TRUNORTH

D.Biotic Resource & Special Species Assessments

Biological Resources Reconnaissance Survey

Spring Mountain Road (APN: 022-140-054)

Napa County, California

Prepared for:

Misty Mountain Partners, LLC
dan@trunorth.co

July 2025
(Updated November 2025)

WRA Project # 340447

Prepared by:

WRA, Inc.
2169-G East Francisco Boulevard
San Rafael, CA 94901

Aaron Arthur
arthur@wra-ca.com

wra

[Page left intentionally blank]

EXECUTIVE SUMMARY

This report details the regulatory background, methods, results, and recommendations of a Biological Resources Reconnaissance Survey located on Spring Mountain Road (Study Area) in Napa County, California. WRA, Inc. performed field surveys in spring and summer of 2025. The Study Area is composed of developed, chamise chaparral, common manzanita chaparral, California black oak forest, Douglas fir forest, and intermittent and ephemeral streams. The proposed project involves development of three vineyard blocks comprising 5.81 acres of total disturbance limits (Project Area).

Of a total of 10.9 acres of California black oak forest land cover across the property, 1.86 acres of oak woodland/forest (approximately 17 percent) are proposed to be converted to vineyard and associated infrastructure. This total is within the 2:1 oak woodland retention per Napa County General Plan CON-24.

The Project Area is intentionally sited to avoid all ephemeral/intermittent streams that are present within the Study Area. There are no other aquatic resources.

A protocol-level botanical survey located two special-status plants, Napa false indigo (*Amorpha californica* var. *napensis*) and narrow-anthered brodiaea (*Brodiaea leptandra*) within the Study Area; however, only the latter is in the Project Area. A habitat management area (HMA) should be designated, and a draft habitat management plan (HMP) should be developed and deployed to translocate and manage the special-status plants from the Project Area to the HMA.

Additionally, three special-status mammals, four special-status birds (and non-status birds with baseline legal protections), and one special-status amphibian, 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.

Contents

1.0 INTRODUCTION 1
2.0 REGULATORY BACKGROUND 2
2.1 Federal and State Regulatory Setting 2
2.1.1 Sensitive Land Cover Types 2
2.1.2 Special-status Species 3
2.2 Napa County Regulatory Setting 5
3.0 ENVIRONMENTAL SETTING 9
3.1 Topography and Soils 9
3.2 Climate and Hydrology 10
3.3 Land Cover and Land Use 11
4.0 ASSESSMENT METHODS 11
4.1 Land Cover Types 12
4.1.1 Terrestrial Land Cover Types 12
4.1.2 Aquatic Resources 12
4.2 Special-status Species 13
4.2.1 General Assessment 13
4.2.2 Special-status Plants 14
4.2.3 Special-status Wildlife 14
4.2.4 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors 14
5.0 ASSESSMENT RESULTS 15
5.1 Land Cover Types 15
5.1.1 Terrestrial Land Cover Types 15
5.1.2 Aquatic Resources 17
5.2 Special-status Species 18
5.2.1 Special-status Plant Species 18
5.2.2 Special-status Wildlife Species 20
5.2.3 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors 23
6.0 PROJECT ANALYSIS AND RECOMMENDATIONS 23
6.1 Land Cover Types 23
6.1.1 Terrestrial Land Cover Types 23
6.1.2 Aquatic Resources 25
6.2 Special-status Species 25
6.2.1 Special-status Plants 25
6.2.2 Special-status Wildlife 26
6.2.3 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors 27
7.0 REFERENCES 28

List of Tables

Table 1. Napa County Stream Setbacks 8
Table 2. NSO 2020 Survey Data 21

List of Appendices

Appendix A – Figures
Appendix B – Species Observed in the Study Area
Appendix C – Potential for Special-status Species to Occur in the Study Area
Appendix D – Representative Photographs
Appendix E – Statement of Qualifications

List of Preparers

Aaron Arthur – Senior Botanist / Wetland Specialist

Definitions

Study Area: The area throughout which the assessment was performed, i.e., the subject parcel (APN: 022-140-054) totaling approximately 40.80 acres.

Project Area: The area encompassing the proposed project (vineyard blocks grading limit); the area evaluated for potential impacts to sensitive biological resources, totaling 5.81 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 December 11, 2024, and April 15, June 5, and October 30, 2025, WRA, Inc. (WRA) performed an assessment of biological resources at a single property located on Spring Mountain Road (APN 022-140-054; 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 special-status plants 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 (Project) involves the installation of three vineyard blocks along with new access roads and vineyard avenues resulting in 5.81 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 crops, 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 Project.

2.0 REGULATORY BACKGROUND

This report is intended to facilitate conformance of the Project with the standards outlined in the Napa County Code and General Plan. In addition to the requirements of Napa County, the 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 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 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 Watershed 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 41-acre Study Area consists of a single parcel (see Appendix A). It is northwestern Napa County, approximately five aerial miles southeast of downtown Calistoga and four miles northwest of downtown Saint Helena. The Study Area is situated on the eastern flank of the Mayacama Mountains south of the Diamond Mountain. 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 1,300 to 1,650 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 four soil

mapping units: Boomer gravelly loam, volcanic bedrock, 11 to 43 percent slopes; Boomer gravelly loam, volcanic bedrock, 14 to 60 percent slopes; Hambright-Rock outcrop complex, 2 to 30 percent slopes; and Kidd loam, 30 to 75 percent slopes. The parent soil series of all the Study Area's mapping units are summarized below.

Boomer Series: This consists of deep to very deep loam soils that formed in residuum from metavolcanic rock situated on upland hills and mountains at elevations ranging from 500 to 5,000 feet (CSRL 2025, USDA 1978). These soils are not considered hydric and are well-drained with slow to very rapid runoff, and moderately slow permeability (USDA 2014, USDA 1978). Native and naturalized plants associated with this series are composed of ponderosa pine (*Pinus ponderosa*), sugar pine (*Pinus lambertiana*), Douglas fir (*Pseudotsuga menziesii*), California black oak (*Quercus kelloggii*), incense cedar (*Calocedrus decurrens*), manzanitas (*Arctostaphylos* spp.), toyon (*Heteromeles arbutifolia*), buck brush (*Ceanothus cuneatus*), and grasses, while land use is primarily forestry and watershed protection (USDA 1978).

Hambright series: This series consists of shallow, very stony loam soils formed from weathered basic igneous rock on plateaus, basalt flows, and hillslopes at elevations ranging from 400 to 2,500 feet elevation (CSRL 2025, USDA 1978). These soils are not considered hydric and are well drained with moderate permeability and medium to rapid runoff (USDA 2014, USDA 1978). Native vegetation on this series typically includes annual grasses and forbs with a few blue oaks (*Quercus douglasii*) and shrubs, and predominant land use is grazing (USDA 1978).

Kidd Series: This series consists of very shallow gravelly loam soils formed from weathered rhyolitic tuff and rhyolite situated on upland hillslopes at elevations ranging from 500 to 4,300 feet (CSRL 2025, USDA 1978). These soils are not considered hydric and are well- to excessively drained with medium to very rapid runoff, and moderately rapid to rapid permeability (USDA 2014, USDA 1978). Native and naturalized vegetation include hoary manzanita (*Arctostaphylos canescens*), chamise (*Adenostoma fasciculatum*), ceanothus (*Ceanothus* spp.), scrub oak (*Quercus berberidifolia*), knobcone pine (*Pinus attenuata*), ponderosa pine (*P. ponderosa*), and mixed herbs, and land use is for watershed, recreation, and limited grazing (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 falling between November and March, with a combined average of 31.35 inches (USDA 2025).

The local watershed is Middle Napa River (HUC 12: 180500020202) and the regional watershed is Napa River (HUC 8: 18050002). The Study Area is situated in the Napa County Planning Watershed of York Creek. There is a dashed blue-line stream mapped on the Study Area on the Calistoga 7.5-minute quadrangles (USGS 2012); likewise, this feature is mapped as Riverine in the National

Wetlands Inventory (NWI; USFWS 2025a) and Fluvial in the California Aquatic Resources Inventory (CARI; SFEI 2025). 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 entire property was investigated for aquatic resources, with a particular focus on the area denoted in the NWI and CARI; detailed descriptions of aquatic resources are in Section 5.1 below.

3.3 Land Cover and Land Use

The Study Area is predominantly undeveloped chaparral, woodland, and forest, with a portion of existing development (gravel road). The property is bounded by adjacent like properties to the north and partially developed (vineyard) properties to the west, east, and south. 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 suburban and rural residential, wineries, and vineyards (Google Earth 2025). Historically, land use in the region included open rangeland of larger ranches, rural residential, vineyards, and orchards. There is no history of intensive agriculture, quarrying, or mining; however, it was likely timbered in the early 20th Century in the Study Area (Historic Aerials 2025). The site was burned over in the 2020 Glass Fire.

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)
- Calistoga 7.5-minute quadrangle (USGS 2012)
- Contemporary aerial photographs (Google Earth 2025)
- Historical aerial photographs (Historical Aerials 2025)
- National Wetlands Inventory (NWI; USFWS 2025a)
- California Aquatic Resources Inventory (CARI; SFEI 2025)
- California Natural Diversity Database (CNDDB; CDFW 2025a)
- California Native Plant Society Electronic Inventory (CNPS 2025a)
- Consortium of California Herbaria (CCH 2025)
- USFWS Information for Planning and Consultation (USFWS 2025b)
- *eBird* Online Database (eBird 2025)
- 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 2025b)

- *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 Mount St. Helena, Detert Reservoir, Aetna Springs, Mark West Springs, Calistoga, St. Helena, Santa Rosa, Kenwood, and Rutherford 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 2025b). 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 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

[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).

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 December 11, 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 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.
- 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 Study Area on December 11, 2024, and April 15, June 5, and October 30, 2025. 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 2025), to the taxonomic level necessary to determine if they were sensitive. Plant names follow those of Jepson Flora Project (eFlora 2025), unless otherwise noted.

4.2.3 Special-status Wildlife

A general wildlife assessment was performed on December 11, 2024, and April 15, June 5, and October 30, 2025. This assessment consisted of traversing the entirety 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.

A protocol-level northern spotted owl (NSO; *Strix occidentalis caurina*) survey was conducted following *Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls* (USFWS 2012). Six surveys through spring 2025 were performed within and around the Study Area, to determine if NSO utilize the site. The surveys were conducted entirely at night, typically in the middle of the night under favorable weather conditions. A minimum of ten minutes of calling was conducted from three established survey stations (FEM 2025).

4.2.4 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

Prior to the site visit the USFWS Critical Habitat Mapper (USFWS 2025c) and the NMFS Essential Fish Habitat Mapper (NMFS 2025) 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 2025b), 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 2025) 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 Project's limits of disturbance in Figure A-4 (Appendix A). Six land cover types are present: developed, chamise chaparral, common manzanita chaparral, California black oak forest, Douglas fir forest, and 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 compacted dirt access road. The vegetation and soils are highly altered, consisting of overhanging native shrubs and disturbance tolerant herbs. Species include chamise (*Adenostoma fasciculatum*), buck brush (*Ceanothus cuneatus*), Queen Anne's lace (*Daucus carota*), tocalote (*Centaurea solstitialis*), stinkwort (*Dittrichia graveolens*), field burweed (*Soliva sessilis*), longbeak stork's bill (*Erodium botrys*), silver hairgrass (*Aira caryophyllea*), and annual bluegrass (*Poa annua*). The developed area totals 0.42 acres in the Study Area, of which 0.12 acres are situated in the Project Area (approximately 29 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). This community is not considered sensitive by Napa County, CDFW, or any other regulatory entity.

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 2025b). 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 8.89 acres of this land cover type, of which 3.55 acres are situated in the Project Area (approximately 40 percent of the total land cover type in the Study Area).

The dominant cover type is shrubs with scattered trees. Because of the 2020 Glass Fire, the herbaceous layer is dense. The woody layer is dominated by chamise (*Adenostoma fasciculatum*), with other woody species that include buck brush (*Ceanothus cuneatus*), wavy-leaf ceanothus (*Ceanothus foliosus*), toyon (*Heteromeles arbutifolia*), chaparral pea (*Pickeringia montana*), sticky monkey (*Diplacus aurantiacus*), and poison oak (*Toxicodendron diversilobum*). The herbaceous layer is dominated by non-native annual grasses and native perennial forbs including wild oat (*Avena barbata*), soft chess (*Bromus hordeaceus*), rip-gut brome (*Bromus diandrus*), red brome (*Bromus rubens*), common soap plant (*Chlorogalum pomeridianum*), common yarrow (*Achillea*

millefolium), golden globe lily (*Calochortus amabilis*), common woolly sunflower (*Eriophyllum lanatum* var. *achilleoides*), and California helianthella (*Helianthella californica* var. *californica*).

