Biological Resources Reconnaissance Survey

Demele Ranch (APN: 034-030-029; 034-030-030)

Napa County, California

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October 2024

WRA Project # 340085

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EXECUTIVE SUMMARY

This report details the regulatory background, methods, results, and recommendations of a Biological Resources Reconnaissance Survey located at the Demele Ranch (Study Area) in Napa County, California. WRA, Inc. performed field surveys in spring and summer of 2024. The Study Area is composed of developed, non-native grassland, coyote brush scrub, chamise chaparral, coast live oak woodland, knobcone pine forest, Douglas fir forest, man-made ponds, seasonal wetlands, and ephemeral/intermittent streams. The Proposed Project involves development of ten vineyard blocks comprising 11.1 acres of total disturbance limits (Project Area).

Of a total of approximately 72.4 acres of oak woodland land cover across the property, 3.8 acres of oak woodland, (approximately 5 percent) are proposed to be converted to vineyard and associated infrastructure. This total is within the 3:1 oak woodland retention per Napa County General Plan CON-24. Likewise, the project will comply with Napa County Code 18.108.020 regarding 70 percent or greater of canopy retention.

The Project Area is intentionally sited to avoid all aquatic resources that are present within the Study Area. A protocol-level botanical survey found that no special-status plant species are present within the Study Area, so no impacts to such species will occur.

Additionally, three special-status mammals, five special-status birds (and non-status birds with baseline legal protections), one special-status reptile, and two special-status amphibians, have the potential to occur in the Study Area. Mitigation measures and best management practices have been developed and provided herein to avoid impacts to these resources.

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Definitions

Study Area: The area throughout which the assessment was performed, i.e., the subject parcels (APN: 034-030-029, 034-030-030), totaling 117.8 acres.

Botanical Survey and Aquatic Resource Delineation Area: The area throughout which the protocol-level special-status plant survey and aquatic resource delineation was conducted, which was formed from the Project Area (below) plus a 50-foot buffer, totaling 28.9 acres.

Project Area: The area encompassing the Proposed Project (vineyard blocks grading limit); the area evaluated for potential impacts to sensitive biological resources, totaling 11.1 acres.

List of Abbreviations & Acronyms

BGEPA	Bald and Golden Eagle Protection Act
BIOS	Biogeographic Information and Observation System
BRRS	Biological Resources Reconnaissance Survey
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CECP	California Essential Connectivity Project
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
County	Napa County
Corps	U.S. Army Corps of Engineers
CRPR	California Rare Plant Ranks
CSRL	California Soils Resources Lab
CWA	Clean Water Act
EFH	Essential Fish Habitat
ESA (Federal)	Endangered Species Act
MBTA	Migratory Bird Treaty Act
NCBDR	Napa County Baseline Data Report
NOAA	National Oceanic and Atmospheric Administration
NMFS	National Marine Fisheries Service
NRCS	Natural Resource Conservation Service
NWI	National Wetland Inventory
NWPL	National Wetland Plant List
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
SFP	State Fully Protected Species
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WRA	WRA, Inc.

1.0 INTRODUCTION

On April 23, May 9, and June 26, 2024, WRA, Inc. (WRA) performed an assessment of biological resources at the Demele Ranch (APN: 034-030-029, 034-030-030; hereafter Study Area) in Napa County California (Figure A-1, Appendix A). The purpose of this study was to gather the information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA) to meet the guidelines outlined by Napa County in *Guidelines for Preparing Biological Resources Reconnaissance Surveys* (Napa County 2016a) and *Guidelines for Preparing Special-status Plant Studies* (Napa County 2016b).

A biological resources reconnaissance survey (BRRS) provides general information on the presence, or potential presence, of sensitive species and habitats. These survey(s) contain the results of a focused protocol-level survey for listed plant species in the Study Area; however, protocol-level surveys for wildlife were not included as part of the survey. This survey is not a formal wetland delineation; in instances where such a delineation may be required for project approval by local, state, or federal agencies, results would be reported herein but may be presented elsewhere in separate reports. This survey is based on information available at the time of the study and on-site conditions that were observed on the date(s) the site was visited.

This report describes the results of the site visits, which assessed the Study Area for (1) the presence of sensitive land cover types, (2) the potential for land cover types on the site to support special-status plant and wildlife species, and (3) the presence of any other sensitive natural resources protected by local, state, or federal laws and regulations. Special-status species observed during the site assessment were documented and their presence is discussed herein. Specific findings on the habitat suitability or presence of special-status species or sensitive habitats may require that protocol-level surveys or other studies be conducted; recommendations for additional studies are provided, if necessary.

The Proposed Project involves the installation of seven vineyard blocks along with new access roads and vineyard avenues resulting in 11.1 acres of total disturbance limits. Associated with the installation of the grape vines will be vineyard avenues, irrigation lines, etc. Site preparation (ripping, installation of erosion control measures, seeding cover crop, and installation of irrigation pipelines and trellis) will occur during the grading window of April 1 through October 15. By October 15, the site will be winterized with placement of straw wattles, seeding of vineyard avenues and planting areas, and straw mulch spread over disturbed areas as required by the ECP prepared for the Proposed Project.

2.0 REGULATORY BACKGROUND

This report is intended to facilitate conformance of the Proposed Project with the standards outlined in the Napa County Code and General Plan. In addition to the requirements of Napa County, the Proposed Project may also be subject to several federal and state regulations designed to protect sensitive natural resources. Full analysis of these requirements in the context of the Proposed Project is addressed herein.

2.1 Federal and State Regulatory Setting

2.1.1 Sensitive Land Cover Types

Land cover types are herein defined as those areas of a particular vegetation type, soil or bedrock formation, aquatic features, and/or other distinct phenomena. Typically, land cover types have identifiable boundaries that can be delineated based on changes in plant assemblages, soil or rock types, soil surface or near-surface hydroperiod, anthropogenic or natural disturbance, topography, elevation, etc. Many land cover types are not considered sensitive or otherwise protected under the environmental regulations discussed here. However, these land cover types typically provide essential ecological and biological functions for plants and wildlife, including, frequently, special-status species. Those land cover types that are considered or protected under one or more environmental regulations are discussed below.

Waters of the United States: The United States Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the Corps Wetlands Delineation Manual (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water mark (OHWM). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the United States generally requires an individual or nationwide permit from the Corps under Section 404 of the CWA.

Waters of the State: The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a

project does not require a federal permit but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements. The San Francisco Bay RWQCB, which has jurisdiction over projects in the Napa River watershed, recently adopted the General Permit for Vineyard Properties in the Napa River and Sonoma Creek Watersheds to comply with the WDRs for sediment and nutrient discharge from vineyards.

Streams, Lakes, and Riparian Habitat: Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). “Riparian” is defined as “on, or pertaining to, the banks of a stream.” Riparian vegetation is defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

Sensitive Natural Communities: Sensitive natural communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" (CDFG 2010, CDFW 2018a) and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2018a). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2018) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). The Napa County Baseline Data Report (NCBDR) identifies sensitive Napa County natural communities, discussed further in Section 2.2 below (Napa County 2005).

2.1.2 Special-status Species

Plants: Special-status plants include taxa that have been listed as endangered or threatened, or are formal candidates for such listing, under the federal Endangered Species Act (ESA) and/or California Endangered Species Act (CESA). The California Native Plant Protection Act (CNPPA) lists 64 “rare” or “endangered” and prevents “take”, with few exceptions, of these species. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1, 2, and 3 are also considered special-status plant species and must be considered under CEQA. Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. A

description of the CNPS Ranks is provided below in Appendices B and C. Additionally, any plant species listed as sensitive within the Napa County General Plan or NCBDR are likewise considered sensitive.

Wildlife: As with plants, special-status wildlife includes species/taxa that have been listed or are formal candidates for such under ESA and/or CESA. The federal Bald and Golden Eagle Protection Act provides relatively broad protections to both of North America's eagle species (bald [*Haliaeetus leucocephalus*] and golden eagle [*Aquila chrysaetos*)] that in some regards are similar to those provided by ESA. The CFGC designates some species as Fully Protected (SFP), which indicates that take of that species cannot be authorized through a state permit. Additionally, CDFW Species of Special Concern (species that face extirpation in California if current population and habitat trends continue) are given special consideration under CEQA and therefore considered special-status species. In addition to regulations for special-status species, most native birds in the United States, including non-status species, have baseline legal protections under the Migratory Bird Treaty Act of 1918 and CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws/codes, the intentional harm or collection of adult birds as well as the intentional collection or destruction of active nests, eggs, and young is illegal. For bat species, the Western Bat Working Group (WBWG) designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA. Finally, wildlife species/taxa named as "locally rare" in the NCBDR (Napa County 2005) are also treated as special-status for purposes of this assessment.

Critical Habitat, Essential Fish Habitat, and Wildlife Corridors: Critical habitat is a term defined in the ESA as a specific and formally designated geographic area that contains features essential for the conservation of a threatened or endangered species, and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. Note that designated critical habitat areas that are currently unoccupied by the species but which are deemed necessary for the species' recovery are also protected by the prohibition against adverse modification.

The Magnuson-Stevens Fishery Conservation and Management Act ("Magnuson-Stevens Act") provides for conservation and management of fishery resources in the U.S. This Act establishes a national program intended to prevent overfishing, rebuild overfished stocks, ensure conservation, and facilitate long-term protection through the establishment of Essential Fish Habitat (EFH). EFH consists of aquatic areas that contain habitat essential to the long-term survival and health of fisheries, which may include the water column, certain bottom types, vegetation (e.g. eelgrass (*Zostera* spp.)), or complex structures such as oyster beds. Any federal agency that authorizes, funds, or undertakes action that may adversely affect EFH is required to consult with NMFS.

Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA. Additionally, the NCBDR (Napa County 2005) outlines important corridor resources within the County and encourages protection of these resources via Policy CON-18 (see section 2.2 below).

2.2 Napa County Regulatory Setting

Napa County General Plan and Napa County Code: Natural resource use in Napa County is regulated by the Napa County General Plan (Napa County 2008). Below are relevant policies from the General Plan pertaining to wetlands and biological resources which may be applicable to the Proposed Project.

Napa County Baseline Data Report

Specific sensitive Land Cover Types are identified in the NCBDR (Napa County 2005). In addition to those Land Cover Types identified by CDFW, the NCBDR also identifies biotic communities of limited distribution that "encompass less than 500 acres of cover within the County and are considered by local biological experts to be worthy of conservation" (Napa County 2005).

Natural Resource Goals and Policies

Policy CON-13: The County shall require that all discretionary residential, commercial, industrial, recreation, agricultural, and water development projects consider and address impacts to wildlife habitat and avoid impacts to fisheries and habitat supporting special-status species to the extent feasible. Where impacts to wildlife and special-status species cannot be avoided, projects shall include effective mitigation measures and management plans including provisions to:

a) Maintain the following essentials for fish and wildlife resources:
    a. Sufficient dissolved oxygen in the water.
    b. Adequate amounts of proper food.
    c. Adequate amounts of feeding, escaping, and nesting habitat.
    d. Proper temperature through maintenance and enhancement of streamside vegetation volume flows, and velocity of water.
b) Employ supplemental planting and maintenance of grasses, shrubs and trees of like quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife and special-status species and maintain the watersheds, especially streams side areas, in good condition.
c) Provide protection for habitat supporting special-status species through buffering or other means.
d) Provide replacement habitat of like quantity and quality on- or off-site for special-status species to mitigate impacts to special-status species.
e) Enhance existing habitat values, particularly for special-status species, through restoration and replanting of native plant species as part of discretionary permit review and approval.
f) Require temporary or permanent buffers of adequate size (based on the requirements of the special-status species) to avoid nest abandonment of birds and raptors associated with construction and site development activities.
g) Demonstrate compliance with applicable provisions and regulations of recovery plans for listed species.

Policy CON-17: Preserve and protect native grasslands, serpentine grasslands, mixed serpentine chaparral, and other sensitive biotic communities and habitats of limited distribution. The County, in its discretion, shall require mitigation that results in the following standards:

a) Prevent removal or disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species.
b) In other areas, avoid disturbances to or removal of sensitive natural plant communities and mitigate potentially significant impacts where avoidance is infeasible.
c) Promote protection from overgrazing and other destructive activities.
d) Encourage scientific study and require monitoring and active management where biotic communities and habitats of limited distribution or sensitive natural plant communities are threatened by the spread of invasive non-native species.
e) Require no net loss of sensitive biotic communities and habitats of limited distribution through avoidance, restoration, or replacement where feasible. Where avoidance, restoration, or replacement is not feasible, preserve like habitat at a 2:1 ratio or greater within Napa County to avoid significant cumulative loss of valuable habitats.

Policy CON-18: To reduce impacts on habitat conservation and connectivity:

a) In sensitive domestic water supply drainages[1] where new development is required to retain between 40 and 60 percent of the existing (as of June 16, 1993) vegetation onsite, the vegetation selected for retention should be in areas designed to maximize habitat value and connectivity.
b) Outside of sensitive domestic water supply drainages, streamlined permitting procedures should be instituted for new vineyard projects that voluntarily retain valuable habitat and connectivity, including generous setbacks from streams and buffers around ecologically sensitive areas.
c) Preservation of habitat and connectivity of adequate size, quality and configuration to support special-status species should be required within the project area. The size of habitat and connectivity to be preserved shall be determined based on the specific needs of the species.
d) The County shall require discretionary projects to retain movement corridors of adequate size and habitat quality to allow for continued wildlife use based on the needs of the species occupying the habitat.
e) The County shall require new vineyard development to be designed to minimize the reduction of wildlife movement to the maximum extent feasible. In the event the County concludes that such development will have a significant impact on wildlife movement, the County may require the applicant to relocate or remove existing perimeter fencing installed on or after February 16, 2007 to offset the impact cause by the new vineyard development.

[1] Sensitive Domestic Water Supply Drainages: (1) Kimball Reservoir; (2) Rector Reservoir; (3) Milliken Reservoir; (4) Bell Canyon Reservoir; (5) Lake Hennessey and Friesen Lakes; (6) Lake Curry; (7) Lake Madigan

Policy CON-19: The County shall encourage the preservation of critical habitat areas and habitat connectivity through the use of conservation easements or other methods as well as through continued implementation of the Napa County Conservation Regulations associated with vegetation retention and setbacks from waterways.

Policy CON-24: Maintain and improve oak woodland habitat to provide for slope stabilization, soil protection, species diversity, and wildlife habitat through appropriate measures including one or more of the following:

a) Preserve, to the extent feasible, oak trees and other significant vegetation that occur near the heads of drainages or depressions to maintain diversity of vegetation type and wildlife habitat as part of agriculture projects.
b) Comply with the Oak Woodlands Preservation Act regarding oak woodland preservation to conserve the integrity and diversity of oak woodlands, and retain, to the maximum extent feasible, existing oak woodland and chaparral communities and other significant vegetation as part of the residential, commercial, and industrial approvals.
c) Provide replacement of lost oak woodlands or preservation of like habitat at a 2:1 ratio [effectively 3:1 ratio[2]] when retention of existing vegetation is found to be infeasible. Removal of oak species limited in distribution shall be avoided to the maximum extent feasible.
d) Support hardwood cutting criteria that require retention of adequate stands of oak trees sufficient for wildlife, slope stabilization, soil production be left standing.
e) Maintain, to the extent feasible, a mixture of oak species which is needed to ensure acorn production. Black, canyon, live, and brewer oaks as well as blue, white, scrub and live oaks are common associations.

Policy CON-48: Proposed developments shall implement project-specific sediment and erosion control measures (e.g., erosion control plans and/or stormwater pollution prevention plans) that maintain pre-development sediment erosion conditions or at a minimum comply with state water quality pollution control (i.e., Basin Plan) requirements and are protective of the County's sensitive domestic supply watersheds. Technical reports and/or erosion control plans that recommend site-specific erosion control measures shall meet the requirements of the County Code and provide detailed information regarding site-specific geologic, soil, and hydrologic conditions and how the proposed measure will function.

Policy CON-50(c): The County shall require discretionary projects to meet performance standards designed to ensure peak runoff in 2-, 10-, 50-, and 100-year events following development is not greater than predevelopment conditions.

Soil loss and Hydrologic Studies are required to demonstrate a given project meets the County's no net increase in erosion and runoff standards are met. The Universal Soil Loss Equation (USLE) is the model used to measure and quantify pre- and post-project soil loss rates. Similarly, pre- and post-project changes in runoff are measured using Technical Release 55 (TR-55). The

[2] Amendments to Napa County Ordinance 18.108 require a 3:1 ratio for preservation/replacement; see "Water Quality and Tree Protection Ordinance" on page 8.

procedures related to the application of hydrologic modeling are fairly standard. Guidance documents for the preparation of these analyses are currently being drafted.

General Provisions – Stream and Wetland Setbacks

Napa County Code 18.108.025 requires stream setbacks for new land clearings for agricultural purposes. "Stream" is defined by Napa County (18.108.030) as: (1) a watercourse designated by a solid line or dash and three dots symbol on the largest scale of the United State Geological Survey (USGS) maps most recently published, or any replacement to that symbol (i.e., USGS "blue-line"); (2) any watercourse which has a well-defined channel with a depth greater than four feet and banks steeper than 3:1 and contains hydrophilic vegetation, riparian vegetation or woody-vegetation including tree species greater than ten feet in height; or (3) those watercourses listed in Resolution No. 94-19. No clearing of land for new agricultural uses as defined by Section 18.08.040 shall take place within the following setbacks from streams:

Table 1. Napa County Stream Setbacks

Slope (Percent)	Required Setback
< 1	35 feet
1--5	45 feet
5--15	55 feet
15--30	65 feet
30--40	85 feet
40--50	105 feet
50--60	125 feet
60--70	150 feet

In 2019, Napa County added to Code Section 18.108.025 the requirement of a 35-foot setback for ephemeral or intermittent streams not meeting Napa County's criteria for a stream. Likewise, 18.108.026 was added to the Napa County Code to include the requirement of a 50-foot setback from the delineated edge of wetland boundaries. Ordinance No. 1438 adopted by the Board of Supervisors allowed for a one-time exemption from the Ordinance (and therefore the updated stream and wetland setbacks) for projects that are less than 15 percent slope and less than 5 acres.

Vegetation Preservation and Replacement

Napa County Code 18.108.100 requires the following conditions when granting a discretionary permit for activities within an erosion hazard area (slopes greater than 5 percent):

a) Existing vegetation shall be preserved to the maximum extent consistent with the project. Vegetation shall not be removed if it is identified as being necessary for erosion control in the approved erosion control plan or if necessary for the preservation of threatened or

endangered plant or animal habitats as designated by state or federal agencies with jurisdiction and identified on the County's environmental sensitivity maps.

b) Existing trees six inches in diameter or larger, measured at diameter breast height (DBH), or tree stands of trees six inches DBH or larger located on a site for which either an administrative or discretionary permit is required shall not be removed until the required permits have been approved by the decision-making body and tree removal has been specifically authorized.

c) Trees to be retained or designated for retention shall be protected through the use of barricades or other appropriate methods to be placed and maintained at their outboard drip line during the construction phase. Where appropriate, the director may require an applicant to install and maintain construction fencing around the trees to ensure their protection during earthmoving activities. Where removal of vegetation is necessitated or authorized, the director or designee may require the planting of replacement vegetation of an equivalent kind, quality and quantity.

