Umbellularia californica*)	842	6, 5	15	Good	Low	5	$1869.56
California bay laurel (*Umbellularia californica*)	843	8	15	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	844	9	15	Good	Low	6	$545.29
California bay laurel (*Umbellularia californica*)	845	12	15	Very poor	Low	8	$545.29
California bay laurel (*Umbellularia californica*)	846	8	15	Good	Low	5	$545.29
madrone (*Arbutus menziesii)*	847	6	15	Poor	Low	4	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
madrone (*Arbutus menziesii)*	848	8	15	Poor	Low	5	$545.29
madrone (*Arbutus menziesii)*	849	10	15	Poor	Low	7	$545.29
coast live oak (*Quercus agrifolia*)	850	9	15	Fair	Low	6	$545.29
madrone (*Arbutus menziesii)*	851	8	20	Dead/ Unstable	Low	5	
valley oak (*Quercus lobata*)	852	10, 10	20	Good	Low	9	$1869.56
madrone (*Arbutus menziesii)*	853	10	15	Good	Low	7	$545.29
madrone (*Arbutus menziesii)*	854	9	15	Fair	High	6	$545.29
valley oak (*Quercus lobata*)	855	12, 12	15	Dead/ Unstable	High	11	
coast live oak (*Quercus agrifolia*)	856	9	15	Good	High	6	$545.29
coast live oak (*Quercus agrifolia*)	857	10	20	Good	High	7	$545.29
California buckeye (*Aesculus californica*)	858	6, 6, 8	25	Good	High	8	$1869.56
black oak (*Quercus kelloggii*)	859	15, 11	20	Very poor	High	12	$545.29
California bay laurel (*Umbellularia californica*)	860	12	20	Good	High	8	$1869.56
black oak (*Quercus kelloggii*)	861	42	35	Good	High	28	$6231.87
California bay laurel (*Umbellularia californica*)	862	16	25	Fair	High	11	$1869.56
coast live oak (*Quercus agrifolia*)	863	8, 8	20	Very poor	High	8	$545.29
valley oak (*Quercus lobata*)	864	12	15	Very poor	Moderate	8	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	865	12, 10	20	Fair	Moderate	10	$1869.56
California bay laurel (*Umbellularia californica*)	866	8	20	Good	Moderate	5	$545.29
coast live oak (*Quercus agrifolia*)	867	20	20	Very poor	High	13	$545.29
valley oak (*Quercus lobata*)	868	14	25	Fair	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	869	22	20	Dead/ Unstable	High	15	
black oak (*Quercus kelloggii*)	870	30	45	Good	High	20	$6231.87
California bay laurel (*Umbellularia californica*)	871	6	20	Fair	High	4	$545.29
valley oak (*Quercus lobata*)	872	12	35	Poor	High	8	$1869.56
coast live oak (*Quercus agrifolia*)	873	19	25	Fair	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	874	18	25	Fair	High	12	$1869.56
valley oak (*Quercus lobata*)	875	19	35	Fair	Moderate-high	13	$6231.87
coast live oak (*Quercus agrifolia*)	876	18, 18, 18	45	Very poor	Moderate-high	21	$545.29
coast live oak (*Quercus agrifolia*)	877	24	20	Dead/ Unstable	High	16	
California bay laurel (*Umbellularia californica*)	878	8, 6, 6, 4, 4	20	Fair	High	9	$1869.56
valley oak (*Quercus lobata*)	879	14	20	Poor	High	9	$1869.56
coast live oak (*Quercus agrifolia*)	880	19	20	Good	High	13	$6231.87
coast live oak (*Quercus agrifolia*)	881	30	35	Good	High	20	$6231.87

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	882	32, 24	35	Fair	Moderate-high	27	$1869.56
coast live oak (*Quercus agrifolia*)	883	24	25	Fair	High	16	$6231.87
coast live oak (*Quercus agrifolia*)	884	16	20	Poor	Low	11	$1869.56
California bay laurel (*Umbellularia californica*)	885	7		Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	886	7		Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	887	22, 22	25	Very poor	Moderate	21	$545.29
coast live oak (*Quercus agrifolia*)	888	34	35	Very poor	Low	23	$545.29
coast live oak (*Quercus agrifolia*)	889	13	20	Good	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	890	6	10	Good	Low	4	$545.29
coast live oak (*Quercus agrifolia*)	891	6, 4	10	Good	Low	5	$1869.56
coast live oak (*Quercus agrifolia*)	892	13	25	Good	High	9	$1869.56
California bay laurel (*Umbellularia californica*)	893	6, 8, 12	25	Fair	Low	10	$1869.56
California bay laurel (*Umbellularia californica*)	894	8	15	Good	Low	5	$545.29
California bay laurel (*Umbellularia californica*)	895	10	15	Good	Low	7	$545.29
California bay laurel (*Umbellularia californica*)	896	7	15	Good	Low	5	$545.29
coast live oak (*Quercus agrifolia*)	897	17	8	Very poor	High	11	$545.29