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 within the Study Area is common throughout Napa County and California and is therefore not afforded protection. While the chamise chaparral within the Study Area is not designated as a sensitive community, it is recognized as potential habitat for special-status plant species. Consequently, focused surveys were conducted within the chamise chaparral to document the occurrence of these species. The impacts to any special-status plant species observed in this community (such as Narrow-anthered brodiaea) are addressed through mitigation measures outlined in the Habitat Management Plan (HMP).

Common Manzanita Chaparral (*Arctostaphylos manzanita* ssp. *manzanita* Provisional Shrubland Alliance). CDFW Rank: G3 S3. Common manzanita chaparrals occur in the Coast Ranges and the Sierra Nevada Foothills from Del Norte County to Santa Cruz County (Sawyer et al. 2009, CNPS 2025b). These chaparrals are typically situated on mid to upper steep slopes underlain by sandstone, serpentine, or metavolcanics (CNPS 2025b). The Study Area contains 2.61 acres of this land cover type, of which 0.27 acres are situated in the Project Area (approximately 10 percent of the total land cover type in the Study Area).

The dominant stratum is the shrub layer which is dominated by common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), with secondary shrubs of toyon (*Heteromeles arbutifolia*), chamise (*Adenostoma fasciculatum*), sticky monkey (*Diplacus aurantiacus*), and poison oak (*Toxicodendron diversilobum*). The understory is composed of shade tolerant chaparral herbs including climbing bedstraw (*Galium porrigens*), California milkwort (*Polygala californica*), goldwire (*Hypericum concinnum*), coastal sanicle (*Sanicula laciniata*), Kellogg's umbrellawort (*Tauschia kelloggii*), roughleaf aster (*Eurybia radulina*), and gold back fern (*Pentagramma triangularis*).

This land cover type is synonymous with the Mixed Manzanita West County NFD Alliance biotic community in the NCLC (Thorne et al. 2004). These chaparrals provide habitat for numerous common native plants and wildlife, as well as have the potential to support several special-status species associated with such arid scrubby vegetation. The CDFW considers these chaparrals as a sensitive natural community but are not specifically noted by Napa County.

California Black Oak Forest (*Quercus kelloggii* Woodland Alliance). Rank: G4 S4. California black oak woodlands/forests are known from the Coast Ranges, Transverse Range, Peninsular Ranges, Klamath Range, Cascade Range, west and east slopes of the Sierra Nevada, and Modoc Plateau. These woodlands typically occur on all aspects and topographic gradients with sites underlain by moderately to excessively drained soils (CNPS 2025b). The Study Area contains 10.95 acres of this land cover type, of which 1.86 acres are situated in the Project Area (approximately 17 percent of the total land cover type in the Study Area).

Within the Study Area, the canopy of this community is dominated by California black oak (*Quercus kelloggii*). Secondary tree species are intermittent, constitute less than 20 percent cover per species, and include blue oak (*Quercus douglasii*), Douglas fir (*Pseudotsuga menziesii*), and Pacific

madrone (*Arbutus menziesii*). The understory is interspersed with dense thickets of native shrubs and an open herbaceous layer. Understory shrubs include common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), toyon (*Heteromeles arbutifolia*), and poison oak (*Toxicodendron diversilobum*). The herbaceous layer is dominated by a mix of grasses and forbs, including California fescue (*Festuca californica*), Idaho fescue (*Festuca idahoensis*), dogtail grass (*Cynosurus echinatus*), blue dicks (*Dipterostemon capitatus*), common yarrow (*Achillea millefolium*), purple Chinese houses (*Collinsia heterophylla*), and Pacific pea (*Lathyrus vestitus*).

This land cover type is synonymous with the California Black 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 oak woodlands. Napa County considers these woodlands to be sensitive natural communities.

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 (CNPS 2025b). These forests occur on all topographic positions and aspects, and variety of substrates including volcanics and serpentine (CNPS 2025b, Sawyer et al. 2009). The Study Area contains 17.92 acres of this land cover type, none of which are situated in the Project Area.

Within the Study Area, the canopy of this community is dominated by Douglas fir (*Pseudotsuga menziesii*). Secondary tree species are frequent, constitute less than 50 percent relative cover collectively, and include Pacific madrone (*Arbutus menziesii*), tanoak (*Notholithocarpus densiflorus*) and California black oak (*Quercus kelloggii*). The stand is even-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*), California hazelnut (*Corylus cornuta* ssp. *californica*), spearleaf agoseris (*Agoseris retrorsa*), woodland madia (*Anisocarpus madioides*), short stem sedge (*Carex brevicaulis*), common Pacific pea (*Lathyrus vestitus*), modesty (*Whipplea modesta*), long-tube iris (*Iris macrosiphon*), checker lily (*Fritillaria affinis*), California bedstraw (*Galium californicum*), false brome (*Brachypodium distachyon*), California brome (*Bromus carinatus*), Chinook brome (*Bromus laevipes*), Geyer's onion grass (*Melica geyeri*), and California fescue (*Festuca californica*).

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

Ephemeral and Intermittent Streams. CWA Section 404/401. Rank: None. The Study Area contains two primary drainages, with one tributary drainage. The primary drainage north of the Project Area contains an intermittent hydroperiod, while the tributary to this drainage and a second primary drainage to the south of the Project Area contain ephemeral hydroperiods. The beds of all the streams 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 intermittent stream is mapped on the 7.5-minute quadrangle (USGS 2015), in the NWI (USFWS 2025a), and in the CARI (SFEI 2025); however, the two ephemeral drainages are not mapped on such.

The drainages appear to connect directly to the Napa River approximately two river miles downstream albeit through culverts; therefore, they are likely jurisdictional under Section 404/401 of the CWA, State Water Policy, 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. The primary intermittent drainage does appear to meet the definition of stream under Napa County Code 18.108.025. The Project Area is at least 50 feet distant from the ephemeral tributary, and greater than 130 feet from the primary drainage to the south and 300 feet from the primary drainage to the north.

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, 100 special-status plant species have been documented in the vicinity of the Study Area. As outlined in Appendix C, 29 of these plants have the potential to occur in the Study Area.[5] The remaining 71 special-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.

WRA biologists conducted site visits in spring and summer, periods sufficient to identify all 29 special-status plant species with the potential to occur within the Study Area. One special-status plant was observed in the Study Area, but outside of the Project Area, and one special-status plant was observed in both the Study Area and Project Area.

The following special-status plant was observed in the Study Area and will be impacted by the Proposed Project:

> Narrow-anthered brodiaea (*Brodiaea leptandra*) CRPR 1B. High Potential (Present). Narrow-anthered California Brodiaea is a perennial herb in the brodiaea family

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

(Themidaceae) that blooms from May to July. It typically occurs in broadleaf upland forest, chaparral, and lower montane coniferous forest habitat at elevations ranging from 360 to 3,000 feet (CDFW 2025a, CNPS 2025a). Soil survey data from documented locations suggest this species is associated with gravelly loam and clay loam substrates derived from rhyolites, metavolcanics, and serpentine (CSRL 2025, CDFW 2025a). This species has a serpentine affinity rank of weak indicator (2.0) (Safford et al. 2005).

There are 562 individuals across several subpopulations totaling approximately 0.33 acres within the Study Area, of which 432 individuals totaling approximately 0.24 acres are situated within the Project Area (Figure A-5, Figure A-6).

The following special-status plant was observed in the Study Area, but will not be impacted by the Proposed Project:

Napa false indigo (*Amorpha californica* var. *napensis*) CRPR 1B. High Potential (Present, No Impact). Napa false indigo is a small deciduous tree in the pea family (Fabaceae) that blooms from April to July, with identifiable vegetative structures remaining into early fall. It typically occurs on north-facing aspects in openings in broadleaf upland forest, chaparral, and cismontane woodland habitat at elevations ranging from 395 to 6,560 feet (CDFW 2025a, CNPS 2025a). Soil survey data at known locations in Napa County suggest that this species is typically located on moderately acid (pH 5.6) to neutral (pH 6.7) loams, often mixed with larger textures derived from a variety of orogeny (CSRL 2025, CDFW 2025a).

There are numerous individuals situated in the Douglas fir forest north of but entirely outside of the Project Area. A full census was not conducted because this species will not be impacted by the Proposed Project (Figure A-5).

The following special-status plants have the potential to occur in the Study Area, but were not observed during protocol-level special-status plant surveys:

- Franciscan onion (*Allium peninsulare* var. *franciscanum*); CRPR 1B
- Howell's broomrape (*Aphyllon validum* ssp. *howellii*); CRPR 4
- Bent-flowered fiddleneck (*Amsinckia lunaris*); CRPR 1B
- Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*); CRPR 1B
- Rincon manzanita (*Arctostaphylos stanfordiana* ssp. *decumbens*); CRPR 1B
- Clara Hunt's milk-vetch (*Astragalus claranus*); FE, ST, CRPR 1B
- Big-scale balsamroot (*Balsamorhiza macrolepis*); 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
- St. Helena fawn lily (*Erythronium helenae*); CRPR 4
- Streamside daisy (*Erigeron biollettii*); CRPR 3

- Greene's narrow-leaved daisy (*Erigeron greenei*); CRPR 1B
- Nodding harmonia (*Harmonia nutans*); CRPR 4
- 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
- Green monardella (*Monardellav iridis*); CRPR 4
- Victor's gooseberry (*Ribes victoris*); CRPR 4
- Napa checkerbloom (*Sidalcea hickmanii* ssp. *napensis*); CRPR 1B
- Dark-mouthed triteleia (*Triteleia lugens*); CRPR 4
- Oval-leaved viburnum (*Viburnum ellpiticum*); CRPR 2B

5.2.2 Special-status Wildlife Species

A total of 57 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 eight have the potential to occur there. The remaining 49 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 special-status wildlife has the potential to occur in the Study Area, but was not observed during surveys:

> Northern Spotted Owl (NSO; *Strix occidentalis caurina*). Federal Threatened, CDFW Species of Special Concern. Moderate Potential (Not Observed). NSO is a subspecies of spotted owl (*Strix occidentalis*) found in Western North America. It is a medium-sized (16 to 20 inches) dark brown owl with a wingspan of approximately forty inches; females are larger than males. It nests in cavities or on platforms in large trees, preferentially inhabiting old growth forests, though it can be found in mixed primary- and secondary-growth forests in the southern part of its range (southern Oregon and California); however, trees are old and contain structures suitable for nesting (e.g., epicormic branching, large cavities, platforms). NSO is primarily nocturnal; its diet consists mainly of wood rats (*Neotoma* sp.) and squirrels, as well as other small mammals, reptiles, birds and insects. It is intolerant of

habitat disturbance and highly territorial; each nesting pair requires a large territory for hunting and raising young. No NSO were observed during the six surveys conducted in 2025 (Table 2) (FEM 2025).

Table 2. NSO 2020 Survey Data

Date	Survey Time	Weather (sky, wind, moisture)	NSO Detection
03/17/2025 - 03/18/2025	Station 1: 21:20 – 21:30 Station 2: 22:02 – 22:12 Station 3: 02:07 – 02:17	Partly cloudy, light breeze, mist	0
04/01/2025 - 04/02/2025	Station 3: 01:33 – 01:43 Station 2: 20:24 – 20:34 Station 1: 21:07 – 21:17	Partly cloudy, light breeze, no moisture	0
04/16/2025	Station 1: 00:09 – 00:22 Station 2: 00:31 – 00:41 Station 3: 01:15 – 01:25	High overcast, calm to light breeze, no moisture	0
04/28/2025 - 04/29/2025	Station 3: 01:45 – 01:55 Station 2: 01:45 – 01:55 Station 1: 02:14 – 02:24	Clear, calm to light breeze, no moisture	0
05/11/2025 - 05/14/2025	Station 3: 00:20 – 00:30 Station 2: 20:16 – 20:26 Station 1: 20:36 – 20:46	Partly cloudy, light breeze, no moisture	0
06/02/2025 - 06/03/2025	Station 3: 23:12 – 23:22 Station 2: 23:48 – 23:58 Station 1: 00:13 – 00:23	Clear, intermittent breeze, no moisture	0

The following special-status wildlife have the potential to occur in the Study Area and there presence/utilization of such are unknown:

Pallid bat (*Antrozous pallidus*). CDFW Species of Special Concern, WBWG High Priority. Moderate Potential (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 2025). 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 2025a). A targeted bat habitat assessment was not performed under this biological 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 2025). The trees within the Study Area may contain cavities or exfoliating bark suitable for roosting. A targeted bat habitat assessment was not performed under this biological 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 2025). A targeted bat habitat assessment was not performed under this biological assessment.

