Biological Resources Reconnaissance Survey

1200 Grandview Drive (APNs 043-061-019, -020)

Napa County, California

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WRA Project # 320262

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EXECUTIVE SUMMARY

This report details the regulatory background, methods, results, and recommendations of a Biological Resources Reconnaissance Survey located at 1200 Grandview Drive (Study Area) in Napa County, California. WRA, Inc. performed field surveys in June of 2022 and April of 2023. The Study Area is composed of coast live oak woodland, non-native grassland, and developed land covers, with reservoirs (manmade ponds) and seasonal wetland features also present. The proposed project involves construction of a new residence including associated outbuildings and servicing, as well as improvements to an existing access road (Project Area).

Of a total of 19.5 acres of coast live oak woodland across the property, 0.3 acre of oak woodland (less than 2 percent) are proposed to be impacted, though no tree removal is anticipated. This total is well within the minimum 70 percent canopy retention and 75 percent (3:1) preservation ratios required by Napa County Code. The remainder of the Project Area is situated in the non-sensitive land covers of non-native grassland and developed areas.

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

Additionally, two special-status bats, four special-status birds (including one state threatened species), and one special-status reptile, as well as non-status birds with baseline legal protections, have the potential to occur in the Study Area as well as in or near the Project Area. Mitigation measures and best management practices have been developed and provided herein to avoid impacts to these resources.

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Definitions

Study Area: The area throughout which the assessment was performed, i.e., the subject parcels (APNs 043-061-019, -020) totaling approximately 108 acres.

Project Area: The area encompassing the proposed project (residential development, road improvements); the area evaluated for potential impacts to sensitive biological resources, totaling 1.4 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	County of Napa
Corps	U.S. Army Corps of Engineers
CRLF	California Red-legged Frog
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
Rank	California Rare Plant Ranks
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 June 29, 2022 and April 26, 2023, WRA, Inc. (WRA) performed an assessment of biological resources at 1200 Grandview Drive (APN APNs 043-061-019, -020; hereafter Study Area) in Napa County California (Figure A-1, Appendix A). The purpose of this study was to gather the information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA) to meet the guidelines outlined by Napa County in *Guidelines for Preparing Biological Resources Reconnaissance Surveys* (Napa County 2016a) and *Guidelines for Preparing Special-status Plant Studies* (Napa County 2016b).

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

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

The proposed project (Project) involves the construction of a new single-family residence and associated structures including a second dwelling unit and a guest cottage. The other primary component of the Project is installation of new driveway sections and improvements to the existing on-site access road, including paving and installation of turnarounds. Servicing for the developments will also be installed including a septic system, utility lines and waters tanks. Site preparation (grading, installation of erosion control measures, and associated) will occur during the grading window of April 1 through October 15.

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 2023b) and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2023a). 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 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.

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[1]] 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.

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

[1] *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.*

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):

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.

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.

- Trees to be retained or designated for retention shall be protected through the use of barricades or other appropriated 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. 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 108-acre Study Area consists of two adjacent parcels (see Appendix A). It is located in southwestern Napa County, approximately two aerial miles southwest of downtown Napa and eight miles east of downtown Sonoma. The Study Area is situated in the Howell Mountains of Napa County on the southern flank of the Mayacama Mountains where the hills are low elevation and gradient rolling into the Napa-Sonoma Baylands. Detailed descriptions of the local setting are below.

3.1 Topography and Soils

The overall topography of the Study Area gently- to moderately-sloped, ranging from approximately 80 to 320 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: Clear Lake clay, drained, 0 to 2 percent slopes; Forward silt loam, 5 to 39 percent slopes; Forward-Kidd complex, 11 to 60 percent slopes; and Haire loam, 2 to 9 percent slopes. The parent soil series of all the Study Area's mapping units are summarized below.

Clear Lake Series: This series consists of very deep clay soils formed in alluvium derived from sedimentary rock and are located on basin floors of river valleys at elevations ranging from 25 to 2,000 feet (CSRL 2023, USDA 1978). These soils are considered hydric, and are poorly drained, with negligible to high runoff, and slow to very slow permeability (USDA 2014, USDA 1978). Native and naturalized vegetation is composed of grasses and forbs, while typical land uses include row cropping, dry farming, irrigated pasture, and dry pasture (USDA 1978).

Forward Series: This series consists of moderately deep sandy loam soils of residuum weathered from rhyolitic tuff on hillslopes at elevations ranging from 400 to 4,500 feet (CSRL 2023, USDA 1978). These soils are not considered hydric, and are well drained, with medium runoff and moderately rapid permeability above the tuff bedrock (USDA 2014, USDA 1978). Native vegetation consists of coniferous forest composed of ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), incense cedar (*Calocedrus decurrens*), California black oak (*Quercus kelloggii*), manzanitas (*Arctostaphylos* spp.), and pine mat (*Ceanothus prostratus*), while typical land uses include timbering, watershed protection, and open space (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 2023, 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, while typical land use is for watershed, recreation, and limited grazing (USDA 1978).

Haire Series: This series consists of moderately deep clay loam soils formed in alluvium derived from sedimentary rock situated in upland terraces at elevations ranging from 20 to 2,400 feet (CSRL 2023, USDA 1978). These soils are considered hydric and are moderately well drained, with very slow permeability, and slow to rapid runoff (USDA 2014, USDA 1978). Native and naturalized

vegetation predominantly consists of annual grasses and forbs, while typical land uses are dry and irrigated pasture grazing (USDA 1978).

3.2 Climate and Hydrology

The Study Area is located in the valley-bayland fog incursion zone of Napa County, where precipitation is supplemented by fog drip. The average monthly maximum temperature of Napa State Hospital is 82.8 degrees Fahrenheit, while the average monthly minimum temperature is 48.1 degrees Fahrenheit. Predominantly, precipitation falls as rainfall with an annual average of 26.5 inches. Precipitation-bearing weather systems are predominantly from the west and south with most of the rain falls between November and March, combining for an of 22.08 inches for this period (USDA 2023).

The local watershed is Carneros Creek (HUC 12: 180500020801) and the regional watershed is Frontal San Pablo Bay Estuaries (HUC 8: 18050002). The Study Area is situated in the Napa County Planning Watershed of Browns Valley Creek. There are no blue-line streams on the Napa 7.5-minute quadrangles (USGS 2015); however, there are three mapped reservoirs. There are several features mapped as Riverine as well as three Freshwater Ponds in the National Wetlands Inventory (NWI; USFWS 2023a), and the same features are mapped as Fluvial and Pond and Associated Vegetation in the California Aquatic Resources Inventory (CARI; SFEI 2023). The primary hydrologic sources are direct precipitation and consequent surface sheet 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 areas 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 woodland and grassland, with portions of development in the central and eastern portion. The developed areas include single-family residences, outbuildings, access roads, vineyard blocks, and associated infrastructure. The property is bounded by vineyards to the west and north, a mix of dense woodland and vineyards to the south, and residential development to the east. Detailed plant community descriptions are included in Section 5.1 below, and all observed plant and wildlife species are included in Appendix B. Regional land uses include rural residential, wineries, and vineyards (Google Earth 2023). Historically, land uses in the region were open rangeland of larger ranches, rural residential, row crops, vineyards, and orchards. There is no history of intensive agriculture (except vineyards), quarrying, mining, or timbering in the Study Area (Historic Aerials 2023).

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)
- Napa 7.5-minute quadrangle (USGS 2015)
- Contemporary aerial photographs (Google Earth 2023)
- Historical aerial photographs (Historical Aerials 2023)
- National Wetlands Inventory (NWI; USFWS 2023a)
- California Aquatic Resources Inventory (CARI; SFEI 2023)
- California Natural Diversity Database (CNDDB; CDFW 2023a)
- California Native Plant Society Electronic Inventory (CNPS 2023a)
- Consortium of California Herbaria (CCH 2023)
- USFWS Information for Planning and Consultation (IPaC; USFWS 2023b)
- *eBird* Online Database (eBird 2023)
- 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 2023b)
- *Preliminary Descriptions of the Terrestrial Natural Communities* (Holland 1986)
- Napa County Land Cover (NCLC) map (Thorne et al. 2004)
- *California Natural Community List* (CDFW 2023b)

For special-status plants, database searches (i.e., CNDDB, CNPS) focused on the Rutherford, Yountville, Capell Valley, Sonoma, Napa (focal), Mount George, Sears Point, Cuttings Wharf, and Cordelia USGS 7.5-minute quadrangles. 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[2].

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 2023b), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), and *A Manual of California*

[2] *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.*

Vegetation, Online Edition (CNPS 2021b). 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.[3] 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 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 site visit was made on June 29, 2022 to evaluate the presence of suitable habitat for special-status species. Suitable habitat conditions are based on physical and biological conditions of the

[3] *Ranking of CDFW List of Vegetation Alliances is based on NatureServe Rankings (NatureServe 2018).*

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 the Study Area on June 29, 2022 and April 26, 2023. 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 2018, USFWS 1996). Plants were identified using *The Jepson Manual, 2nd Edition* (Baldwin et. al. 2012) and Jepson Flora Project (eFlora 2023), to the taxonomic level necessary to determine if they were sensitive. Plant names follow those of Jepson Flora Project (eFlora 2023), unless otherwise noted.

4.2.3 Special-status Wildlife

A general wildlife assessment was performed during the site visits referenced above. 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 [*Rana draytonii*]) or species groups (e.g., bats, anadromous fish) were searched for and noted. Such habitat elements include, but are not limited to: plant assemblages and vegetation structure; stream depth, width, hydro-period, slope, and bed-and-bank structure; rock outcrops, caves, cliffs, overhangs, and substrate texture and rock content; history of site alteration and contemporary disturbances; etc.

4.2.4 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

Prior to the site visit the USFWS Critical Habitat Mapper (USFWS 2023c) and the NMFS Essential Fish Habitat Mapper (NMFS 2023) 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 2023c), 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 Earth 2023) 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; land covers overlain with the Project's limits of disturbance are shown in Figure A-4, and details of individual Project elements in Figure A-5 (Appendix A). Representative photographs of the site are shown in Appendix D. Six land cover types are present: developed, non-native grassland, blue gum grove, coast live oak woodland, seasonal wetland, and reservoir. The Project Area (residence and associated facilities, road footprint) has been intentionally sited to avoid all sensitive aquatic resources and limit impacts to the oak woodland canopy.

5.1.1 Terrestrial Land Cover Types

<u>Developed Area (no vegetation alliance). CDFW Rank: None</u>. Within the Study Area, the developed portion is composed of existing vineyard blocks, two residences, various outbuildings and viticultural facilities, and access roads. The vegetation and soils are highly altered, consisting of overhanging native trees, landscape species, and disturbance tolerant herbs. Species include coast live oak (*Quercus agrifolia*), blue oak (*Quercus douglasii*), California bay (*Umbellularia californica*), Peruvian pepper tree (*Schinus molle*), stinkwort (*Dittrichia graveolens*), purple star thistle (*Centaurea calcitrapa*), field burweed (*Soliva sessilis*), and red sand spurry (*Spergularia rubra*).

The developed area totals 37.3 acre in the Study Area and 0.4 acre in the Project Area (approximately one 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.

<u>Non-native Annual Grassland – Wild Oat Grassland (*Avena barbata* Semi-Natural Herbaceous Stands). CDFW Rank: None</u>. Non-native grasslands occur throughout cismontane California, particularly in the Sierra Foothills, Coast Range, Transverse Range, and Peninsular Ranges (Sawyer

et al. 2009, CNPS 2023b). These grasslands are situated on a variety of landscapes including coastal terraces, valley bottoms, and foothills underlain by a variety of soil types. The Study Area contains 45.1 acres of this community type, of which 0.7 acre are situated in the Project Area (approximately 1.5 percent of the total land cover type in the Study Area).