Water Quality and Tree Protection Ordinance

In 2019, the Napa County Board of Supervisors adopted the Water Quality and Tree Protection Ordinance (WQTPO) modifying Chapter 18.108 Conservation Regulations to provide additional protections to trees and water quality. As noted above, additional setbacks were added for ephemeral and intermittent drainages and wetlands (Chapters 18.108.025 and 18.108.026). In addition, the tree retention required by Chapter 18.108.027 in sensitive domestic water supply drainages was increased from 60 percent to 70 percent based on vegetation that existed within the parcel in 1993. For areas within the Agricultural Watershed zoning district (outside of sensitive water supply drainages), Chapter 18.108.020 subsections C and D were added that require a minimum of 70 percent canopy retention based on vegetation that existed within the parcel in 2016, and the preservation or mitigation of trees (within oak woodland/forest and/or coniferous forest land covers) at a minimum 3:1 ratio. However, Properties zoned Agricultural Preservation are exempt from these requirements. Ordinance No. 1438 allowed for a one-time exemption from the Ordinance (and therefore the updated stream setbacks, wetland setbacks, and vegetation retention requirements) for projects that are less than 30 percent slope and less than 5 acres.

3.0 ENVIRONMENTAL SETTING

The approximately 118-acre Study Area consists of two adjacent parcels (see Appendix A). It is in central-western Napa County, approximately two aerial miles southwest of downtown Yountville and eight aerial miles northwest of downtown Napa. The Study Area is situated in the eastern flank of the Mayacama Mountains in the Dry Creek watershed. Detailed descriptions of the local setting are below.

3.1 Topography and Soils

The overall topography of the Study Area is moderately to steeply sloped, ranging from approximately 400 to 1,050 feet above sea level. According to the *Soil Survey of Napa County* (USDA 1978) and as shown in Figure A-2 (Appendix A), the Study Area is underlain by three soil

mapping units: Felton gravelly loam, 30 to 50 percent slopes; Lodo-Maymen-Felton association, 30 to 75 percent slopes; and Sobrante loam, 30 to 50 percent slopes. The parent soil series of all the Study Area's mapping units are summarized below.

Felton Series: This series consists of deep silt loam soils formed from residuum weathered from sandstone and shale situated on hillslopes at elevations ranging from 400 to 3,000 feet (CSRL 2024, USDA 1978). These soils are not considered hydric, and are well drained, with rapid to very rapid runoff, and moderately slow permeability (USDA 2014, USDA 1978). Native vegetation consists of coast redwood (*Sequoia sempervirens*), Douglas fir (*Pseudotsuga menziesii*), Pacific madrone (*Arbutus menziesii*), and oaks (*Quercus* spp.), while land uses include timber production, Christmas tree farms, homesites, recreation, and watershed protection (USDA 1978).

Lodo Series: This series consists of very shallow clay loam soils formed in residuum weathered from shale and sandstone situated on backslopes of hills at elevations ranging from 300 to 3,400 feet (CSRL 2024, USDA 1978). These soils are not considered hydric, and are somewhat excessively drained, medium to rapid runoff, and moderate permeability (USDA 2014, USDA 1978). Native and naturalized vegetation includes blue oak (*Quercus douglasii*), digger pine (*Pinus sabiniana*), chamise (*Adenostoma fasciculatum*), and buckwheat (*Eriogonum nudum*), while primary land uses include livestock grazing, wildlife habitat, and watershed protection (USDA 1978).

Maymen Series: This series consists of shallow loam soils formed from residuum weathered from shale, schist, greenstone, and sandstone situated on backslopes of hills at elevations ranging from 400 to 4,250 feet (CSRL 2024, USDA 1978). These soils are not considered hydric, and are somewhat excessively drained, with high to very high runoff and moderate to moderately rapid permeability (USDA 2014, USDA 1978). Native and naturalized vegetation include chamise (*Adenostoma fasciculatum*), manzanitas (*Arctostaphylos* spp.), ceanothuses (*Ceanothus* spp.), and scattered trees, while predominant land uses are watershed protection, wildlife habitat, and recreation (USDA 1978).

Sobrante Series: This series consists of moderately deep to shallow fine loam soils formed from residuum weathered from igneous and metamorphic rock situated on upland hillslopes at elevations ranging from 125 to 3,500 feet (CSRL 2024, USDA 1978). This series is not considered hydric in Sonoma County, and is well drained, with moderate permeability, and low to very high runoff (USDA 2014, USDA 1978). Native and naturalized vegetation is oak (*Quercus* spp.) savannah and woodland dominated by annual grasses and forbs, and predominant land uses are rangeland, irrigated hay and pasture, and dry land crops (USDA 1978).

3.2 Climate and Hydrology

The Study Area is located above the valley fog incursion zone of Napa County. The average monthly maximum temperature of St. Helena is 89.5 degrees Fahrenheit, while the average monthly minimum temperature is 36.1 degrees Fahrenheit. Predominantly, precipitation falls as rainfall with an annual average of 36.47 inches. Precipitation-bearing weather systems are predominantly

from the west and south with most of the rain falls between November and March, with a combined average of 31.35 inches (USDA 2024).

The local watershed is Dry Creek (HUC 12: 180500020203) and the regional watershed is Napa River (HUC 8: 18050002). The Study Area is situated in the Napa County Planning Watershed of Bear Canyon and Lower Dry Creek. There is one unnamed dashed blue-line stream mapped within the Study Area on the Rutherford 7.5-minute quadrangles (USGS 2015). This stream is mapped as Riverine in the National Wetlands Inventory (NWI; USFWS 2024a), while there are several additional linear features mapped as Fluvial in the California Aquatic Resources Inventory (CARI; SFEI 2024). Additionally, there is a mapped Freshwater Pond in the NWI, which is mapped as Pond and Associated Vegetation in the CARI. The primary hydrologic sources are direct precipitation and consequent surface sheet flow and concentrated in-channel flow. Precipitation in the majority of the Study Area infiltrates quickly due to rocky loam soils. The Botanical Survey Area was investigated for aquatic resources in-situ, with a particular focus on the area denoted in the NWI and CARI, while the remainder of the property was assessed remotely. Detailed descriptions of aquatic resources are in Section 5.1 below.

3.3 Land Cover and Land Use

The Study Area is predominantly undeveloped woodland, chaparral, and grassland with a portion of existing development. The developed areas include a single-family residence, outbuildings, access road, private recreation areas (pool, hardscaping), and associated infrastructure, all of which are in the central portion of the property. The property is surrounded by like properties of rural residential, with vineyard development to the neighboring northern property. Detailed plant community descriptions are included in Section 5.1 below, and all observed plant and wildlife species are included in Appendix B. Regional land uses include rural residential, wineries, vineyards, and open space (Google Earth 2024). Historically, land uses in the region were open rangeland of larger ranches, small timbering, rural residential, vineyards, and orchards. There is no history of intensive agriculture, quarrying, mining, or timbering on the property (Historic Aerials 2024).

4.0 ASSESSMENT METHODS

Prior to the site visits, WRA biologists reviewed the following literature and performed database searches to assess the potential for sensitive natural communities (e.g., wetlands) and special-status species (e.g., endangered plants):

- *Soil Survey of Napa County, California* (USDA 1978)
- Yountville 7.5-minute quadrangle (USGS 2015)
- Contemporary aerial photographs (Google Earth 2024)
- Historical aerial photographs (Historical Aerials 2024)
- National Wetlands Inventory (NWI; USFWS 2024a)
- California Aquatic Resources Inventory (CARI; SFEI 2024)
- California Natural Diversity Database (CNDDB; CDFW 2024a)
- California Native Plant Society Electronic Inventory (CNPS 2024a)

- Consortium of California Herbaria (CCH 2024)
- USFWS Information for Planning and Consultation (USFWS 2024b)
- *eBird* Online Database (eBird 2024)
- CDFW Publication, *California Bird Species of Special Concern in California* (Shuford and Gardali 2008)
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- *Breeding Birds of Napa County, California* (Smith 2003)
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003)
- *A Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009)
- *A Manual of California Vegetation Online* (CNPS 2024b)
- *Preliminary Descriptions of the Terrestrial Natural Communities* (Holland 1986)
- Napa County Land Cover (NCLC) map (Thorne et al. 2004)
- *California Natural Community List* (CDFW 2018a)

Database searches (i.e., CNDDB, CNPS) focused on the Calistoga, St. Helena, Chiles Valley, Kenwood, Rutherford, Yountville, Glen Ellen, Sonoma, and Napa USGS 7.5-minute quadrangles for special-status plants. The special-status wildlife evaluation was based on database searches for the entirety of Napa County.

Following the remote assessment, a botanist with 40-hour Corps wetland delineation and wildlife biologist training traversed the entire Study Area on foot to document: (1) land cover types (e.g., terrestrial communities, aquatic resources), (2) if and what type of aquatic natural communities (e.g., wetlands) are present, (3) existing conditions and to determine if such provide suitable habitat for any special-status plant or wildlife species, and (4) if special-status species are present[3].

4.1 Land Cover Types

4.1.1 Terrestrial Land Cover Types

Terrestrial land cover types were mapped and evaluated across the entire Study Area. In most instances, communities are delineated based on distinct shifts in plant assemblage (vegetation) and follow the *California Natural Community List* (CDFW 2018a), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), and *A Manual of California Vegetation, Online Edition* (CNPS 2024b). In some cases, it may be necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature; should an undescribed variant be used, it will be noted in the description.

Vegetation alliances (natural communities) with a CDFW Rank of 1 through 3 (globally critically imperiled (S1/G1), imperiled (S2/G2), or vulnerable (S3/G3), were evaluated as sensitive as part of this evaluation.[4] Additionally, any sensitive natural communities as described in the Napa

[3] Due to the timing of the assessment, it may or may not constitute protocol-level species surveys; see Section 4.2 if the site assessment would constitute a formal or protocol-level species survey.
[4] Ranking of CDFW List of Vegetation Alliances is based on NatureServe Rankings (NatureServe 2018).

County Baseline Data Report (NCBDR; Napa County 2005) or General Plan (Napa County 2008) were considered.

4.1.2 Aquatic Resources

Aquatic resources include Waters of the U.S., Waters of the State, and Streams, Lakes, and Riparian Habitat as defined in the CWA, Porter-Cologne Act, and CFGC, respectively. Napa County mandates setbacks from these aquatic resources, and therefore requires mapping of the outward extent of such features. This site assessment does not constitute a formal wetland delineation; however, the surveys looked for superficial indicators of wetlands such as hydrophytic vegetation (i.e., plant communities dominated by wetland species), evidence of inundation or flowing water, saturated soils and seepage, and topographic depressions/swales. If sample points were taken, WRA followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Corps 2008).

If streams potentially jurisdictional under the CWA and/or the CFGC are noted on a site, they are delineated using a mix of surveyed topography data, high resolution aerial photographs, and a sub-meter GPS unit. The OHWM would be used to determine the extent of potential Section 404 jurisdiction, while the top-of-bank would be used to determine the extent of CFGC Section 1602 and 401. Streams with associated woody vegetation were assessed to determine if these areas would be considered riparian habitat by the CDFW following *A Field Guide to Lake and Streambed Alteration Agreements, Section 1600-1607, California Fish and Game Code* (CDFG 1994). Finally, all streams were assessed to determine if they meet the Napa County definition of "stream" pursuant to Napa County Code 18.108.030.

4.2 Special-status Species

4.2.1 General Assessment

Potential occurrence of special-status species in the Study Area was evaluated by first determining which special-status species occur in the greater vicinity through a literature and database review. Database searches for known occurrences of special-status species focused on the 7.5-minute USGS quadrangles mentioned above for special-status plants and the entirety of Napa County for special-status wildlife.

A preliminary site visit was made on April 23, 2024, to evaluate the presence of suitable habitat for special-status species. Suitable habitat conditions are based on physical and biological conditions of the site, as well as the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Study Area was then determined according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All habitat components meeting the species' requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site in the recent past.

If a more thorough assessment was warranted, a targeted or protocol-level assessment or survey was conducted or recommended as a future study. Methods for the assessments are described below. If a special-status species was observed during the site visit, its presence was recorded and discussed below in Section 5.2.

4.2.2 Special-status Plants

To determine the presence or absence of special-status plant species, focused surveys were conducted within the Botanical Survey Area on April 23, May 9, and June 26, 2024. The surveys correspond to the period sufficient to observe and identify those special-status plants determined to have the potential to occur. The field surveys were conducted by botanists familiar with the flora of Napa and surrounding counties. The surveys were performed in accordance with those outlined by Napa County (2016b), which follow those described by resource experts and agencies (CNPS 2001, CDFW 2018b, USFWS 1996). Plants were identified using *The Jepson Manual, 2nd Edition* (Baldwin et. al. 2012) and Jepson Flora Project (eFlora 2020), to the taxonomic level necessary to determine if they were sensitive. Plant names follow those of Jepson Flora Project (eFlora 2024), unless otherwise noted.

4.2.3 Special-status Wildlife

A general wildlife assessment was performed on April 23 and June 26, 2024. This assessment consisted of traversing the entirety of the Botanical Study Area and other portions of the Study Area. Habitat elements required or associated with certain species (e.g., California red-legged frog) or species groups (e.g., bats, anadromous fish) were searched for and noted. Such habitat elements include, but are not limited to plant assemblages and vegetation structure; stream depth, width, hydro-period, slope, and bed-and-bank structure; rock outcrops, caves, cliffs, overhangs, and substrate texture and rock content; history of site alteration and contemporary disturbances; etc.

4.2.4 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

Prior to the site visit the USFWS Critical Habitat Mapper (USFWS 2024c) and the NMFS Essential Fish Habitat Mapper (NMFS 2024) were queried to determine if critical habitat for any species or EFH, respectively, occurs within the Study Area. To account for potential impacts to wildlife movement/migratory corridors, biologists reviewed maps from the California Essential Connectivity Project (CECP) by Caltrans (2010) and CDFW's Biogeographic Information and Observation System (BIOS) (CDFW 2024b), as well as the NCBDR (Napa County 2005). The CECP maps both 1) "Natural Landscape Blocks," or discrete areas of mostly natural land covers that support biodiversity, and 2) "Essential Connectivity Areas" that provide ecological connectivity between the former. Additionally, aerial imagery (Google 2024) for the local area was referenced to assess if local core habitat areas were present within or connected to the Study Area. This assessment was refined based on observations of on-site physical and/or biological conditions.

5.0 ASSESSMENT RESULTS

5.1 Land Cover Types

Land cover types observed by WRA within the Study Area are shown in Figure A-3, and land covers overlain with the Proposed Project's limits of disturbance in Figure A-4 (Appendix A). Ten land cover types are present: developed, non-native grassland, coyote brush scrub, chamise chaparral, coast live oak woodland, Knobcone pine forest, Douglas fir forest, man-made pond, seasonal wetland, and ephemeral to intermittent streams. The Project Area (vineyard blocks and clearing limits) has been intentionally sited to avoid all sensitive aquatic resources and limit impacts to oak woodland canopy.

5.1.1 Terrestrial Land Cover Types

Developed Area (no vegetation alliance). CDFW Rank: None. Within the Study Area, the developed portion is composed of a single residence, accessory outbuildings, associated landscaping, access roads, and associated infrastructure. The vegetation and soils are highly altered, consisting of overhanging native trees, landscape species, and disturbance tolerant herbs. Species include coast live oak (*Quercus agrifolia*), California black oak (*Quercus kelloggii*), California bay (*Umbellularia californica*), common fig (*Ficus carica*), French lavander (*Lavandula stoechas*), English plantain (*Plantago lanceolata*), bur weed (*Soliva sessilis*), and bur medic (*Medicago polymorpha*). The developed area totals 2.3 acres in the Study Area, of which 0.3 acre is situated in the Project Area (approximately 13 percent of the total land cover type in the Study Area). This community is synonymous with the Urban/Built-up biotic community in the NCLC (Thorne et al. 2004), which is not considered sensitive by Napa County, CDFW, or any other regulatory entity.

Non-native Annual Grassland – Wild Oat Grassland (*Avena barbata* Semi-Natural Herbaceous Stands). CDFW Rank: None. Non-native grasslands occur throughout cismontane California, particularly in the Sierra Foothills, Coast Range, Transverse Range, and Peninsular Ranges (Sawyer et al. 2009, CNPS 2024b). These grasslands are situated on a variety of landscapes including coastal terraces, valley bottoms, and foothills underlain by a variety of soil types. The Study Area

contains 16.6 acres of this community type, of which 5.5 acres are situated in the Project Area (approximately 33 percent of the total land cover type in the Study Area).

The dominant cover is the herbaceous layer, which is dominated by non-native herbs of wild oat (*Avena barbata*), false brome (*Brachypodium distachyon*), soft chess (*Bromus hordeaceus*), dogtail grass (*Cynosurus echinatus*), Italian rye grass (*Festuca perennis*), hedge parsley (*Torilis arvensis*), bristly ox-tongue (*Helminthotheca echioides*), rough cat's-ear (*Hypochaeris radicata*), and garden vetch (*Vicia sativa*).

This community is synonymous with the California Annual Grasslands Alliance biotic community in the NCLC (Thorne et al. 2004). These grasslands provide habitat for numerous common native plants and wildlife, as well as have the potential to support several special-status species associated with grasslands. These grasslands are not considered sensitive by the CDFW or Napa County.

Coyote Brush Scrub (*Baccharis pilularis* Shrubland Alliance). CDFW Rank: G5 S5. Coyote brush scrub is known from the outer Coast Ranges and Sierra Nevada Foothills from Del Norte County south to San Diego County. These scrubs are typically located on river mouths, riparian areas, terraces, stabilized dunes, coastal bluffs, open hillsides, and ridgelines on all aspects underlain by variable substrate of sand to clay (Sawyer et al. 2009, CNPS 2024b). The Study Area contains 1.9 acres of coyote brush scrub, of which 1.1 acres is situated in the Project Area (approximately 58 percent of the total land cover type in the Study Area).

The tree layer is minimal in this community with isolated individuals of Pacific madrone (*Arbutus menziesii*) and coast live oak (*Quercus agrifolia*) trees. The dominant cover element is the shrub layer, with the dominant species of coyote brush (*Baccharis pilularis*), with infrequent cover from a combination of common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), and cherry plum (*Prunus cerasifera*). The herbaceous layer is dominated by non-native herbs including wild oat (*Avena barbata*), false brome (*Brachypodium distachyon*), soft chess (*Bromus hordeaceus*), dog-tail grass (*Cynosurus echinatus*), Italian thistle (*Carduus pycnocephalus*), and woolly-pod vetch (*Vicia villosa*).