Olive-sided flycatcher (*Contopus cooperi*). CDFW Species of Special Concern. Moderate 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 areas 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.

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.

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). A general nesting bird survey was not performed under this biological assessment.

Foothill yellow-legged frog (*Rana boylii*). State Candidate (Threatened), CDFW Species of Special Concern. Moderate Potential (Presence Unknown, No 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. Additionally, the Proposed Project is at least 100 feet distant from the primary stream which could possibly support foraging for this species. 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 2025b, NMFS 2025) or Essential Fish Habitat (NMFS 2025). 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 surrounding undeveloped or lightly developed lands, primarily in the form of woodland/forest capable of hosting a variety of wildlife species. The Study Area maintains substantial coniferous forest, oak woodland, and chaparral around the vineyard block allowing for continued wildlife movement at the localized and regional scale.

6.0 PROJECT ANALYSIS AND RECOMMENDATIONS

6.1 Land Cover Types

6.1.1 Terrestrial Land Cover Types

California Black Oak Forest: California black oak forests are not explicitly 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/forest be maintained and/or improved to the extent feasible to provide for oak woodland/forest 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; however, such preservation necessarily requires the retention of woodland/forest on slopes greater than 30 percent. Proposed retention areas are a mix of California black oak forest (5.32 acres) and Douglas fir forest (2.75 acres), totaling 8.07 acres. The Study Area contains 10.95 acres of California black oak forest; to ensure that a 3:1 ratio is maintained of 3 acres of oak woodland preserved for each 1 acre impacted, only 2.74 acres can be converted to vineyard. The Project Area currently contains 1.86 acre of California black oak forest, which was intentionally designed to comply with the 3:1 ratio; however, like the canopy retention requirement, such preservation necessarily requires the retention of California black oak forest on slopes greater than 30 percent.

The proposed retention areas will continue to provide effective buffering capacity to protect the on-site streams and downstream water quality. The plant diversity and stand structure are the same across the forest irrespective of slope. The forest situated on steeper slopes provides greater buffering capacity to the on-site streams due their closer proximity to the streams than those situated on the relatively flat ridgeline of the proposed vineyard block. Vegetation slows surface flows and captures sediment through their roughness. Likewise, vegetation increases infiltration of water into the soil along living root channels and discharging cleaner surface and subsurface waters more slowly into the local watershed.

The 2020 Glass Fire severely burned the region including portions of the Subject Property. Preserved vegetation provides seed stock for the emergence of new generations of trees, shrubs, and herbs contributing to vegetation succession. Such growth will provide streambank stability and shading thereby resulting in cleaner, cooler water for amphibians, fishes, and aquatic invertebrates. Increased plant diversity, density, and vertical heterogeneity will provide ever increasing habitat for birds and other terrestrial organisms closely associated with riparian areas and woodlands. Migrating terrestrial (e.g., deer, mountain lion) and semi-aquatic species (e.g., frogs) can continue to take advantage of the proposed preserved area vegetation cover as well as access an increasing vegetative cover along the streams and hillsides. Such migratory corridors allow local wildlife to move up and down the on-site stream accessing other protected lands.

Therefore, it is WRA's opinion that the proposed retention areas, irrespective of slope, is sufficient to protect on-site streams, continue to provide wildlife habitat, maintain plant diversity, and meet the spirit and standard of 18.108.020 of the Napa County Code of Ordinances.

Common Manzanita Chaparral: Common manzanita chaparrals are considered sensitive by CDFW but are not included as sensitive in the NCBDR; however, the Napa County General Plan Conservation Element Policy CON-17 requires that sensitive biotic communities be mitigated for impacts to such. Where avoidance is infeasible, retention at a 2:1 ratio would be acceptable under Conservation Element Policy CON-17. Likewise, Napa County accepts 80 percent retention for special-status habitat under Conservation Element Policy CON-13. As noted, there is a total of 2.61 acres of common manzanita chaparral, with 0.27 acre occurring in the Project Area. The

remaining acreage (approximately 90 percent of the total) will be retained and protected in perpetuity (Figure A-7).

The proposed retention areas are similar in plant diversity and structure as those areas slated for conversion to vineyard. Therefore, it is WRA's opinion that the proposed retention areas are sufficient to continue to provide wildlife habitat, maintain plant diversity, and meet the spirit and standard of Napa County's Conservation Elements.

6.1.2 Aquatic Resources

The Study Area contains an intermittent stream with an ephemeral tributary. The Project Area has been intentionally sited at least 50 feet from the ephemeral stream and over 300 feet from the intermittent stream. In both instances, the intervening vegetation is composed of dense shrubs and trees which will continue to provide buffering for these streams. No further actions are recommended for aquatic resources.

6.2 Special-status Species

6.2.1 Special-status Plants

The Study Area has the potential to support 29 special-status plants. Twenty-seven of these plants were not observed during protocol-level special-status plant surveys, are considered absent, and therefore, there are no further actions are recommended for such.

Numerous individuals of Napa false indigo (*Amorpha californica* var. *napensis*) were observed in the Douglas fir forest north of the Project Area, all of which are 50 feet or greater from the Project Area. Therefore, no further actions are recommended for this species.

There are 432 individuals totaling 0.24 acres of narrow-anthered brodiaea (*Brodiaea leptandra*) within the Project Area. This represents approximately 73 (by individuals) to 77 (by area) percent of the total population documented across the Study Area (562 individuals totaling 0.33 acres). The following recommendation is forwarded to compensate for the impact on these 432 individuals:

> Recommendation 1: Under the direction of a qualified biologist, outline a habitat management area (HMA) and develop a habitat management plan (HMP) to compensate for impacts to special-status plants. The HMA would encompass areas outside of the Project Area in suitable special-status plant habitat with ready access for the landscape contractor, irrigation, etc. A potential HMA is included in Figure A-7; however, this may require slight alteration in shape and/or location during the process of drafting the HMP but will be at least 0.72 acres (3:1 mitigation ratio by area). All 432 individuals in the Project Area will be translocated to the HMA. Additionally, there will be approximately 23 percent retention (0.09 acres) by area or 27 percent retention by individuals (n = 118).
>
> The HMA is located adjacent to the accessory road in similar and contiguous habitat (i.e., chamise chaparral) with that supporting the special-status plants. There are some individual plants within the HMA. The HMA should be near the proposed vineyard and access road to readily provide labor access and irrigation, while being in the same habitat

(i.e., chamise chaparral) to the extant plants. Vineyard avenues can be situated immediately adjacent to the HMA as they are will not be deep-ripped and do not pose a threat to narrow-anthered brodiaea germination, emergence, growth, or overall proliferation[6].

Inclusive in the HMP will be plant/seed collection methods, management prescriptions, monitoring methods, success criteria, monitoring schedule/period, and reporting schedule and outline. Currently, it is anticipated that the entire population in the Project Area be unearthed and translocated to the HMA avoiding existing individuals that are situated therein. Bulbs will be unearthed in mid-summer to mid-fall following complete senescence and, in their summer/fall dormancy. The bulbs may be stored over winter and planted in late water/early spring or immediately translocated in summer/fall.

6.2.2 Special-status Wildlife

The Study Area has the potential to support eight special-status wildlife species (three mammals, four birds, one amphibian), as well as non-status birds protected under the MBTA and CFGC. The one amphibian, foothill yellow-legged frog (*Rana boylii*), would be confined to the intermittent stream and its banks when waters present. This stream is greater than 100 feet distant from the Project Area; therefore, there are no further actions recommended for this species.

The following measures are recommended to avoid or otherwise minimize potential impacts to these species.

Bat Species: Three special-status bats have the potential to occur within the Study Area (pallid bat, fringed myotis, long-legged myotis). 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. Because a targeted bat habitat assessment was not conducted as part of this biological assessment, pre-construction surveys for bat habitat and recommendations for tree removal to avoid impacts to bat species are provided below.

> Recommendation 2: Tree removal should be performed from September through March, outside of the general bat maternity season. If tree removal during this period is not feasible, it is recommended that a bat habitat assessment and survey effort (the latter if needed) be performed by a qualified biologist prior to tree removal to determine if bats are present in the trees. If no suitable roosting habitat for bats is found, then no further study is warranted. If special-status bat species 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.

[6] WRA biologists have noted narrow-anthered brodiaea growing in vineyard avenues in Napa County in several locations around Pritchard Hill and Lake Hennessey.

All Bird Species (including non-special-status): In addition to the four special-status bird species discussed above (olive-sided flycatcher, purple martin, black-chinned sparrow, northern spotted owl), 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: Tree/vegetation removal and initial ground disturbance should occur from August 16 to January 31, outside of the general bird nesting season. 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 500 feet. 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.

6.2.3 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

As noted above, the Study Area is not within a Natural Landscape Block or an Essential Connectivity Area. The Project will necessarily remove existing, natural land covers on-site and result in less potential movement area overall. However, most of the site will remain undeveloped, including the bulk of the site's California black oak forest, much of the chaparral, and all of the Douglas fir forest. More specifically, the remnant woodlands will remain connected, resulting in direct connectivity with similar habitats within the Study Area as well as between neighboring (largely undeveloped) properties to the north, west, and east. This on-site corridor will be more than sufficient to allow for continued wildlife movement. Therefore, the Project is not anticipated to result in any potentially significant impacts to wildlife movement or migration and no further actions are recommended.

7.0 REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (eds.). 2012. The Jepson Manual: Vascular Plants of California, 2nd Edition. University of California Press, Berkeley, CA. 1568 pp.

California Department of Fish and Game (CDFG). 1994. A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607. Environmental Service Division, California Department of Fish and Game, Sacramento, CA.

(CDFG). 2010. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program, California Department of Fish and Game, Sacramento, CA. September 2010.

California Department of Fish and Wildlife (CDFW). 2025a. California Natural Diversity Database (CNDDB), Wildlife and Habitat Data Analysis Branch. Sacramento, CA. Accessed: June 2025.

(CDFW). 2025b. Biogeographic Information and Observation System (BIOS). Wildlife and Habitat Data Analysis Branch. Sacramento. Available online: http:// https://wildlife.ca.gov/Data/BIOS. Accessed: June 2025.

(CDFW). 2018a. California Natural Community List. Vegetation Classification and Mapping Program, California Department of Fish and Game, Sacramento, CA. January 24, 2018.

(CDFW). 2018b. Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Natural Communities. California Natural Resources Agency, California Department of Fish and Game. March 20, 2018.

California Department of Transportation (CalTrans). 2010. California Essential Habitat Connectivity Project. Available at: https://www.wildlife.ca.gov/conservation/planning. Accessed: June 2025.

California Invasive Plant Council (Cal-IPC). 2006. California Invasive Plant Inventory: Cal-IPC Publication 2006-2. California Invasive Plant Council, Berkeley, CA. Available online: http://www.cal-ipc.org/ip/inventory/index.php. Accessed: June 2025.

California Native Plant Society (CNPS). 2001. CNPS Botanical Survey Guidelines. June 2, 2001.

(CNPS). 2025a. Online Inventory of Rare, Threatened, and Endangered Plants of California. Available at: http://www.rareplants.cnps.org/. Accessed: June 2025.

(CNPS). 2025b. A Manual of California Vegetation Online. Available at: http://vegetation.cnps.org/. Accessed: June 2025.

California Soil Resources Lab (CSRL). 2025. Online Soil Survey. Available at: http://casoilresource.lawr.ucdavis.edu/drupal/ Accessed: June 2025.

Consortium of California Herbaria (CCH). 2025. Data provided by the participants of the Consortium of California Herbaria. Available at: http://ucjeps.berkeley.edu/consortium. Accessed: June 2025.

eBird. 2024. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available at: http://www.ebird.org. Accessed: June 2025.

Jepson Herbarium. Jepson Flora Project (eFlora). 2025. Jepson eFlora Online at: http://ucjeps.berkeley.edu/IJM.html. Accessed: June 2025.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Department of the Army, Waterways Experiment Station, Vicksburg, Mississippi 39180-0631.

Forest Ecosystem Management (FEM). Northern Spotted Owl Assessment for Misty Mountain Properties (Shire Area). June 67, 2025.