The dominant cover is the herbaceous layer, which is dominated by non-native grasses of wild oat (*Avena barbata*), soft chess (*Bromus hordeaceus*), dogtail grass (*Cynosurus echinatus*), and Italian rye grass (*Festuca perennis*). Native wildflowers are not uncommon in portions of the grassland including miniature lupine (*Lupinus bicolor*), sky lupine (*Lupinus nanus*), California poppy (*Eschscholzia californica*), common soap plant (*Chlorogalum pomeridianum*), and common yarrow (*Achillea millefolium*).

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

Blue Gum Grove (*Eucalyptus globulus* Semi-Natural Woodland Stands). CDFW Rank: None. Blue gum groves are known from the Coast Ranges and Central Valley, typically as planted woodlands and shelterbelts to buffer coastal winds and provide shade. These groves are not described in Holland (1986) but are included in Sawyer et al. (2009). This vegetation alliance is dominated by one of several eucalyptus species (*Eucalyptus* spp.), all of which are not native to North America. Blue gum (and other eucalyptus) groves are frequently situated in rural and semi-urbanized settings, along streams, and coastal hills/prairies. The Study Area contains 1.0 acre of blue gum grove, none of which is within the Project Area.

The overstory of this alliance is entirely composed of blue gum (*Eucalyptus globulus*), an invasive species listed as "limited" by the California Invasive Plant Council (Cal-IPC 2020). As is typical of blue gum groves because of allelopathic chemicals in fallen leaves and branches, the understory is low-growing and relatively bare, and composed of non-native, weedy species such as ripgut brome (*Bromus diandrus*) and wild oat (*Avena barbata*).

This community is synonymous with the Eucalyptus Alliance biotic community in the NCLC (Thorne et al. 2004). These groves provide habitat for numerous common wildlife, as well as have the potential to support several special-status bird and bat species associated with wooded areas. Neither CDFW nor Napa County consider these groves a sensitive natural community.

Coast Live Oak Woodland (*Quercus agrifolia* Woodland Alliance). CDFW Rank: G5 S4: Coast live oak woodlands occur in the outer and inner Coast Ranges, Transverse Ranges, and southern coast from northern Mendocino County south to San Diego County (Sawyer et al. 2009, CNPS 2020b). These woodlands are typically situated on terraces, canyon bottoms, slopes, and flats underlain by deep, well-drained sandy or loam substrates with high organic content (Sawyer et al. 2009). The Study Area contains 19.5 acres of which 0.3 acre is situated in the Project Area (approximately 1.5 percent of the total land cover type in the Study Area); note however that no tree removal is planned to accommodate the Project (see Section 6.1.1).

The dominant tree is coast live oak (*Quercus agrifolia*), with scattered cover of blue oak (*Q. douglasii*) valley oak (*Quercus lobata*), and California bay (*Umbellularia californica*). Predominant understory species include poison oak (*Toxicodendron diversilobum*), rough hedgenettle (*Stachys rigida*), common bedstraw (*Galium aparine*), blue field madder (*Sherardia arvensis*), Italian thistle (*Carduus pycnocephalus*), and numerous non-native annual grasses.

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

5.1.2 Aquatic Resources

Seasonal Wetland – Italian Rye Grass Grassland (*Festuca perennis* Herbaceous Alliance). Section 404/401 CWA; CDFW Rank: None. Seasonal wetlands are known from a variety of topographic positions and soil types where surface waters collect and flows are reduced, or subsurface waters approach the soil surface as a rising water table or seep. In the Study Area, three seasonal wetlands occupy 0.6 acre as seasonal swales; these swales are situated entirely outside of the Project Area.

The vegetation is dominated by hydrophytes including Italian rye grass (*Festuca perennis*), meadow barley (*Hordeum brachyantherum*), Mediterranean barley (*Hordeum marinum*), rabbit's-foot grass (*Polypogon monspeliensis*), toad rush (*Juncus bufonius*), poverty rush (*Juncus tenuis*), and seep monkeyflower (*Erythranthe guttata*). The soils support redoximorphic features (iron rust) and were saturated in April 2023. Likewise, wetland hydrology indicators included saturation and oxidized rhizospheres (rusted roots). Because all three wetland parameters (vegetation, soil, and hydrology) are clearly evidenced, those areas mapped as wetland in the Study Area would be considered sensitive by Napa County and jurisdictional under the CWA.

Reservoir. CWA Section 404/401, CDFW Section 1602. Rank: None. The Study Area contains three reservoirs (manmade ponds), each of which contains a clear OHWM. The edge contains some emergent wetland vegetation, but this fringe is neither contiguous nor wider than two or three feet. Species in this fringe include overhanging Pacific willow (*Salix lasiandra*) and arroyo willow (*Salix lasiolepis*), with common spikerush (*Eleocharis macrostachya*), narrowleaf cattail (*Typha angustifolia*), and common cattail (*Typha latifolia*) rooted in the banks and shallows. This feature is likely to be considered jurisdictional under Section 404/401 of the CWA, the Porter Cologne Act, and Section 1600 of the CFGC; therefore, it is considered a sensitive aquatic resource.

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, 73 special-status plant species have been documented in the vicinity of the Study Area. As outlined in Appendix C, twenty-

six of these plants have the potential to occur in the Study Area.[4] The remaining 47 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 several site visits during a period sufficient to identify all 26 special-status plant species with the potential to occur within the Study Area. No special-status plants were observed during these surveys, and as such these species are considered absent at the site. The following is a list of those plants with the potential to occur within the Study Area but were not observed during surveys conducted in spring and summer of 2023 and 2022, respectively.

- Henderson's bentgrass (*Agrostis hendersonii*); CRPR 3
- Franciscan onion (*Allium peninsulare* var. *franciscanum*); CRPR 1B
- Napa false indigo (*Amorpha californica* var. *napensis*); CRPR 1B
- Bent-flowered fiddleneck (*Amsinckia lunaris*); CRPR 1B
- Clara Hunt's milk-vetch (*Astragalus claranus*); FE, ST, CRPR 1B
- Alkali milk-vetch (*Astragalus tener* var. *tener*); CRPR 1B
- Sonoma sunshine (*Blennosperma bakeri*); FE, SE, CRPR 1B
- Johnny-nip (*Castilleja ambigua* var. *ambigua*); CRPR 4
- Mead's owl-clover (*Castilleja ambigua* var. *meadii*); CRPR 1B
- Dwarf downingia (*Downingia pusilla*); CRPR 2B
- Streamside daisy (*Erigeron biolettii*); CRPR 3
- Jepson's coyote thistle (*Eryngium jepsonii*); CRPR 1B
- Nodding harmonia (*Harmonia nutans*); CRPR 4
- Diablo helianthella (*Helianthella castanea*); CRPR 1B
- Hayfield tarplant (*Hemizonia congesta* ssp. *congesta*); CRPR 1B
- Contra Costa goldfields (*Lasthenia conjugens*); FE, CRPR 1B
- Legenere (*Legenere limosa*); CRPR 1B
- Bristly leptosiphon (*Leptosiphon aureus*); CRPR 4, LR

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

- Sebastopol meadowfoam (*Limnanthes vinculans*); FE, SE, CRPR 1B
- Mt. Diablo cottonweed (*Micropus amphibolus*); CRPR 3
- Few-flowered navarretia (*Navarretia leucocephala* ssp. *pauciflora*); FE, ST, CRPR 1B
- Lobb's buttercup (*Ranunculus lobbii*); CRPR 4
- Sanford's arrowhead (*Sagittaria sanfordii*); CRPR 1B
- Showy rancheria clover (*Trifolium amoenum*); FE, CRPR 1B
- Saline clover (*Trifolium hydrophilum*); CRPR 1B
- Oval-leaved viburnum (*Viburnum ellipticum*); CRPR 2B

5.2.2 Special-status Wildlife Species

A total of 58 special-status wildlife species have been documented in Napa County (CDFW 2023a, Napa County 2005). As outlined in Appendix C, one of these species was observed during WRA's site visits to the Study Area, six additional species have the potential to occur there, and four other species (all colonial-nesting heron [bird] species) were assessed as having potential to occur but were determined to be absent.[5] The remaining 48 species are unlikely or have no potential to occur due to one or more of the following reasons:

- Aquatic habitats (e.g., rivers, estuaries) necessary to support the special-status wildlife species are not present in the Study Area
- Vegetation habitats (e.g., coast redwood forest, coastal prairie, dense 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 local range (including breeding range for birds)

Special-Status Wildlife Observed

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. High Potential. The white-tailed kite is resident year-round in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas, and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates.

[5] *The subject heron species were not observed in any capacity during site visits. Based on this as well as Project specifics, no additional attention or dedicated measures for these species are warranted.*

The Study Area and some of the surrounding areas provide suitable year-round habitat for white-tailed kites, including stands of oak woodland for nesting and open areas in proximity for foraging. One white-tailed kite was observed foraging on-site in June 2022. Though no indication of on-site nesting was observed during either of WRA's site visits there is potential for such to occur in the future.

Special-status Wildlife with Potential to Occur

Pallid bat (*Antrozous pallidus*). CDFW Species of Special Concern, WBWG High Priority. Moderate Potential. The pallid bat occurs in a variety of habitats ranging from rocky arid deserts to grasslands, and 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 2023). Trees within the Study Area (larger, more aged oaks) may contain cavities or snags suitable for roosting by this species, and there are CNDDB occurrences in the vicinity (CDFW 2023a). A targeted bat habitat assessment was not performed under this biological assessment.

Fringed myotis (*Myotis thysanodes*). WBWG High Priority. Moderate Potential. The fringed myotis ranges throughout much of western North America. This species is found in desert scrubland, grassland, sage-grass steppe, old-growth forest, and subalpine coniferous and mixed deciduous forest. Oak and pinyon-juniper woodlands are most commonly used. 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 California (WBWG 2023). Trees within the Study Area (larger, more aged oaks) may contain cavities or exfoliating bark suitable for roosting. A targeted bat habitat assessment was not performed under this biological assessment.

American badger (*Taxidea taxus*). CDFW Species of Special Concern. Moderate Potential. The American badger is a large, semi-fossorial member of the Mustelidae (weasel family). It is found uncommonly within the region in drier open stages of most scrub, woodland, and herbaceous habitats where friable soils and prey populations are present. Badgers are typically solitary and nocturnal, digging burrows to provide refuge during daylight hours. Burrow entrances are usually elliptical (rather than round), and each burrow generally has only one entrance. Young are born in the spring and become independent by the end of summer. Badgers are carnivores, preying on a variety of fossorial mammals (especially ground squirrels and pocket gophers) and occasionally other vertebrates including bird eggs. Home ranges for this species tend to be large, depending on the habitat available; population density averages one badger per square mile in prime open country (Long 1973).

The Study Area features woodland open grassland and is contiguous with similar, undeveloped areas to the north and south. There is a historic CNDDB occurrence for this

species approximately 0.8 mile to the south (from 1911; CDFW 2023a), though no more recent observations in the vicinity. Potential badger burrows were looked for during the site visit and not observed anywhere in the Study Area. However, if a local population exists, there is some potential for the species to be present in the future.