This community is synonymous with the Coyote Brush-California Sagebrush NFD Super Alliance biotic community in the NCLC (Thorne et al. 2004). These scrubs provide habitat for numerous common native plants and wildlife, as well as have the potential to support several special-status plants associated with grasslands within the scrub openings. These scrubs are not considered sensitive by the CDFW or Napa County.

Chamise Chaparral (*Adenostoma fasciculatum* Shrubland Alliance). CDFW Rank: G5 S5. Chamise chaparral occurs in the Coast Ranges, Transverse Ranges, Sierra Nevada Foothills, and Peninsular Range from Humboldt County south to San Diego County (Sawyer et al. 2009, CNPS 2024b). These shrublands are situated on varied topography, rarely flats underlain by shallow colluvial soils derived from a variety of parent materials (Sawyer et al. 2009). The Study Area contains 18.0 acres, none of which is situated in the Project Area.

The dominant cover type is shrubs with scattered trees. The woody layer is dominated by chamise (*Adenostoma fasciculatum*), with other woody species that include California bay (*Umbellularia californica*), manzanitas (*Arctostaphylos* spp.), toyon (*Heteromeles arbutifolia*), sticky monkey (*Diplacus aurantiacus*), chaparral pea (*Pickeringia montana*), buck brush (*Ceanothus cuneatus*), Bisbee Peak rushrose (*Crocanthemum scoparium*), and poison oak (*Toxicodendron diversilobum*). The herbaceous layer is dominated by non-native annual grasses and native perennial forbs including common soap plant (*Chlorogalum pomeridianum*), common yarrow (*Achillea millefolium*), golden globelily (*Calochortus amabilis*), common woolly sunflower (*Eriophyllum lanatum* var. *achilleoides*), goldwire (*Hypericum concinnum*), California milkwort (*Polygala californica*), distant phacelia (*Phacelia distans*), and long-tube iris (*Iris macrosiphon*).

This community is synonymous with the Chamise Alliance biotic community in the NCLC (Thorne et al. 2004). Some associations of these shrublands are considered sensitive by the CDFW and Napa County; however, the association (Chamise-Annual grasses) within the Study Area is common throughout Napa County and California and is therefore not afforded protection.

Coast Live Oak Woodland (*Quercus agrifolia* Woodland Alliance). CDFW Rank: G5 S4. Coast live oak woodlands occur in the outer and inner Coast Ranges, Transverse Ranges, and southern coast from northern Mendocino County south to San Diego County (Sawyer et al. 2009, CNPS 2024b). These woodlands are typically situated on terraces, canyon bottoms, slopes, and flats underlain by deep, well-drained sandy or loam substrates with high organic content (Sawyer et al. 2009). The Study Area contains 72.4 acres of coast live oak woodland, of which 3.8 acres is within the Project Area (approximately 5 percent of the total land cover type in the Study Area).

The dominant tree is coast live oak (*Quercus agrifolia*), with secondary cover of blue oak (*Q. douglasii*), California black oak (*Quercus kelloggii*), Pacific madrone (*Arbutus menziesii*), California bay (*Umbellularia californica*), and Douglas fir (*Pseudotsuga menziesii*). Predominant understory species include toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), pink honeysuckle (*Lonicera hispidula*), Pacific sanicle (*Sanicula crassicaulis*), hedge parsley (*Torilis arvensis*), Pacific hound's tongue (*Adelinia grandis*), milk maids (*Cardamine californica*), Pacific woodrush (*Luzula comosa*), common bedstraw (*Galium aparine*), wild oat (*Brachypodium distachyon*), and dogtail grass (*Cynosurus echinatus*).

This community is synonymous with the Coast Live Oak Alliance biotic community in the NCLC (Thorne et al. 2004). These woodlands provide habitat for numerous common native plants and wildlife, as well as have the potential to support several special-status species associated with woodlands. The CDFW does not consider coast live oak woodland a sensitive natural community. Conversely, these woodlands are considered sensitive Napa County under the General Plan Conservation Element Policy CON-24 (oak woodland retention).

Knobcone Pine Forest (*Pinus attenuata* Forest Alliance). CDFW Rank: S4 G4. Knobcone pine forests are known from the Klamath Mountains, Cascade Range, Coast Ranges, western slope of the Sierra Nevada, and Transverse Ranges (Sawyer et al. 2009, CNPS 2024b). These forests occur on all aspects typically situated on ridgelines and midslopes underlain by ultramafic, granitic, sedimentary, or volcanic substrates (CNPS 2024b). The Study Area contains 3.8 acres of knobcone pine forest, of which 0.4 acres is within the Project Area (approximately 11 percent of the total land cover type in the Study Area).

Within the Study Area, the canopy of this community is dominated (greater than 50 percent cover) by knobcone pine (*Pinus attenuata*). Secondary tree species are infrequent, but include California black oak (*Quercus kelloggii*), Pacific madrone (*Arbutus menziesii*), and California bay (*Umbellularia californica*). The understory is relatively depauperate, but does contain scattered shrubs and herbs including chamise (*Adenostoma fasciculatum*), buck brush (*Ceanothus cuneatus*), hoary manzanita (*Arctostaphylos canescens* ssp. *canescens*), chaparral pea (*Pickeringia montana*), common woolly sunflower (*Eriophyllum lanatum*), short stem sedge (*Carex brevicaulis*), goldwire (*Hypericum concinnum*), blue wildrye (*Elymus glaucus*), and bracken fern (*Pteridium aquilinum*).

This community is synonymous with the Knobcone Pine Alliance biotic community in the NCLC (Thorne et al. 2004). These forests provide habitat for numerous common native plants and wildlife, including several special-status species.

Douglas Fir Forest (*Pseudotsuga menziesii* Forest Alliance). CDFW Rank: G5 S4. Douglas fir forests are known from the Coast Ranges, Klamath Mountains, Cascade Range, and the western slope of the Sierra Nevada (Sawyer et al. 2009, CNPS 2024b). These forests occur on all topographic positions and aspects, and variety of substrates including volcanics and serpentine (CNPS 2020b, Sawyer et al. 2009). The Study Area contains 2.5 acres of Douglas fir forest, none of which is situated within the Project Area.

Within the Study Area, the canopy of this community is dominated (greater than 50 percent cover) Douglas fir (*Pseudotsuga menziesii*). Secondary tree species are frequent, but constituting less than 50 percent relative cover collectively, and include coast redwood (*Sequoia sempervirens*), Pacific madrone (*Arbutus menziesii*), and California black oak (*Quercus kelloggii*). The stand is mixed aged with a few older trees in the overstory and notable regeneration of Douglas fir (*Pseudotsuga menziesii*) in the understory. Other understory species include poison oak (*Toxicodendron diversilobum*), sweet cicely (*Osmorhiza berteroi*), common bedstraw (*Galium aparine*), bracken fern (*Pteridium aquilinum*), and California wood fern (*Dryopteris arguta*).

This land cover type is synonymous with the Douglas Fir Alliance biotic community in the NCLC (Thorne et al. 2004). These forests provide habitat for numerous common native plants and wildlife, including several special-status species.

5.1.2 Aquatic Resources

Seasonal Wetland – Italian Rye Grass Grassland (*Festuca perennis* Herbaceous Alliance). Section 404/401 CWA; CDFW Rank: None. Seasonal wetlands are known from a variety of topographic positions and soil types where surface waters collect and flows are reduced, or subsurface waters approach the soil surface as a rising water table or seep. In the Study Area, one seasonal wetland occupies 0.74 acre as a seasonal swale; this swale is situated entirely outside of the Project Area.

The vegetation is dominated by hydrophytes including Italian rye grass (*Festuca perennis*), common velvet grass (*Holcus lanatus*), Mediterranean barley (*Hordeum marinum*), California sunflower (*Helianthus californicus*), clustered field sedge (*Carex praegracilis*), tall flat-sedge (*Cyperus eragrostis*), cowbag clover (*Trifolium depauperatum*), tinker's penny (*Hypericum anagalloides*), Pacific rush (*Juncus effusus* ssp. *pacificus*), dense-flowered willowherb (*Epilobium densiflorum*), and seep monkeyflower (*Erythranthe guttata*).

Indicators of wetland hydrology include direct observation of inundation and saturation, flow patterns, sediment deposition, and algal mats (in micro-depressions). The soils were saturated, and in deeper portions of the swale inundated, during the April and December site visits, and are assumed hydric given the presence of strong vegetation and wetland hydrology indicators. Because all three wetland parameters (vegetation, soil, and hydrology) are clearly evidenced, those areas mapped as wetland in the Study Area would be considered sensitive by Napa County and jurisdictional under the CWA.

Man-made Pond. CWA Section 404/401, Porter-Cologne Act, CFGC Section 162. Rank: None. The Subject Property contains two ponds both of which are off-line and spring fed. The ponds contain a clear OHWM and is connected by overflow channels and overland sheet flow to on-site streams. The edges contain emergent wetland vegetation, including tule (*Schoenoplectus acutus*), common cattail (*Typha latifolia*), tall flat-sedge (*Cyperus eragrostis*), and common spikerush (*Eleocharis macrostachya*). These features are likely to be considered jurisdictional under Section 404/401 of the CWA, the Porter Cologne Act, and Section 1602 of the CFGC due to the direct connectivity to downslope streams; therefore, it is considered a sensitive aquatic resource.

Ephemeral Streams and Intermittent Streams. CWA Section 404/401, Porter-Cologne Act, CFGC Section 1602. Rank: None. The Study Area contains two primary intermittent drainages, with several tributaries. All tributaries contain an ephemeral hydroperiod with flows only during and immediately following substantial rainfalls. The beds are a mix of sediments, gravel, cobble, and in some locations, bedrock. The banks are a mix of finer sediments and cobbles and contain woody non-riparian vegetation. The two primary drainages contain intermittent flows with gravels, cobbles, and bedrock for the bed, a mix of finer sediment and cobbles banks; however, characteristically riparian vegetation is lacking. The central intermittent stream is included in the 7.5-minute quadrangle (USGS 2015), the NWI (USFWS 2024a), and the CARI (SFEI 2024), with the ephemeral tributaries included in CARI database.

The intermittent drainages enter Dry Creek off-site near Dry Creek Road. Dry Creek continues for approximately seven river miles where it enters Napa River. Because all of the on-site drainages directly connect to Napa River, they are likely jurisdictional under Section 404/401 of the CWA, Porter-Cologne Act, and Section 1602 of the CFGC. The ephemeral drainages do not meet the Napa County stream definition pursuant to Napa County Code 18.108.025 but do merit a 35-foot setback; conversely, the intermittent streams appear to meet the Napa County definition under Code 18.108.025.

5.2 Special-status Species

5.2.1 Special-status Plant Species

Based upon a review of the resource databases listed in Section 4.0, 86 special-status plant species have been documented in the vicinity of the Study Area. As outlined in Appendix C, 33 of these plants have the potential to occur in the Botanical Survey Area.[5] The remaining 53 special-

[5] As per these databases, there are no documented occurrences of special-status mosses, bryophytes or lichens in Napa County.

status plants documented from the greater vicinity are unlikely or have no potential to occur for one or more of the following:

- Hydrologic conditions (e.g., tidal, riverine) necessary to support the special-status plant species are not present in the Study Area.
- Edaphic (soil) conditions (e.g., volcanic tuff, serpentine) necessary to support the special-status plant species are not present in the Study Area.
- Topographic conditions (e.g., north-facing slope, montane) necessary to support the special-status plant species are not present in the Study Area.
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present in the Study Area.
- Associated natural communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present in the Study Area.
- The Study Area is geographically isolated (e.g., below elevation, coastal environ) from the documented range of the special-status plant species.
- Land use history and contemporary management (e.g., absence of mowing or grazing) has degraded the localized habitat necessary to support the special-status plant species.

None of the special-status plants with the potential to occur were observed in the Botanical Survey Area during protocol-level plant surveys conducted on April 23, May 9, and June 26, 2024. Those plants with the potential to occur are listed below.

- Franciscan onion (*Allium peninsulare* var. *Franciscanum*); CRPR 1B
- Napa false indigo (*Amorpha californica* var. *napensis*); CRPR 1B
- Bent-flowered fiddleneck (*Amsinckia lunaris*); CRPR 1B
- Howell's broomrape (*Aphyllon validum* ssp. *howellii*); CRPR 4
- Rincon manzanita (*Arctostaphylos stanfordiana* ssp. *decumbens*); CRPR 1B
- Brewer's milk-vetch (*Astragalus breweri*); CRPR 4
- Clara Hunt's milk-vetch (*Astragalus claranus*); FE, ST, CRPR 1B
- Big-scale balsamroot (*Balsamorhiza macrolepis*); CRPR 1B
- Narrow-anthered brodiaea (*Brodiaea leptandra*); CRPR 1B
- Brewer's calandrinia (*Calandrinia breweri*); CRPR 4
- Rincon Ridge ceanothus (*Ceanothus confuses*); CRPR 1B
- Calistoga ceanothus (*Ceanothus divergens*); CRPR 1B
- Point Reyes ceanothus (*Ceanothus gloriosus* var. *exaltatus*); CRPR 4
- Holly-leaved ceanothus (*Ceanothus purpureus*); CRPR 1B
- Sonoma ceanothus (*Ceanothus sonomensis*); CRPR 1B
- Streamside daisy (*Erigeron biolettii*); CRPR 3
- Greene's narrow-leaved daisy (*Erigeron greenei*); CRPR 1B
- St. Helena fawn lily (*Erythronium helenae*); CRPR 4
- Nodding harmonia (*Harmonia nutans*); CRPR 4
- Hayfield tarplant (*Hemizonia congesta* ssp. *congesta*); CRPR 1B
- Bristly leptosiphon (*Leptosiphon aureus*); CRPR 4
- Jepson's leptosiphon (*Leptosiphon jepsonii*); CRPR 1B
- Redwood lily (*Lilium rubescens*); CRPR 4

- Napa lomatium (*Lomatium repostum*); CRPR 4
- Cobb Mountain lupine (*Lupinus sericatus*); CRPR 1B
- Mt. Diablo cottonweed (*Micropus amphibolus*); CRPR 3
- Green monardella (*Monardella viridis*); CRPR 4
- Lobb's buttercup (*Ranunculus lobbii*); CRPR 4
- Sanford's arrowhead (*Sagittaria sanfordii*); CRPR 1B
- Napa checkerbloom (*Sidalcea hickmanii* ssp. *napensis*); CRPR 1B
- Showy rancheria clover (*Trifolium amoenum*); FE, CRPR 1B
- Dark-mouthed triteleia (*Triteleia lugens*); CRPR 4
- Oval-leaved viburnum (*Viburnum ellipticum*); CRPR 2B

5.2.2 Special-status Wildlife Species

A total of 59 special-status wildlife species have been documented in Napa County (CDFW 2024a, Napa County 2005). As outlined in Appendix C none of these species were observed during WRA's site visits to the Study Area, though 11 have the potential to occur there. The remaining 48 species are unlikely or have no potential to occur due to one or more of the following reasons:

- Aquatic habitats (e.g., rivers, estuaries, ponds) necessary to support the special-status wildlife species are not present in the Study Area.
- Vegetation habitats (e.g., coast redwood forest, coastal prairie, emergent marsh) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present in the Study Area.
- Physical structures and vegetation (e.g., mines/caves, riparian forest) necessary to provide nesting, cover, and/or foraging habitat to support the special-status wildlife species are not present in the Study Area.
- Host plants (e.g., dog violet, harlequin lotus) necessary to provide larval and nectar resources for the special-status wildlife species are not present in the Study Area
- The Study Area is outside (e.g., north of, west of) of the special-status wildlife species documented nesting range.

The following eleven special-status wildlife species have the potential to occur within the Study Area and could be impacted by the Proposed Project without standard recommended protections (Section 6.0).

> Pallid bat (*Antrozous pallidus*). CDFW Species of Special Concern, WBWG High Priority. Moderate Potential (Present Presence Unknown). Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in several habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented within snags and basal hollows of conifers, and within bole cavities in oak trees. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG 2024). Trees within the Study Area (primarily oaks) may contain cavities or snags

suitable for roosting by this species, and there are CNDDB occurrences in the vicinity (CDFW 2024a). There were no observations of this species during the site visits; however, a focused habitat assessment was not performed during this assessment.

Fringed myotis (*Myotis thysanodes*). WBWG High Priority. Moderate Potential (Presence Unknown). The fringed myotis ranges through much of western North America from southern British Columbia, Canada, south to Chiapas, Mexico and from Santa Cruz Island in California, east to the Black Hills of South Dakota. This species is found in desert scrubland, grassland, sage-grass steppe, old-growth forest, and subalpine coniferous and mixed deciduous forest. These bats most frequently utilize oak and pinyon-juniper woodlands. The fringed myotis roosts in colonies from 10 to 2,000 individuals, although large colonies are rare. Caves, buildings, underground mines, rock crevices in cliff faces, and bridges are used for maternity and night roosts, while hibernation has only been documented in buildings and underground mines. Tree-roosting has also been documented in Oregon, New Mexico, and California (WBWG 2024). There were no observations of this species during the site visits; however, a focused habitat assessment was not performed during this assessment.

Long-legged myotis (*Myotis volans*). WBWG High Priority. Moderate Potential. (Presence Unknown). The long-legged myotis ranges across western North America from southeastern Alaska to Baja California and east to the Great Plains and central Texas. This species is usually found in coniferous forests, but also occurs seasonally in riparian and desert habitats. They use abandoned buildings, cracks in the ground, cliff crevices, exfoliating tree bark and hollows within snags as summer day roosts. Caves and mines are used as hibernation roosts. Long-legged myotis forage in and around the forest canopy and feed on moths and other soft-bodies insects (WBWG 2024). There were no observations of this species during the site visits; however, a focused habitat assessment was not performed during this assessment.

Olive-sided flycatcher (*Contopus cooperi*). CDFW Species of Special Concern. High Potential (Presence Unknown). This passerine bird is known from across Canada into the West Coast, Rocky Mountains, and Great Lake Area. They typically nest in coniferous or mixed forests, particularly lower montane forest. These birds forage for flying insects in forest openings, burns, edges, and other mixed open area in greater forest habitats. Nests are well-hidden in dense branches of large trees, preferentially conifer trees (Altman 2000). The trees within the Study Area may contain cavities or exfoliating bark suitable for roosting. A general nesting bird survey was not performed under this biological assessment. There were no observations of this species during the site visits; however, a protocol-level survey was not performed during this assessment.

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. Moderate Potential (Presence Unknown). White-tailed kites are resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas, and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate

surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. The Study Area provides suitable year-round habitat for white-tailed kites, including stands of oaks for nesting and open areas in close proximity for foraging. There were no observations of this species during the site visits; however, a protocol-level survey was not performed during this assessment.

