



3496 Soda Canyon Road
Vineyard Project
Biological Resources Survey



Prepared for:
Austin Peterson
3496 Soda Canyon Road
Napa, CA 94558

Prepared by:
MIG, Inc.

February 2022

Project Number: 16058

PLANNING | DESIGN | COMMUNICATIONS | MANAGEMENT | SCIENCE | TECHNOLOGY

2055 Junction Avenue, Suite 205 • San Jose, CA 95131 • USA • 650-327-0429 • www.migcom.com

Offices in: California • Colorado • Oregon • Texas • Washington

This page is left blank intentionally

3496 Soda Canyon Road Vineyard Project
Biological Resources Survey
February 2022

3496 Soda Canyon Road
Vineyard Project
Biological Resources Survey

Prepared for
Austin Peterson
3496 Soda Canyon Road
Napa, California 94558

Prepared by
MIG, Inc.
2055 Junction Avenue, Suite 205
San Jose, CA 95131

February 2022

Project Number: 16058
Project contacts: Taylor Peterson, David Gallagher

Contents

LIST OF ABBREVIATED TERMS	6
1 INTRODUCTION	7
1.1 REGIONAL AND LOCAL SETTING	7
1.2 PROJECT DESCRIPTION.....	7
1.3 SUMMARY OF THE BIOLOGICAL RESOURCES ON THE PARCEL AND PROJECT IMPACTS.....	8
2 REGULATORY SETTING	9
2.1 FEDERAL ENDANGERED SPECIES ACT	10
2.2 MIGRATORY BIRD TREATY ACT.....	10
2.3 BALD AND GOLDEN EAGLE PROTECTION ACT	11
2.4 CLEAN WATER ACT.....	11
2.5 CALIFORNIA ENDANGERED SPECIES ACT	12
2.6 CALIFORNIA ENVIRONMENTAL QUALITY ACT.....	12
2.7 CALIFORNIA FISH AND GAME CODE.....	13
2.8 PORTER-COLOGNE WATER QUALITY CONTROL ACT	14
2.9 NAPA COUNTY POLICIES	14
3 METHODS.....	19
3.1 LITERATURE REVIEW	19
3.2 FIELD SURVEYS.....	19
3.3 SENSITIVE HABITATS AND AQUATIC FEATURES.....	20
3.4 SPECIAL-STATUS SPECIES HABITAT EVALUATION	20
4 EXISTING CONDITIONS	21
4.1 SOILS AND TOPOGRAPHY.....	21
4.2 PLANT COMMUNITIES & ASSOCIATED WILDLIFE HABITATS	22
4.3 HOMESTEAD.....	23
4.4 AQUATIC FEATURES	23
4.5 PLANT COMMUNITIES OF CONCERN	23
4.6 WILDLIFE MOVEMENT CORRIDORS	24
4.7 WILDLIFE OBSERVATIONS.....	24
4.8 SPECIAL-STATUS ANIMALS	25
4.9 SPECIAL-STATUS PLANTS.....	27
5 BIOLOGICAL IMPACT ASSESSMENT AND AVOIDANCE AND MITIGATION MEASURES.....	30
5.1 SIGNIFICANCE CRITERIA	30
5.2 SUMMARY OF PROJECT IMPACTS.....	31
5.3 SENSITIVE SPECIES – <i>LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION</i>	32
5.4 SENSITIVE NATURAL VEGETATION COMMUNITIES, INCLUDING WETLANDS – <i>LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION</i>	35
5.5 INTERFERE WITH NATIVE WILDLIFE MOVEMENT – <i>LESS-THAN-SIGNIFICANT IMPACT</i>	37
5.6 CONFLICT WITH LOCAL POLICIES – <i>LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION</i>	37
6 REFERENCES	39
7 APPENDICES	41
APPENDIX A: FIGURES.....	43

3496 Soda Canyon Road Vineyard Project
Biological Resources Survey
February 2022

APPENDIX B: SPECIES LISTS	53
APPENDIX C: REPRESENTATIVE PHOTOGRAPHS	85

List of Abbreviated Terms

AMM	Avoidance and Minimization Measures
APN	Assessor's Parcel Number
AW	Agricultural Watershed
AWOS	Agricultural, Watershed, and Open Space
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practice
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFP	California Fully Protected Species
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CON	Conservation Element (Napa Co General Plan)
CRLF	California Red-legged Frog
CSSC	California Species of Special Concern
CWA	Clean Water Act
EPA	Environmental Protection Agency
FESA	Federal Endangered Species Act
FT	Federal Threatened
GPS	Global Positioning System
HCP	Habitat Conservation Plan
LSAA	Lake and Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
NOAA Fisheries	National Oceanic and Atmospheric Administrations' National Marine Fisheries Service
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
RWQCB	Regional Water Quality Control Board
SWPPP	Storm Water Pollution Prevention Plan
U.S.	United States
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDR	Waste Discharge Requirement
WTKI	White-tailed Kite

1 Introduction

This report presents the methods and results of a study of biological resources present or potentially present at 3496 Soda Canyon Road (“the parcel”; Figure 1 in Appendix A). This report was prepared by MIG for use in site planning and in permit applications to Napa County and state resource agencies, as needed.