Google Earth. 2025. Silverado Trail area, Napa County area. Image dates: 1993-2020. Accessed: June 2025.

Historical Aerials. 2025. Available at: http://historicalaerials.com. Accessed: June 2025.

Holland, R. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game, Sacramento, CA. 156 pp.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17.

Martin, J.W. and M.K. Wicksten. Review and Redescription of the Freshwater Atyid Shrimp Genus *Syncaris* Holmes, 1900, in California. Journal of Crustacean Biology 24(3): 447-462.

Napa County. 2005. Napa County Baseline Data Report. Available at: http://www.co.napa.us/gov/.

Napa County. 2008. Napa County General Plan. June 2, 2008. Available at: http://www.co.napa.ca.us/GOV/Departments/.

Napa County. 2016a. Attachment B: Guidelines for Preparing Biological Resources Reconnaissance Surveys. Planning, Building, and Environmental Services. August 2016.

Napa County. 2016b. Attachment C: Guidelines for Preparing Special-status Plant Studies. Planning, Building, and Environmental Services. August 2016.

Napa County. 2025. Napa County Public Browser (Online Map). Available at: http://gis.napa.ca.gov/Html5Viewer/Index.html?viewer=Public_HTML. Accessed: June 2025.

National Marine Fisheries Service (NMFS). 2025. Essential Fish Habitat Mapper. Available at: https://www.habitat.noaa.gov/protection/efh/efhmapper/. Accessed: June 2025.

NatureServe. 2025. NatureServe Explorer: NatureServe Conservation Status. Available at: http://www.natureserve.org/explorer/ranking#relationship. Accessed: June 2025.

Palmer, R. S., ed. 1962. Handbook of North American birds. Vol. 1. Yale University Press, New Haven, CT. 567pp.

San Francisco Estuary Institute (SFEI). 2025. California Aquatic Resource Inventory (CARI). Available at: http://www.sfei.org/cari#sthash.Mzz93W9i.dpbs. Accessed: June 2025.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, 2nd Edition. California Native Plant Society in collaboration with California Department of Fish and Game. Sacramento, CA. 1300 pp.

Shuford, W.D. and Gardali, T., eds. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Smith, A., ed. 2003. Breeding Birds of Napa County, California. Napa-Solano Audubon Society, Vallejo, California. 199 pp.

Stebbins, RC. 2003. A Field Guide to Western Reptiles and Amphibians, Third Edition. Houghton Mifflin Company, Boston, MA and New York, NY.

Tenney, C.R. 1997. Black-chinned Sparrow (*Spizella atrogularis*), The Birds of North America Online (A. Poole, ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online. Available at: http://bna.birds.cornell.edu/bna/species/270. Accessed: September 2024.

Thomson, R.C., A.N. Wright, and H.B. Shaffer. 2016. California Amphibian and Reptile Species of Special Concern. Co-published by the California Department of Fish and Wildlife and University of California Press. Oakland, California.

Thorne, J., Kennedy, J., Quinn, J., McCoy, M., Keeler-Wolfe, T. A Vegetation Map of Napa County Using the Manual of California Vegetation Classification and its Comparison to Other Digital Vegetation Maps. Information Center for the Environment (ICE). University of California, Davis. 2004.

U.S. Army Corps of Engineers (Corps). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, MS. September 28, 2008.

U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS). 1978. Soil Survey of Napa County, California. In cooperation with the University of California Agricultural Experiment Station.

(USDA), Natural Resources Conservation Service (NRCS). 2014. Official List of California Hydric Soils.

(USDA), (NRCS). 2017. Field Indicators of Hydric Soils in the United States, Version 8.1. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). In cooperation with the National Technical Committee for Hydric Soils.

(USDA), (NRCS). 2025. Climate Information for Napa County in the State of California. Available at: http://www.wcc.nrcs.usda.gov/. Accessed: June 2025.

U.S. Fish and Wildlife Service (USFWS). 2025a. National Wetlands Inventory. Available at: http://www.fws.gov/wetlands/index.html. Accessed: June 2025.

(USFWS). 2025b. Information for Planning and Consultation. Available online at: https://ecos.fws.gov/ipac/. Accessed: June 2025.

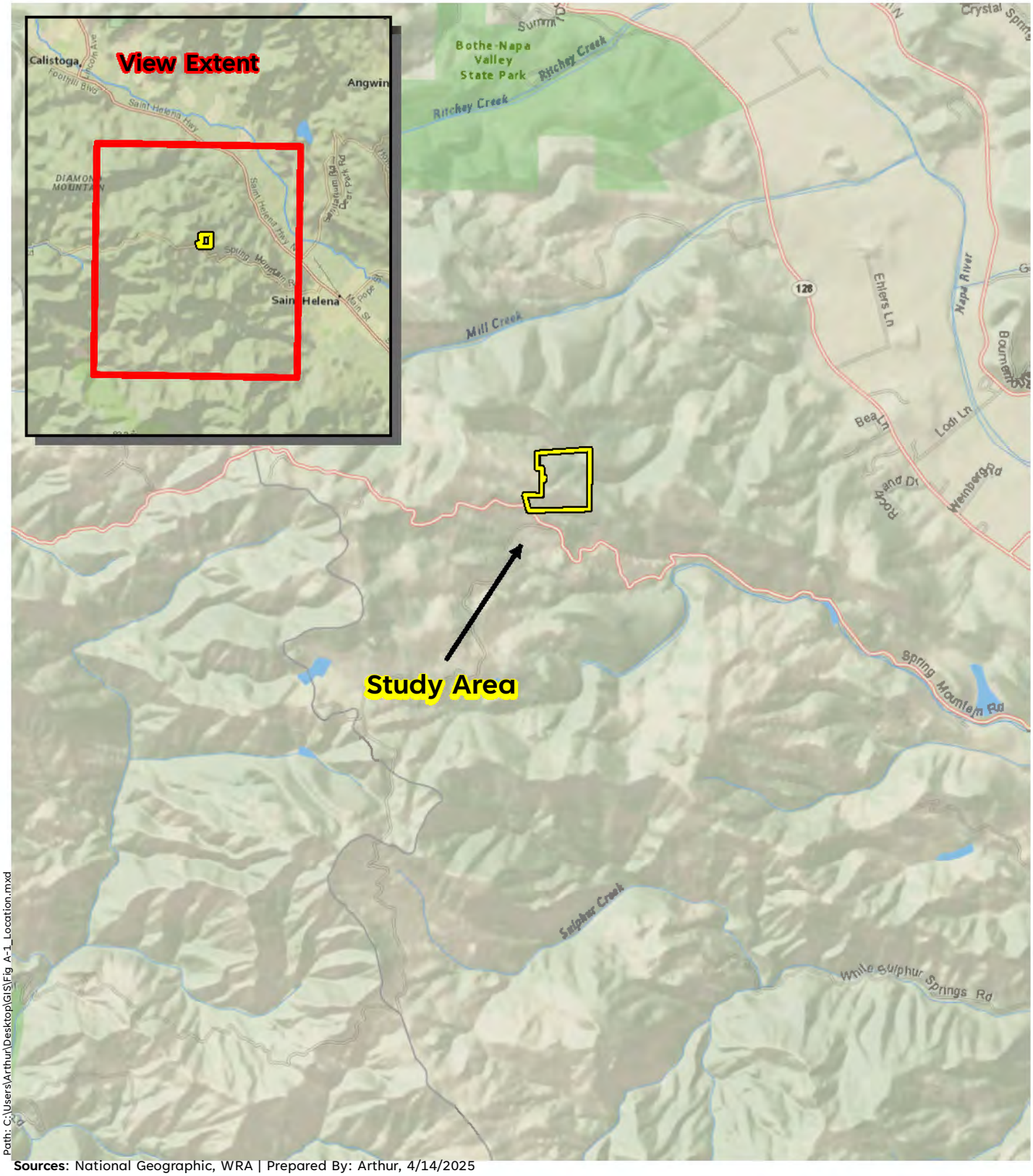
(USFWS). 2025c. Threatened and Endangered Species Active Critical Habitat Report. Available at: https://ecos.fws.gov/ecp/report/table/critical-habitat.html. Accessed: June 2025.

U.S. Geological Survey (USGS). 2015. Yountville, California 7.5-minute quadrangle topographic map.

Western Bat Working Group (WBWG). 2025. Species Accounts. Available at: http://www.wbwg.org/speciesinfo/species_accounts/species_accounts.html. Accessed: June 2025.