Swainson's hawk (*Buteo swainsoni*). State Threatened. Moderate Potential. Swainson's hawk is a summer (breeding) resident and migrant in lowlands of California, primarily occurring in the Central Valley but also other low-lying areas near the coast, including Napa County. Nests are constructed of sticks and placed in trees located in otherwise largely open land covers. Areas typically used for nesting include bands of riparian vegetation, patches of oak woodland, lone trees, as well as planted and natural trees associated with roads, farmyards and sometimes adjacent residential areas. Foraging occurs in open habitats, including grasslands, open woodlands, and some agricultural areas. While breeding, adults feed primarily on rodents (and other vertebrates); for the remainder of the year, large insects (e.g., grasshoppers, dragonflies) comprise most of the diet. In many areas this species has adapted to foraging primarily in and around favorable agricultural plots (particularly alfalfa, wheat and row crops), as prey is both numerous and conspicuous at harvest and/or during flooding or burning (Bechard et al. 2010).

Napa County hosts a population of breeding Swainson's hawks that appears to be increasing. CNDDB currently includes 15 nesting occurrences in the County, nearly all of which are in bayland areas south and southwest of the City of Napa; the nearest occurrence is located approximately 1.6 miles southwest of the Study Area (CDFW 2023a). The Study Area provides open grassland areas for foraging and trees suitable for nesting. This species was looked for during site visits and not observed, though it has the potential to be present (including nesting) in future years.

Loggerhead shrike (*Lanius ludovicianus*). CDFW Species of Special Concern. Moderate Potential. The loggerhead shrike is a year-round resident and winter visitor in lowlands and foothills throughout California, associated with open country featuring short vegetation and scattered trees, shrubs, fences, utility lines and/or other perches. Although songbirds, shrikes are predatory and forage on a variety of invertebrates and small vertebrates. Captured prey items are often impaled for storage purposes on suitable substrates, including thorns or spikes on vegetation, and barbed wire fences. Nests are usually placed three to ten feet off the ground in trees or larger shrubs (Shuford and Gardali 2008). The Study Area provides suitable habitat for this species, including open grasslands for foraging, trees/shrubs for nesting, and fence posts and other perches. This species was looked for during site visits but not observed; there are nearby observations in eBird (2023) and shrikes may be found on-site in the future.

Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*). CDFW Species of Special Concern. Moderate Potential. This subspecies of the common and widespread savannah sparrow is a year-round resident of the coastal California fog belt. It typically occupies upper tidally-influenced areas, often found where wetland communities merge into grassland; drier, more inland coastal grasslands are also occupied. Nesting occurs in vegetation on or near the ground, including along roads, levees, and canals (Shuford and Gardali 2008). Like most sparrows Bryant's consumes primarily invertebrates and

vegetable matter (e.g., seeds). The Study Area provides areas of open grassland that may be used by this species, including during the breeding season.

Western pond turtle (*Emys marmarota*). CDFW Species of Special Concern. Moderate Potential. The western pond turtle is the only freshwater turtle native to most of California. This species is highly aquatic, typically inhabiting perennial waters including lakes, ponds/reservoirs, rivers, streams, and canals that provide submerged cover and suitable exposed basking structures such as rocks, logs and mats of emergent vegetation. Nesting usually occurs in spring to early summer, with eggs hatching in the fall; nests are excavated in upland areas with friable soil, usually on unshaded slopes within 300 feet of water (Thomson et al. 2016). Hatchlings require shallow water with relatively dense emergent and aquatic vegetation to provide forage, usually aquatic invertebrates (Thomson et al. 2016).

The Study Area's reservoirs provide suitable perennial aquatic habitat for western pond turtles. The feature in the northwestern portion of the site provides the highest quality habitat overall, with aquatic vegetation, basking sites, and relatively shallow banks with surrounding grassland. The eastern reservoir also has some potential to be occupied, though its banks are often steeper. The southwestern reservoir is surrounded by vineyard development and less likely to be occupied. This species was looked for during site visits and not observed, though these results are not considered conclusive.

5.2.3 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

The Study Area does not contain any designated Critical Habitat (USFWS 2023c, NMFS 2023) or Essential Fish Habitat (NMFS 2023).

As per mapping by the CECP the Study Area is not within a Natural Landscape Block or an Essential Connectivity Area (Caltrans 2010, CDFW 2023c), and vineyard and urban development in the vicinity limit any potential landscape-scale movement functions. At a localized scale the Study Area is bounded by vineyard development to the west, much of the north, and to the southwest; residential development is present to the east. Potential local movement corridors are present only in the eastern portion of the site, where there is some connectivity between undeveloped lands to the north (grassland and oak woodland) and the largely undeveloped property to the south (primarily oak woodland/forest).

6.0 PROJECT ANALYSIS AND RECOMMENDATIONS

6.1 Land Cover Types

6.1.1 Terrestrial Land Cover Types

Coast Live Oak Woodland

Coast live oak woodlands are not 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 be maintained and/or improved to the extent feasible. 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 (preferably less than 30 percent) and outside of stream and wetland setbacks.

The Study Area contains 19.5 acres of oak woodland; to ensure that a 3:1 ratio is maintained of 3 acres of oak woodland preserved for each 1 acre impacted, only 4.9 acres can be impacted. While no tree removal is anticipated as a component of the Project, the Project Area currently contains 0.3 acre of oak woodland land cover in total (featuring woodland understory and similar) and thus 19.2 acres of this land cover type will be retained, vastly exceeding County requirements for retention of canopy overall and oak woodland specifically. Note that the County will presumably require preservation (in perpetuity) of at least 0.9 acre of on-site coast live oak woodland (3:1 ratio) in compensation for the impacts; WRA recommends that this acreage of woodland be selected as per slope and setback parameters outlined above and shown in the Project's final development application.

6.1.2 Aquatic Resources

The Study Area contains three seasonal wetlands and three reservoirs (ponds); with one exception, the Project Area is set back 50 feet or greater from the outward edge of these aquatic features as per 18.108.026 of the Napa County Code. Access road improvements will necessarily occur within 50 feet of the Study Area's easternmost reservoir, but the disturbance footprint in this area is restricted to the existing access road that is subject to regular use. For these reasons, no further actions are recommended for aquatic resources.

6.2 Special-status Species

6.2.1 Special-status Plants

No special-status plants were observed within the Study Area doing protocol-level botanical surveys in 2022 (summer) and 2023 (spring). Consequently, the Project will not impact special-status plants; therefore, there are no further actions recommended for such.

6.2.2 Special-status Wildlife

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

Bat Species: Two special-status bats have the potential to occur within the Study Area (pallid bat, fringed myotis). While the Project does not involve tree removal, tree trimming (limb removal; e.g., if needed to accommodate construction) during the local bat maternity season and/or hibernation period could impact bat breeding and potentially result in take (injury, mortality) 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 1: WRA recommends that any tree trimming (if needed) be performed from September 1 through October 15, or March 1 to April 15, outside of the respective bat maternity and hibernation seasonal periods. If tree removal during either of these periods 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 or hibernation 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 with potential bat roosts 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.

American Badger: No indication of on-site presence by American badgers was observed during site visits. However, if present in the vicinity this species could occur on-site in the future. Destruction of active badger burrows could result in badger injury or mortality, including to badger young if burrows are impacted during the breeding period. No potentially significant impacts to badger habitat or foraging by the Project are anticipated, given the relatively small total area of impact and disturbance. To avoid potential impacts to badgers, the following measure is provided.

> Recommendation 2: WRA recommends that a pre-construction survey for badger burrows/dens be performed by a qualified biologist within and adjacent to (within approximately 150 feet of) the Project Area no more than 10 days prior to the initiation of ground disturbance (or other disruptive activities). (This survey could be conducted concurrently with other pre-construction surveys.) If survey results indicate that this species is present during the general breeding period (roughly spring through summer), the biologist should assess if young are present in any identified dens, e.g., using track plates or motion cameras. If young are deemed present, an exclusionary buffer should be placed around each occupied den (as described below for bird nests) until all young are independent. Once young are independent or if badgers are found to be present during the nonbreeding period, use of the site should be discouraged using passive relocation techniques (e.g., placing one-way doors across den entrances) to remove badgers from areas to be impacted prior to the initiation of ground disturbance.

Swainson's Hawk: The state threatened Swainson's hawk has the potential to occur within the Study Area, including on-site nesting. Tree trimming (including removal of limbs) during the nesting season has the potential to harm or even destroy an active nest (a violation of CESA), and ground disturbance and construction activities may result in disruption to breeding activities if an active nest is present, including up to nest abandonment. Because land conversion within the Study Area will be relatively limited (e.g., only 0.7 acre of approximately 45 acres of on-site annual grassland will be converted), no potentially significant impacts to Swainson's hawk foraging are anticipated. To avoid impacts to nesting Swainson's hawks, a pre-construction survey effort specific to this species is recommended.

Recommendation 3: WRA recommends that initial ground disturbance and tree trimming (if such is needed) occur from September 1 to February 28, outside of the local Swainson's hawk nesting season. If adhering to this work window is not feasible, a pre-construction survey effort for Swainson's hawk should be performed by a qualified biologist. This effort should involve a minimum of three individual surveys, spaced at least one week (seven days) apart, prior to the initiation of Project activities. Individual surveys should follow the protocol outlined in "Recommended Timing and Methodology for Swainson's Hawk Nesting in California's Central Valley" by SHTAC (2000).[6] As per the protocol, surveys should not be performed from April 20 to June 10, due to specifics of nesting behavior when nests are harder to detect. Each survey would cover the Study Area and accessible/visible areas within approximately 0.5 mile of the site. (Note that the final Swainson's hawk survey could be conducted concurrently with a general nesting bird survey; see Recommendation 4.) Any active Swainson's hawk nests found would be protected by a work exclusion buffer; the size of each buffer would be determined by the qualified biologist to ensure that the nest is not abandoned due to disturbance, or otherwise harmed. Factors that may influence the size of the buffer include nest location, ambient noise/disturbance conditions in the area, topography (e.g., line-of-site or lack thereof to the Project Area), behavior of the individual birds in question, and other factors. An implemented work exclusion buffer would remain in place until all young in the nest have fledged or it otherwise is confirmed as inactive by the biologist.

Other Bird Species: Loggerhead Shrike, Bryant's Savannah Sparrow, White-tailed Kite, and non-special-status species: In addition to the three special-status bird species discussed above, exclusive of Swainson's hawk (loggerhead shrike, Bryant's savannah sparrow, and white-tailed kite), various non-status bird species with baseline protections under the MBTA and CFGC may use vegetation within or directly adjacent to the Project Areas for nesting. Pre-construction surveys are recommended to ensure that the implementation of the Project would not impact any nesting birds, including via incidental impacts (such as construction noise).

Recommendation 4: WRA recommends that vegetation removal (including tree trimming, if needed) and initial ground disturbance occur from September 1 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 Project activities. 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. Buffer sizes may vary dependent on bird species, location and setting of the nest, levels of ambient disturbance near the nest, and other factors. 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] *Note that this survey protocol was developed in the context of relatively large-scale land conversions in the Central Valley and designed (in part) to assess impacts to foraging habitat, thus requiring a minimum of six and up to nine surveys; this higher level of effort is not warranted for the Project.*

Western Pond Turtle: Although western pond turtle was not observed during site visits, the Study Area's reservoirs, particularly the northwestern and eastern reservoirs, provide suitable aquatic habitat and the species may be present in the future. If pond turtles are present upland nesting near the reservoirs may also occur. Proposed project activities will avoid the reservoirs including their immediate shorelines (along with basking substrates), reducing the risk of harm to adult pond turtles. However, ground disturbance near the reservoirs has some potential to impact turtle nests in the substrate (if present) as well as adult turtles and/or hatchlings moving to/from the pond to upland areas. To avoid any potential impacts to nesting activities of this species, the following measures are provided.