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Calculated TPZ 8x (ft. radius)	CCT Value (Appraised Value)
coast live oak (*Quercus agrifolia*)	898	17	8	Very poor	Low	11	$545.29
coast live oak (*Quercus agrifolia*)	899	13	15	Poor	Low	9	$1869.56
coast live oak (*Quercus agrifolia*)	900	24, 24	35	Very poor	Low	23	$545.29

Appendix C: Photographs

C1: General tree and site conditions



C2: General tree and site conditions



C3: General tree and site conditions

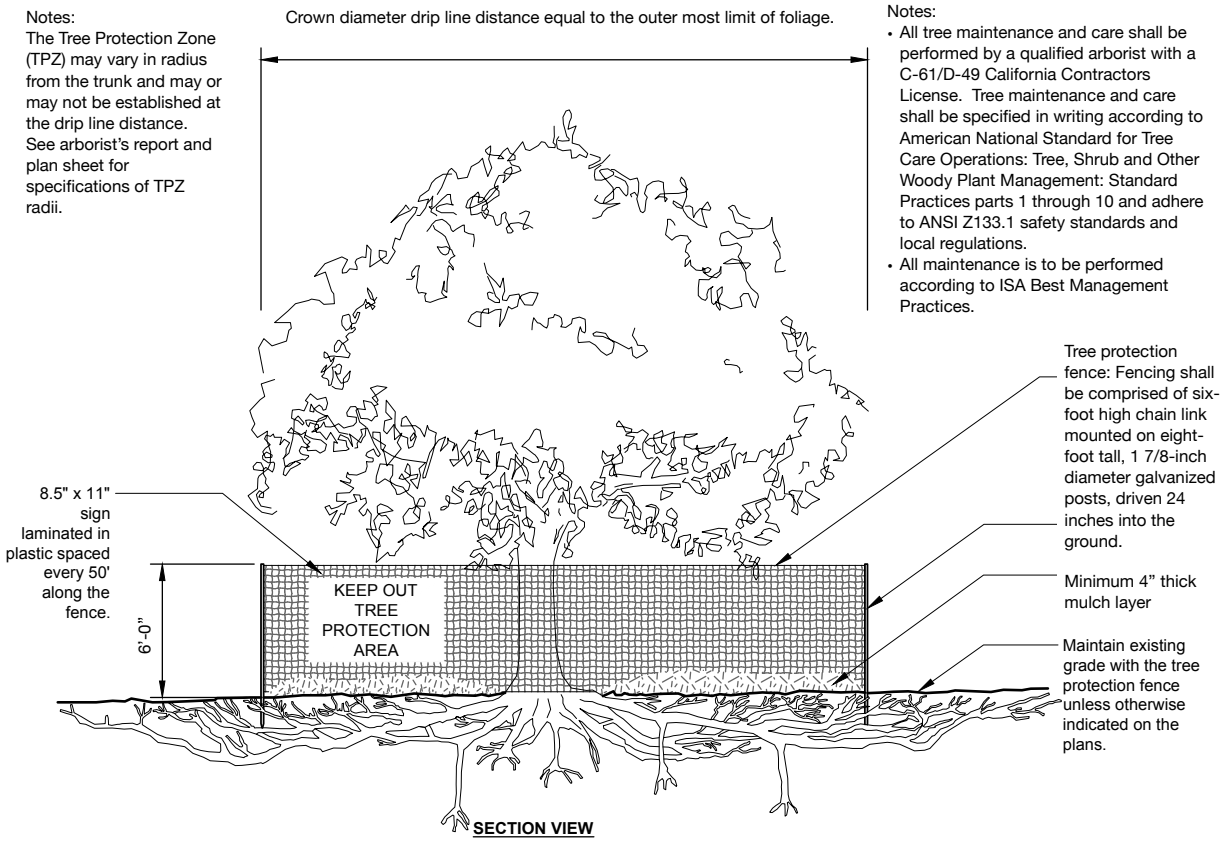


C4: General tree and site conditions



Appendix D: Tree Protection Guidelines

D1: Tree Protection Plan Sheet Detail



S-X TREE PROTECTION

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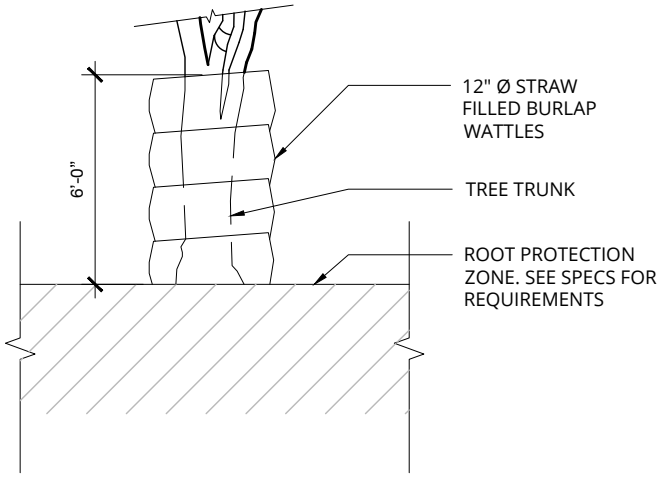
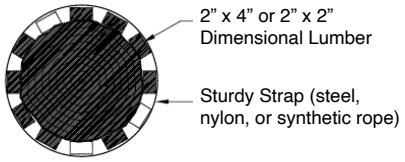
D2: Trunk Protection Detail



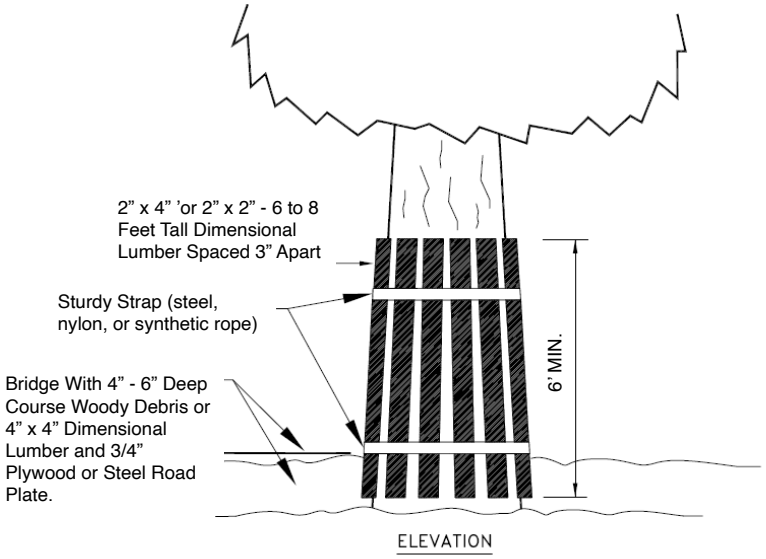
SECTION VIEW

S-Y TRUNK PROTECTION WITH WATTLE

Note: See Local Ordinance Requirements and Arborist's Report for Additional Protection Specifications and Guidelines.



PLAN



ELEVATION

Trunk Protection Vertical Timber Detail

15-50.120 - Setback of new construction from existing trees

Unless otherwise permitted by the approving authority, no structure, excavation or impervious surface areas of any kind shall be constructed or installed within the root zone of any protected tree without mitigating special design, such as post and beam footings that bridge the roots. No parking, storing of vehicles, equipment or other materials shall be permitted within the dripline of any protected tree without special design considerations approved by the Community Development Director and the City Arborist.

15-50.140 - Tree preservation plan.