American peregrine falcon (*Falco peregrinus*). State Endangered, CDFW Fully Protected Species. High Potential (Observed/Presence Unknown). American peregrine falcons occur throughout North America, with year-round occurrences along the coast and Klamath Range of California, and non-breeding in Central Valley and Sierra Nevada. They occur in grasslands, woodlands, and open forests. Nesting is on ledges of cliffs, transmission towers, quarry faces, skyscrapers, and bridges, and the nest is either one that has been abandoned by other birds or is scraped depression. Clutches range from two to five eggs, with only one brood a year. Falcons primarily hunt small birds, taking them on-the-wing, but also take bats, rodents, fish, and small raptors. There were no observations of this species during the site visits; however, a protocol-level survey was not performed during this assessment.

Purple martin (*Progne subis*). CDFW Species of Special Concern. Moderate Potential (Presence Unknown). Purple martin is an uncommon summer resident in California, occurring in woodlands and low-elevation hardwood and coniferous forest. It usually feeds on insects captured in flight approximately 100 to 200 feet above ground. These birds nest in cavities of tall, old, isolated trees or snags in open forest or woodland. The trees within the Study Area may contain cavities or exfoliating bark suitable for roosting. A general nesting bird survey was not performed under this biological assessment. There were no observations of this species during the site visits; however, a protocol-level survey was not performed during this assessment.

Black-chinned sparrow (*Spizella atrogularis*). Local Rare. Moderate Potential (Presence Unknown). Black-chinned sparrows are locally common residence of the dry scrublands, chaparrals, and mountain slopes of California up to 8,800 feet in elevation. This species breeds in California in the inner north and south Coast Ranges, Transverse Range, Peninsular Range, the western slopes of the Sierra Nevada, irregularly in the north Central Valley, and locally in the mountains of southeastern California (Tenney 1997). This species inhabits xeric slopes of dense scrub, chaparral, and sagebrush habitats dominated by ceanothus (*Ceanothus* spp.), manzanitas (*Arctostaphylos* spp.), sagebrush (*Artemisia* spp.), and chamise (*Adenostoma fasciculatum*) (Tenney 1997). There were no observations of this species during the site visits; however, a protocol-level survey was not performed during this assessment.

Western pond turtle (*Emys marmorata*). CDFW Species of Special Concern. Moderate Potential (Presence Unknown). Western pond turtle is the only native freshwater turtle in California. This turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and Transverse Ranges. Western pond turtles inhabit perennial aquatic habitats, such as lakes, ponds, rivers, streams, and canals that provide submerged cover and suitable basking structures, such as rocks and logs (Zeiner

et. al. 2000). Western pond turtles prefer to nest on unshaded upland slopes close to their aquatic habitat, and hatchlings require shallow water with relatively dense emergent and submergent vegetation for foraging for aquatic invertebrates (Jennings and Hayes 1994). There were no observations of this species during the site visits; however, a protocol-level survey was not performed during this assessment.

Foothill yellow-legged frog (*Rana boylii*). CDFW Species of Special Concern. Moderate Potential (Presence Unknown without Impact). The foothill yellow-legged frog (FYLF) historically occurred in coastal and mountain streams from southern Oregon to Los Angeles County but has declined in many parts of this range. This species is strongly associated with rivers and perennial creeks, and prefers shallow, flowing water with a rocky substrate. FYLF individuals do not typically move overland and are rarely observed far from a source of permanent water (typically less than ten feet). Aquatic breeding sites are in-stream, often near confluences, with eggs typically deposited behind or sometimes under rocks in low-flow areas with cobble and/or gravel (Thomson et al. 2016). Metamorphosis takes at least 15 weeks. The lower reach of the intermittent stream within the Study Area provides a rocky substrate and may be occupied when the stream is flowing; any individuals present would presumably retreat downstream when flow ceases. Breeding within the stream is unlikely given the limited water depth and intermittent nature of the flow. There were no observations of this species during the site visits; however, a protocol-level survey was not performed during this assessment.

California red-legged frog (*Rana draytonii*). Federal Threatened Species, CDFW Species of Special Concern. Moderate Potential (Presence Unknown). The California red-legged frog is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, red-legged frogs disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. California red-legged frogs estivate (period of inactivity) during the dry months in small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds. There were no observations of this species during the site visits; however, a protocol-level survey was not performed during this assessment.

5.2.3 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

The Study Area does not contain any designated Critical Habitat (USFWS 2024b, NMFS 2024) or Essential Fish Habitat (NMFS 2024). As per mapping by the CECP, the Study Area is not within either a Natural Landscape Block or an Essential Connectivity Area. At a localized scale the Study Area provides connectivity between undeveloped/lightly developed lands surrounding the property. Additionally, the streams provide corridor functions such as dispersal, foraging, and cover habitat for a variety of terrestrial, semi-aquatic, and aquatic wildlife; however, the steep, narrow, and shallow nature of these streams as well as partial downstream barriers precludes anadromous fishes. The proposed Project Area maintains substantial woodland and forest between the various vineyard blocks allowing for continued wildlife movement at the localized and regional scale. Likewise, the streams will be entirely avoided by the Proposed Project.

6.0 PROJECT ANALYSIS AND RECOMMENDATIONS

6.1 Land Cover Types

6.1.1 Terrestrial Land Cover Types

Coast Live Oak Woodland: Coast live oak woodlands are not considered sensitive by CDFW or included as sensitive in the NCBDR; however, the Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained and/or improved to the extent feasible to provide for oak woodland and wildlife habitat, slope stabilization, soil protection, and species diversity. Policy CON-24c specifically calls for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio. Code Section 18.108.020(C) requires that 70 percent of canopy cover be retained based on the on-site canopy present on June 16, 2016. Code Section 18.108.020(D) requires that the removal of tree canopy on an acreage basis be mitigated at a 3:1 ratio (which is equivalent to 75 percent retention) where the areas to be preserved must generally occur on slopes less than 50 percent and outside of stream and wetland setbacks. The Proposed Project was designed to follow both the 70 percent retention and the 3:1 tree preservation requirement, and therefore no further recommendations are needed to ensure compliance with the County Code.

The Study Area contains 72.4 acres of coast live oak woodland; to ensure that a 3:1 ratio is maintained of 3 acres of oak woodland preserved for each 1 acre impacted, only 18.1 acres can be converted to vineyard. The Project Area currently contains 3.8 acre of mixed oak woodland, which was intentionally designed to comply with the 3:1 ratio; therefore, no further recommendations are required.

6.1.2 Aquatic Resources

All streams within the Study Area contain either an ephemeral or intermittent hydroperiod. They are connected through a direct connection via Dry Creek to the Napa River and therefore would be considered under the CWA and CFGC. The ephemeral streams do not meet the Napa County definition of a "stream" due to them being shallow (less than four feet) and banks with less than 3:1 slope; conversely, the intermittent streams meet the Napa County stream definition pursuant to Code 18.108.025. The Proposed Project has been intentionally sited away from these streams with the application of the Napa County required setbacks. To protect the quality of these streams, the following recommendations are forwarded:

> Recommendation 1: For the non-definitional streams (all Study Area streams) the block boundaries shall be set back by 35 feet in accordance with Napa County Code 18.108.025. Grading shall occur during the dry season (April 1 through October 15). The Project Area is at least 75 feet from the intermittent streams with dense interstitial vegetation all of which provides a more than sufficient buffer to protect this stream. If rainfall is in the forecast, standard erosion control measures (e.g., straw waddles, bales) should be deployed on the vineyard block edge paralleling the aquatic feature. Construction personnel should be informed of the location of the site's aquatic resources with high visibility flagging or staking prior to construction. No materials or equipment shall be laid down in the setback

to the aquatic resources, and spill prevention materials shall be deployed for all construction equipment.

6.2 Special-status Species

6.2.1 Special-status Plants

The Botanical Survey Area (inclusive of the Project Area) does not contain special-status plants. Therefore, the project will not incur any impacts to such; there are no further actions recommended for special-status plants.

6.2.2 Special-status Wildlife

The Study Area has the potential to support eleven special-status wildlife species (three mammals, five birds, two amphibians, one reptile), as well as non-status birds protected under the MBTA and CFGC. The following measures are recommended to avoid or otherwise minimize potential impacts to the remaining seven species.

Bat Species: Three special-status bats have the potential to occur within the Study Area (pallid bat (*Antrozous pallidus*), fringed myotis (*Myotis thysanodes*), long-legged myotis (*Myotis volans*)). Removal and trimming of trees during the local bat maternity season (generally, April through August) could impact bat breeding and potentially result in the "take" of bats. To avoid impacts to bat species the following recommendations are forwarded.

> Recommendation 2: WRA recommends that any tree removal be performed from outside of the general bat maternity season (September 1 to March 31). If tree removal during this period is not feasible, it is recommended that a single acoustic and sunset emergence survey be conducted at the location of the tree trees previously determined to have the potential to provide maternity roosting. If bats are not found, then no further study is warranted. If special-status bat species and/or bat maternity roosts are detected, then roost trees should be avoided until the end of the maternity roosting season. If this avoidance is not feasible, appropriate species- and roost-specific mitigation measures should be developed in consultation with CDFW. Irrespective of time of year, all felled trees should remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats present within the felled trees to escape.

All Bird Species (including non-special-status): In addition to the three special-status bird species discussed above (olive-sided flycatcher (*Contopus cooperi*), white-tailed kite (*Elanus leucurus*), American peregrine falcon (*Falco peregrinus*), purple martin (*Progne subis*), black-chinned sparrow (*Spizella atrogularis*)), various non-status bird species with baseline protections under the MBTA and CFGC may use vegetation within the Project Areas for nesting. Pre-construction surveys are recommended to ensure that the implementation of the Project would not impact any nesting birds.

> Recommendation 3: WRA recommends that tree/vegetation removal and initial ground disturbance occur outside of the general nesting bird survey (September to January 31. If tree/vegetation removal during this time is not feasible, a pre-construction nesting bird survey should be performed by a qualified biologist no more than 14 days prior to the

initiation of tree removal or ground disturbance is recommended. The survey should cover the Project Area (including tree removal areas) and surrounding areas within 50 feet for passerines and other smaller birds and 500 feet for raptors and owls. If active bird nests are found during the survey, an appropriate no-disturbance buffer should be established by the qualified biologist. Once it is determined that the young have fledged (left the nest) or the nest otherwise becomes inactive (e.g., due to predation), the buffer may be lifted, and work may be initiated within the buffer.

Amphibians/Reptiles: The Study Area has the potential to support two special-status amphibians (foothill yellow-legged frog (FYLF; *Rana boylii*), California red-legged frog (CRLF; *Rana draytonii*)) and one reptile (western pond turtle (WPT; *Emys marmorata*)).

Recommendation 4: If the Study Area streams are dry at the time of construction, no further actions are recommended for FYLF; however, surveys around the ponds should be conducted for CRLF and WPT. If the stream channels are wet, then two surveys should be performed along the streams at least 14 days prior to project initiation. The surveys must have different light angles (e.g., early morning and early afternoon), but can be conducted on the same day. Survey areas (streams) will be systematically walked upstream, zig-zagging between the bank and the thalweg in wide areas, and bank-to-bank in narrow areas. All areas along the streams and pond edges that could support frogs/turtles will be searched, including rocks, ledges, woody debris, overhanging vegetation, etc. as well as accessible natural cover within 50 feet of the wetted perimeter where frogs could be present. Surveyors will use binoculars to reduce disturbing frogs and flashlights for searching darkened crevices and shaded areas. Slow-moving and/or still waters will be closely inspected for the presence of tadpoles.

If no FYLF, CRLF, and/or WPT are present during the pre-construction survey, no additional measures are warranted. If any of the three species are determined to be present, one daytime survey is proposed for pre-construction activities to be completed within 48 hours of project initiation. If any of these species are or will likely be present at the time of ground-breaking, protective measures should be deployed. Such measures include: (1) installation of exclusion fencing, (2) presence of an on-site biologist during ground disturbance activities, and (3) implementation of a worker education program. Exclusion fencing shall be installed along the inhabited stream(s)/pond(s) immediately adjacent to the vineyard blocks, extending 100 feet beyond the terminus of the proposed vineyard blocks in each direction.

The on-site biologist will be present to perform a survey of the vineyard blocks in the morning prior to that day's ground-breaking activities. If any of the three species are present within the vineyard block, individuals shall be allowed to leave the disturbance area of their own accord, as confirmed by the biologist. Alternatively, other measures shall be developed and approved in coordination with CDFW.

Finally, the worker education program shall consist of a qualified biologist providing construction personnel with information regarding the identification and ecology of FYLF/CRLF/WPT, the potential for occurrence of the species within work areas, the legal

status of the species and ramifications for take, the specific measures being implemented to avoid impacts to these species, and the role of the on-site biologist.

6.2.3 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

As noted above, the Study Area is not within Critical Habitat, Essential Fish Habitat, Natural Landscape Block, or an Essential Connectivity Area. The Proposed Project will necessarily remove existing, natural land covers on-site resulting in highly localized wildlife barriers. However, most of the site will remain undeveloped, including the bulk of the site's chaparral, woodland, and forest. More specifically, the remnant habitats will remain connected, resulting in direct connectivity with similar habitats within the Study Area as well as between neighboring (largely undeveloped) properties to the west and south, and the residential areas to the east and north. Only the vineyard blocks will be fenced with the remainder of the property left open or fenced with wildlife-friendly fencing. Therefore, the Proposed Project is not anticipated to result in any potentially significant impacts to wildlife movement or migration and no further actions are recommended.

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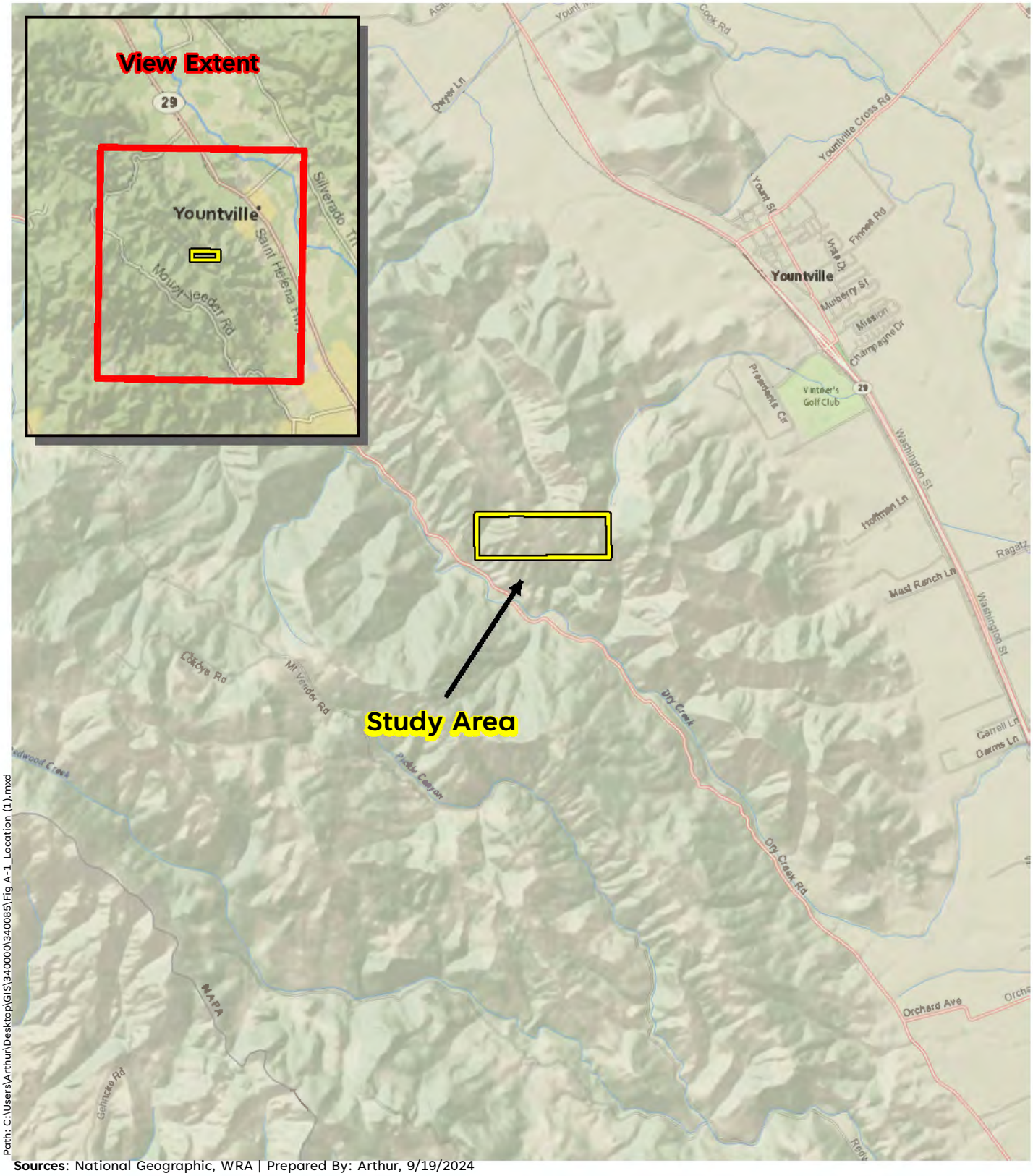
Appendix A

Figures



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Sources: National Geographic, WRA | Prepared By: Arthur, 9/19/2024

Figure A-1. Study Area Location

Demele Ranch
Napa County, CA

0 1 2 Miles

N

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Figure A-2.
Soil Mapping Units

Demele Ranch
Napa County, CA

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 9/19/2024

wra
Environmental
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Figure A-3.
Land Cover: Study Area

Demele Ranch
Napa County, CA

Study Area (117.8 ac.)
Botanical & Delineation Survey Area (28.9 ac.)

Land Cover: Study Area

Developed (2.3 ac.)
Non-native Grassland (16.6 ac.)
Coyote Brush Scrub (1.9 ac.)
Chamise Chaparral (18.0 ac.)
Coast Live Oak Woodland (72.4 ac.)
Knobcone Pine Woodland (3.8 ac.)
Douglas Fir Forest (2.5 ac.)
Man-made Pond (0.2 ac.)
Seasonal Wetland (0.2 ac.)
Stream: Centerline
Stream: Top-of-Bank

0 200 400
Feet

N

wra Environmental Consultants

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 9/19/2024

Figure A-4.
Land Cover: Project Area

Demele Ranch
Napa County, CA

Study Area (117.8 ac.)

Project Area (11.1 ac.)

Land Cover: Project Area

Developed (0.3 ac.)

Non-native Grassland (5.5 ac.)

Coyote Brush Scrub (1.1 ac.)

Coast Live Oak Woodland (3.8 ac.)

Knobcone Pine Forest (0.4 ac.)