> Recommendation 5: WRA recommends that a presence/absence survey for western pond turtles be performed prior to April 1 (see context below) in the year when ground disturbance is planned. The survey should be performed by a qualified biologist using suitable methods, i.e., surveying the two focal reservoirs on a sunny day from suitable distant vantage points as to limit potential disturbance to turtles and increase the chances of detection of any that are present. Alternately, presence of the species within either or both reservoirs may simply be assumed with no survey performed.
>
> If the species is observed on-site or presence is assumed, exclusion fencing should be installed during the wet season (prior to April 1) around the northwestern boundary of the disturbance area in such a manner as to preclude turtles from entering ground disturbance areas with suitable nesting habitat, e.g., grassland and other relatively open areas. The fencing should have a minimum height above ground of 24 inches, the bottom of the fence buried to a minimum depth of 4 inches. Erosion control fencing (silt fencing) may serve as the exclusion fence if it meets the requirements above. Specific location(s) of the fencing should be approved by a qualified biologist prior to installation, and inspected by the biologist following installation to ensure that it is effective. The fencing should remain installed until on-site mechanized ground disturbance is completed.
>
> If pond turtles are observed on-site, prior to the initiation of work, a biological education program should also provided by the qualified biologist to all personnel that will be present at the site during ground disturbance and related activities. The worker education program should include information regarding the identification of western pond turtle (including photographs), the potential for occurrence within work areas, the purpose of the exclusion fencing and importance of maintaining it, and specific measures being implemented to avoid impacts (which will include halting all ground disturbance and immediately alerting the qualified biologist if western pond turtle is observed in work areas over the course of the work).

6.2.3 Wildlife Movement

The eastern portion of the Study Area provides local connectivity with undeveloped lands to the north and south. However, the Project is sited primarily in the western portion of the site, adjacent to existing on-site vineyard development. Additionally, the Project involves relatively limited land conversions and existing land covers in the undeveloped portions of the Study Area (including the eastern portion) will be largely left intact. For these reasons, the Project is not anticipated to result in any potentially significant impacts to wildlife movement or migration.

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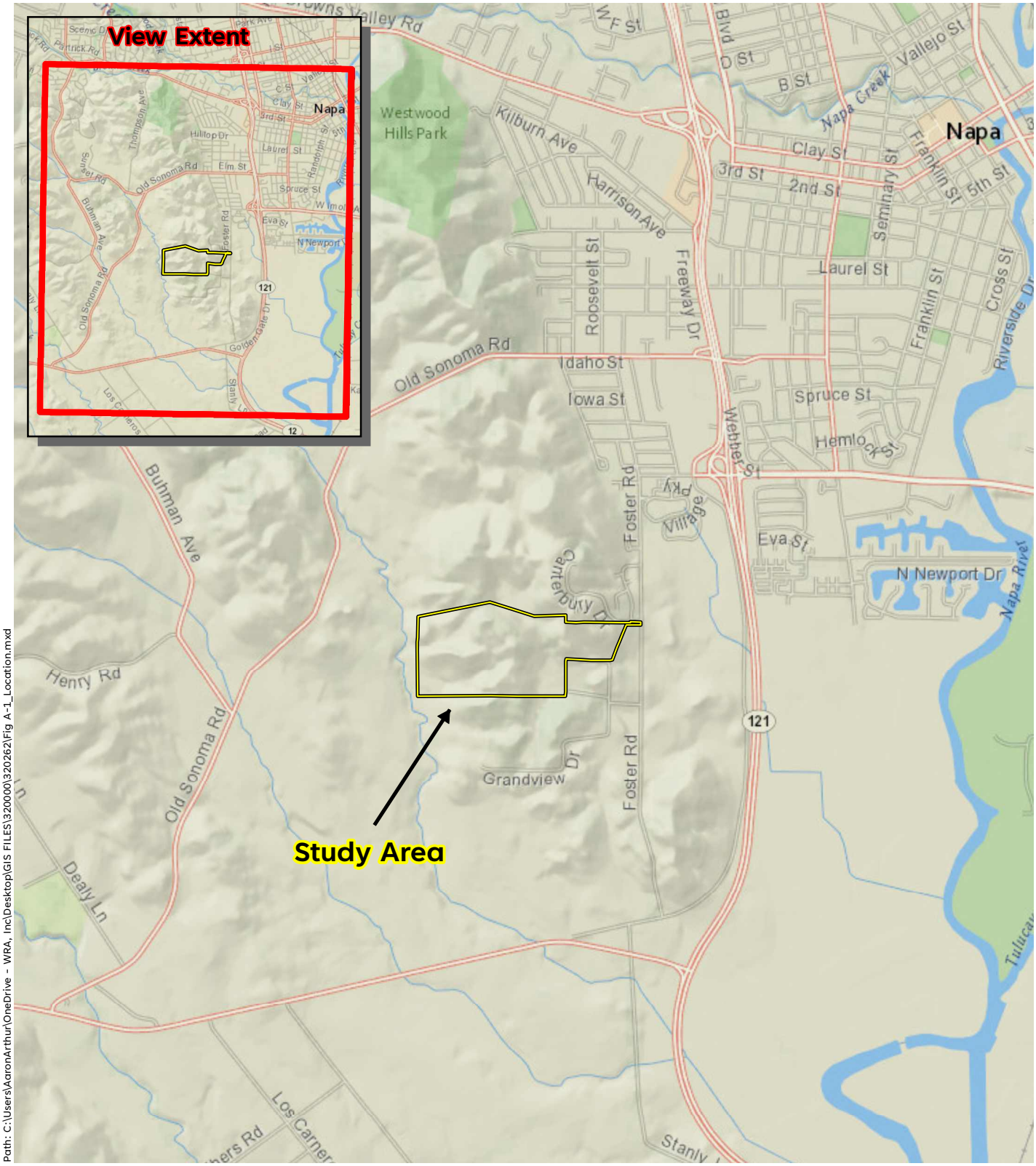
Appendix A

Figures



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Sources: National Geographic, WRA | Prepared By: AaronArthur, 9/19/2023

Figure A-1. Study Area Location

1200 Grandview Drive
Napa County, CA

0 0.5 1 Miles

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wra Environmental Consultants

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: AaronArthur, 9/20/2023

Figure A-2. Soil Mapping Units

1200 Grandview Drive
Napa County, CA

0 100 200 Feet

N

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: AaronArthur, 9/20/2023

Figure A-3. Land Cover: Study Area

1200 Grandview Drive
Napa County, CA

0 100 200 Feet

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wra Environmental Consultants

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: AaronArthur, 9/20/2023

Figure A-4. Land Cover: Project Area

1200 Grandview Drive
Napa County, CA

0 100 200 Feet

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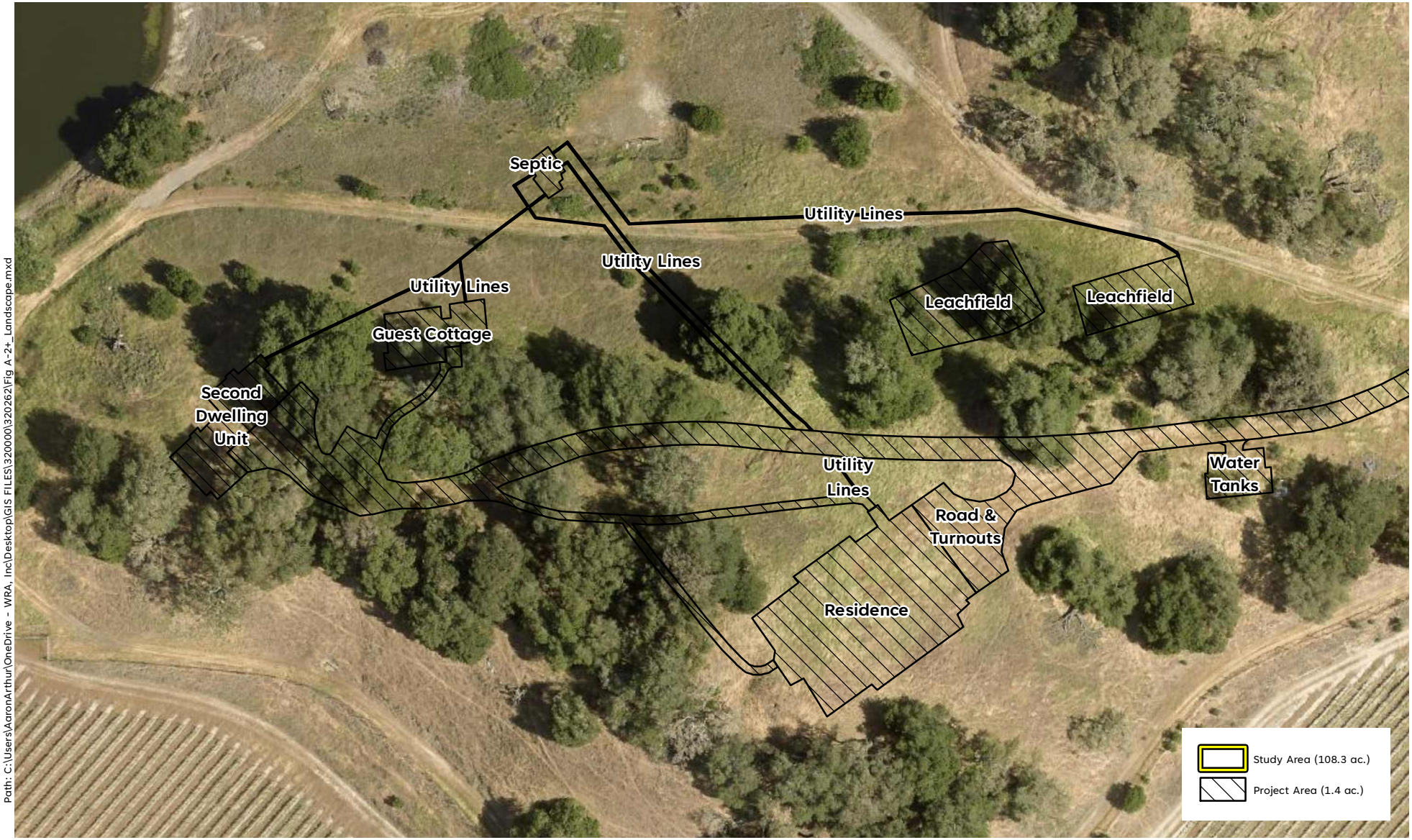

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: AaronArthur, 9/20/2023

Figure A-5. Project Elements

1200 Grandview Drive
Napa County, CA

0 100 200 Feet

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wra Environmental Consultants

Appendix B

Species Observed in the Study Area

Table B-1. Plant species observed in the Study Area: June 29, 2022 and April 26, 2023