Appendix A

Figures



Sources: National Geographic, WRA | Prepared By: Arthur, 4/14/2025

Figure A-1. Study Area Location

Spring Mountain Road
Napa County, CA

0 0.75 1.5 Miles

N

wra Environmental Consultants

Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 8/28/2025

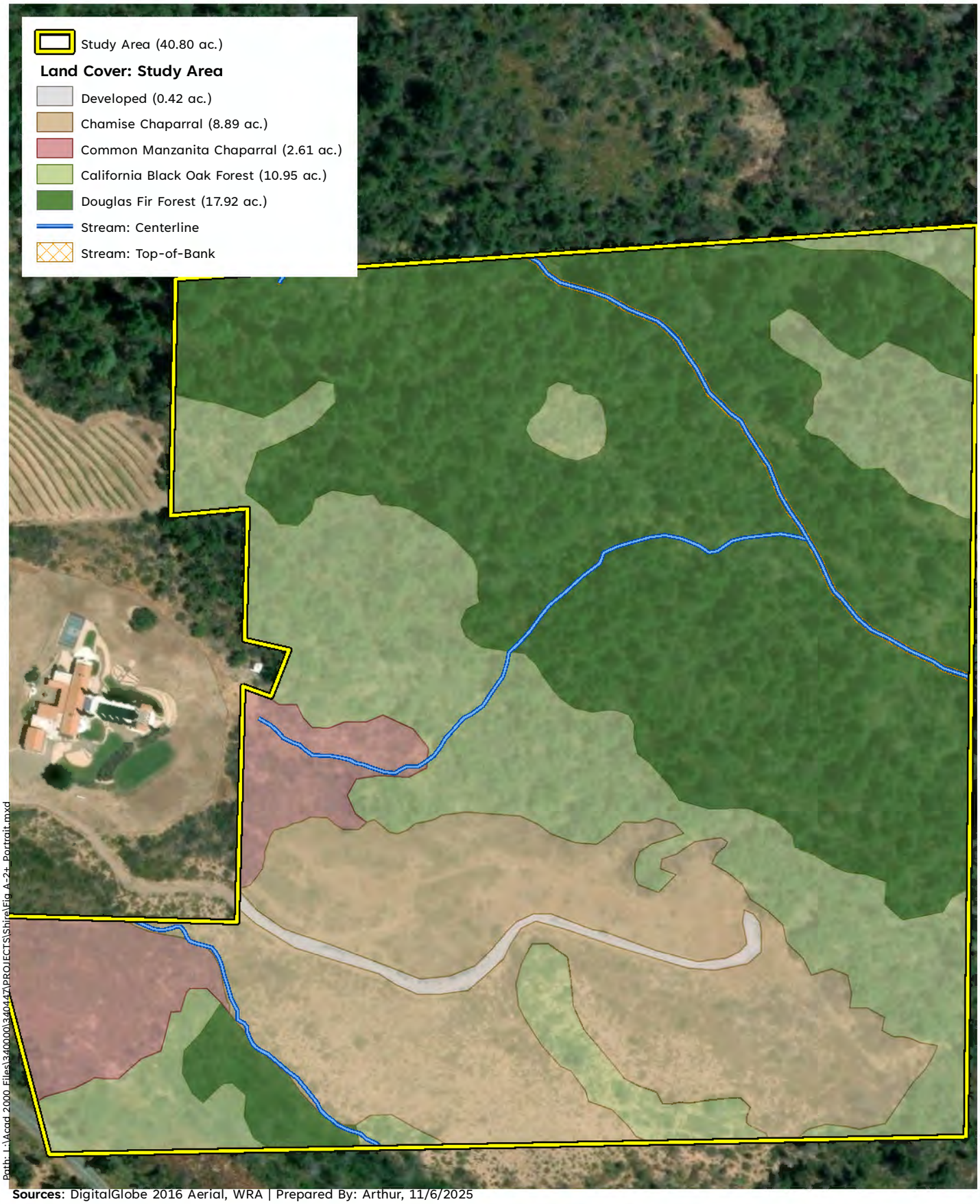
Figure A-2. Soil Mapping Units

Fehrenbach Property
Napa County, CA

0 250 500 Feet

N

wra Environmental Consultants



Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 11/6/2025

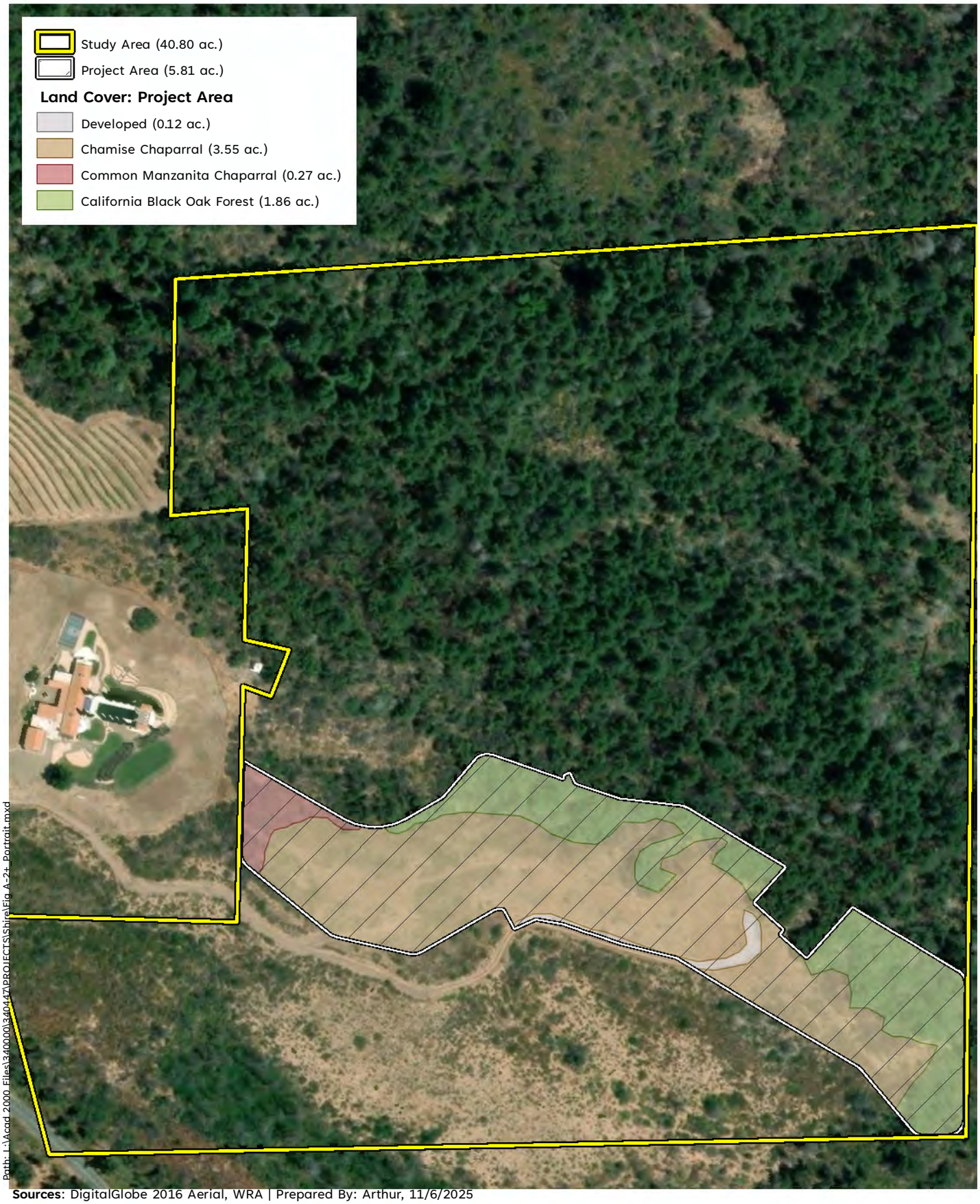
Figure A-3. Land Cover: Study Area

Fehrenbach Property
Napa County, CA

0 250 500 Feet

N

wra Environmental Consultants



Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 11/6/2025

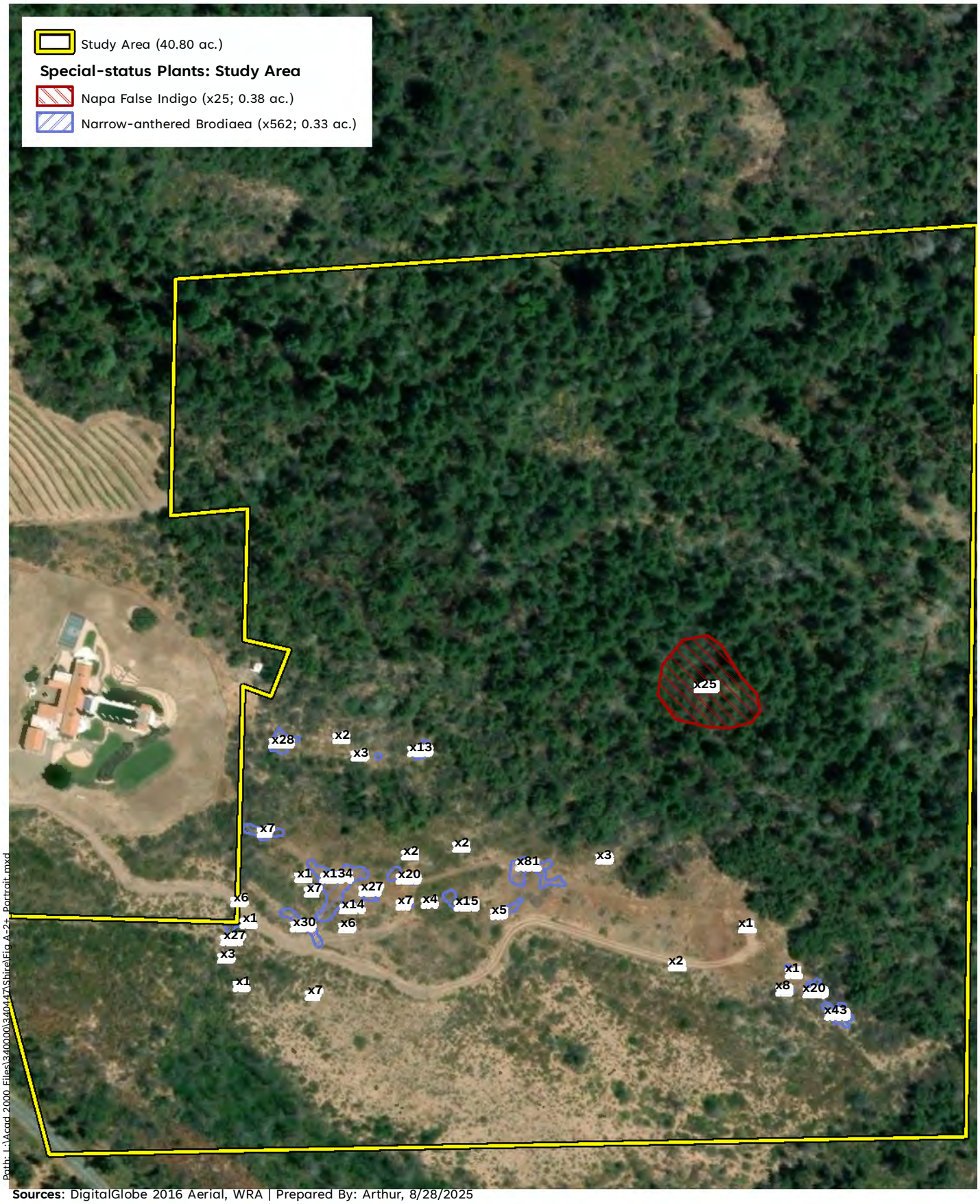
Figure A-4. Land Cover: Project Area

Fehrenbach Property
Napa County, CA

0 250 500 Feet

N

wra Environmental Consultants



Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 8/28/2025

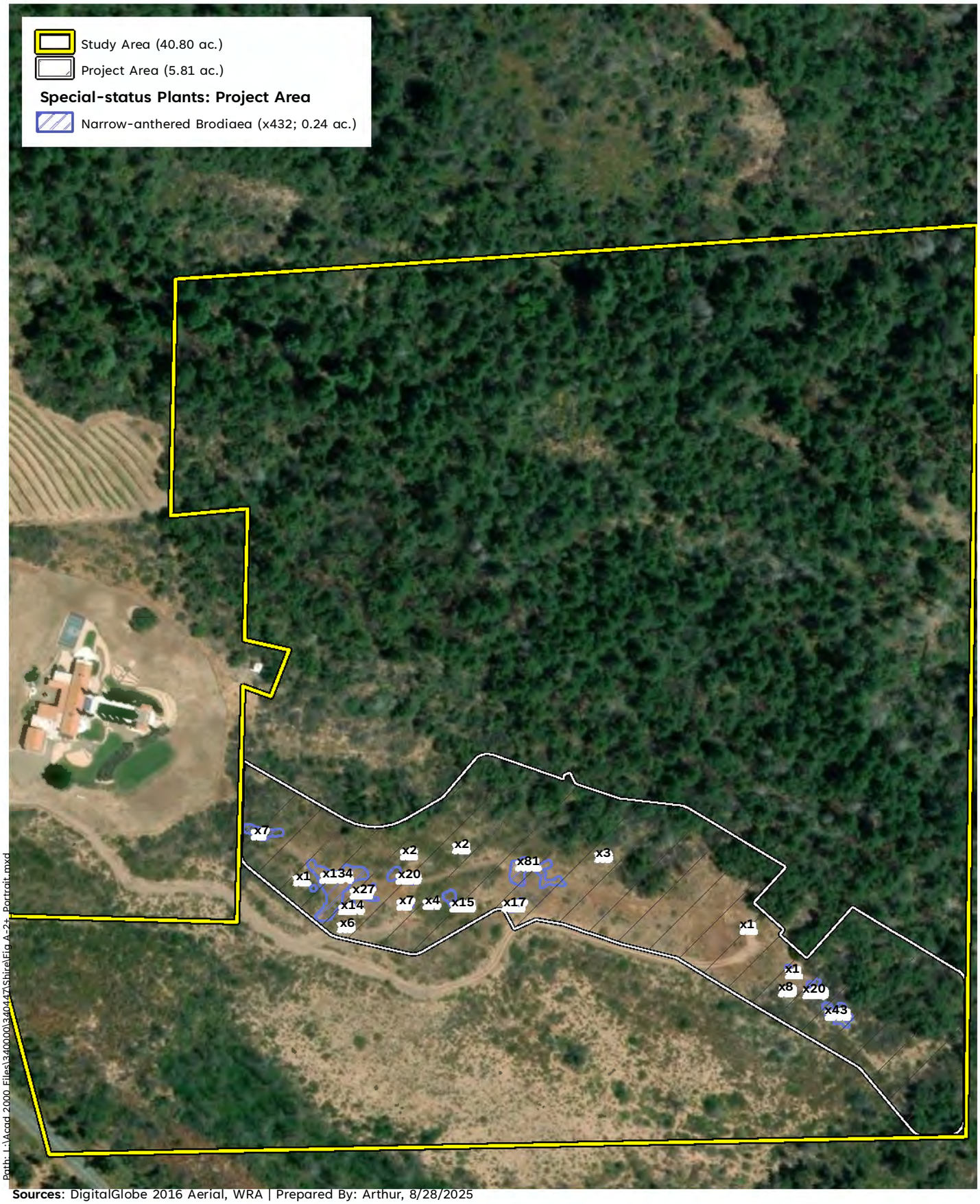
Figure A-5. Special-status Plants: Study Area