0 200 400
Feet

N

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 9/19/2024

Appendix B

Species Observed in the Study Area

Table B-1. Plant species observed in the Study Area: April 23, May 9, and June 26, 2024

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Agavaceae	*Chlorogalum pomeridianum* var. *pomeridianum*	common soap plant	perennial forb	native	--	--	NL
Alismataceae	*Alisma triviale*	northern water plantain	perennial forb	native	--	--	OBL
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	deciduous shrub	native	--	--	FACU
Apiaceae	*Daucus carota*	Queen Anne's lace	perennial forb	non-native	--	assessed	UPL
Apiaceae	*Osmorhiza berteroi*	sweet cicely	perennial forb	native	--	--	FACU
Apiaceae	*Perideridia kelloggii*	Kellogg's yampah	perennial forb	native	--	--	NL
Apiaceae	*Sanicula bipinnatifida*	purple sanicle	perennial forb	native	--	--	NL
Apiaceae	*Sanicula crassicaulis*	Pacific sanicle	perennial forb	native	--	--	NL
Apiaceae	*Torilis arvensis*	hedge parsley	annual forb	non-native	--	moderate	NL
Apiaceae	*Torilis nodosa*	knotted hedgeparsley	annual forb	non-native	--	--	NL
Aristolochiaceae	*Aristolochia californica*	Dutchman's pipe	perennial vine	native	--	--	NL
Asteraceae	*Achillea millefolium*	common yarrow	perennial forb	native	--	--	FACU
Asteraceae	*Agoseris retrorsa*	spearleaf agoseris	perennial forb	native	--	--	NL
Asteraceae	*Anisocarpus madioides*	woodland madia	perennial forb	native	--	--	NL
Asteraceae	*Artemisia douglasiana*	mugwort	perennial forb	native	--	--	FAC
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	coyote brush	evergreen shrub	native	--	--	NL
Asteraceae	*Carduus pycnocephalus*	Italian thistle	annual forb	non-native	--	moderate	NL
Asteraceae	*Centaurea melitensis*	tocalote	annual forb	non-native	--	moderate	NL
Asteraceae	*Centaurea solstitialis*	yellow star thistle	annual forb	non-native	--	high	NL
Asteraceae	*Cichorium intybus*	chicory	perennial forb	non-native	--	--	FACU
Asteraceae	*Cirsium occidentale*	cobwebby thistle	perennial forb	native	--	--	NL
Asteraceae	*Dittrichia graveolens*	stinkwort	annual forb	non-native	--	moderate	NL
Asteraceae	*Erigeron canadensis*	Canadian horseweed	annual forb	native	--	--	FACU
Asteraceae	*Eriophyllum lanatum* var. *achilleoides*	common woolly sunflower	perennial forb	native	--	--	NL
Asteraceae	*Grindelia hirsutula*	hairy gumweed	perennial forb	native	--	--	FACW

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Asteraceae	*Helminthotheca echioides*	bristly ox-tongue	perennial forb	non-native	--	limited	FAC
Asteraceae	*Hemizonia congesta* ssp. *luzulifolia*	white hayfield tarweed	annual forb	native	--	--	NL
Asteraceae	*Hieracium albiflorum*	white hawkweed	perennial forb	native	--	--	NL
Asteraceae	*Hypochaeris glabra*	smooth cat's-ear	annual forb	non-native	--	limited	NL
Asteraceae	*Hypochaeris radicata*	rough cat's-ear	perennial forb	non-native	--	moderate	FACU
Asteraceae	*Lactuca serriola*	prickly lettuce	annual forb	non-native	--	assessed	FACU
Asteraceae	*Leontodon saxatilis* ssp. *longirostris*	hawkbit	annual forb	non-native	--	--	FACU
Asteraceae	*Leucanthemum vulgare*	ox-eye daisy	perennial forb	non-native	--	moderate	UPL
Asteraceae	*Logfia gallica*	narrowleaf cottonrose	annual forb	non-native	--	--	NL
Asteraceae	*Madia elegans*	common madia	annual forb	native	--	--	NL
Asteraceae	*Madia exigua*	meager tarweed	annual forb	native	--	--	NL
Asteraceae	*Madia gracilis*	gumweed tarweed	annual forb	native	--	--	NL
Asteraceae	*Madia sativa*	coast tarweed	annual forb	native	--	--	NL
Asteraceae	*Microseris douglasii*	Douglas' silverpuffs	annual forb	native	--	--	FACU
Asteraceae	*Pseudognaphalium californicum*	ladies' tobacco	perennial forb	native	--	--	NL
Asteraceae	*Pseudognaphalium canescens*	Wright's cudweed	perennial forb	native	--	--	FACU
Asteraceae	*Rhagadiolus stellatus*	endive daisy	annual forb	non-native	--	--	NL
Asteraceae	*Solidago velutina* ssp. *californica*	California goldenrod	perennial forb	native	--	--	NL
Asteraceae	*Soliva sessilis*	bur weed	annual forb	non-native	--	--	FACU
Asteraceae	*Sonchus asper*	prickly sow thistle	annual forb	non-native	--	assessed	FAC
Asteraceae	*Sonchus oleraceus*	common sow thistle	annual forb	non-native	--	--	NL
Asteraceae	*Wyethia angustifolia*	narrow leaf mule ears	perennial forb	native	--	--	FACU
Asteraceae	*Wyethia glabra*	Coast Range mule ears	perennial forb	native	--	--	NL
Athyriaceae	*Athyrium filix-femina*	lady fern	perennial fern	native	--	--	FAC
Azollaceae	*Azolla filiculoides*	Pacific mosquitofern	annual fern	native	--	--	OBL
Boraginaceae	*Adelinia grandis*	Pacific hound's tongue	perennial forb	native	--	--	NL
Boraginaceae	*Phacelia distans*	distant phacelia	annual forb	native	--	--	OBL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Boraginaceae	*Plagiobothrys nothofulvus*	rusty popcornflower	annual forb	native	--	--	FAC
Brassicaceae	*Cardamine californica*	milk maids	perennial forb	native	--	--	NL
Cactaceae	*Opuntia ficus-indica*	tuna cactus	evergreen shrub	non-native	--	--	NL
Caprifoliaceae	*Lonicera hispidula*	pink honeysuckle	evergreen shrub	native	--	--	FACU
Caryophyllaceae	*Cerastium glomeratum*	mouse-ear chickweed	annual forb	non-native	--	--	UPL
Caryophyllaceae	*Petrorhagia dubia*	wilding pink	annual forb	non-native	--	--	NL
Caryophyllaceae	*Silene gallica*	windmill pink	annual forb	non-native	--	--	NL
Caryophyllaceae	*Stellaria media*	common chickweed	annual forb	non-native	--	--	FACU
Cistaceae	*Crocanthemum scoparium*	Bisbee Peak rushrose	evergreen shrub	native	--	--	NL
Convolvulaceae	*Calystegia occidentalis* ssp. *occidentalis*	chaparral false bindweed	perennial forb	native	--	--	NL
Convolvulaceae	*Convolvulus arvensis*	field bindweed	perennial forb	non-native	--	assessed	NL
Cucurbitaceae	*Marah fabacean*	California manroot	perennial vine	native	--	--	NL
Cupressaceae	*Sequoia sempervirens*	coast redwood	evergreen tree	native	--	--	NL
Cyperaceae	*Carex brevicaulis*	short stem sedge	perennial graminoid	native	--	--	NL
Cyperaceae	*Carex densa*	dense sedge	perennial graminoid	native	--	--	OBL
Cyperaceae	*Carex praegracilis*	clustered field sedge	perennial graminoid	native	--	--	FACW
Cyperaceae	*Cyperus eragrostis*	tall flat-sedge	perennial graminoid	native	--	--	FACW
Cyperaceae	*Eleocharis macrostachya*	common spikerush	perennial graminoid	native	--	--	OBL
Cyperaceae	*Schoenoplectus acutus*	tule	perennial graminoid	native	--	--	OBL
Dennstaedtiaceae	*Pteridium aquilinum*	bracken fern	perennial fern	native	--	--	FACU
Dipsacaceae	*Dipsacus fullonum*	Fuller's teasel	perennial forb	non-native	--	moderate	FAC
Dryopteridaceae	*Dryopteris arguta*	California wood fern	perennial fern	native	--	--	NL
Ericaceae	*Arbutus menziesii*	Pacific madrone	evergreen tree	native	--	--	NL
Ericaceae	*Arctostaphylos canescens* ssp. *canescens*	hoary manzanita	evergreen shrub	native	--	--	NL
Ericaceae	*Arctostaphylos manzanita* ssp. *manzanita*	common manzanita	evergreen shrub	native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Ericaceae	*Arctostaphylos stanfordiana* ssp. *stanfordiana*	Stanford's manzanita	evergreen shrub	native	--	--	NL
Euphorbiaceae	*Croton setiger*	turkey mullein	annual forb	native	--	--	NL
Fabaceae	*Acmispon americanus*	American lotus	annual forb	native	--	--	NL
Fabaceae	*Acmispon glaber*	deer vetch	evergreen shrub	native	--	--	NL
Fabaceae	*Acmispon parviflorus*	small flowered lotus	annual forb	native	--	--	NL
Fabaceae	*Acmispon wrangelianus*	Wrangel's lotus	annual forb	native	--	--	NL
Fabaceae	*Genista monspessulana*	French broom	evergreen shrub	non-native	--	high	NL
Fabaceae	*Lathyrus sphaericus*	grass pea	annual forb	non-native	--	--	FACU
Fabaceae	*Lathyrus vestitus* var. *vestitus*	common Pacific pea	perennial forb	native	--	--	NL
Fabaceae	*Lupinus albifrons* var. *collinus*	silver lupine	evergreen shrub	native	--	--	NL
Fabaceae	*Lupinus bicolor*	miniature lupine	annual forb	native	--	--	NL
Fabaceae	*Lupinus nanus*	sky lupine	annual forb	native	--	--	NL
Fabaceae	*Medicago polymorpha*	bur medic	annual forb	non-native	--	limited	FACU
Fabaceae	*Pickeringia montana* var. *montana*	chaparral pea	evergreen shrub	native	--	--	NL
Fabaceae	*Trifolium bifidum*	notch leaf clover	annual forb	native	--	--	NL
Fabaceae	*Trifolium ciliolatum*	tree clover	annual forb	native	--	--	NL
Fabaceae	*Trifolium dubium*	shamrock clover	annual forb	non-native	--	--	UPL
Fabaceae	*Trifolium glomeratum*	clustered clover	annual forb	non-native	--	--	NL
Fabaceae	*Trifolium gracilentum*	pinpoint clover	annual forb	native	--	--	NL
Fabaceae	*Trifolium hirtum*	rose clover	annual forb	non-native	--	moderate	NL
Fabaceae	*Trifolium microdon*	thimble clover	annual forb	native	--	--	NL
Fabaceae	*Trifolium repens*	white clover	perennial forb	non-native	--	--	FACU
Fabaceae	*Trifolium willdenovii*	tomcat clover	annual forb	native	--	--	FACW
Fabaceae	*Vicia sativa*	garden vetch	annual forb	non-native	--	--	FACU
Fabaceae	*Vicia tetrasperma*	lentil vetch	annual forb	non-native	--	--	NL
Fabaceae	*Vicia villosa*	woolly-pod vetch	annual forb	non-native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Fagaceae	*Quercus agrifolia*	coast live oak	evergreen tree	native	--	--	NL
Fagaceae	*Quercus berberidifolia*	scrub oak	evergreen tree	native	--	--	NL
Fagaceae	*Quercus douglasii*	blue oak	deciduous tree	native	--	--	NL
Fagaceae	*Quercus kelloggii*	California black oak	deciduous tree	native	--	--	NL
Fagaceae	*Quercus lobata*	valley oak	deciduous tree	native	--	--	FACU
Fagaceae	*Quercus wislizeni* var. *wislizeni*	interior live oak	evergreen tree	native	--	--	NL
Fagaceae	*Quercus* Xmorehus	oracle oak	deciduous tree	native	--	--	NL
Geraniaceae	*Erodium brachycarpum*	foothill filaree	annual forb	non-native	--	limited	NL
Geraniaceae	*Geranium dissectum*	cutleaf geranium	annual forb	non-native	--	moderate	NL
Geraniaceae	*Geranium purpureum*	herb robert	perennial forb	non-native	--	--	NL
Hypericaceae	*Hypericum concinnum*	goldwire	perennial forb	native	--	--	NL
Hypericaceae	*Hypericum perforatum*	Klamath weed	perennial forb	non-native	--	moderate	FACU
Iridaceae	*Iris macrosiphon*	long-tube iris	perennial forb	native	--	--	NL
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	perennial forb	native	--	--	FACW
Juglandaceae	*Juglans hindsii*	black walnut	deciduous tree	native	--	--	FAC
Juncaceae	*Juncus effusus* ssp. *pacificus*	Pacific rush	perennial graminoid	native	--	--	FACW
Juncaceae	*Juncus patens*	common rush	perennial graminoid	native	--	--	FACW
Juncaceae	*Juncus phaeocephalus*	brownhead rush	perennial graminoid	native	--	--	FACW
Juncaceae	*Juncus tenuis*	poverty rush	perennial graminoid	native	--	--	FACW
Juncaceae	*Luzula comosa*	Pacific woodrush	perennial graminoid	native	--	--	FAC
Lamiaceae	*Lavandula stoechas*	French lavender	evergreen shrub	non-native	--	--	NL
Lamiaceae	*Monardella viridis*	green monardella	perennial forb	native	CRPR 4.3	--	NL
Lamiaceae	*Stachys rigida* var. *quercetorum*	rough hedgenettle	perennial forb	native	--	--	FACW
Lauraceae	*Umbellularia californica*	California bay	evergreen tree	native	--	--	FAC
Liliaceae	*Calochortus amabilis*	golden globelily	perennial forb	native	--	--	NL
Liliaceae	*Calochortus luteus*	yellow mariposa lily	perennial forb	native	--	--	NL
Liliaceae	*Prosartes hookeri*	drops of gold	perennial forb	native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Linaceae	*Linum bienne*	pale flax	annual forb	non-native	--	--	NL
Lythraceae	*Lythrum hyssopifolia*	hyssop loosestrife	annual forb	non-native	--	moderate	OBL
Melanthiaceae	*Toxicoscordion fremontii*	Fremot's star lily	perennial forb	native	--	--	NL
Moraceae	*Ficus carica*	common fig	deciduous tree	non-native	--	moderate	FACU
Myrsinaceae	*Lysimachia arvensis*	scarlet pimpernel	annual forb	non-native	--	--	NL
Oleaceae	*Olea europaea*	olive	evergreen tree	non-native	--	limited	NL
Onagraceae	*Clarkia gracilis* ssp. *gracilis*	slender clarkia	annual forb	native	--	--	NL
Onagraceae	*Clarkia purpurea* ssp. *quadrivulnera*	purple clarkia	annual forb	native	--	--	NL
Onagraceae	*Clarkia unguiculata*	woodland clarkia	annual forb	native	--	--	NL
Onagraceae	*Epilobium brachycarpum*	annual willowherb	annual forb	native	--	--	FAC
Orobanchaceae	*Castilleja attenuata*	valley tassels	annual forb	native	--	--	NL
Orobanchaceae	*Pedicularis densiflora*	Indian warrior	perennial forb	native	--	--	NL
Papaveraceae	*Dendromecon rigida*	tree poppy	evergreen shrub	native	--	--	NL
Papaveraceae	*Eschscholzia californica*	California poppy	perennial forb	native	--	--	NL
Phrymaceae	*Diplacus aurantiacus*	sticky monkey	evergreen shrub	native	--	--	NL
Pinaceae	*Pinus attenuata*	knobcone pine	evergreen tree	native	--	--	NL
Pinaceae	*Pinus sabiniana*	digger pine	evergreen tree	native	--	--	NL
Pinaceae	*Pseudotsuga menziesii*	Douglas fir	evergreen tree	native	--	--	FACU
Plantaginaceae	*Plantago erecta*	foothill plantain	annual forb	native	--	--	NL
Plantaginaceae	*Plantago lanceolata*	English plantain	perennial forb	non-native	--	limited	FAC
Poaceae	*Agrostis pallens*	seashore bentgrass	perennial graminoid	native	--	--	FACU
Poaceae	*Aira caryophyllea*	silver hairgrass	annual graminoid	non-native	--	assessed	FACU
Poaceae	*Avena barbata*	wild oat	annual graminoid	non-native	--	moderate	NL
Poaceae	*Brachypodium distachyon*	false brome	perennial graminoid	non-native	--	moderate	NL
Poaceae	*Briza maxima*	big rattlesnake grass	annual graminoid	non-native	--	limited	NL
Poaceae	*Briza minor*	little rattlesnake grass	annual graminoid	non-native	--	--	FAC
Poaceae	*Bromus catharticus*	Chilean brome	perennial graminoid	non-native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Poaceae	*Bromus diandrus*	rip-gut brome	annual graminoid	non-native	--	moderate	NL
Poaceae	*Bromus hordeaceus*	soft chess	annual graminoid	non-native	--	limited	FACU
Poaceae	*Bromus madritensis*	foxtail chess	annual graminoid	non-native	--	--	NL
Poaceae	*Cynodon dactylon*	Bermuda grass	perennial graminoid	non-native	--	moderate	FACU
Poaceae	*Cynosurus echinatus*	dogtail grass	annual graminoid	non-native	--	moderate	NL
Poaceae	*Dactylis glomerata*	orchard grass	perennial graminoid	non-native	--	limited	FACU
Poaceae	*Elymus caput-medusae*	Medusa head	perennial graminoid	non-native	--	high	NL
Poaceae	*Elymus glaucus*	blue wildrye	perennial graminoid	native	--	--	FACU
Poaceae	*Festuca arundinacea*	tall fescue	perennial graminoid	non-native	--	moderate	FACU
Poaceae	*Festuca bromoides*	brome fescue	perennial graminoid	non-native	--	--	FACU
Poaceae	*Festuca californica*	California fescue	perennial graminoid	native	--	--	FACU
Poaceae	*Festuca idahoensis*	Idaho fescue	perennial graminoid	native	--	--	NL
Poaceae	*Festuca microstachys*	Pacific fescue	annual graminoid	native	--	--	NL
Poaceae	*Festuca myuros*	rattail fescue	perennial graminoid	non-native	--	moderate	FACU
Poaceae	*Festuca perennis*	Italian rye grass	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Gastridium phleoides*	nit grass	annual graminoid	non-native	--	--	FACU
Poaceae	*Glyceria declinata*	waxy manna grass	perennial graminoid	non-native	--	moderate	FACW
Poaceae	*Holcus lanatus*	common velvet grass	perennial graminoid	non-native	--	moderate	FAC
Poaceae	*Hordeum marinum*	Mediterranean barley	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Hordeum murinum*	mouse barley	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Melica torreyana*	Torrey's onion grass	perennial graminoid	native	--	--	NL
Poaceae	*Phalaris aquatica*	harding grass	perennial graminoid	non-native	--	moderate	FACU
Poaceae	*Poa annua*	annual bluegrass	annual graminoid	non-native	--	--	FAC
Poaceae	*Poa secunda* ssp. *secunda*	one-sided bluegrass	perennial graminoid	native	--	--	FACU
Poaceae	*Polypogon interruptus*	ditch rabbit's-foot grass	perennial graminoid	non-native	--	--	FACW
Poaceae	*Polypogon monspeliensis*	rabbit's-foot grass	annual graminoid	non-native	--	limited	FACW
Poaceae	*Stipa pulchra*	purple needlegrass	perennial graminoid	native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Polemoniaceae	*Gilia tricolor*	bird's eye gilia	annual forb	native	--	--	NL
Polemoniaceae	*Leptosiphon parviflorus*	variable linanthus	annual forb	native	--	--	NL
Polygalaceae	*Polygala californica*	California milkwort	perennial forb	native	--	--	NL
Polygonaceae	*Rumex acetosella*	sheep sorrel	perennial forb	non-native	--	moderate	FACU
Pteridaceae	*Adiantum jordanii*	maidenhair fern	perennial fern	native	--	--	FAC
Pteridaceae	*Pentagramma triangularis*	gold back fern	perennial fern	native	--	--	NL
Ranunculaceae	*Ranunculus occidentalis*	western buttercup	perennial forb	native	--	--	FAC
Rhamnaceae	*Ceanothus cuneatus*	buck brush	evergreen shrub	native	--	--	NL
Rhamnaceae	*Rhamnus crocea*	redberry buckthorn	evergreen shrub	native	--	--	NL
Rosaceae	*Adenostoma fasciculatum*	chamise	evergreen shrub	native	--	--	NL
Rosaceae	*Fragaria vesca*	woodland strawberry	perennial forb	native	--	--	UPL
Rosaceae	*Heteromeles arbutifolia*	toyon	evergreen shrub	native	--	--	NL
Rosaceae	*Prunus cerasifera*	cherry plum	deciduous tree	non-native	--	limited	NL
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	evergreen shrub	non-native	--	high	FAC
Rosaceae	*Rubus ursinus*	California blackberry	evergreen shrub	native	--	--	FACU
Rubiaceae	*Galium aparine*	common bedstraw	annual forb	native	--	--	FACU
Rubiaceae	*Galium californicum*	California bedstraw	perennial forb	native	--	--	NL
Rubiaceae	*Galium porrigens*	graceful bedstraw	perennial forb	native	--	--	NL
Rubiaceae	*Sherardia arvensis*	blue fieldmadder	annual forb	non-native	--	--	NL
Salicaceae	*Salix lasiolepis*	arroyo willow	deciduous tree	native	--	--	FACW
Sapindaceae	*Aesculus californica*	California buckeye	deciduous tree	native	--	--	NL
Themidaceae	*Dichelostemma congestum*	ookow	perennial forb	native	--	--	NL
Themidaceae	*Dipterostemon capitatus*	blue dicks	perennial forb	native	--	--	FACU
Typhaceae	*Typha latifolia*	common cattail	perennial forb	native	--	--	OBL
Verbenaceae	*Phyla nodiflora*	common lippia	perennial forb	native	--	--	FACW