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Agavaceae	*Chlorogalum pomeridianum* var. *pomeridianum*	common soap plant	perennial forb	native	--	--	NL
Amaranthaceae	*Amaranthus albus*	pigweed amaranth	annual forb	non-native	--	--	FACU
Anacardiaceae	*Schinus molle*	Peruvian pepper tree	evergreen tree	non-native	--	limited	NL
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	deciduous shrub	native	--	--	FACU
Apiaceae	*Daucus carota*	Queen Anne's lace	perennial forb	non-native	--	assessed	UPL
Apiaceae	*Sanicula bipinnatifida*	purple sanicle	perennial forb	native	--	--	NL
Apiaceae	*Sanicula crassicaulis*	Pacific sanicle	perennial forb	native	--	--	NL
Asteraceae	*Achillea millefolium*	common yarrow	perennial forb	native	--	--	FACU
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	coyote brush	evergreen shrub	native	--	--	NL
Asteraceae	*Carduus pycnocephalus*	Italian thistle	annual forb	non-native	--	moderate	NL
Asteraceae	*Centaurea calcitrapa*	purple star thistle	annual forb	non-native	--	moderate	NL
Asteraceae	*Centaurea melitensis*	tocalote	annual forb	non-native	--	moderate	NL
Asteraceae	*Centaurea solstitialis*	yellow star thistle	annual forb	non-native	--	high	NL
Asteraceae	*Dittrichia graveolens*	stinkwort	annual forb	non-native	--	moderate	NL
Asteraceae	*Erigeron bonariensis*	flax-leaved horseweed	annual forb	non-native	--	--	FACU
Asteraceae	*Hypochaeris radicata*	rough cat's-ear	perennial forb	non-native	--	moderate	FACU
Asteraceae	*Lactuca serriola*	prickly lettuce	annual forb	non-native	--	assessed	FACU
Asteraceae	*Leontodon saxatilis* ssp. *longirostris*	hawkbit	annual forb	non-native	--	--	FACU
Asteraceae	*Logfia filaginoides*	California cottonrose	annual forb	native	--	--	NL
Asteraceae	*Logfia gallica*	narrowleaf cottonrose	annual forb	non-native	--	--	NL
Asteraceae	*Pseudognaphalium luteoalbum*	Jersey cudweed	annual forb	non-native	--	--	FAC
Asteraceae	*Psilocarphus oregonus*	Oregon woollyheads	annual forb	native	--	--	OBL
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* ssp. *asper*	prickly sow thistle	annual forb	non-native	--	assessed	FAC

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Asteraceae	*Sonchus oleraceus*	common sow thistle	annual forb	non-native	--	--	NL
Asteraceae	*Xanthium spinosum*	spiny cocklebur	annual forb	native	--	--	FACU
Asteraceae	*Xanthium strumarium*	rough cocklebur	annual forb	native	--	--	FAC
Azollaceae	*Azolla filiculoides*	Pacific mosquitofern	annual fern	native	--	--	OBL
Boraginaceae	*Amsinckia menziesii*	Menzies' fiddleneck	annual forb	native	--	--	NL
Brassicaceae	*Capsella bursa-pastoris*	shepherd's purse	annual forb	non-native	--	--	FACU
Brassicaceae	*Cardamine californica*	milk maids	perennial forb	native	--	--	NL
Brassicaceae	*Hirschfeldia incana*	short podded mustard	perennial forb	non-native	--	moderate	NL
Brassicaceae	*Raphanus sativus*	wild radish	perennial forb	non-native	--	limited	NL
Brassicaceae	*Sinapis arvensis*	charlock	annual forb	non-native	--	limited	NL
Caryophyllaceae	*Spergularia rubra*	red sand spurry	perennial forb	non-native	--	--	FAC
Caryophyllaceae	*Stellaria media*	common chickweed	annual forb	non-native	--	--	FACU
Convolvulaceae	*Convolvulus arvensis*	field bindweed	perennial forb	non-native	--	assessed	NL
Crassulaceae	*Crassula connata*	sand pygmyweed	annual forb	native	--	--	FAC
Cyperaceae	*Eleocharis macrostachya*	common spikerush	perennial graminoid	native	--	--	OBL
Euphorbiaceae	*Croton setiger*	turkey mullein	annual forb	native	--	--	NL
Fabaceae	*Acmispon americanus*	American lotus	annual forb	native	--	--	NL
Fabaceae	*Lotus corniculatus*	bird's-foot trefoil	perennial forb	non-native	--	assessed	FAC
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	*Trifolium hirtum*	rose clover	annual forb	non-native	--	moderate	NL
Fabaceae	*Trifolium subterraneum*	subterranean clover	annual forb	non-native	--	--	NL
Fabaceae	*Vicia sativa*	garden vetch	annual forb	non-native	--	--	FACU
Fagaceae	*Quercus agrifolia*	coast live oak	evergreen tree	native	--	--	NL
Fagaceae	*Quercus douglasii*	blue oak	deciduous tree	native	--	--	NL
Fagaceae	*Quercus lobata*	valley oak	deciduous tree	native	--	--	FACU

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
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	*Geranium dissectum*	cutleaf geranium	annual forb	non-native	--	moderate	NL
Geraniaceae	*Geranium molle*	woodland geranium	perennial forb	non-native	--	assessed	NL
Geraniaceae	*Geranium purpureum*	herb robert	perennial forb	non-native	--	--	NL
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	perennial forb	native	--	--	FACW
Juncaceae	*Juncus bufonius*	toad rush	annual graminoid	native	--	--	FACW
Juncaceae	*Juncus tenuis*	poverty rush	perennial graminoid	native	--	--	FACW
Lamiaceae	*Lamium amplexicaule*	henbit deadnettle	annual forb	non-native	--	--	NL
Lamiaceae	*Marrubium vulgare*	horehound	perennial forb	non-native	--	limited	FACU
Lamiaceae	*Mentha pulegium*	pennyroyal	perennial forb	non-native	--	moderate	OBL
Lamiaceae	*Stachys rigida* var. *quercetorum*	rough hedgenettle	perennial forb	native	--	--	FACW
Lythraceae	*Lythrum hyssopifolia*	hyssop loosestrife	annual forb	non-native	--	moderate	OBL
Malvaceae	*Malva nicaeensis*	bull mallow	annual forb	non-native	--	--	NL
Montiaceae	*Claytonia parviflora*	spring beauty	annual forb	native	--	--	FACU
Moraceae	*Ficus carica*	common fig	deciduous tree	non-native	--	moderate	FACU
Myrsinaceae	*Lysimachia arvensis*	scarlet pimpernel	annual forb	non-native	--	--	NL
Myrtaceae	*Eucalyptus globulus*	blue gum	evergreen tree	non-native	--	moderate	NL
Onagraceae	*Clarkia purpurea* ssp. *quadrivulnera*	winecup clarkia	annual forb	native	--	--	NL
Onagraceae	*Epilobium brachycarpum*	annual willowherb	annual forb	native	--	--	FAC
Onagraceae	*Taraxia ovata*	sun cup	perennial forb	native	--	--	NL
Orobanchaceae	*Triphysaria eriantha* ssp. *eriantha*	Johnny-tuck	annual forb	native	--	--	NL
Oxalidaceae	*Oxalis pes-caprae*	Bermuda buttercup	perennial forb	non-native	--	moderate	NL
Papaveraceae	*Eschscholzia californica*	California poppy	perennial forb	native	--	--	NL
Plantaginaceae	*Kickxia elatine*	sharpleaf cancerwort	perennial forb	non-native	--	--	UPL
Plantaginaceae	*Plantago lanceolata*	English plantain	perennial forb	non-native	--	limited	FAC
Poaceae	*Aira caryophyllea*	silver hairgrass	annual graminoid	non-native	--	assessed	FACU

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Poaceae	*Avena barbata*	wild oat	annual graminoid	non-native	--	moderate	NL
Poaceae	*Brachypodium distachyon*	false brome	perennial graminoid	non-native	--	moderate	NL
Poaceae	*Briza minor*	little rattlesnake grass	annual graminoid	non-native	--	--	FAC
Poaceae	*Bromus diandrus*	rip-gut brome	annual graminoid	non-native	--	moderate	NL
Poaceae	*Bromus hordeaceus*	soft chess	annual graminoid	non-native	--	limited	FACU
Poaceae	*Cynodon dactylon*	Bermuda grass	perennial graminoid	non-native	--	moderate	FACU
Poaceae	*Cynosurus echinatus*	dogtail grass	annual graminoid	non-native	--	moderate	NL
Poaceae	*Elymus caput-medusae*	Medusa head	perennial graminoid	non-native	--	high	NL
Poaceae	*Elymus glaucus*	blue wildrye	perennial graminoid	native	--	--	FACU
Poaceae	*Festuca bromoides*	brome fescue	perennial graminoid	non-native	--	--	FACU
Poaceae	*Festuca perennis*	Italian rye grass	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Glyceria declinata*	waxy manna grass	perennial graminoid	non-native	--	moderate	FACW
Poaceae	*Hordeum brachyantherum*	meadow barley	perennial graminoid	native	--	--	FACW
Poaceae	*Hordeum marinum*	Mediterranean barley	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Hordeum murinum*	mouse barley	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Hordeum vulgare*	common barley	annual graminoid	non-native	--	--	NL
Poaceae	*Phalaris aquatica*	harding grass	perennial graminoid	non-native	--	moderate	FACU
Poaceae	*Poa annua*	annual bluegrass	annual graminoid	non-native	--	--	FAC
Poaceae	*Polypogon monspeliensis*	rabbit's-foot grass	annual graminoid	non-native	--	limited	FACW
Poaceae	*Stipa pulchra*	purple needlegrass	perennial graminoid	native	--	--	NL
Poaceae	*Triticum aestivum*	bread wheat	annual graminoid	non-native	--	--	NL
Polemoniaceae	*Leptosiphon bicolor*	true babystars	annual forb	native	--	--	UPL
Polygonaceae	*Polygonum aviculare*	dooryard knotweed	perennial forb	non-native	--	--	FAC
Polygonaceae	*Rumex crispus*	curly dock	perennial forb	non-native	--	limited	FAC
Polygonaceae	*Rumex pulcher*	fiddle dock	perennial forb	non-native	--	--	FAC
Ranunculaceae	*Ranunculus californicus*	California buttercup	perennial forb	native	--	--	FACU
Ranunculaceae	*Ranunculus muricatus*	spiny buttercup	perennial forb	non-native	--	--	FACW

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	evergreen shrub	non-native	--	high	FAC
Rubiaceae	*Galium aparine*	common bedstraw	annual forb	native	--	--	FACU
Rubiaceae	*Galium parisiense*	wall bedstraw	annual forb	non-native	--	--	UPL
Rubiaceae	*Sherardia arvensis*	blue field madder	annual forb	non-native	--	--	NL
Salicaceae	*Salix lasiandra*	Pacific willow	deciduous tree	native	--	--	FACW
Salicaceae	*Salix lasiolepis*	arroyo willow	deciduous tree	native	--	--	FACW
Sapindaceae	*Aesculus californica*	California buckeye	deciduous tree	native	--	--	NL
Saxifragaceae	*Lithophragma affine*	woodland star	perennial forb	native	--	--	NL
Themidaceae	*Dipterostemon capitatum*	blue dicks	perennial forb	native	--	--	FACU
Typhaceae	*Typha angustifolia*	narrowleaf cattail	perennial forb	non-native	--	--	OBL
Typhaceae	*Typha latifolia*	common cattail	perennial forb	native	--	--	OBL
Urticaceae	*Urtica dioica ssp. gracilis*	American stinging nettle	perennial forb	native	--	--	FAC
Urticaceae	*Urtica urens*	dwarf nettle	annual forb	non-native	--	--	NL
Violaceae	*Viola pedunculata*	johnny jump-up	perennial forb	native	--	--	NL
Vitaceae	*Vitis vinifera*	wine grape	deciduous vine	non-native	--	--	NL

All species identified using the *Jepson Manual, 2nd Edition* (Baldwin et al. 2012), *The Jepson Flora Project* (eFlora 2023), and *A Flora of Napa County* (Ruygt 2020); nomenclature follows *The Jepson Flora Project* (eFlora 2023) 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 2023a)

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 2018)

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: June 29, 2022 and April 26, 2023