A. A Tree Preservation Plan shall be required for any project approved pursuant to Chapters 14, 15 and 16 of the Code on any site on which an Arborist Report is prepared.
B. The Tree Preservation Plan shall consist of a separate detailed plan drawn to a sufficient scale but no larger than twenty feet to the inch, with any details to be shown at least ten to the inch) to clearly indicate all protection and mitigation measures to be taken as required by the Community Development Director and/or the Arborist Report for the project.
C. When a project has been submitted for approval pursuant to Chapters 14, 15, or 16, there shall be no permits issued for grading or site improvements until a Tree Preservation Plan for the project has been approved by the Community Development Director and the required protection measures are determined to be in place throughout City inspection. Protection measures required shall remain in place for the duration of the construction activity at the project site, or as otherwise required by the City and shall not be removed until authorized by the Community Development Director.
D. The Tree Preservation Plan and any permits for tree removal shall be maintained at the project site at all times during construction activities and until all work has been completed, inspected and approved by the City.
E. At least three scheduled inspections shall be made by the City to ensure compliance with the Tree Preservation Plan. The inspections shall, at a minimum include the following: (1) Initial inspection prior to any construction or grading, (2) After completion of drought grading and/or trenching, and (3) Completion of all work including planting and irrigation system installation. Other inspections may be conducted as required by the Community Development Director.