All species identified using the *Jepson Manual, 2nd Edition* (Baldwin et al. 2012), *The Jepson Flora Project* (eFlora 2024), and *A Flora of Napa County* (Ruygt 2020); nomenclature follows *The Jepson Flora Project* (eFlora 2024) unless otherwise noted

Sp.: “species”, intended to indicate that the observer was confident in the identity of the genus but uncertain which species
Cf.: “*confer*” or “compared with”, intended to indicate a species appeared to the observer to be specific, but was not identified based on diagnostic characters

[1]Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2024a)

FE:	Federal Endangered
FT:	Federal Threatened
SE:	State Endangered
ST:	State Threatened
SR:	State Rare
LR	Locally Rare
CRPR 1A:	Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B:	Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A:	Plants presumed extirpated in California, but more common elsewhere
CRPR 2B:	Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 3:	Plants about which we need more information – a review list
CRPR 4:	Plants of limited distribution – a watch list

[2]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2006)

High:	Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
Moderate:	Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited moderate distribution ecologically
Limited:	Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
Assessed:	Assessed by Cal-IPC and determined to not be an existing current threat

[3]Wetland Status: National List of Plant Species that Occur in Wetlands, Arid West Region (Corps 2022)

OBL:	Almost always a hydrophyte, rarely in uplands
FACW:	Usually a hydrophyte, but occasionally found in uplands
FAC:	Commonly either a hydrophyte or non-hydrophyte
FACU:	Occasionally a hydrophyte, but usually found in uplands
UPL:	Rarely a hydrophyte, almost always in uplands
NL:	Rarely a hydrophyte, almost always in uplands
NI:	No information; not factored during wetland delineation

Table B-2. Wildlife species observed in and around the Study Area: April 23, May 9, and June 26, 2024

SCIENTIFIC NAME	COMMON NAME
Mammals	
Canis latrans	coyote
Lepus californicus	black-tailed jackrabbit
Odocoileus hemionus columbianus	black-tailed deer
Birds	
Agelaius phoeniceus	red-winged blackbird
Aphelocoma californica	California scrub jay
Baeolophus inornatus	oak titmouse
Buteo jamaicensis	red-tailed hawk
Callipepla californica	California quail
Cathartes aura	turkey vulture
Chamaea fasciata	wrentit
Colaptes auratus	northern flicker
Corvus corax	common raven
Cyanocitta stelleri	Steller's jay
Junco hyemalis	dark-eyed junco
Melanerpes formicivorus	acorn woodpecker
Meleagris gallopavo	wild turkey
Melozone crissalis	California towhee
Patagioenas fasciata	band-tailed pigeon
Pipilo maculatus	spotted towhee
Polioptila caerulea	blue-green gnatcatcher
Sialia mexicana	western bluebird
Sitta carolinensis	white-breasted nuthatch
Spinus psaltria	lesser goldfinch
Tachycineta thalassina	violet-green swallow
Thryomanes bewickii	Bewick's wren
Vermivora celata	orange-crowned warbler
Zenaida macroura	mourning dove
Reptiles and Amphibians	
Lithobates catesbeianus	American bullfrog
Sceloporus occidentalis	western fence lizard