SCIENTIFIC NAME	COMMON NAME
Mammals	
Canus latrans	coyote
Lepus californicus	black-tailed jackrabbit
Odocoileus hemionus columbianus	black-tailed deer
Otospermophilus beecheyi	California ground squirrel
Birds	
Aeronautes saxatalis	white-throated swift
Agelaius phoeniceus	red-winged blackbird
Anas platyrhynchos	mallard
Aphelocoma californica	California scrub-jay
Baeolophus inornatus	oak titmouse
Branta canadensis	Canada goose
Bubo virginianus	great horned owl
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Calypte anna	Anna's hummingbird
Cathartes aura	turkey vulture
Corvus corax	common raven
Elanus leucurus	white-tailed kite
Haemorhous mexicanus	house finch
Icterus bullockii	Bullock's oriole
Junco hyemalis	dark-eyed junco
Melanerpes formicivorus	acorn woodpecker
Meleagris gallopavo	wild turkey
Melozone crissalis	California towhee
Mimus polyglottos	northern mockingbird
Myiarchus cinerascens	ash-throated flycatcher
Oreothlypis celata	orange-crowned warbler
Picoides pubescens	downy woodpecker
Pipilo maculatus	spotted towhee
Sayornis nigricans	black phoebe
Sialia mexicana	western bluebird
Sitta carolinensis	white-breasted nuthatch

SCIENTIFIC NAME	COMMON NAME
Spinus psaltria	lesser goldfinch
Sturnus vulgaris	European starling
Tachycineta bicolor	tree swallow
Tachycineta thalassina	violet-green swallow
Thryomanes bewickii	Bewick's wren
Zenaida macroura	mourning dove
Reptiles and Amphibians	
Sceloporus occidentalis	western fence lizard