Fehrenbach Property
Napa County, CA

0 250 500 Feet

N

wra Environmental Consultants



Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 8/28/2025

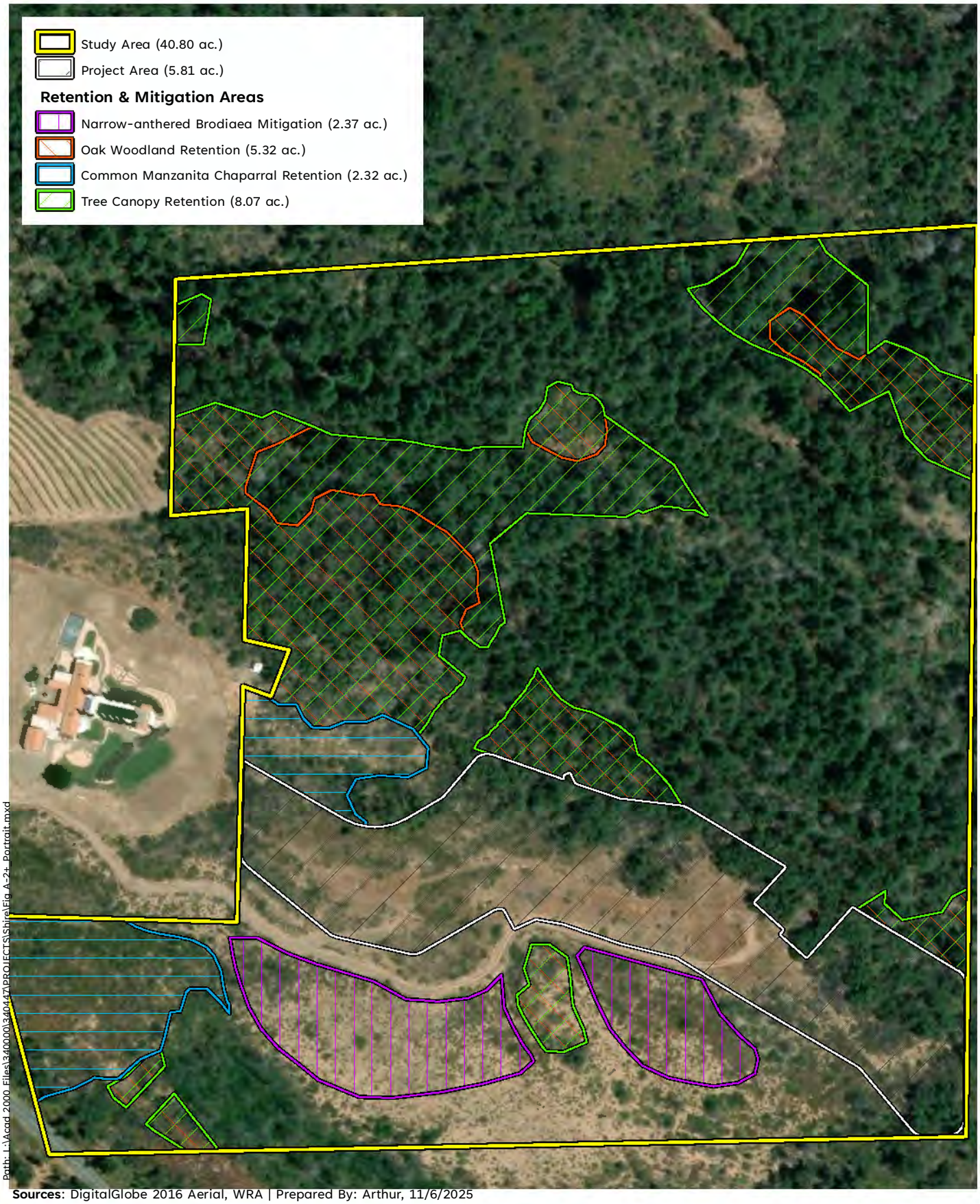
Figure A-6. Special-status Plants: Project Area

Fehrenbach Property
Napa County, CA

0 250 500 Feet

N

wra Environmental Consultants



Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 11/6/2025

Figure A-7. Proposed Retention and Mitigation Areas

Fehrenbach Property
Napa County, CA

0 250 500 Feet

N

wra Environmental Consultants

Appendix B

Species Observed in the Study Area

Table B-1. Plant species observed in the Study Area: December 11, 2024; April 15, June 5, and October 30, 2025

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Adoxaceae	*Sambucus nigra ssp. caerulea*	blue elderberry	deciduous shrub	native	--	--	FAC
Agavaceae	*Chlorogalum pomeridianum* var. *pomeridianum*	common soap plant	perennial forb	native	--	--	NL
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	deciduous shrub	native	--	--	FACU
Apiaceae	*Daucus carota*	Queen Anne's lace	perennial forb	non-native	--	assessed	UPL
Apiaceae	*Lomatium dasycarpum*	woollyfruit desertparsley	perennial forb	native	--	--	NL
Apiaceae	*Lomatium utriculatum*	common lomatium	perennial forb	native	--	--	NL
Apiaceae	*Sanicula bipinnatifida*	purple sanicle	perennial forb	native	--	--	NL
Apiaceae	*Sanicula laciniata*	coastal blacksnakeroot	perennial forb	native	--	--	NL
Apiaceae	*Tauschia kelloggii*	Kellogg's umbrellawort	perennial forb	native	--	--	NL
Apiaceae	*Torilis arvensis*	hedge parsley	annual forb	non-native	--	moderate	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	*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	*Cirsium occidentale* var. *occidentale*	cobwebby thistle	perennial forb	native	--	--	NL
Asteraceae	*Cirsium vulgare*	bull thistle	perennial forb	non-native	--	moderate	FACU
Asteraceae	*Dittrichia graveolens*	stinkwort	annual forb	non-native	--	moderate	NL
Asteraceae	*Ericameria arborescens*	goldenfleece	evergreen shrub	native	--	--	NL
Asteraceae	*Erigeron canadensis*	Canadian horseweed	annual forb	native	--	--	FACU
Asteraceae	*Eriophyllum lanatum* var. *arachnoideum*	common woolly sunflower	perennial forb	native	--	--	NL
Asteraceae	*Eurybia radulina*	roughleaf aster	perennial forb	native	--	--	NL
Asteraceae	*Helianthella californica* var. *californica*	California helianthella	perennial forb	native	--	--	NL
Asteraceae	*Hypochaeris glabra*	smooth cat's-ear	annual forb	non-native	--	limited	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
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	*Logfia gallica*	narrowleaf cottonrose	annual forb	non-native	--	--	NL
Asteraceae	*Madia elegans*	common madia	annual forb	native	--	--	NL
Asteraceae	*Madia gracilis*	gumweed tarweed	annual forb	native	--	--	NL
Asteraceae	*Pseudognaphalium californicum*	ladies' tobacco	perennial forb	native	--	--	NL
Asteraceae	*Pseudognaphalium canescens*	Wright's cudweed	perennial forb	native	--	--	FACU
Asteraceae	*Senecio vulgaris*	old-man-of-spring	annual forb	non-native	--	--	FACU
Asteraceae	*Silybum marianum*	milk thistle	perennial forb	non-native	--	limited	NL
Asteraceae	*Soliva sessilis*	field burweed	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 glabra*	Coast Range mule ears	perennial forb	native	--	--	NL
Athyriaceae	*Athyrium filix-femina* var. *cyclosorum*	lady fern	perennial fern	native	--	--	FAC
Betulaceae	*Corylus cornuta* ssp. *californica*	California hazelnut	deciduous shrub	native	--	--	FACU
Boraginaceae	*Adelinia grandis*	Pacific hound's tongue	perennial forb	native	--	--	NL
Boraginaceae	*Nemophila heterophylla*	white baby blue eyes	annual forb	native	--	--	NL
Brassicaceae	*Brassica nigra*	black mustard	annual forb	non-native	--	moderate	NL
Brassicaceae	*Cardamine hirsute*	hairy bittercress	annual forb	non-native	--	--	NL
Brassicaceae	*Sinapis arvensis*	charlock	annual forb	non-native	--	limited	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
Cistaceae	*Crocanthemum scoparium*	Bisbee Peak rushrose	evergreen shrub	native	--	--	NL
Convolvulaceae	*Calystegia purpurata* ssp. *purpurata*	Pacific false bindweed	perennial vine	native	--	--	NL
Convolvulaceae	*Calystegia subacaulis* ssp. *subacaulis*	hillside false bindweed	perennial forb	native	--	--	NL
Cupressaceae	*Sequoia sempervirens*	coast redwood	evergreen tree	native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Cyperaceae	*Carex brevicaulis*	short stem sedge	perennial graminoid	native	--	--	NL
Dryopteridaceae	*Dryopteris arguta*	California wood fern	perennial fern	native	--	--	NL
Ericaceae	*Arbutus menziesii*	Pacific madrone	evergreen tree	native	--	--	NL
Ericaceae	*Arctostaphylos manzanita* ssp. *manzanita*	common manzanita	evergreen shrub	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	*Amorpha californica* var. *napensis*	Napa false indigo	deciduous shrub	native	CRPR 1B	--	FAC
Fabaceae	*Genista monspessulana*	French broom	evergreen shrub	non-native	--	high	NL
Fabaceae	*Lathyrus vestitus* var. *vestitus*	common Pacific pea	perennial forb	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 var. bifidum*	notch leaf clover	annual forb	native	--	--	NL
Fabaceae	*Trifolium ciliolatum*	tree clover	annual forb	native	--	--	NL
Fabaceae	*Trifolium dichotomum*	branched Indian clover	annual forb	native	--	--	FACU
Fabaceae	*Trifolium hirtum*	rose clover	annual forb	non-native	--	moderate	NL
Fabaceae	*Trifolium incarnatum*	crimson clover	annual forb	non-native	--	--	NL
Fabaceae	*Trifolium microcephalum*	maiden clover	annual forb	native	--	--	FAC
Fabaceae	*Trifolium subterraneum*	subterranean clover	annual forb	non-native	--	--	NL
Fabaceae	*Trifolium willdenovii*	tomcat clover	annual forb	native	--	--	FACW
Fabaceae	*Vicia sativa*	garden vetch	annual forb	non-native	--	--	FACU
Fagaceae	*Notholithocarpus densiflorus*	tanoak	evergreen tree	native	--	--	NL
Fagaceae	*Quercus agrifolia*	coast live oak	evergreen tree	native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Fagaceae	*Quercus berberidifolia*	scrub oak	evergreen tree	native	--	--	NL
Fagaceae	*Quercus chrysolepis*	canyon live oak	evergreen tree	native	--	--	NL
Fagaceae	*Quercus douglasii*	blue oak	deciduous tree	native	--	--	NL
Fagaceae	*Quercus durata*	leather oak	evergreen shrub	native	--	--	NL
Fagaceae	*Quercus kelloggii*	California black oak	deciduous tree	native	--	--	NL
Garryaceae	*Garrya elliptica*	coast silktassel	evergreen shrub	native	--	--	NL
Gentianaceae	*Zeltnera muehlenbergii*	Monterey centaury	annual forb	native	--	--	FAC
Geraniaceae	*Erodium botrys*	longbeak stork's bill	annual forb	non-native	--	assessed	FACU
Geraniaceae	*Erodium brachycarpum*	foothill filaree	annual forb	non-native	--	limited	NL
Geraniaceae	*Erodium cicutarium*	redstem stork's bill	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
Hydrangeaceae	*Whipplea modesta*	modesty	evergreen vine	native	--	--	NL
Hypericaceae	*Hypericum concinnum*	goldwire	perennial forb	native	--	--	NL
Iridaceae	*Iris macrosiphon*	long-tube iris	perennial forb	native	--	--	NL
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	perennial forb	native	--	--	FACW
Juncaceae	*Juncus bufonius*	toad rush	annual graminoid	native	--	--	FACW
Lamiaceae	*Monardella villosa* ssp. *villosa*	coyote mint	perennial forb	native	--	--	NL
Lamiaceae	*Stachys ajugoides*	bugle hedgenettle	perennial forb	native	--	--	OBL
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	*Fritillaria affinis*	checker lily	perennial forb	native	--	--	NL
Melanthiaceae	*Toxicoscordion fremontii*	Fremot's star lily	perennial forb	native	--	--	NL
Melanthiaceae	*Xerophyllum tenax*	common beargrass	perennial forb	native	--	--	NL
Montiaceae	*Claytonia parviflora*	spring beauty	annual forb	native	--	--	FACU