Appendix C

Potential for Special-status Species to Occur in the Study Area

Table C. Potential for Special-status Species to Occur in the Study Area. List compiled from the CDFW BIOS database (CDFW 2024a), USFWS IPaC Report (USFWS 2024b), and CNPS Electronic Inventory (CNPS 2024a) searches. For plants, the Calistoga, St. Helena, Chiles Valley, Kenwood, Rutherford, Yountville, Glen Ellen, Sonoma, and Napa USGS 7.5' quadrangles were included in the search. For wildlife, the entirety of Napa County was considered.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
PLANTS				
Allium peninsulare var. *franciscanum* Franciscan onion	CRPR 1B	Cismontane woodland, valley and foothill grassland; on clay substrate, often derived from volcanics or serpentine; serpentine indicator: WI. Elevation range: 170 – 985 feet. Blooms: May – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic grassland and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Alopecurus aequalis var. *sonomensis* Sonoma alopecurus	FE, CRPR 1B	Freshwater marshes and swamps, riparian scrub; closely associated with other wetland species; wetland indicator: OBL/OBL. Elevation range: 15 – 1200 feet. Blooms: May – July.	**Unlikely.** The Botanical Survey Area does not contain extensive perennial wetland (freshwater marsh, riparian wetland) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Amorpha californica var. *napensis* Napa false indigo	CRPR 1B	Openings in broadleaf upland forest, chaparral, cismontane woodland. Elevation range: 395 – 6560 feet. Blooms: April – July.	**Moderate Potential.** The Botanical Survey Area contains woodland and chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Amsinckia lunaris bent-flowered fiddleneck	CRPR 1B	Cismontane woodland, valley and foothill grassland, coastal bluff scrub; situated on rocky soils. Elevation range: 10 – 1625 feet. Blooms: March – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic grassland and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Antirrhinum virga twig-like snapdragon	CRPR 4	Chaparral, lower montane coniferous forest; located on rocky openings often derived from serpentine; serpentine indicator: SI. Elevation range: 325 – 6550 feet. Blooms: June – July.	**Unlikely.** Although the Botanical Survey Area contains chaparral, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Aphyllon validum ssp. *howellii* Howell's broomrape	CRPR 4	Chaparral; located on serpentine or volcanic substrate. Elevation range: 585 – 5655 feet. Blooms: June – September.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Arctostaphylos stanfordiana ssp. decumbens Rincon manzanita	CRPR 1B	Chaparral, cismontane woodland; highly restricted to red rhyolite soils. Elevation range: 245 – 1215 feet. Blooms: February – April.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Astragalus breweri Brewer's milk-vetch	CRPR 4	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland; located on open, gravelly serpentine or volcanic substrate; serpentine indicator: SI. Elevation range: 290 – 2375 feet. Blooms: April – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Astragalus claranus Clara Hunt's milk-vetch	FE; ST; CRPR 1B	Cismontane woodland, valley and foothill grassland, chaparral; on open grassy hillsides, especially exposed shoulders with thin, volcanic or serpentine clay soils; serpentine indicator: SI. Elevation range: 245 – 900 feet. Blooms: March – May.	**Moderate Potential.** The Botanical Survey Area contains volcanic woodland and grassland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Astragalus clevelandii Cleveland's milk-vetch	CRPR 4	Chaparral, cismontane woodland, riparian forest; located on serpentine seeps; serpentine indicator: SE. Elevation range: 650 – 4875 feet. Blooms: June – September.	**Unlikely.** Although the Botanical Survey Area contains chaparral, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Astragalus tener var. *tener* alkali milk-vetch	CRPR 1B	Playas, vernal pools, valley and foothill grassland; located in vernal pools and similar wetlands/mesic areas on alkaline substrate. Elevation range: 0 – 195 feet. Blooms: March – June.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Balsamorhiza macrolepis big-scale balsamroot	CRPR 1B	Valley and foothill grassland, cismontane woodland; situated on rocky substrates, typically derived from metavolcanics, sometimes on serpentine substrate; serpentine indicator: SI. Elevation range: 295 – 3100 feet. Blooms: March – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic grassland and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Blennosperma bakeri Sonoma sunshine	FE, SE, CRPR 1B	Vernal pools, vernal swales, and mesic areas in valley grassland; highly restricted to the Santa Rosa Plain and Valley of the Moon. Elevation range: 35 – 360 feet. Blooms: March – April.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Brodiaea leptandra narrow-anthered brodiaea	CRPR 1B	Broadleaf upland forest, chaparral, lower montane coniferous forest; situated on gravelly soils derived from volcanics, particularly rhyolitic tuff, sometimes serpentine; serpentine indicator: WI. Elevation range: 360 – 3000 feet. Blooms: May – July.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Calamagrostis ophitidis serpentine reed grass	CRPR 4	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland; located in openings, often north-facing, underlain by rocky serpentine substrate; serpentine indicator: SE. Elevation range: 290 – 3465 feet. Blooms: April – July.	**Unlikely.** Although the Botanical Survey Area contains chaparral and grassland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Calandrinia breweri Brewer's Calandrinia	CRPR 4	Chaparral, coastal scrub; located on sandy or loamy substrate in areas often recently disturbed or burned. Elevation range: 30 – 3965 feet. Blooms: March – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Calochortus uniflorus large-flowered mariposa lily	CRPR 4, LR	Coastal prairie, coastal scrub, meadows and seeps, North Coast coniferous forest; infrequently situated on serpentine substrate; serpentine indicator: WI. Elevation range: 30 – 3480 feet. Blooms: April – June.	**No Potential.** The Botanical Survey Area does not contain prairie, coastal scrub, or North Coast coniferous forest to support this species.	**Not Present.** No further actions are recommended for this species.
Calystegia collina ssp. *oxyphylla* Mt. Saint Helena morning-glory	CRPR 4	Chaparral; located on serpentine barrens, slopes, and hillsides; serpentine indicator: SE. Elevation range: 815 – 3315 feet. Blooms: April – June.	**Unlikely.** Although the Botanical Survey Area contains chaparral, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Castilleja ambigua var. *ambigua* Johnny-nip	CRPR 4	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pool margins. Elevation range: 0 – 1415 feet. Blooms: March – August.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Castilleja ambigua var. *meadii* mead's owl's-clover	CRPR 1B	Meadows and seeps, vernal pools; located in mesic areas or wetlands underlain by gravelly clay soils derived from volcanics. Elevation range: 1460 – 1545 feet. Blooms: April – May.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Ceanothus confusus Rincon Ridge ceanothus	CRPR 1B	Closed-cone coniferous forest, chaparral, cismontane woodland; known from volcanic and serpentine substrate; typically situated on dry shrubby slopes; serpentine indicator: WI/IN. Elevation range: 245 – 3495 feet. Blooms: February – April.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Ceanothus divergens Calistoga ceanothus	CRPR 1B	Chaparral, cismontane woodland; on rocky, serpentine sites; serpentine indicator: WI. Elevation range: 560 – 3115 feet. Blooms: February – March.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Ceanothus gloriosus var. *exaltatus* Point Reyes ceanothus	CRPR 4	Chaparral. Elevation range: 95 – 1985 feet. Blooms: March – June, sometimes August.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Ceanothus purpureus holly-leaved ceanothus	CRPR 1B	Chaparral, cismontane woodland; located on rocky, volcanic slopes. Elevation range: 395 – 3000 feet. Blooms: February – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Ceanothus sonomensis Sonoma ceanothus	CRPR 1B	Chaparral; located on sandy serpentine or volcanic substrates; serpentine indicator: WI/IN. Elevation range: 705 – 2625 feet. Blooms: February – April.	**High Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Centromadia parryi ssp. *parryi* pappose tarplant	CRPR 1B	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland; situated in vernally mesic sites, often with alkali substrate. Elevation range: 5 – 1380 feet. Blooms: May – November.	**No Potential.** The Botanical Survey Area does not contain alkali grassland to support this species.	**Not Present.** No further actions are recommended for this species.
Clarkia breweri Brewer's clarkia	CRPR 4	Chaparral, cismontane woodland, coastal scrub; frequently on serpentine substrate; serpentine indicator: BE/SI. Elevation range: 695 – 3625 feet. Blooms: April – June.	**Unlikely.** Although the Botanical Survey Area contains chaparral and woodland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Clarkia gracilis ssp. *tracyi* Tracy's clarkia	CRPR 4	Chaparral; located in openings and situated on substrates often derived from serpentine; serpentine indicator: BE. Elevation range: 210 – 2115 feet. Blooms: April – July.	**Unlikely.** Although the Botanical Survey Area contains chaparral, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Collomia diversifolia serpentine collomia	CRPR 4	Chaparral, cismontane woodland; situated on rocky to gravelly serpentine substrates; serpentine indicator: SE. Elevation range: 975 – 1950 feet. Blooms: May – June.	**Unlikely.** Although the Botanical Survey Area contains chaparral and woodland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Cordylanthus tenuis ssp. *brunneus* serpentine bird's-beak	CRPR 4	Closed-cone coniferous forest, chaparral, cismontane woodland; typically located serpentine substrate; serpentine indicator: BE. Elevation range: 1540 – 2975 feet. Blooms: July – August.	**Unlikely.** Although the Botanical Survey Area contains chaparral and woodland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Delphinium uliginosum swamp larkspur	CRPR 4	Chaparral, valley and foothill grassland; located in seeps and wet meadows underlain by serpentine substrate; serpentine indicator: SE. Elevation range: 1105 – 1985 feet. Blooms: May – June.	**Unlikely.** Although the Botanical Survey Area contains chaparral and grassland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Downingia pusilla dwarf downingia	CRPR 2B	Valley and foothill grassland, vernal pools; located in mesic grassy sites, pool and lake margins. Elevation range: 3 – 1450 feet. Blooms: March – May.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Eleocharis parvula small spikerush	CRPR 4	Marshes and swamps. Elevation range: 5 – 9815 feet. Blooms: sometimes April, June – August, sometimes September.	**Unlikely.** The Botanical Survey Area does not contain extensive perennial wetland (freshwater marsh, riparian wetland) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Erigeron biolettii Streamside daisy	CRPR 3	Broadleaf upland forest, cismontane woodland, North Coast coniferous forest; on rocky, mesic. Elevation range: 95 – 3610 feet. Blooms: June – October.	**Moderate Potential.** The Botanical Survey Area contains rocky woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Erigeron greenei Greene's narrow-leaved daisy	CRPR 1B	Chaparral; located on volcanic or serpentine substrate. Elevation range: 260 – 3270 feet. Blooms: May – September.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Eryngium constancei Loch Lomond coyote thistle	FE; SE; CRPR 1B	Vernal pools; located on volcanic ash flow vernal pools. Elevation range: 1495 – 2780 feet. Blooms: April – June.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Eryngium jepsonii Jepson's coyote thistle	CRPR 1B	Valley and foothill grassland, vernal pools; situated on clay substrate that is vernally saturated. Elevation range: 10 – 975 feet. Blooms: April – August.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Erythronium helenae St. Helena fawn lily	CRPR 4	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland; located on volcanic or serpentine substrate; serpentine indicator: BE. Elevation range: 1135 – 3965 feet. Blooms: March – May.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Extriplex joaquiniana San Joaquin spearscale	CRPR 1B	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland; located on alkaline substrate. Elevation range: 0 – 2715 feet. Blooms: April – October.	**No Potential.** The Botanical Survey Area does not contain alkali wetland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Fritillaria liliacea fragrant fritillary	CRPR 1B	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland; located in grassy sites underlain by clay, typically derived from volcanics or serpentine; serpentine indicator: WI. Elevation range: 10 – 1335 feet. Blooms: February – April.	**Unlikely.** The Botanical Survey Area does not contain rocky, heavy clay soils to support this species.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Fritillaria purdyi Purdy's fritillary	CRPR 4	Chaparral, cismontane woodland, lower montane coniferous forest; usually situated on serpentine substrates; serpentine indicator: BE. Elevation range: 565 – 7330 feet. Blooms: March – June.	**Unlikely.** Although the Botanical Survey Area contains chaparral and woodland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Harmonia nutans nodding harmonia	CRPR 4	Chaparral, cismontane woodland; located on rocky to gravelly substrates derived from volcanics. Elevation range: 240 – 3170 feet. Blooms: March – May.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Hemizonia congesta ssp. congesta Hayfield tarplant	CRPR 1B	Coastal scrub, valley and foothill grassland; serpentine indicator: WI/IN. Elevation range: 65 – 1840 feet. Blooms: April – October.	**Moderate Potential.** The Botanical Survey Area contains grassland habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Hesperolinon sharsmithiae Sharsmith's western flax	CRPR 1B	Chaparral; located on serpentine substrate; serpentine indicator: SE. Elevation range: 875 – 975 feet. Blooms: May – July.	**Unlikely.** Although the Botanical Survey Area contains chaparral, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Horkelia tenuiloba thin-lobed horkelia	CRPR 1B	Broadleaf upland forest, coastal scrub, valley and foothill grassland, chaparral; in mesic openings, on sandy substrate. Elevation range: 165 – 1640 feet. Blooms: May – July.	**Unlikely.** Although the Botanical Survey Area contains chaparral and grassland, sandy soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Hosackia gracilis harlequin lotus	CRPR 4	Broadleaf upland forest, coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and swamps, North Coast coniferous forest, valley and foothill grassland; located in wetlands and roadside ditches. Elevation range: 0 – 2275 feet. Blooms: March – July.	**Unlikely.** The Botanical Survey Area does not contain extensive perennial wetland (freshwater marsh, riparian wetland) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Iris longipetala coast iris	CRPR 4	Coastal prairie, lower montane coniferous forest, meadows and seeps; located on mesic sites. Elevation range: 0 – 1950 feet. Blooms: March – May.	**No Potential.** The Botanical Survey Area does not contain prairie or the forest types associated with this species.	**Not Present.** No further actions are recommended for this species.
Lasthenia burkei Burke's goldfields	FE; SE; CRPR 1B	Vernal pools, meadows and seeps; typically located in pools and swales. Elevation range: 45 – 1950 feet. Blooms: April – June.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Lasthenia conjugens Contra Costa goldfields	FE, CRPR 1B	Valley and foothill grassland, vernal pools, cismontane woodland; located in pools, swales, and depressions in mesic grassy sites underlain by alkaline substrate. Elevation range: 0 – 1530 feet. Blooms: March – June.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Lathyrus jepsonii var. *jepsonii* Delta tule pea	CRPR 1B	Freshwater and brackish marshes; typically located near or on slough margins, closely associated with cattail, tules, bulrushes, Baltic rush, California rose, and Suisun Marsh aster; known widely throughout Suisun Bay and Delta regions. Elevation range: 0 – 15 feet. Blooms: May – July, sometimes September.	**No Potential.** The Botanical Survey Area does not contain coastal brackish marsh to support this species.	**Not Present.** No further actions are recommended for this species.
Layia septentrionalis Colusa layia	CRPR 1B	Chaparral, cismontane woodland, valley and foothill grassland; on sandy, serpentine substrate; typically occurs in fields, grassy slopes; serpentine indicator: SI. Elevation range: 330 – 3595 feet. Blooms: April – May.	**Unlikely.** Although the Botanical Survey Area contains grassland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Legenere limosa legenere	CRPR 1B	Vernal pools; typically located in the deepest portions of pools. Elevation range: 3 – 2860 feet. Blooms: April – June.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Leptosiphon aureus bristly leptosiphon	CRPR 4, LR	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland; often located on shallow, rocky substrate in foothill positions. Elevation range: 175 – 4875 feet. Blooms: April – July.	**Moderate Potential.** The Botanical Survey Area contains chaparral and woodland with areas of thin, rocky soils that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Leptosiphon jepsonii Jepson's leptosiphon	CRPR 1B	Chaparral, cismontane woodland; on open to partially shaded grassy slopes on volcanic or the periphery of serpentine substrate. Elevation range: 330 – 1640 feet. Blooms: April – May.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Leptosiphon latisectus broad-lobed leptosiphon	CRPR 4	Broadleaf upland forest, cismontane woodland; frequently situated on serpentine substrate; serpentine indicator: WI. Elevation range: 550 – 4875 feet. Blooms: April – June.	**Unlikely.** Although the Botanical Survey Area contains grassland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Lessingia hololeuca woolly-headed lessingia	CRPR 3, LR	Broadleaf upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland; situated on clay, serpentine substrate; serpentine indicator: SI. Elevation range: 3 – 2885 feet. Blooms: April – June.	**Unlikely.** Although the Botanical Survey Area contains grassland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Lilaeopsis masonii Mason's Lilaeopsis	SR, CRPR 1B	Freshwater and brackish coastal marshes, riparian scrub; located on channel banks in the splash zone on bare mud substrate. Elevation range: 0 – 35 feet. Blooms: April – November.	**No Potential.** The Botanical Survey Area does not contain coastal brackish marsh to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Lilium rubescens redwood lily	CRPR 4, LR	Broadleaf upland forest, chaparral, lower montane coniferous forest, upper montane coniferous forest, North Coast coniferous forest; often located on volcanic and serpentine substrates, and along roadcuts; serpentine indicator: WI. Elevation range: 95 – 6210 feet. Blooms: April – September.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Limnanthes vinculans Sebastopol meadowfoam	FE, SE, CRPR 1B	Mesic meadows, valley and foothill grassland, vernal pools; located in swales, wet meadows, depressions, and pools in the oak savanna of the Santa Rosa Plain on heavy adobe clay substrate. Elevation range: 3 – 2885 feet. Blooms: April – June.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Lomatium repostum Napa Lomatium	CRPR 4	Chaparral, cismontane woodland; located on serpentine or volcanic substrates; serpentine indicator: SI. Elevation range: 290 – 2700 feet. Blooms: March – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Lupinus sericatus Cobb Mountain lupine	CRPR 1B	Broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest; typically located in stands of knobcone pine-oak woodland, on open wooded slopes in gravelly substrate typically derived from volcanics, sometimes serpentine. Elevation range: 890 – 4960 feet. Blooms: March – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Micropus amphibolus Mt. Diablo cottonweed	CRPR 3	Broadleaf upland forest, chaparral, cismontane woodland, valley and foothill grassland; typically situated on thin, rocky soils; serpentine indicator: WI. Elevation range: 145 – 2710 feet. Blooms: March – May.	**Moderate Potential.** The Botanical Survey Area contains chaparral and woodland with areas of thin, rocky soils that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Monardella viridis green monardella	CRPR 4	Broadleaf upland forest, chaparral, cismontane woodland; situated on serpentine or volcanic soils; serpentine indicator: BE/SI. Elevation range: 325 – 3285 feet. Blooms: June – September.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Navarretia cotulifolia cotula navarretia	CRPR 4, LR	Chaparral, cismontane woodland, valley and foothill grassland; located on adobe substrate. Elevation range: 10 – 5950 feet. Blooms: May – June.	**Unlikely.** Although the Botanical Survey Area contains woodland, chaparral, and grassland, heavy clay soils (adobe) are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Navarretia heterandra Tehama navarretia	CRPR 4	Valley and foothill grasslands, vernal pools; situated in pools and mesic grasslands. Elevation range: 95 – 3285 feet. Blooms: April – June.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Navarretia leucocephala ssp. *bakeri* Baker's navarretia	CRPR 1B	Wet, mesic sites underlain by adobe and/or alkaline substrate in cismontane woodland, meadows, seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Elevation range: 15 – 5710 feet. Blooms: April – July.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Navarretia leucocephala ssp. *pauciflora* few-flowered navarretia	FE, ST, CRPR 1B	Vernal pools; located on volcanic ash flow and volcanic substrate pools. Elevation range: 1300 – 2780 feet. Blooms: May – June.	**Unlikely.** Although the Botanical Survey Area contains seasonal wetlands, these wetlands are recently formed and not of the type or character (vernal pool) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Navarretia rosulata Marin County navarretia	CRPR 1B	Closed-cone coniferous forest, chaparral; located on dry, rocky sites often formed from serpentine; serpentine indicator: SE. Elevation range: 650 – 2065 feet. Blooms: May – July.	**Unlikely.** Although the Botanical Survey Area contains chaparral, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Penstemon newberryi var. *sonomensis* Sonoma beardtongue	CRPR 1B	Chaparral; crevices in rock outcrops and talus slopes on ridgelines and mountain peaks. Elevation range: 2295 – 4495 feet. Blooms: April – August.	**Unlikely.** Although the Botanical Survey Area contains chaparral, large rock outcrops and talus slopes on ridgetops are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Plagiobothrys strictus Calistoga popcornflower	FE, ST, CRPR 1B	Broadleaf upland forest, meadows and seeps, valley and foothill grassland, vernal pools; located on heavy dark adobe alkali clay substrate near hot springs and vernal pools. Elevation range: 290 – 520 feet. Blooms: March – June.	**No Potential.** The Botanical Survey Area does not contain alkali wetland habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Poa napensis Napa bluegrass	FE, SE, CRPR 1B	Meadows and seeps, valley and foothill grassland; located in moist alkaline substrate near hot springs. Elevation range: 325 – 650 feet. Blooms: May – August.	**No Potential.** The Botanical Survey Area does not contain alkali wetland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Puccinellia simplex California alkali grass	CRPR 1B	Chenopod scrub, meadow and seep, valley and foothill grassland, vernal pool; situated vernally mesic alkaline substrate in sinks, flats, and lake margins. Elevation range: 5 – 3025 feet. Blooms: March – May.	**No Potential.** The Botanical Survey Area does not contain alkali wetland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Ranunculus lobbii Lobb's buttercup	CRPR 4	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools; located in mesic, vernally wet areas. Elevation range: 45 – 1530 feet. Blooms: February – May.	**Moderate Potential.** The Botanical Survey Area contains small ponds that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Sagittaria sanfordii Sanford's arrowhead	CRPR 1B	Marshes and swamps; located in assorted shallow freshwater habitats including canals and perennial drainage ditches. Elevation range: 0 – 2115 feet. Blooms: May – October, sometimes November.	**Moderate Potential.** The Botanical Survey Area contains small ponds that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Sidalcea hickmanii ssp. *napensis* Napa checkerbloom	CRPR 1B	Chaparral; located on rhyolitic substrates. Elevation range: 1345 – 1985 feet. Blooms: April – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Sidalcea oregana ssp. *hydrophila* marsh checkerbloom	CRPR 1B	Meadows and seeps, riparian forest; located on wet soils along streambanks and meadows. Elevation range: 3575 – 7475 feet. Blooms: July – August.	**Unlikely.** The Botanical Survey Area does not contain extensive perennial wetland (freshwater marsh, riparian wetland) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Sidalcea oregana ssp. *valida* Kenwood Marsh checkerbloom	FE, SE, CRPR 1B	Freshwater marshes and swamps, on the edges of marshes. Elevation range: 375 – 495 feet. Blooms: June – September.	**Unlikely.** The Botanical Survey Area does not contain extensive perennial wetland (freshwater marsh, riparian wetland) to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Spergularia macrotheca var. *longistyla* long-styled sand-spurry	CRPR 1B	Meadow and seep, marshes and swamps; located in alkaline marshes, pools, mud flats, meadows, and hot springs. Elevation range: 0 – 830 feet. Blooms: February – March.	**No Potential.** The Botanical Survey Area does not contain alkali wetland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Streptanthus barbiger bearded jewel-flower	CRPR 4, LR	Chaparral; located on serpentine substrate; serpentine indicator: SE. Elevation range: 485 – 3480 feet. Blooms: May – July.	**Unlikely.** Although the Botanical Survey Area contains chaparral, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Streptanthus hesperidis green jewelflower	CRPR 1B	Chaparral, cismontane woodland; located in openings in brushy/wooded sites on rocky serpentine substrate; serpentine indicator: SE. Elevation range: 420 – 2470 feet. Blooms: May – July.	**Unlikely.** Although the Botanical Survey Area contains chaparral and woodland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Symphyotrichum lentum Suisun Marsh aster	CRPR 1B	Freshwater and brackish marshes and swamps; typically located on slough margins and edges, closely associated with cattail, tules, bulrushes, California rose, and Delta Tule pea. Elevation range: 0 – 10 feet. Blooms: May – November.	**No Potential.** The Botanical Survey Area does not contain coastal brackish marsh to support this species.	**Not Present.** No further actions are recommended for this species.
Toxicoscordion fontanum marsh zigzag	CRPR 4	Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, marshes and swamps; located in vernally mesic sites underlain by serpentine; serpentine indicator: BE/SI. Elevation range: 45 – 3250 feet. Blooms: April – July.	**Unlikely.** Although the Botanical Survey Area contains chaparral and woodland, serpentine soils are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Trichostema ruygtii Napa bluecurls	CRPR 1B, LR	Cismontane woodland, chaparral, valley and foothill grassland, vernal pools, lower montane coniferous forest; located in open, sunny locations, and dried vernal pools. Elevation range: 95 – 2210 feet. Blooms: June – October.	**Unlikely.** Although the Botanical Survey Area contains volcanic habitat, this species is closely associated with large, volcanic slabs and outcrops that are not present in the Botanical Survey Area.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Trifolium amoenum showy rancheria clover	FE, CRPR 1B	Valley and foothill grassland, coastal bluff scrub, swales, open sunny sites, sometimes on serpentine; serpentine indicator: WI/IN. Elevation range: 15 – 1365 feet. Blooms: April – June.	**Moderate Potential.** The Botanical Survey Area contains grassland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Triteleia lugens dark-mouthed triteleia	CRPR 4, LR	Broadleaf upland forest, chaparral, lower montane coniferous forest, coastal scrub. Elevation range: 325 – 3250 feet. Blooms: April – June.	**Moderate Potential.** The Botanical Survey Area contains volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Viburnum ellipticum oval-leaved viburnum	CRPR 2B	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation range: 705 – 4595 feet. Blooms: May – June.	**Moderate Potential.** The Botanical Survey Area contains chaparral and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
WILDLIFE				
Mammals				
Antrozous pallidus pallid bat	SSC, WBWG High	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various manmade structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Moderate Potential.** The Study Area contains woodland with large trees that may provide maternity roost habitat for this species.	**Presence Unknown.** Tree removal outside of maternity roost season or conduct pre-construction roost habitat assessment. See Section 6.0 for details.
Corynorhinus townsendii townsendii Townsend's western big-eared bat	SSC, WBWG High	Humid coastal regions of northern and central California. Roosts in limestone caves, lava tubes, mines, buildings etc. Will only roost in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to disturbance	**No Potential.** The Study Area does not contain mines, caves, or abandoned/unmaintained buildings to support this species.	**Not Present.** No further actions are recommended for this species.
Eumops perotis californicus western mastiff bat	SSC, WBWG High	Found in a wide variety of open, arid and semi-arid habitats. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders.	**No Potential.** The Study Area does not contain large rock outcrops, rock piles, or rocky cliff faces to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Lasiurus blossevillii western red bat	SSC, WBWG High	Highly migratory and typically solitary, roosting primarily in the foliage of trees or shrubs. It is associated with broad-leaved tree species including cottonwoods, sycamores, alders, and maples. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	**Unlikely.** The Study Area does not contain the tree species associated with this species.	**Presumed Absent.** No further actions are recommended for this species.
Myotis thysanodes fringed myotis	WBWG High	Associated with a wide variety of habitats including dry woodlands, desert scrub, mesic coniferous forest, grassland, and sage-grass steppes. Building, mines, and large trees and snags are important day and night roosts.	**Moderate Potential.** The Study Area contains woodland with large trees that may provide maternity roost habitat for this species.	**Presence Unknown.** Tree removal outside of maternity roost season or conduct pre-construction roost habitat assessment. See Section 6.0 for details.
Myotis volans long-legged myotis	WBWG High	Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Large hollow trees, rock crevices, buildings, mines, and caves are important day roosts.	**Moderate Potential.** The Study Area contains woodland with large trees that may provide maternity roost habitat for this species.	**Presence Unknown.** Tree removal outside of maternity roost season or conduct pre-construction roost habitat assessment. See Section 6.0 for details.
Reithrodontomys raviventris salt marsh harvest mouse	FE, SE, SFP	Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for dryland refugia during high tides.	**No Potential.** The Study Area does not contain coastal brackish marsh habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Sorex ornatus sinuosus Suisun shrew	SSC	Tidal marshes of the northern shores of San Pablo and Suisun bays. Require dense low-lying vegetation cover, driftwood, and other litter above the mean high tide line for nesting and foraging.	**No Potential.** The Study Area does not contain coastal brackish marsh habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Taxidea taxus American badger	SSC	Most abundant in drier open stages of most shrub, woodland, and herbaceous vegetation types. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**Unlikely.** The Study Area's grasslands are relatively limited in size and are surrounded by dense woodland not favored by this species.	**Presumed Absent.** No further actions are recommended for this species.
Birds				
Agelaius tricolor tricolored blackbird	ST, SSC	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	**No Potential.** Although the Study Area contains ponds with emergent vegetation, they are not extensive enough to support a colony of this species. Napa County documented occurrences limited to bottomlands in Pope Valley, Lake Hennessey, Napa Valley, and the Baylands (eBird 2024).	**Not Present.** No further actions are recommended for this species.
Ammodramus savannarum grasshopper sparrow	SSC, LR	Summer resident. Breeds in open grasslands in lowlands and foothills, generally with low- to moderate-height grasses and scattered shrubs. Well-hidden nests are placed on the ground.	**Unlikely.** Suitable grassland cover is relatively limited within most of the Study Area, and this species has not been documented in this portion of the County as per available sources (Smith 2003, eBird 2024).	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Aquila chrysaetos golden eagle	BGEPA, SFP	Occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas.	**Unlikely.** The Study Area does not provide large cliffs or typical large trees for nesting; may forage in the vicinity.	**Presumed Absent.** No further actions are recommended for this species.
Ardea alba great egret	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially, usually in trees, occasionally on the ground or elevated platforms. Breeding sites are usually near foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Unlikely.** The Study Area is not situated in area with extensive, contiguous aquatic habitat (marshes, lakes) for foraging; this species typically roosts and nests in areas very near large aquatic bodies.	**Presumed Absent.** No further actions are recommended for this species.
Ardea herodias great blue heron	LR (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially in tall trees and cliffs, also sequestered terrestrial substrates. Breeding sites are usually near foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Unlikely.** The Study Area is not situated in area with extensive, contiguous aquatic habitat (marshes, lakes) for foraging; this species typically roosts and nests in areas very near large aquatic bodies.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Asio flammeus short-eared owl	SSC	Occurs year-round, but primarily as a winter visitor; breeding is highly restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles.	**Unlikely.** Known distribution (wintering) is restricted to the Napa Baylands; breeding in the County has never been documented (Smith 2003, eBird 2024).	**Presumed Absent.** No further actions are recommended for this species.
Asio otus long-eared owl	SSC	Occurs year-round in California. Nests in trees in a variety of woodland habitats, including oak and riparian, as well as tree groves. Requires adjacent open land with rodents for foraging, and the presence of old nests of larger birds (hawks, crows, magpies) for breeding.	**Unlikely.** Although the Study Area contains woodlands, larger expanses of open habitat (i.e., grasslands, prairies, wetlands) to provide reliable and consistent foraging habitat.	**Presumed Absent.** No further actions are recommended for this species.
Athene cunicularia burrowing owl	SSC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	**Unlikely.** Breeding and wintering distribution within Napa County are restricted to the vicinity of Lake Berryessa and southern Baylands (Smith 2003, CDFW 2024a). Wintering population in Pope Valley (eBird 2024).	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Buteo swainsoni Swainson's hawk	ST	Summer resident in Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	**Unlikely.** Napa County's very small breeding population is restricted to the Napa Valley floor in association with the Napa River and Baylands (CDFW 2024a, eBird 2024).	**Presumed Absent.** No further actions are recommended for this species.
Charadrius nivosus nivosus western snowy plover	FT, SSC	Federal listing applies only to the Pacific coastal population. Year-round resident and winter visitor. Occurs on sandy beaches, salt pond levees, and the shores of large alkali lakes. Nests on the ground, requiring sandy, gravelly or friable soils.	**No Potential.** The Study Area does not contain beaches or other suitable barren habitat near water.	**Not Present.** No further actions are recommended for this species.
Circus hudsonius northern harrier	SSC	Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates.	**Unlikely.** Open grassland areas within the Study Area are generally arid and relatively rocky and limited in size; this species is not known to nest in this portion of Napa County as per Smith (2003). Napa County documented occurrences predominantly from bottomland areas in Pope Valley, Lake Berryessa, Napa Valley, and Baylands (eBird 2024).	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Contopus cooperi olive-sided flycatcher	SSC	Summer resident. Typical breeding habitat is montane coniferous forests. At lower elevations, also occurs in wooded canyons and mixed forests and woodlands. Often associated with forest edges. Arboreal nest sites located well off the ground.	**Moderate Potential.** The Study Area contains dense woodland/forest that may support this species.	**Presence Unknown.** Tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.
Cypseloides niger black swift	SSC	Summer resident with a fragmented breeding distribution; most occupied areas in California either montane or coastal. Breeds in small colonies on cliffs behind or adjacent to waterfalls, in deep canyons, and sea-bluffs above surf. Forages aerially over wide areas. No modern nesting records in Napa County.	**No Potential.** The Study Area does not contain waterfalls; there are no modern breeding records for Napa County (Smith 2003, Shuford and Gardali 2008). Napa County documented occurrences limited to Wooden Valley (eBird 2024).	**Not Present.** No further actions are recommended for this species.
Egretta thula snowy egret	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially, usually in trees, at times in sequestered beds of dense emergent vegetation (e.g., tules). Rookery sites usually situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	**Unlikely.** The Study Area is not situated in area with extensive, contiguous aquatic habitat (marshes, lakes) for foraging; this species typically roosts and nests in areas very near large aquatic bodies.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Elanus leucurus white-tailed kite	SFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	**Moderate Potential.** Woodland within the Study Area provides suitable nesting trees, and open areas for foraging.	**Presence Unknown.** Tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.
Falco peregrinus anatum American peregrine falcon	SE, SFP	Year-round resident and winter visitor. Occurs near water, including coastal areas, wetlands, lakes and rivers. This species usually nests on sheltered cliffs or tall man-made structures. Preys primarily on waterbirds.	**Moderate Potential.** The eastern portion of the Study Area contains a ridgeline with rock outcrops that may provide nesting for this species.	**Presence Unknown.** Tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.
Geothlypis trichas sinuosa San Francisco (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.	**No Potential.** No marsh vegetation is present within the Study Area. Napa County distribution limited to Lake Hennessey, Lake Berryessa, Napa Valley, and Baylands (eBird 2024).	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Haliaeetus leucocephalus bald eagle	BGEPA, SE, SFP	Occurs year-round in California, but primarily a winter visitor; breeding population is growing. Nests in large trees in the vicinity of larger lakes, reservoirs, and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	**Unlikely.** Larger water bodies are not within or in close proximity to the Study Area. As per Smith (2003) and CDFW (2024a), nesting within Napa County is known only from the immediate vicinity of Lake Berryessa.	**Presumed Absent.** No further actions are recommended for this species.
Icteria virens yellow-breasted chat	SSC, LR	Summer resident, occurring in riparian areas with an open canopy, very dense understory, and trees for song perches. Nests in thickets of willow (*Salix* ssp.), blackberry (*Rubus* spp.), and wild grape (*Vitis californicus*).	**Unlikely.** The Study Area does not contain stands of dense riparian understory favored by this species for nesting. There are no recent observations in the vicinity (eBird 2024).	**Presumed Absent.** No further actions are recommended for this species.
Lanius ludovicianus loggerhead shrike	SSC, LR	Year-round resident in open woodland, grasslands, savannah, and scrub. Prefers areas with sparse shrubs, trees, posts, and other suitable perches for foraging. Preys upon large insects and small vertebrates. Nests are well-concealed in densely foliated shrubs or trees.	**Unlikely.** The Study Area provides some suitable habitat elements, but this species has not been documented in this portion of the County as per available sources (Smith 2003, eBird 2024).	**Presumed Absent.** No further actions are recommended for this species.
Laterallus jamaicensis coturniculus California black rail	ST, SFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	**No Potential.** The Study Area does not contain tidal or brackish marsh. Within Napa County, this species is restricted to Baylands and the lower Napa River.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Melospiza melodia samuelis San Pablo song sparrow	SSC	Year-round resident of tidal marshes along the north side of San Francisco and San Pablo Bays. Typical habitat is dominated by pickleweed, with gumplant and other shrubs present in the upper zone for nesting. May forage in areas adjacent to marshes.	**No Potential.** The Study Area contains no tidal or brackish marsh and is outside of this species' limited Napa County range.	**Not Present.** No further actions are recommended for this species.
Nycticorax nycticorax black-crowned night heron	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially, usually in trees but also in patches of emergent vegetation. Rookery sites are often on islands and usually located adjacent to foraging areas: margins of lakes and bays.	**No Potential.** The Study Area and adjacent lands lack aquatic foraging habitat.	**Not Present.** No further actions are recommended for this species.
Passerculus sandwichensis alaudinus Bryant's savannah sparrow	SSC	Year-round resident associated with the coastal fog belt, primarily between Humboldt and northern Monterey Counties. Occupies low tidally influenced habitats and adjacent areas, including grasslands. Also uses drier, more upland coastal grasslands. Nests near the ground in taller vegetation, including along levees and canals.	**Unlikely.** The Study Area's grasslands are relatively limited in size and more arid than is typical nesting habitat for this species.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Progne subis purple martin	SSC, LR	Summer resident. Inhabits woodlands and low-elevation coniferous forests. Nests in old woodpecker cavities and man-made structures (bridges, utility towers). Nest is often located in tall, isolated tree or snag.	**Moderate Potential.** The Study Area contains some coniferous trees and stands with dense woodland that may support this species.	**Presence Unknown.** Tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.
Rallus obsoletus obsoletus California Ridgway's (clapper) rail	FE, SE, SFP	Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on mollusks and crustaceans.	**No Potential.** The Study Area does not contain tidal or brackish marsh. Within Napa County, this species is restricted to Baylands and the lower Napa River.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Riparia riparia bank swallow	ST	Summer resident in riparian and other lowland habitats near rivers, lakes, and the Pacific Ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting ranges in southern and central areas of California have been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen counties; portions of the North Coast; and along the Sacramento River.	**No Potential.** The Study Area does not contain cliffs or cuts with fine-textured soils or any other potentially suitable nesting substrate. Not known to nest in Napa County as per Smith (2003).	**Not Present.** No further actions are recommended for this species.
Setophaga petechia brewsteri (Brewster's) yellow warbler	SSC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting is variable, but dense willow growth is typical. Occurs widely on migration.	**No Potential.** The Study Area does not contain riparian habitat with dense, mature thickets of willows.	**Not Present.** No further actions are recommended for this species.
Spizella atrogularis black-chinned sparrow	LR	Summer resident. Typically occurs on arid, rocky slopes with brushy vegetation, e.g. mixed chaparral, and sagebrush.	**Moderate Potential.** The Study Area contains chaparral and brushy woodland that may support this species.	**Presence Unknown.** Tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Strix occidentalis caurina northern spotted owl	FT, ST, SSC	Year-round resident in dense, structurally complex forests, primarily those with stands of mature conifers. In Napa County, uses both coniferous and mixed (coniferous-hardwood) forests. Nests on platform-like substrates in the forest canopy, including in tree cavities. Preys on mammals.	**No Potential.** The Study Area does not contain old-growth conifer or mixed broadleaf-conifer forest necessary to support this species.	**Not Present.** No further actions are recommended for this species.
Xanthocephalus xanthocephalus yellow-headed blackbird	SSC, LR	Summer resident. Breeds colonially in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. Requires abundant large insects such as dragonflies; nesting is timed for maximum emergence of insect prey.	**No Potential.** Although the Study Area contains ponds with emergent vegetation, they are not extensive enough to support a colony of this species. Napa County documented occurrences limited to bottomlands in Pope Valley, Lake Hennessey, Napa Valley, and the Baylands (eBird 2024).	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Reptiles and Amphibians				
Dicamptodon ensatus California giant salamander	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	**Unlikely.** The Study Area's intermittent stream courses lack deeper perennial pools and other necessary habitat elements.	**Presumed Absent.** No further recommendations for this species.
Emys marmorata western pond turtle	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying. Requires water for foraging and feeding.	**Moderate Potential.** The Study Area contains two small ponds that may provide foraging and adjacent uplands for nesting for this species.	**Presence Unknown.** Pre-construction survey to determine if this species is present. See Section 6.0 for details.
Rana boylii foothill yellow-legged frog	SSC	Found in or near rocky streams in a variety of habitats; highly aquatic. Prefers partially sunlit, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on invertebrates (aquatic and terrestrial).	**Moderate Potential.** The Study Area contains ephemeral and intermittent streams that may support foraging frogs; however, frogs would migrate downstream during the late spring/early summer draw-down. Therefore, breeding is unlikely but foraging and dispersal may occur in winter and spring.	**Presence Unknown.** Pre-construction survey to determine if this species is present. See Section 6.0 for details.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Rana draytonii California red-legged frog	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense emergent and/or overhanging riparian vegetation. Favors perennial to intermittent ponds, marshes, and stream pools. Requires 11 to 20 weeks of continuous inundation for larval development. Disperses through upland habitats during and after rains.	**Moderate Potential.** The Study Area contains two small ponds that may provide foraging and adjacent uplands for nesting for this species.	**Presence Unknown.** Pre-construction survey to determine if this species is present. See Section 6.0 for details.
Fishes				
Acipenser medirostris green sturgeon	FT, SSC	Spawns in the Sacramento River and Klamath Rivers, at temperatures between 8 and 14 degrees Celsius. Preferred spawning substrate is large cobble but can range from clean sand to bedrock.	**No Potential.** The Study Area does not contain riverine or estuarine waters.	**Not Present.** No further actions are recommended for this species.
Eucyclogobius newberryi tidewater goby	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches. Requires still but not stagnant water and high oxygen levels.	**No Potential.** The Study Area does not contain brackish or estuarine waters.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Hypomesus transpacificus Delta smelt	FT, ST	Endemic to the Sacramento-San Joaquin estuary in areas where salt and freshwater systems meet. Occurs seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt; most often at salinities < 2 ppt.	**No Potential.** The Study Area does not contain estuarine waters.	**Not Present.** No further actions are recommended for this species.
Lampetra ayresi river lamprey	SSC	Lower Sacramento River, San Joaquin River and Russian River. May occur in coastal streams north of San Francisco Bay. Adults need clean, gravelly riffles, Ammocoetes need sandy backwaters or stream edges, good water quality and temps less than 25 degrees Celsius.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** No further actions are recommended for this species.
Mylopharodon conocephalus hardhead	SSC	Known from mid-elevation streams in the Sacramento, San Joaquin, Napa River, and Russian River drainages. Prefer clear, deep pools with sand-gravel-boulder bottoms and slow water velocity.	**No Potential.** The Study Area does not contain riverine waters.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Oncorhynchus mykiss irideus steelhead - central CA coast DPS	FT	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also, in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**Unlikely.** Although the Study Area contains an intermittent stream connected to Dry Creek (anadromous stream), this stream is narrow, high gradient, and does not contain run-riffle-complexes to provide breeding or rearing habitat for this species. There are partial barriers downstream that may encumber rearing in the region (CalFish 2024).	**Presumed Absent.** No further actions are recommended for this species.
Oncorhynchus tshawytscha Chinook salmon – Central Valley Fall/Late Fall Run and Central Coastal Chinook Salmon ESUs	FT	These ESUs includes all naturally spawned populations of Chinook salmon from rivers and streams south of the Klamath River (exclusive) to the Russian River (inclusive), as well as Napa River. Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 degrees C lethal to adults.	**Unlikely.** Although the Study Area contains an intermittent stream connected to Dry Creek (anadromous stream), this stream is narrow, high gradient, and does not contain run-riffle-complexes to provide breeding or rearing habitat for this species. There are partial barriers downstream that may encumber rearing in the region (CalFish 2024).	**Presumed Absent.** No further actions are recommended for this species.
Spirinchus thaleichthys longfin smelt	FC, ST, SSC	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15 to 30 ppt but can be found in completely freshwater to almost pure seawater.	**No Potential.** The Study Area does not contain riverine or estuarine waters.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Invertebrates				
Bombus crotchii Crotch bumblebee	SC	Range largely restricted to California. Favors grassland and scrub habitats. Typical of bumblebees, nests are usually constructed underground. Visits a variety of plants.	**Unlikely.** The Study Area contains grasslands that are overwhelmingly dominated by non-native grasses and lack abundant floral resources.	**Presumed Absent.** No further actions are recommended for this species.
Bombus occidentalis western bumblebee	SC	Formerly common throughout much of western North America; populations from southern British Columbia to central California have nearly disappeared (Xerces 2015). Occurs in a wide variety of habitat types. Nests are constructed annually in pre-existing cavities, usually on the ground (e.g., mammal burrows). Many plants are visited and pollinated.	**Unlikely.** The Study Area contains grasslands that are overwhelmingly dominated by non-native grasses and lack abundant floral resources.	**Presumed Absent.** No further actions are recommended for this species.
Branchinecta lynchi vernal pool fairy shrimps	FT	Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**No Potential.** The Study Area does not contain vernal pools or other suitable seasonal aquatic features (e.g., swales deep and ponded enough to support this species).	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA/BOTANICAL SURVEY AREA	RESULTS AND RECOMMENDATIONS
Desmocerus californicus dimorphus valley elderberry longhorn beetle	FT	Known from the Central Valley and adjacent foothills, in riparian and oak savannah where elderberry (*Sambucus* sp.), the host plant, is present.	**No Potential.** Elderberry (*Sambucus* spp.) was not observed within the Botanical Survey Area. This species is known only from the southeastern portion of Napa County (CDFW 2024a).	**Presumed Absent.** No further actions are recommended for this species.
Speyeria callippe callippe Callippe silverspot butterfly	FE	Two populations are recognized, on San Bruno Mountain and the Cordelia Hills. Host plant is Johnny jump-up (*Viola pedunculata*), which is found on serpentine soils. Most adults found on east-facing slopes; males congregate on hilltops in search of females.	**No Potential.** Johnny jump-up (*Viola pedunculata*) or other violets (*Viola* sp.) was not observed in the Botanical Survey Area during the site visits. This species' known range with Napa County is restricted to the immediate vicinity of the Cordelia Hills (CDFW 2024a).	**Not Present.** No further actions are recommended for this species.
Syncaris pacifica California freshwater shrimp	FE, SE	Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main stream flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	**No Potential.** Although the Study Area contains ephemeral and intermittent streams; this species is known from perennial streams only. Additionally, the only documented occurrence in Napa County is from Huichica Creek in the southwest portion of the county (Marin and Wicksten 2004, CDFW 2024a).	**Not Present.** No further actions are recommended for this species.