Pre-Construction Meeting with the Project Arborist

Tree protection locations should be marked before any fencing contractor arrives.

Prior to beginning work, all contractors involved with the project should attend a pre construction meeting with the project arborist to review the tree protection guidelines. Access routes, storage areas, and work procedures will be discussed.

Tree Protection Zones and Fencing

Tree protection fencing should be established prior to the arrival of construction equipment or materials on site. Fencing should be comprised of six-foot high chain link fencing mounted on eight-foot tall, 1 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced no more than 10 feet apart. Once established, the fencing must remain undisturbed and be maintained throughout the construction process until final inspection.

The fencing should be maintained throughout the site during the construction period and should be inspected periodically for damage and proper functions.

Fencing should be repaired, as necessary, to provide a physical barrier from construction activities.

A final inspection by the city arborist at the end of the project will be required prior to removing any tree protection fence and replacement tree shall be planted at this time.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Restrictions Within the Tree Protection Zone

No storage of construction materials, debris, or excess soil will be allowed within the Tree Protection Zone. Spoils from the trenching shall not be placed within the tree protection zone either temporarily or permanently. Construction personnel and equipment shall be routed outside the tree protection zones.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Boring or Tunneling

Boring machines should be set up outside the drip line or established Tree Protection Zone. Boring may also be performed by digging a trench on both sides of the tree until roots one inch in diameter are encountered and then hand dug or excavated with an Air Spade® or similar air or water excavation tool. Bore holes should be adjacent to the trunk and never go directly under the main stem to avoid oblique (heart) roots. Bore holes should be a minimum of three feet deep.

Timing

If the construction is to occur during the summer months supplemental watering and bark beetle treatments should be applied to help ensure survival during and after construction.

Tree Pruning and Removal Operations

All tree pruning or removals should be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree pruning should be specified according to ANSI A-300A pruning standards and adhere to ANSI Z133.1 safety standards. Trees that need to be removed or pruned should be identified in the pre-construction walk th drought.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited. Text on the signs should be in both English and Spanish (Appendix C) and read TREE PROTECTION ZONE
DO NOT MOVE OR REMOVE FENCE WITHOUT PRIOR APPROVAL FROM THE CITY ARBORIST, THE CITY ARBORIST (408) 868-1276. DO NOT MOVE WITHOUT APPROVAL FROM THE PROJECT ARBORIST