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Myrsinaceae	*Lysimachia arvensis*	scarlet pimpernel	annual forb	non-native	--	--	NL
Onagraceae	*Clarkia purpurea* ssp. *quadrivulnera*	winecup clarkia	annual forb	native	--	--	NL
Orchidaceae	*Piperia transversa*	royal rein orchid	perennial forb	native	--	--	NL
Orobanchaceae	*Castilleja attenuata*	valley tassels	annual forb	native	--	--	NL
Orobanchaceae	*Castilleja foliolosa*	woolly Indian paintbrush	perennial forb	native	--	--	NL
Phrymaceae	*Diplacus aurantiacus*	sticky monkey	evergreen shrub	native	--	--	NL
Pinaceae	*Pinus attenuata*	knobcone pine	evergreen tree	native	--	--	NL
Pinaceae	*Pinus ponderosa*	ponderosa pine	evergreen tree	native	--	--	FACU
Pinaceae	*Pseudotsuga menziesii*	Douglas fir	evergreen tree	native	--	--	FACU
Plantaginaceae	*Collinsia heterophylla*	purple Chinese houses	annual forb	native	--	--	NL
Plantaginaceae	*Penstemon heterophyllus* var. *heterophyllus*	foothill penstemon	perennial forb	native	--	--	NL
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 carinatus*	California brome	perennial graminoid	native	--	--	NL
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 laevipes*	Chinook brome	perennial graminoid	native	--	--	NL
Poaceae	*Bromus madritensis*	foxtail chess	annual graminoid	non-native	--	--	NL
Poaceae	*Bromus rubens*	red brome	annual graminoid	non-native	--	high	NL
Poaceae	*Cynosurus echinatus*	dogtail grass	annual graminoid	non-native	--	moderate	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Poaceae	*Elymus glaucus*	blue wildrye	perennial graminoid	native	--	--	FACU
Poaceae	*Festuca bromoides*	brome fescue	perennial graminoid	non-native	--	--	FACU
Poaceae	*Festuca californica*	California fescue	perennial graminoid	native	--	--	FACU
Poaceae	*Festuca occidentalis*	western fescue	perennial graminoid	native	--	--	NL
Poaceae	*Festuca perennis*	Italian rye grass	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Gastridium phleoides*	nit grass	annual graminoid	non-native	--	--	FACU
Poaceae	*Hordeum marinum*	Mediterranean barley	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Hordeum murinum*	mouse barley	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Melica geyeri*	Geyer's onion grass	perennial graminoid	native	--	--	NL
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	*Stipa cernua*	nodding needlegrass	perennial graminoid	native	--	--	NL
Poaceae	*Stipa lepida*	foothill needlegrass	perennial graminoid	native	--	--	NL
Poaceae	*Stipa pulchra*	purple needlegrass	perennial graminoid	native	--	--	NL
Poaceae	*Triticum aestivum*	bread wheat	annual graminoid	non-native	--	--	NL
Polemoniaceae	*Collomia heterophylla*	variable leaf collomia	annual forb	native	--	--	NL
Polemoniaceae	*Navarretia atractyloides*	hollyleaf pincushionplant	annual forb	native	--	--	NL
Polygalaceae	*Polygala californica*	California milkwort	perennial forb	native	--	--	NL
Primulaceae	*Primula hendersonii*	shooting stars	perennial forb	native	--	--	NL
Pteridaceae	*Pellaea mucronata*	bird's foot fern	perennial fern	native	--	--	NL
Ranunculaceae	*Delphinium nudicaule*	red larkspur	perennial forb	native	--	--	NL
Ranunculaceae	*Delphinium variegatum*	royal larkspur	perennial forb	native	--	--	NL
Rhamnaceae	*Ceanothus cuneatus*	buck brush	evergreen shrub	native	--	--	NL
Rhamnaceae	*Ceanothus foliosus* var. *foliosus*	wavy-leaf ceanothus	evergreen shrub	native	--	--	NL
Rhamnaceae	*Ceanothus parryi*	Parry ceanothus	evergreen shrub	native	--	--	NL
Rhamnaceae	*Frangula californica* ssp. *californica*	California coffeeberry	evergreen shrub	native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Rosaceae	*Adenostoma fasciculatum*	chamise	evergreen shrub	native	--	--	NL
Rosaceae	*Cercocarpus betuloides*	mountain mahogany	evergreen shrub	native	--	--	NL
Rosaceae	*Heteromeles arbutifolia*	toyon	evergreen shrub	native	--	--	NL
Rosaceae	*Rosa gymnocarpa* var. *gymnocarpa*	dwarf rose	evergreen shrub	native	--	--	FACU
Rubiaceae	*Galium aparine*	common bedstraw	annual forb	native	--	--	FACU
Rubiaceae	*Galium californicum*	California bedstraw	perennial forb	native	--	--	NL
Rubiaceae	*Galium divaricatum*	Lamarck's bedstraw	annual forb	non-native	--	--	FACU
Rubiaceae	*Galium porrigens*	graceful bedstraw	perennial forb	native	--	--	NL
Sapindaceae	*Acer macrophyllum*	big leaf maple	deciduous tree	native	--	--	FAC
Sapindaceae	*Aesculus californica*	California buckeye	deciduous tree	native	--	--	NL
Saxifragaceae	*Lithophragma heterophyllum*	hillside woodland star	perennial forb	native	--	--	NL
Scrophulariaceae	*Verbascum blattaria*	moth mullein	perennial forb	non-native	--	--	NL
Solanaceae	*Solanum xanti*	purple nightshade	perennial forb	native	--	--	NL
Themidaceae	*Brodiaea elegans* ssp. *elegans*	harvest brodiaea	perennial forb	native	--	--	FACU
Themidaceae	*Brodiaea leptandra*	narrow-anthered brodiaea	perennial forb	native	CRPR 1B	--	NL
Themidaceae	*Dichelostemma congestum*	ookow	perennial forb	native	--	--	NL
Themidaceae	*Dipterostemon capitatus*	blue dicks	perennial forb	native	--	--	FACU
Themidaceae	*Triteleia laxa*	Ithuriel's spear	perennial forb	native	--	--	NL
Violaceae	*Viola ocellata*	two eyed violet	perennial forb	native	--	--	NL

All species identified using the *Jepson Manual, 2nd Edition* (Baldwin et al. 2012), *The Jepson Flora Project* (eFlora 2025), and *A Flora of Napa County* (Ruygt 2020); nomenclature follows *The Jepson Flora Project* (eFlora 2025) 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 2025a)

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 the Study Area: December 11, 2024; April 15, June 5, and October 30, 2025