Appendix C

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

Table C. Potential for Special-status Species to Occur in the Study Area. List compiled from the Napa County Baseline Data Report (NCBDR; Napa County 2005), CDFW BIOS database (CDFW 2023a), USFWS IPaC Report (USFWS 2023b), and CNPS Electronic Inventory (CNPS 2023a) searches. For plants, the Rutherford, Yountville, Capell Valley, Sonoma, Napa, Mt. George, Sears Point, Cuttings Wharf, and Cordelia USGS 7.5' quadrangles were included in the search. For wildlife, the entirety of Napa County was considered.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
PLANTS				
Agrostis hendersonii Henderson's bentgrass	CRPR 3	Valley and foothill grassland, vernal pools; situated in mesic grasslands; wetland indicator: FACW/FACW. Elevation range: 225 – 995 feet. Blooms: April – June.	**Moderate Potential.** The Study Area contains seasonal wetland habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
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 grassland habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Amorpha californica var. *napensis* Napa false indigo	CRPR 1B	Openings in broadleaf upland forest, chaparral, cismontane woodland. Elevation range: 395 – 6560 feet. Blooms: April – July.	**Moderate Potential.** The Study Area contains rocky woodland habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
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 grassland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	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.	**No Potential.** The Study Area does not contain chaparral or forest habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Arabis modesta modest rockcress	CRPR 4	Chaparral, lower montane coniferous forest; located on steep slopes, cliffs, and shaded canyons underlain by deep soils. Elevation range: 390 – 2600 feet. Blooms: March – July.	**No Potential.** The Study Area does not contain chaparral or forest habitat to support this species.	**Not Present.** 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.	**No Potential.** The Study Area does not contain chaparral habitat to support this species.	**Not Present.** 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 rocky woodland that may support this species; documented occurrences from central Mayacama Mountains.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Astragalus clevelandii Cleveland's milk-vetch	CRPR 4	Chaparral, cismontane woodland, riparian forest; located on serpentine seeps; serpentine indicator: SE. Elevation range: 650 – 4875 feet. Blooms: June – September.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Astragalus tener var. *tener* alkali milk-vetch	CRPR 1B	Playas, vernal pools, valley and foothill grassland; located in vernal pools and similar wetlands/mesic areas on alkaline substrate. Elevation range: 0 – 195 feet. Blooms: March – June.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
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.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** 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.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
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.	**No Potential.** The Study Area does not contain chaparral or forest habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	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.	**No Potential.** The Study Area does not contain chaparral or coastal scrub habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Carex lyngbyei Lyngbye's sedge	CRPR 2B	Marshes and swamps; located in brackish or freshwater. Elevation range: 0 - 30 feet. Blooms April - August	**No Potential.** The Study Area does not contain coastal marsh habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Castilleja affinis ssp. *neglecta* Tiburon paintbrush	FE; ST; CRPR 1B	Valley and foothill grassland; located in grassy, open areas and rock outcrops underlain by serpentine substrate; serpentine indicator: SE. Elevation range: 195 – 1300 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** 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.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Castilleja ambigua var. *meadii* Mead's owl's-clover	CRPR 1B	Meadows and seeps, vernal pools; located in mesic areas or wetlands underlain by gravelly clay soils derived from volcanics. Elevation range: 1460 – 1545 feet. Blooms: April – May.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	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.	**No Potential.** The Study Area does not contain chaparral habitat to support this species.	**Not Present.** 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.	**No Potential.** The Study Area does not contain chaparral or scrubby woodland habitat to support this species.	**Not Present.** 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.	**No Potential.** The Study Area does not contain chaparral or scrubby woodland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Ceanothus sonomensis Sonoma ceanothus	CRPR 1B	Chaparral; located on sandy serpentine or volcanic substrates; serpentine indicator: WI/IN. Elevation range: 705 – 2625 feet. Blooms: February – April.	**No Potential.** The Study Area does not contain chaparral habitat to support this species.	**Not Present.** 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.	**Unlikely.** Although the Study Area contains seasonal wetlands and grasslands, this species is known from highly alkali areas.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Centromadia parryi ssp. *rudis* Parry's rough tarplant	CRPR 4	Valley and foothill grassland, vernal pools; situated on vernally mesic sites underlain by alkaline soils, frequently seeps, swales, and roadsides. Elevation range: 0 – 330 feet. Blooms: May – October.	**Unlikely.** Although the Study Area contains seasonal wetlands and grasslands, this species is known from highly alkali areas.	**Presumed Absent.** No further actions are recommended for this species.
Chloropyron molle ssp. *molle* soft bird's-beak	FE, SR, CRPR 1B	Coastal brackish or salt marshes; located in low-growing saltgrass and picklweed mats. Elevation range: 0 – 10 feet. Blooms: June – November.	**No Potential.** The Study Area does not contain coastal marsh habitat 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.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** 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.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** 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.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Eleocharis parvula small spikerush	CRPR 4	Marshes and swamps. Elevation range: 5 – 9815 feet. Blooms: sometimes April, June – August, sometimes September.	**No Potential.** The Study Area does not contain marsh habitat 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 woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Erigeron greenei Greene's narrow-leaved daisy	CRPR 1B	Chaparral; located on volcanic or serpentine substrate. Elevation range: 260 – 3270 feet. Blooms: May – September.	**No Potential.** The Study Area does not contain chaparral habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Eryngium jepsonii Jepson's coyote thistle	CRPR 1B	Valley and foothill grassland, vernal pools; situated on clay substrate that is vernally saturated. Elevation range: 10 – 975 feet. Blooms: April – August.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	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.	**Unlikely.** The woodland and grassland types associated with this species are not present in the Study Area.	**Presumed Absent.** No further actions are recommended for this species.
Extriplex joaquiniana San Joaquin spearscale	CRPR 1B	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland; located on alkaline substrate. Elevation range: 0 – 2715 feet. Blooms: April – October.	**Unlikely.** Although the Study Area contains seasonal wetlands and grasslands, this species is known from highly alkali areas.	**Presumed Absent.** No further actions are recommended for this species.
Harmonia nutans nodding harmonia	CRPR 4	Chaparral, cismontane woodland; located on rocky to gravelly substrates derived from volcanics. Elevation range: 240 – 3170 feet. Blooms: March – May.	**Moderate Potential.** The Study Area contains rocky grassland and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Helianthella castanea Diablo helianthella	CRPR 1B	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Elevation range: 180 – 3900 feet. Blooms: March - June	**Moderate Potential.** The Study Area contains rocky grassland and woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Hemizonia congesta ssp. congesta hayfield tarplant	CRPR 1B	Coastal scrub, valley and foothill grassland; serpentine indicator: WI/IN. Elevation range: 65 – 1840 feet. Blooms: April – October.	**Moderate Potential.** The Study Area contains grassland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Hesperolinon bicarpellatum Two-carpellate western flax	CRPR 1B	Chaparral; located on serpentine substrate; serpentine indicator: SE. Elevation range: 195 – 3270 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** No further actions are recommended for this species.
Hesperolinon breweri Brewer's western flax	CRPR 1B	Chaparral, cismontane woodland, valley and foothill grassland; typically located in serpentine grassland and serpentine chaparral underlain by rocky substrates; serpentine indicator: SI. Elevation range: 95 – 2925 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** 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.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** No further actions are recommended for this species.
Horkelia tenuiloba thin-lobed horkelia	CRPR 1B	Broadleaf upland forest, coastal scrub, valley and foothill grassland, chaparral; in mesic openings, on sandy substrate. Elevation range: 165 – 1640 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain acidic sandy substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Iris longipetala coast iris	CRPR 4	Coastal prairie, lower montane coniferous forest, meadows and seeps; located on mesic sites. Elevation range: 0 – 1950 feet. Blooms: March – May.	**Unlikely.** This species is known from cooler, mesic coastal grasslands.	**Presumed Absent.** No further actions are recommended for this species.
Isocoma arguta Carquinez goldenbush	CRPR 1B	Valley and foothill grassland; located on alkaline soils. Elevation range: 0 – 60 feet. Blooms: August – December.	**Unlikely.** Although the Study Area contains grasslands, this species is known from highly alkali areas.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Lasthenia conjugens Contra Costa goldfields	FE, CRPR 1B	Valley and foothill grassland, vernal pools, cismontane woodland; located in pools, swales, and depressions in mesic grassy sites underlain by alkaline substrate. Elevation range: 0 – 1530 feet. Blooms: March – June.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Lathyrus jepsonii var. *jepsonii* Delta tule pea	CRPR 1B	Freshwater and brackish marshes; typically located near or on slough margins, closely associated with cattail, tules, bulrushes, Baltic rush, California rose, and Suisun Marsh aster; known widely throughout Suisun Bay and Delta regions. Elevation range: 0 – 15 feet. Blooms: May – July, sometimes September.	**No Potential.** The Study Area does not contain coastal marsh habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Legenere limosa legenere	CRPR 1B	Vernal pools; typically located in the deepest portions of pools. Elevation range: 3 – 2860 feet. Blooms: April – June.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Leptosiphon 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 grassland that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	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.	**No Potential.** The Study Area does not contain chaparral or serpentine woodland habitat to support this species.	**Not Present.** 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 woodland types associated with 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.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** No further actions are recommended for this species.
Lilaeopsis masonii Mason’s Lilaeopsis	SR, CRPR 1B	Freshwater and brackish coastal marshes, riparian scrub; located on channel banks in the splash zone on bare mud substrate. Elevation range: 0 – 35 feet. Blooms: April – November.	**No Potential.** The Study Area does not contain coastal marsh habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Lilium rubescens redwood lily	CRPR 4, LR	Broadleaf upland forest, chaparral, lower montane coniferous forest, upper montane coniferous forest, North Coast coniferous forest; often located on serpentine substrates, and along roadcuts; serpentine indicator: WI. Elevation range: 95 – 6210 feet. Blooms: April – September.	**No Potential.** The Study Area does not contain chaparral or forest habitat 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.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Lomatium repostum Napa Lomatium	CRPR 1B	Chaparral, cismontane woodland; located on serpentine or volcanic substrates; serpentine indicator: SI. Elevation range: 290 – 2700 feet. Blooms: March – June.	**No Potential.** The Study Area does not contain chaparral or scrubby woodland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Lupinus sericatus Cobb Mountain lupine	CRPR 1B	Broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest; typically located in stands of knobcone pine-oak woodland, on open wooded slopes in gravelly substrate typically derived from volcanics, sometimes serpentine. Elevation range: 890 – 4960 feet. Blooms: March – June.	**Unlikely.** The Study Area does not contain woodland types associated with this species.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Micropus amphibolus Mt. Diablo cottonweed	CRPR 3	Broadleaf upland forest, chaparral, cismontane woodland, valley and foothill grassland; typically on thin, rocky soils; serpentine indicator: WI. Elevation range: 145 – 2710 feet. Blooms: March – May.	**Moderate Potential.** The Study Area contains areas of thin, rocky soils and low biomass that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Monardella viridis green monardella	CRPR 4	Broadleaf upland forest, chaparral, cismontane woodland; situated on serpentine or volcanic soils; serpentine indicator: BE/SI. Elevation range: 325 – 3285 feet. Blooms: June – September.	**No Potential.** The Study Area does not contain chaparral or scrubby woodland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia leucocephala ssp. *pauciflora* few-flowered navarretia	FE, ST, CRPR 1B	Vernal pools; located on volcanic ash flow and volcanic substrate pools. Elevation range: 1300 – 2780 feet. Blooms: May – June.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
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.	**No Potential.** The Study Area does not contain chaparral or large rock outcrops to support this species.	**Not Present.** No further actions are recommended for this species.
Polygonum marinense Marin knotweed	CRPR 3	Salt and brackish coastal marshes. Elevation range: 0 – 35 feet. Blooms: sometimes April, May – August, sometimes October.	**No Potential.** The Study Area does not contain coastal marsh habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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.	**High Potential.** The Study Area contains shallow edges of reservoirs that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Rhynchospora californica California beaked-rush	CRPR 1B	Bogs and fens, lower montane coniferous forest, meadows and seeps, freshwater marshes and swamps. Elevation range: 145 – 3315 feet. Blooms: May – July.	**Unlikely.** The Study Area does not contain perennial wetland (freshwater marsh) habitat to support this species.	**Presumed Absent.** No further actions are recommended for this species.
Sagittaria sanfordii Sanford's arrowhead	CRPR 1B	Marshes and swamps; located in assorted shallow freshwater habitats including canals and perennial drainage ditches. Elevation range: 0 – 2115 feet. Blooms: May – October, sometimes November.	**High Potential.** The Study Area contains shallow edges of reservoirs that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Sidalcea hickmanii ssp. *napensis* Napa checkerbloom	CRPR 1B	Chaparral; located on rhyolitic substrates. Elevation range: 1345 – 1985 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain chaparral habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Sidalcea keckii Keck's checkerbloom	FE, CRPR 1B	Cismontane woodland, valley and foothill grassland; located in grassy areas in blue oak woodland underlain by serpentine substrate; serpentine indicator: SI. Elevation range: 240 – 2115 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Streptanthus hesperidis green jewelflower	CRPR 1B	Chaparral, cismontane woodland; located in openings in brushy/wooded sites on rocky serpentine substrate; serpentine indicator: SE. Elevation range: 420 – 2470 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain serpentine habitats to support this species.	**Not Present.** No further actions are recommended for this species.
Symphyotrichum lentum Suisun Marsh aster	CRPR 1B	Freshwater and brackish marshes and swamps; typically located on slough margins and edges, closely associated with cattail, tules, bulrushes, California rose, and Delta Tule pea. Elevation range: 0 – 10 feet. Blooms: May – November.	**No Potential.** The Study Area does not contain coastal marsh habitat to support this species.	**Not Present.** 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 volcanic ash soils to support this species.	**Not Present.** No further actions are recommended for this species.
Trifolium amoenum showy rancheria clover	FE, CRPR 1B	Valley and foothill grassland, coastal bluff scrub, swales, open sunny sites, sometimes on serpentine; serpentine indicator: WI/IN. Elevation range: 15 – 1365 feet. Blooms: April – June.	**Moderate Potential.** The Study Area contains grassland habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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.	**Moderate Potential.** The Study Area contains seasonal wetlands that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.
Triteleia lugens dark-mouthed triteleia	CRPR 4, LR	Broadleaf upland forest, chaparral, lower montane coniferous forest, coastal scrub. Elevation range: 325 – 3250 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain chaparral or forest habitat to support this species.	**Not Present.** 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 woodland habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level special-status plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	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.** Woodland and forest within the Study Area provides trees suitable for roosting; there are CNDDB occurrences within 5 miles (CDFW 2021a). Targeted bat assessment (i.e., close inspection of trees) was not performed.	**Presence Unknown.** If relevant, tree trimming outside of maternity roosting season, or conduct pre-construction roost habitat assessment. See Section 6.2.2.
Bassariscus astutus ringtail (ringtail cat)	SFP	Widely distributed throughout much of California. Found in a variety of habitats including riparian areas, semi-arid country, deserts, chaparral, oak woodlands, pinyon pine woodlands, juniper woodlands and montane conifer forests usually under 4,600 ft. elevation. Typically uses cliffs or large trees for shelter.	**Unlikely.** The Study Area lacks cliffs and large tree cavities/hollows typical of dens for this species; no known occurrences in the vicinity.	**Presumed Absent.** No further recommendations for this species.
Corynorhinus townsendii townsendii Townsend's western big-eared bat	SSC, WBWG High	Humid coastal regions of northern and central California. Roost 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	**Unlikely.** Buildings within the Study Area are occupied or otherwise maintained, reducing roost potential.	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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.	**Unlikely.** The Study Area lacks large rock structures that are suitable for roosting. There are no CNDDB occurrences of this species in Napa County (CDFW 2023a).	**Presumed Absent.** No further recommendations for this species.
Lasiurus blossevillii western red bat	SSC, WBWG High	Highly migratory and typically solitary, roosting primarily in the foliage of trees or shrubs. Associated with riparian 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 lacks large, broadleaved trees of the type typically used for roosting (maples, sycamores, etc.).	**Presumed Absent.** No further recommendations 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.** Oak woodland within the Study Area provides trees suitable for roosting. Targeted bat assessment (i.e., close inspection of trees) was not performed.	**Presence Unknown.** If relevant, tree trimming outside of maternity roosting season, or conduct pre-construction roost habitat assessment. See Section 6.2.2.
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.	**Unlikely.** The Study Area does not contain stands of coniferous forest.	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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 contains no tidal or brackish marsh and is outside of this species' Napa County range.	**Not Present.** No further recommendations for this species.
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 contains no tidal or brackish marsh and is outside of this species' Napa County range.	**Not Present.** No further recommendations 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 largely on burrowing rodents.	**Moderate Potential.** The Study Area contains open woodland and grassland with some suitable habitat elements. There is a CNDDB occurrence approximately 0.9 mile to the south, though it dates from 1911 (CDFW 2023a). Large burrows characteristic of this species were looked for and not observed during the site visits.	**Presence Unknown.** A pre-construction burrow/den survey should be performed in focal areas prior to ground disturbance; see Section 6.2.2.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Birds				
Agelaius tricolor tricolored blackbird	SC (E), 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.	**Unlikely.** Ponds with the Study Area feature only limited emergent vegetation that would be suitable for nesting. No indication of presence observed during site visits (timed during two consecutive breeding seasons).	**Presumed Absent.** No further recommendations 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.** The Study Area lacks expanses of suitable grassland habitat.	**Presumed Absent.** No further recommendations for this species.
Aquila chrysaetos golden eagle	BGEPA, SFP	Occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas.	**Unlikely.** The Study Area does not provide large cliffs and lacks typical nest trees. No indication of presence observed during site visits. May forage in the vicinity.	**Presumed Absent.** No further recommendations 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 in proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Moderate Potential (nesting).** The Study Area's eastern pond (reservoir) provides perennial foraging habitat and adjacent trees for nesting. However, no indication of nesting or even presence observed during site visits (timed during two consecutive breeding seasons).	**Not Observed.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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 sequested terrestrial substrates. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Moderate Potential (nesting).** The Study Area's eastern pond (reservoir) provides perennial foraging habitat and adjacent trees for nesting. However, no indication of nesting or even presence observed during site visits (timed during two consecutive breeding seasons).	**Not Observed.** No further recommendations for this species.
Asio flammeus short-eared owl	SSC	Occurs year-round, but primarily as a winter visitor; breeding very 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).	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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.** Rare in Napa County, with the nearest observations located on the Napa Valley floor (eBird 2023a).	**Presumed Absent.** No further recommendations for this species.
Athene cunicularia burrowing owl	SSC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	**Unlikely.** Breeding and wintering distribution within Napa County are restricted to the vicinity of Lake Berryessa and southern baylands (Smith 2003, CDFW 2021a).	**Presumed Absent.** No further recommendations for this species.
Buteo swainsoni Swainson's hawk	ST	Summer resident in Central Valley and some coastal valleys. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as favored agricultural fields, especially alfalfa. Preys on arthropods year-round as well as vertebrates during the breeding season.	**Moderate Potential.** Napa County's breeding population is primarily restricted to baylands; the nearest CNDDB nesting occurrence is approximately 1.6 miles to the southwest (CDFW 2023a). The Study Area provides trees for nesting and open areas for foraging.	**Presence Unknown.** Vegetation removal and initial ground disturbance should occur outside of nesting season, or conduct dedicated pre-construction surveys and avoid any active nests found. See Section 6.2.2.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Charadrius alexandrines 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 recommendations for this species.
Circus cyaneus northern harrier	SSC	Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and some agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates.	**Unlikely.** Grassland patches within the Study Area are relatively small in contiguous area, and the surroundings (e.g., vineyards) are subject to regular disturbance.	**Presumed Absent.** No further recommendations for this species.
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.	**Unlikely.** Woodland within the Study Area features a relatively sparse canopy, with conifers absent.	**Presumed Absent.** No further recommendations for this species.
Coturnicops noveboracensis yellow rail	SSC	Summer resident in eastern Sierra Nevada in Mono County, breeding in shallow freshwater marshes and wet meadows with dense vegetation. Also a rare winter visitor along the coast and other portions of the state. Extremely cryptic.	**No Potential.** The Study Area does not provide any suitable marsh/wetland habitat.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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).	**Not Present.** No further recommendations 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.	**Moderate Potential (nesting).** The Study Area's eastern pond (reservoir) provides perennial foraging habitat and adjacent trees for nesting. However, no indication of nesting or even presence observed during site visits (timed during two consecutive breeding seasons).	**Not Observed.** No further recommendations for this species.
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.	**High Potential.** Woodland areas within the Study Area provides suitable nesting trees, with adjacent open areas for foraging.	**Present.** One white-tailed kite was observed foraging in June 2022. Vegetation removal and initial ground disturbance should occur outside of nesting season, or conduct a pre-construction survey and avoid any active nests found. See Section 6.2.2.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Falco peregrinus anatum American peregrine falcon	SE, 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.	**Unlikely.** The Study Area does not contain large cliffs or suitable man-made structures for nesting.	**Presumed Absent.** No further recommendations for this species.
Geothlypis trichas sinuosa San Francisco (saltmarsh) common yellowthroat	SSC	Resident of the San Francisco Bay region, in fresh and salt water 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, and this species' Napa County distribution is restricted to tidal and brackish baylands (Shuford and Gardali 2008).	**Not Present.** No further recommendations 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.** On-site reservoirs are small, and no typical potential nest trees (large conifers) are present within or adjacent to the Study Area. As per Smith (2003) and CDFW (2023a), nesting within Napa County is known only from the immediate vicinity of Lake Berryessa.	**Presumed Absent.** No further recommendations for this species.
Icteria virens yellow-breasted chat	SSC, LR	Summer resident, occurring in riparian areas with an open canopy, very dense understory, and trees for song perches. Nests in thickets of willow (*Salix* ssp.), blackberry (*Rubus* spp.), and wild grape (*Vitis californicus*).	**Unlikely.** The Study Area does not contain stands of dense riparian understory favored by this species for nesting.	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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-foliaged shrubs or trees.	**Moderate Potential.** The Study Area provides some suitable habitat elements, including open areas with trees/shrubbery and fence posts; there are eBird observations in the vicinity (eBird 2023). Not observed during site visits.	**Presence Unknown.** 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 6.2.2.
Laterallus jamaicensis coturniculus California black rail	ST, SFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	**No Potential.** The Study Area does not contain tidal or brackish marsh. Within Napa County, this species is restricted to baylands and the lower Napa River.	**Not Present.** No further recommendations for this species.
Melospiza melodia samuelis San Pablo song sparrow	SSC	Year-round resident of tidal marshes along the north side of San Francisco and San Pablo Bays. Typical habitat is dominated by pickleweed, with gumplant and other shrubs present in the upper zone for nesting. May forage in areas adjacent to marshes.	**No Potential.** The Study Area contains no tidal or brackish marsh and is outside of this species' limited Napa County range (Shuford and Gardali 2008).	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
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.	**Moderate Potential (nesting).** The Study Area's eastern pond (reservoir) provides perennial foraging habitat and adjacent trees for nesting. However, no indication of nesting or even presence observed during site visits (timed during two consecutive breeding seasons).	**Not Observed.** No further recommendations 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.	**Moderate Potential.** Areas of grassland within the Study Area are suitable for nesting by this species. Not observed during site visits.	**Presence Unknown.** Vegetation removal and initial ground disturbance should occur outside of nesting season, or conduct a pre-construction survey and avoid any active nests found. See Section 6.2.2.
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.	**Unlikely.** The Study Area does not contain coniferous forest and lacks typical nesting habitat.	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Rallus obsoletus obsoletus California Ridgway's (clapper) rail	FE, SE, SFP	Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on mollusks and crustaceans.	**No Potential.** The Study Area does not contain tidal or brackish marsh. Within Napa County, this species is restricted to baylands and the lower Napa River system.	**Not Present.** No further recommendations for this species.
Riparia riparia bank swallow	ST	Summer resident in riparian and other lowland habitats near rivers, lakes and the ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Currently known to breed in Siskiyou, Shasta, and Lassen Cos., portions of the north coast, and along Sacramento River from Shasta Co. south to Yolo Co.	**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 recommendations for this species.
Setophaga petechia brewsteri (Brewster's) yellow warbler	SSC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting is variable, but dense willow growth is typical. Occurs widely on migration.	**Unlikely (breeding).** The Study does not contain stream courses with dense willow or similar riparian cover. May occur on migration.	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Spizella atrogularis black-chinned sparrow	LR	Summer resident. Typically occurs on arid, rocky slopes with brushy vegetation, e.g. mixed chaparral, and sagebrush.	**No Potential.** The Study Area does not contain expansive chaparral or similar brushy habitats.	**Not Present.** No further recommendations for this species.
Strix occidentalis caurina northern spotted owl	FT, ST, SSC	Year-round resident in dense, structurally complex forests, primarily those with stands of mature conifers. In Napa County, uses both coniferous and mixed (coniferous-hardwood) forests. Nests on platform-like substrates in the forest canopy, including in tree cavities. Preys on mammals.	**No Potential.** The Study Area does not contain coniferous or mixed forest.	**Not Present.** No further recommendations for this species.
Xanthocephalus xanthocephalus yellow-headed blackbird	SSC, LR	Summer resident. Breeds colonially in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. Requires abundant large insects such as dragonflies; nesting is timed for maximum emergence of insect prey.	**Unlikely.** Ponds with the Study Area feature only limited emergent vegetation that would be suitable for nesting. No indication of presence observed during site visits (timed during two consecutive breeding seasons).	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Reptiles and Amphibians				
Dicamptodon ensatus California giant salamander	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	**No Potential.** The Study Area lacks streams and is outside of this species' Napa County range.	**Not Present.** No further recommendations for this species.
Emys marmorata western pond turtle	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**Moderate Potential.** The Study Area's perennial reservoirs (ponds) provide suitable aquatic habitat (including basking substrates); the small reservoir in the northwestern portion of the site also features adjacent grassland that is suitable for nesting.	**Presence Unknown.** No turtles observed during site visits, but these results are not considered conclusive. Pre-construction survey recommended; see Section 6.2.2.
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).	**No Potential.** The Study Area lacks perennial or near-perennial rocky streams.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Rana draytonii California red-legged frog	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense emergent and/or overhanging riparian vegetation. Favors perennial to intermittent ponds, marshes, and stream pools. Requires 11 to 20 weeks of continuous inundation for larval development. Disperses through upland habitats during and after rains.	**Unlikely.** The Study Area contains perennial reservoirs (ponds) with favorable habitat elements, particularly the northwestern pond. However, the nearest CNDDB occurrences are greater than 6.3 miles away (to the southeast; CDFW 2023a), and the site (including adjacent properties to the south) are effectively surrounded by vineyard development, rending movement in/out of the Study Area unlikely. No frogs observed within or along shorelines of ponds during site visits.	**Presumed Absent.** No further recommendations for this species.
Fishes				
Acipenser medirostris green sturgeon	FT, SSC	Spawns in the Sacramento River and Klamath Rivers, at temperatures between 8-14 degrees C. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** No further recommendations 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 fairly still but not stagnant water and high oxygen levels.	**No Potential.** The Study Area does not contain brackish or ore estuarine waters; believed to be extirpated from San Francisco Bay.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Hypomesus transpacificus Delta smelt	FT, ST	Endemic to the Sacramento-San Joaquin estuary in areas where salt and freshwater systems meet. Occurs seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt; most often at salinities < 2 ppt.	**No Potential.** The Study Area does not contain estuarine waters.	**Not Present.** No further recommendations 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 < 25 degrees C.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** No further recommendations for this species.
Mylopharodon conocephalus hardhead	SSC	Known from mid-elevation streams in the Sacramento, San Joaquin, Napa River, and Russian River drainages. Prefer clear, deep pools with sand-gravel-boulder bottoms and slow water velocity.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** No further recommendations 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; the on-site ephemeral stream lacks hydrology to support migration or spawning.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Oncorhynchus tshawytscha Chinook salmon - California coastal ESU	FT	This ESU includes all naturally spawned populations of Chinook salmon from rivers and streams south of the Klamath River (exclusive) to the Russian River (inclusive). Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 degrees C lethal to adults.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters and is outside of the relevant watershed.	**Not Present.** No further recommendations for this species.
Pogonichthys macrolepidotus Sacramento splittail	SSC	Formerly endemic to the lakes and rivers of the Central Valley, but now confined to the Sacramento Delta, Suisun Bay and associated marshes. Occurs in slow-moving river sections and dead-end sloughs. Requires flooded vegetation for spawning and foraging for young. A freshwater species, but tolerant of moderate salinity (10-18 parts per thousand).	**No Potential.** The Study Area does not contain riverine or estuarine waters.	**Not Present.** No further recommendations for this species.
Spirinchus thaleichthys longfin smelt	FC, ST, SSC	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15 to 30 ppt, but can be found in completely freshwater to almost pure seawater.	**No Potential.** The Study Area does not contain riverine or estuarine waters.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	RESULTS AND RECOMMENDATIONS
Invertebrates				
Bombus occidentalis western bumble bee	SC	Formerly common throughout much of western North America; populations from southern British Columbia to central California have nearly disappeared. 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 plant species are visited and pollinated.	**No Potential.** As per the Xerces Society (2018), this species is considered extirpated in the Bay Area.	**Not Present.** No further recommendations 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 recommendations 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.** Elderberry was not observed during the site visit; CNDDB occurrences are restricted to Napa County's southeastern-most portion (CDFW 2023a).	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE	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.** Violet was not observed within the Study Area during the site visit. Additionally, this species' known range with Napa County is restricted to the immediate vicinity of the Cordelia Hills.	**Not Present.** No further recommendations 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; favors shallow pools away from mainstem flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	**No Potential.** Although the Study Area contains an ephemeral stream, 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 (CDFW 2023a).	**Not Present.** No further recommendations 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
LR	Locally Rare as per Napa County Baseline Report
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
CRPR 1A	CNPS CRPR 1A: Plants presumed extinct in California
CRPR 1B	CNPS CRPR 1B: Plants rare, threatened or endangered in California and elsewhere
CRPR 2A	CNPS CRPR 2A: Plants presumed extirpated in California, but more common elsewhere
CRPR 2B	CNPS CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 3	CNPS CRPR 3: Plants about which CNPS needs more information (a review list)