***Key to status codes:**
FC Federal Candidate for Listing
FE Federal Endangered
BGEPA Bald and Golden Eagle Protection Act Species
FT Federal Threatened
SC (E/T) State Candidate for Listing (Endangered/Threatened)
SE State Endangered
SFP State Fully Protected Animal
SR State Rare
SSC State Species of Special Concern
ST State Threatened
LR Locally Rare as per Napa County Baseline Report
CRPR 1A CNPS CRPR 1A: Plants presumed extinct in California
CRPR 1B CNPS CRPR 1B: Plants rare, threatened or endangered in California and elsewhere
CRPR 2A CNPS CRPR 2A: Plants presumed extirpated in California, but more common elsewhere
CRPR 2B CNPS CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 3 CNPS CRPR 3: Plants about which CNPS needs more information (a review list)
CRPR 4 CNPS CRPR 4: Plants of limited distribution (a watch list)
WBWG Western Bat Working Group High or Medium-high Priority Species

Potential to Occur:
No Potential: Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Unlikely: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate Potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High Potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Results and Recommendations:
Present: Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.
Assumed Present: Species is assumed to be present on-site based on the presence of key habitat components.
Assumed Present without Impact: Species assumed present; however, project activities will not have an impact on the species.
Presumed Absent: Species is presumed to not be present due to a lack of key habitat components.
Not Present: Species is considered not present due to a clear lack of any suitable habitat and/or local range limitations.
Not Observed: Species was not observed during dedicated/formal surveys.
Presence Unknown: Species has the potential to be present, but no dedicated surveys to determine absence/presence were performed.

Appendix D

Representative Photographs

Non-native grassland bordered by coast live oak woodland

Coyote brush scrub

Coast live oak woodland

Knobcone pine forest

Stream corridor

Stream corridor

Seasonal wetland

Man-made pond

Appendix E

Statement of Qualifications

Appendix E – Statement of Qualifications

WRA is an environmental consulting firm with over 30 years of experience conducting biological resources assessments, wetland delineations, protocol-level rare plant surveys, special-status wildlife assessments and species-specific surveys, as well as preparing applications with state and federal natural resource agencies for avoiding, minimizing, and mitigating impacts to sensitive natural resources. Other services and products with which WRA has expertise include preparation of CEQA/NEPA documents, habitat mitigation and monitoring plans, natural resource management plans, mitigation and conservation bank enabling instruments, grazing management plans, and wetland and other natural resources restoration plans.

Aaron Arthur, MS, Associate Plant Biologist with WRA, has nearly 20 years performing vegetation & habitat mapping, rare plant surveys, botanical assessments, vegetation change analysis, and wetland delineations. His project focus is vineyard development, timber resources, coastal development permits, habitat mitigation and monitoring plans, conservation and mitigation banking, and long-term management plans in Sonoma, Marin, Napa, and Mendocino counties. Mr. Arthur's technical training includes the flora of Northern California, the flora of the Pacific Northwest, agrostology, aquatic botany, plant ecology, forest ecology, and soil science. Additionally, he has completed the 40-hour Corps wetland delineation course, holds 2081(a) Plant Voucher Permit, and is Certified California Consulting Botanist #0016 from the California Native Plant Society. Mr. Arthur received his Bachelor of Arts in Geography and received his Master of Science in Physical Geography from Oregon State University, where his research focused on forest floristics and vegetation change.

Rhiannon Korhummel, BS, Biologist with WRA, has nearly ten years of experience performing special-status plant surveys, land cover mapping, aquatic resource delineation, wildlife habitat assessments, biological monitoring for special-status wildlife species, and nesting bird surveys. She prepares a variety of biological assessments and technical reports and supports project management staff at WRA for a variety of public and private projects. Ms. Korhummel received his Bachelor of Arts in Biology from Humboldt State University with a focus in botany and vegetation ecology.