Security Deposit

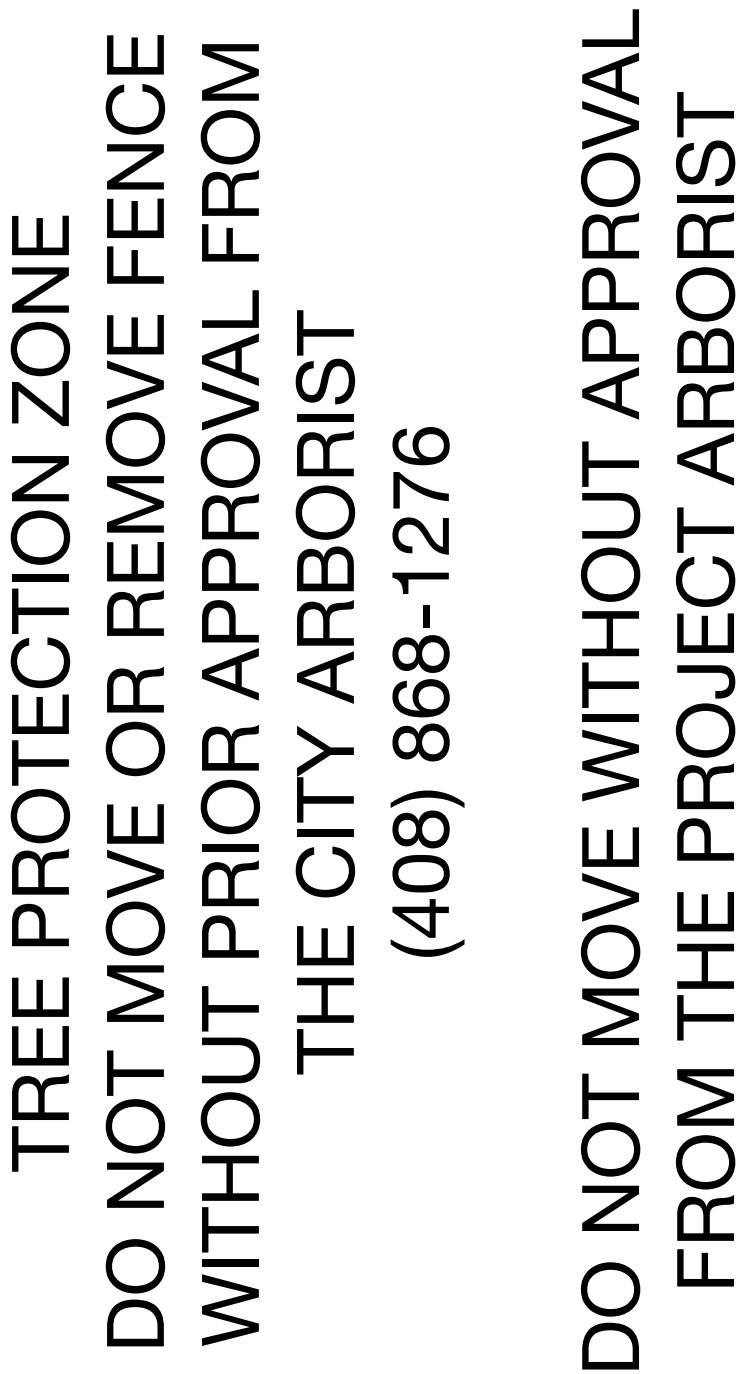
The tree protection security deposit is to remain in place for the duration of the project to ensure protection. Once the project is completed, inspected, and approved by the city arborist (a building inspector cannot release the tree security deposit) the bond will be released. Trees damaged by construction activity will require replanting equal to the appraised value state herein.

15-50.080 - Determination on permit

(d) Security deposits and maintenance bonds. In the case of an application for, or a project involving encroachment on one or more protected trees, the applicant shall post a security deposit with the City in an amount equal to twenty-five percent to one hundred percent of the ISA valuation of the trees involved at the discretion of the approving authority; provided, however, that any project involving multiple structures or a multi-family structure shall post a security deposit with the City in an amount equal to one hundred percent of the ISA valuation of the trees involved. The City may also require posting of a maintenance bond or security deposit of at least five years designed to ensure long term maintenance of the affected or replacement trees. Security deposits or maintenance bonds required for protected trees or replacement trees in public or private development may, in the reasonable discretion of the Community Development Director, be refunded upon a determination that the project is in compliance with the City Arborist's requirements and/or Tree Preservation Plan. In the case of violations of this Article or where replacement, restitution, or other remedy required pursuant to Section 15-50.170 cannot be made on the project site, then such payments shall be made from the deposit or bond being held before any refund is made.

Appendix E: Tree Protection Signs

E1: English



E2: Spanish

ÁRBOL DE ZONA DE PROTECCIÓN
NO trasladar o eliminar cerca sin la aprobación previa Del ARBORISTA CIUDAD, (408) 868-1276

NO MUEVA sin la aprobación del ARBORISTA PROYECTO

Qualifications, Assumptions, and Limiting Conditions

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or attend meetings, hearings, conferences, mediations, arbitration, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only examined items and their condition at the time of inspection; and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.

Certification of Performance

I Richard Gessner, Certify:

That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and/or appraisal is stated in the attached report and Terms of Assignment;

That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;

That the analysis, opinions and conclusions stated herein are my own;

That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;

That no one provided significant professional assistance to the consultant, except as indicated within the report.

That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any other subsequent events;

I further certify that I am a Registered Consulting Arborist® with the American Society of Consulting Arborists, and that I acknowledge, accept and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Board Certified Master Arborist® and Tree Risk Assessor Qualified. I have been involved with the practice of Arboriculture and the care and study of trees since 1998.

Richard J. Gessner 

ASCA Registered Consulting Arborist® #496
ISA Board Certified Master Arborist® WE-4341B

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