CRPR 4	CNPS CRPR 4: Plants of limited distribution (a watch list)
WBWG	Western Bat Working Group High or Medium-high Priority Species

Potential to Occur:

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

Results and Recommendations:

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

Appendix D

Representative Photographs

Annual grassland and coast live oak woodland in the eastern portion of the Study Area. (*Taken: June 29, 2022*)

Blue gum grove along the reservoir in the eastern portion of the Study Area. (*Taken: June 29, 2022*)

Coast live oak woodland near the Project Area. (*Taken: June 29, 2022*)

Reservoir and adjacent grassland with portion of a seasonal wetland in the northwestern portion of the Project Area. (*Taken: April 26, 2023*)

Appendix E

Statement of Qualifications

Appendix E. Statement of Qualifications

WRA is an environmental consulting firm with over 31 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.

Matt Richmond, BS, Principal with WRA, has over 19 years of experience performing botanical assessments, rare plant surveys, environmentally sensitive habitat area surveys, wetland delineations, and vegetation mapping. He also has experience performing protocol-level surveys for California red-legged frog, Ridgway's rail, marbled murrelet, northern spotted owl, Point Arena mountain beaver, and Behren's silverspot butterfly. His project focus is in conservation and mitigation banking, coastal development projects, vineyard development, and timber resources. Mr. Richmond regularly manages large-scale mitigation banking projects, as well as coastal development permits, coastal restoration projects, and vineyard grading permits with a focus in Mendocino, Napa, Lake, and Sonoma counties. Mr. Richmond's technical training includes the flora of Northern California, plant ecology, and forest ecology. Additionally, he has completed the 40-hour Corps wetland delineation training. Mr. Richmond received his Bachelor of Science in Biology from Humboldt State University.

Jason Yakich, MS, Senior Biologist with WRA, has over 16 years of experience performing wildlife habitat assessments, biological monitoring for special-status wildlife species, breeding bird and other avian surveys, and protocol-level surveys for several special-status wildlife species. Additionally, he prepares and oversees a variety of general biological assessments and technical reports at WRA, with a geographic focus on the North Bay counties and North Coast. Mr. Yakich has respective permit authorizations from the USFWS and CDFW to conduct active (call-playback) surveys for California clapper rail and California black rail. Mr. Yakich received his Bachelor of Arts in Biology from U.C. Santa Cruz, and received his Master of Science in Biology from San Francisco State University with a focus on marine and estuarine biology.

Aaron Arthur, MS, Senior Plant Biologist with WRA, has over 16 years of experience performing vegetation & habitat mapping, rare plant surveys, botanical assessments, vegetation change analysis, and wetland delineations. His project focus is on 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.