SCIENTIFIC NAME	COMMON NAME
Mammals	
Odocoileus hemionus columbianus	black-tailed deer
Lepus californicus	black-tailed jackrabbit
Canus latrans	coyote
Sciurus griseus	western gray squirrel
Birds	
Aphelocoma californica	California scrub jay
Baeolophus inornatus	oak titmouse
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Callipepla californica	California quail
Cathartes aura	turkey vulture
Colaptes auratus	northern flicker
Contopus cooperi	olive-sided flycatcher
Corvus corax	common raven
Cyanocitta stelleri	Steller's jay
Haemorhous mexicanus	house finch
Junco hyemalis	dark-eyed junco
Leiothlypis celata	orange-crowned warbler
Leuconotopicus villosus	hairy woodpecker
Melanerpes formicivorus	acorn woodpecker
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee
Psaltriparus minimus	American bushtit
Sitta carolinensis	white-breasted nuthatch
Spinus psaltria	lesser goldfinch
Tachycineta bicolor	tree swallow
Thryomanes bewickii	Bewick's wren
Zenaida macroura	mourning dove
Reptiles and Amphibians	
Elgaria multicarinata	southern alligator lizard
Scleoporus 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 2025a), USFWS IPaC Report (USFWS 2025b), and CNPS Electronic Inventory (CNPS 2025a) searches. For plants, the Mount St. Helena, Detert Reservoir, Aetna Springs, Mark West Springs, Calistoga, St. Helena, Santa Rosa, Kenwood, and Rutherford 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	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 Study Area contains rocky woodland and openings in chaparral that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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.	**No Potential.** The Study Area does not contain freshwater marsh or similar perennial wetlands to support this species.	**Not Present.** 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.	**High Potential.** The Study Area contains forest and woodland habitat that may support this species.	**Present, No Impact.** Numerous individuals are present in the Study Area but are located at least 75 feet from the Project Area. 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 Study Area contains rocky woodland and openings in chaparral that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY 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.** The Study Area does not contain serpentine substrate to support this species.	**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 Study Area contains volcanic chaparral habitat that may support this species.	**Presence Unknown.** A summer survey (June) will determine the absence/presence of this species.
Arctostaphylos manzanita ssp. *elegans* Konocti manzanita	CRPR 1B	Chaparral, cismontane woodland, lower montane coniferous forest; located on volcanic substrates. Elevation range: 1280 – 5250 feet. Blooms: March – July.	**Moderate Potential.** The Study Area contains volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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 Study Area contains volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.
Asclepias solanoana serpentine milkweed	CRPR 4, LR	Chaparral, cismontane woodland, lower montane coniferous forest; located on serpentine substrate; serpentine indicator: SE. Elevation range: 745 – 6045 feet. Blooms: May – August.	**Unlikely.** The Study Area does not contain serpentine substrate 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	RESULTS AND RECOMMENDATIONS
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.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
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 Study Area contains volcanic chaparral and woodland habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Astragalus rattanii var. *jepsonianus* Jepson's milk-vetch	CRPR 1B	Chaparral, cismontane woodland, valley and foothill grassland; typically situated on serpentine substrate in openings or grasslands; often on roadsides; serpentine indicator: BE/SI. Elevation range: 955 – 2275 feet. Blooms: March – June.	**Unlikely.** The Study Area does not contain serpentine substrate 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	RESULTS AND RECOMMENDATIONS
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 Study Area contains rocky volcanic woodland habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.
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.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** 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.	**High Potential.** The Study Area contains rocky volcanic chaparral habitat that may support this species.	**Present.** The Study Area supports 514 individuals in several subpopulations totaling 0.29 acres, of which 432 individuals totaling 0.24 acres are situated in the Project Area. Develop a plan to translocate and monitor on-site. See Section 6.0 for details.
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.** The Study Area does not contain serpentine substrate 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	RESULTS AND RECOMMENDATIONS
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 Study Area contains burnt chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.
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.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Calyptridium quadripetalum four-petaled pussypaws	CRPR 4	Chaparral, lower montane coniferous forest; located on sandy or gravelly substrate, typically derived from serpentine; serpentine indicator: BE. Elevation range: 1020 – 6630 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** 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.** The Study Area does not contain serpentine substrate to support this species.	**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.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands 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	RESULTS AND RECOMMENDATIONS
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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.
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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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.	**Moderate Potential.** The Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.
Centromadia parryi ssp. *parryi* pappose tarplant	CRPR 1B	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland; in vernally mesic sites, often with alkali substrate. Elevation range: 5 – 1380 feet. Blooms: May – November.	**No Potential.** The Study 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.** The Study Area does not contain serpentine substrate to support this species.	**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.** The Study Area does not contain serpentine substrate to support this species.	**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.** The Study Area does not contain serpentine substrate 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	RESULTS AND RECOMMENDATIONS
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.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Cryptantha dissita serpentine cryptantha	CRPR 1B	Chaparral; located on serpentine outcrops; serpentine indicator: BE/SI. Elevation range: 1280 – 1885 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
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.** The Study Area does not contain serpentine substrate to support this species.	**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.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** 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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the summer botanical survey. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the summer botanical survey. No further actions are recommended for this species.
Eriogonum nervulosum Snow Mountain buckwheat	CRPR 1B	Chaparral; located on serpentine substrate; serpentine indicator: SE. Elevation range: 975 – 6845 feet. Blooms: June – September.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Eriogonum umbellatum var. *bahiiforme* bay buckwheat	CRPR 4	Cismontane woodland, lower montane coniferous forest; situated on rocky substrates often derived from serpentine; serpentine indicator: BE/SI. Elevation range: 2275 – 7150 feet. Blooms: July – September.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
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.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Erythranthe nudata bare monkeyflower	CRPR 4	Chaparral, cismontane woodland; located on serpentine seeps in brushy or wooded sites; serpentine indicator: SE. Elevation range: 810 – 2275 feet. Blooms: May – June.	**Unlikely.** The Study Area does not contain serpentine substrate 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	RESULTS AND RECOMMENDATIONS
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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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 Study Area does not contain rocky expansive adobe clay substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Fritillaria pluriflora adobe lily	CRPR 1B	Chaparral, cismontane woodland, valley and foothill grassland; typically located on adobe clays, often derived from serpentine; serpentine indicator: WI. Elevation range: 195 – 2295 feet. Blooms: February – April.	**Unlikely.** The Study Area does not contain rocky expansive adobe clay substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Gratiola heterosepala Boggs Lake hedge hyssop	SE, CRPR 1B	Marshes and swamps, vernal pools; situated on vernally saturated clay soil, often lake margins. Elevation range: 30 – 7720 feet. Blooms: April – August.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Harmonia hallii Hall's harmonia	CRPR 1B	Chaparral, rock outcrops; situated on rocky serpentine subtrates; often roadsides and roadcuts; serpentine indicator: SE. Elevation range: 1625 – 3170 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain serpentine substrate 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	RESULTS AND RECOMMENDATIONS
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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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.	**No Potential.** The Study Area does not contain coastal scrub or extensive grassland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Hesperolinon bicarpellatum Two-carpellate western flax	CRPR 1B	Chaparral; located on serpentine substrate; serpentine indicator: SE. Elevation range: 195 – 3270 feet. Blooms: May – July.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** 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.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
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 Study Area does not contain seasonal wetland or mesic herbaceous areas 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	RESULTS AND RECOMMENDATIONS
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 Study Area does not contain coastal prairie to support this species.	**Not Present.** No further actions are recommended for this species.
Juncus luciensis Santa Lucia dwarf rush	CRPR 1B	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. Elevation range: 975 – 6630 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support 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.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands 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.** The Study Area does not contain serpentine substrate 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 Study Area contains rocky chaparral that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY 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 Study Area contains rocky volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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.** The Study Area does not contain serpentine substrate to support this species.	**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; typically on clay, serpentine substrate; serpentine indicator: SI. Elevation range: 3 – 2885 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
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 serpentine substrates, and along roadcuts; serpentine indicator: WI. Elevation range: 95 – 6210 feet. Blooms: April – September.	**Moderate Potential.** The Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Limnanthes floccosa ssp. *floccosa* woolly meadowfoam	CRPR 4	Chaparral, cismontane woodland, valley and foothill grassland, vernal pools; situated in vernally mesic settings. Elevation range: 195 – 4340 feet. Blooms: March – June.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** 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.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Lomatium hooveri Hoover's Lomatium	CRPR 4, LR	Chaparral, cismontane woodland; situated on soils derived from serpentine, and rarely volcanic; serpentine indicator: SE. Elevation range: 975 – 2880 feet. Blooms: April – July.	**Unlikely.** The Study Area does not contain serpentine substrate 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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.
Lythrum californicum California loosestrife	LR	Yellow pine forest, cismontane woodland, chaparral, valley and foothill grassland, meadows and seeps; located in wetlands. Elevation range: 0 – 7150 feet. Blooms: April – September.	**No Potential.** The Study Area does not contain freshwater marsh or similar perennial wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Microseris paludosa marsh microseris	CRPR 1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation range: 5 – 300 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain grassland or closed-cone coniferous forest to support this species.	**Presumed Absent.** 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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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.	**No Potential.** The Study Area does not contain expansive adobe clay substrate 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	RESULTS AND RECOMMENDATIONS
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.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia jepsonii Jepson's navarretia	CRPR 4	Chaparral, cismontane woodland, valley and foothill grassland; situated on serpentine substrates; serpentine indicator: SE. Elevation range: 565 – 2780 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
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.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia leucocephala ssp. *plieantha* many-flowered navarretia	FE, SE, CRPR 1B	Vernal pools underlain by substrate derived from volcanic ash flows. Elevation range: 95 – 3120 feet. Blooms: May – June.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia myersii ssp. *deminuta* Myer's navarretia	CRPR 1B	Vernal pool; underlying substrate is clay loam. Elevation range: undocumented. Blooms: April – May.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands 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	RESULTS AND RECOMMENDATIONS
Navarretia paradoxinota Porter's navarretia	CRPR 1B	Meadow and seep; typically situated in vernally mesic openings underlain by serpentine substrate; serpentine indicator: SE. Elevation range: 535 – 2730 feet. Blooms: May – June, sometimes July.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** 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.** The Study Area does not contain serpentine substrate to support this species.	**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.** The Study Area does not contain large rock outcrops on a peak ridgelines to support this species.	**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 Study Area does not contain alkali vernal pool or similar seasonal wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
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 Study Area does not contain alkali vernal pool or similar seasonal wetlands 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	RESULTS AND RECOMMENDATIONS
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 Study Area does not contain alkali vernal pool or similar seasonal wetlands 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.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Ribes victoris Victor's gooseberry	CRPR 4	Broadleaf upland forest, chaparral; located in shady, mesic sites. Elevation range: 325 – 2440 feet. Blooms: March – April.	**Moderate Potential.** The Study Area contains volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.
Sidalcea hickmanii ssp. *napensis* Napa checkerbloom	CRPR 1B	Chaparral; located on rhyolitic substrates. Elevation range: 1345 – 1985 feet. Blooms: April – June.	**Moderate Potential.** The Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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.	**No Potential.** The Study Area does not contain freshwater marsh or similar perennial wetlands 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	RESULTS AND RECOMMENDATIONS
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.	**No Potential.** The Study Area does not contain freshwater marsh or similar perennial wetlands to support this species.	**Not Present.** 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 Study Area does not contain alkali vernal pool or similar seasonal wetlands 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.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Streptanthus brachiatus ssp. *brachiatus* Socrates Mine jewel-flower	CRPR 1B	Chaparral, closed-cone coniferous forest; located on serpentine substrates; serpentine indicator: SE. Elevation range: 1770 – 3250 feet. Blooms: May – June.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Streptanthus brachiatus ssp. *hoffmanii* Freed's jewel-flower	FSC, CRPR 1B	Chaparral, cismontane woodland; located on serpentine outcrops, primarily in geothermal areas; serpentine indicator: SE. Elevation range: 1590 – 3965 feet. Blooms: May – July.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
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.** The Study Area does not contain serpentine substrate 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	RESULTS AND RECOMMENDATIONS
Streptanthus morrisonii ssp. *elatus* Three Peaks jewel-flower	CRPR 1B	Serpentine chaparral; serpentine indicator: SE. Elevation range: 90 – 815 feet. Blooms: June – September.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Streptanthus vernalis early jewel-flower	CRPR 1B	Closed-cone coniferous forest, chaparral; situated on serpentine; serpentine indicator: ?. Elevation range: undocumented. Blooms: March – May.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Stuckenia filiformis ssp. *alpina* slender-leaved pondweed	CRPR 2B	Marshes and swamps; located in shallow freshwater. Elevation range: 975 – 6990 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain freshwater marsh or similar perennial wetlands 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.** The Study Area does not contain serpentine substrate to support this species.	**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.	**No Potential.** The Study Area does not contain large volcanic ash slabs 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	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.	**No Potential.** The Study Area does not contain grassland or coastal scrub habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Trifolium buckwestiorum Santa Cruz clover	CRPR 1B	Broadleaf upland forest, cismontane woodland, coastal prairie margins. Elevation range: 105 – 610 feet. Blooms: April – October.	**Unlikely.** The Study Area does not contain forest or woodland of the types associated with this species.	**Presumed Absent.** No further actions are recommended for this species.
Trifolium hydrophilum saline clover	CRPR 1B	Marshes and swamps, mesic portions of alkali vernal pools; mesic, alkali valley and foothill grassland. Elevation range: 0 – 985 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain vernal pool or similar seasonal wetlands to support this species.	**Not Present.** 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 Study Area contains rocky volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. 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 Study Area contains rocky volcanic chaparral and woodland habitat that may support this species.	**Not Observed.** This species was not observed during the spring botanical survey. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY 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	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	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 does not contain extensive grassland or open scrub and it is includes and is 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.** The Study Area does not contain freshwater marsh or similar habitat to support this species.	**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 2025).	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY 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.	**No Potential.** The Study Area does not provide large cliffs or typical large (solitary) 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 usually near foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**No Potential.** The Study Area is not situated in an area with extensive, contiguous aquatic habitat (marshes, lakes) for foraging; this species typically roosts and nests in areas very near large aquatic bodies. Individuals may occasionally forage around the seasonal pond.	**Not Present.** 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 usually near foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**No Potential.** The Study Area is not situated in an area with extensive, contiguous aquatic habitat (marshes, lakes) for foraging; this species typically roosts and nests in areas very near large aquatic bodies. Individuals may occasionally forage around the seasonal pond.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY 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 2025).	**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 woodland habitat, extensive herbaceous habitats are lacking.	**Presumed Absent.** No further actions are recommended for this species.
Athene cunicularia burrowing owl	SC, 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.	**No Potential.** The Study Area does not contain extensive herbaceous habitats in a rolling hills or bottomland setting.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY 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.	**No Potential.** Napa County's very small breeding population is restricted to the Napa Valley floor in association with the Napa River and Baylands (CDFW 2025a, eBird 2025).	**Not Present.** 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.	**No Potential.** The Study Area does not contain extensive grassland habitat; likewise, 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 2025).	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY 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 coniferous forest and mixed 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.
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 2025).	**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.	**No Potential.** The Study Area is not situated in an area with extensive, contiguous aquatic habitat (marshes, lakes) for foraging; this species typically roosts and nests in areas very near large aquatic bodies. Individuals may occasionally forage around the seasonal pond.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY 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.	**Unlikely.** The Study Area and environs do not contain extensive grassland and other open herbaceous habitats to provide sufficient foraging resources.	**Presumed Absent.** No further actions are recommended for this species.
Falco peregrinus anatum American peregrine falcon	SFP	Year-round resident and winter visitor. Occurs near water, including coastal areas, wetlands, lakes and rivers. Usually nests on sheltered cliffs or tall man-made structures. Preys primarily on waterbirds.	**No Potential.** The Study Area does not contain large cliffs or suitable man-made structures for nesting.	**Not Present.** No further actions are recommended for this species.
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 2025).	**Not Present.** No further actions are recommended for this species.
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 (2025a), nesting within Napa County is known only from the immediate vicinity of Lake Berryessa.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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*).	**No Potential.** 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 2025).	**Not Present.** 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.	**No Potential.** The Study Area does not contain extensive grassland habitat; likewise, 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 2025).	**Not Present.** 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 the 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	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 (*Salicornia* spp.), with gumplant (*Grindelia* spp.) 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 is not situated in an area with extensive, contiguous aquatic habitat (marshes, lakes) for foraging; this species typically roosts and nests in areas very near large aquatic bodies. Individuals may occasionally forage around the seasonal pond.	**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.	**No Potential.** The Study Area does not contain grassland 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	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 coniferous forest to support this species.	**Not Present.** No further actions are recommended for this species.
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 the Baylands and the lower Napa River.	**Not Present.** No further actions are recommended for this species.
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.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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 habitat 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.
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.	**Moderate Potential.** The Study Area contains coniferous forest that may provide foraging habitat for this species; however, the stand generally lacks large old-growth trees with the structures sufficient to provide nesting habitat. There are documented activity centers less than one mile distant (CDFW 2025a).	**Not Observed.** Protocol-level surveys resulted in negative detections for this species. See Section 6.0 for details.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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.	**Unlikely.** Although the Study Area contains an intermittent pond, it is small and lacks emergent marsh vegetation necessary to support colonies of this species.	**Presumed Absent.** No further actions are recommended for this species.
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 stream courses lack deeper perennial pools and other necessary habitat elements.	**Presumed Absent.** No further actions are recommended 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.	**No Potential.** The Study Area does not contain perennial wetlands or ponds to provide breeding and foraging habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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 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, No Impact.** Although this species may be present on-site it would be confined to the Study Area streams and their nearby banks which are 100 feet or greater from the Project Area. No further actions are recommended for this species.
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.	**No Potential.** The Study Area does not contain perennial wetlands or ponds to provide breeding and foraging habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Fishes				
Acipenser medirostris green sturgeon	FT, SSC	Spawns in the Sacramento River and Klamath Rivers, at temperatures between 45 and 57 degrees Fahrenheit. 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.
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 greater than 10 ppt; most often at salinities less than 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 77 degrees Fahrenheit.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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.
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.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** 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 that are greater than 80 degrees Fahrenheit lethal to adults.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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.
Invertebrates				
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 does not contain extensive grassland habitat and floral resources are generally lacking.	**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.
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.** The Study Area does not contain the necessary host plant (elderberry) for this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
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.) were not observed in the Study Area during the site visits. This species' known range with Napa County is restricted to the immediate vicinity of the Cordelia Hills (CDFW 2025a).	**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 streams; this species is known from perennial streams. Additionally, the only documented occurrence in Napa County is from Huichica Creek in the southwest portion of the county (Marin and Wicksten 2004, CDFW 2025a).	**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: Plants presumed extinct in California
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 CNPS needs more information (a review list)
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

Chamise chaparral in the Project Area.

California black oak woodland understory on the edge of the Project Area.

Douglas fir forest north of the Project Area.

Chamise chaparral in the Proposed Replanting Area immediately south of the Project Area.

Narrow-anthered braodiaea (*Brodiaea leptandra*) in the Project Area.

Napa false indigo (*Amorpha californica* var. *napensis*) north and outside of the Project Area.

Appendix E

Statement of Qualifications

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 20 years performing vegetation & habitat mapping, special-status plant surveys, botanical assessments, wildlife assessments, vegetation change analysis, aquatic resources (wetland) delineations, and northern spotted owl surveys. 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.