Napa County requires a biological resources evaluation for discretionary projects in areas identified to contain, or potentially contain, special-status species based on the County’s Baseline Data Report, California Natural Diversity Database, or other technical sources. The biological evaluation and impact analysis was completed by biologists with MIG, Inc. It identifies sensitive biological resources within the parcel and potential impacts to those resources resulting from the proposed project, which is development of a vineyard. This report provides:

- an overview of the proposed project and a description of the parcel
- a list of the federal, state, and local resource-related regulations that may pertain to the project
- a description of the vegetation communities and associated wildlife habitats present
- a discussion of special-status plant and animal species and sensitive communities that are known to occur or that could potentially occur in or near the parcel
- an evaluation of the potential impacts to biological resources that may occur because of development of the parcel
- recommendations to avoid or minimize those impacts
- responses to the California Environmental Quality Act (CEQA) Guidelines Appendix G questions related to biological resources

1.1 Regional and Local Setting

The parcel is located in central Napa County southwest of Lake Berryessa, southeast of Lake Hennessey, approximately 12 miles north of the town of Napa and approximately 5 miles east of Yountville. It is between Haystack and Atlas Peak in the Vaca Mountains, on the Yountville U.S. Geological Survey quadrangle (Latitude N 38.4427; Longitude W 122.28017). The parcel ranges in elevation from 1,380 to 1,470 feet above mean sea level. It is in the Rector Reservoir watershed, which is a sub-watershed of the Napa River.

The parcel is on Soda Canyon Road, which is a rural residential road. It is zoned as AW (Agricultural Watershed). Soda Canyon Road bifurcates and becomes gravel about one mile south of the parcel. Land uses surrounding the parcel include agriculture, grazing, open space, vineyards, and single family rural residential housing.

1.2 Project Description

The proposed project is the development of a sustainable vineyard. The project includes the clearing of vegetation in two distinct areas on the parcel, identified as Blocks 1 and 2 on Figure 2. The parcel is 14.3 acres in size. Blocks 1 and 2 total 7.2 acres gross, of which 5.3 acres net will be developed as vineyard. The total gross area of development is 50% of the parcel and the total net area is 37% of the parcel.

The initial steps of vineyard development include the use of bulldozers and excavators to clear brush, trees, and debris from Blocks 1 and 2 as well as remove roots and rocks from the soil to a depth of 3-4 feet.

After the initial ground disturbance, the cleared areas will be ripped and disked, soil amendments added, irrigation lines installed, and finally grape vines planted. Additionally, pesticide use will be minimized and a permanent cover crop with a minimum of 80% vegetative cover will be maintained.

1.3 Summary of the Biological Resources on the Parcel and Project Impacts

The 14.3-acre parcel (APN 032-500-025) contains dilapidated structures, including an unoccupied residence and a water tower structure. The parcel has long been used as a residence and for cattle grazing. Currently 8 cows are grazed for fire control between April and August (A. Peterson, pers. comm.). Vegetation mapping in the 2005 Baseline Data Report includes grassland and wetland, but appears to be incomplete. The vegetation alliances within 1 mile of the site, as mapped in CDFW's VegCAMP database are shown in Figure 7 in Appendix A.

Based on site visits and review of aerial photography, including drone footage, the vegetation on the parcel consists of blue oak woodland alliance (4.9 acres; G4S4), and white leaf manzanita alliance (6.8 acres). The white leaf manzanita alliance includes two associations: white leaf manzanita – interior live oak association (6.0 acres; G4S4), and white leaf manzanita/Sonoma sage chaparral association (0.8 acres)¹ (Figure 6). Species lists are provided in Tables 1 through 4 in Appendix B. Photographs are provided in Appendix C. No special-status species were found in the blue oak woodland during multiple reconnaissance surveys. That area of the parcel has been affected by home site development and a history of grazing, and the blue oaks have declined due to natural factors (age, disease, drought), since the tree survey included in Appendix B was completed. Development of Block 2 will impact blue oak woodland.

Holly-leaved ceanothus (*Ceanothus purpureus*; CRPR 1B.2 = rare, threatened or endangered in California and elsewhere) is present in the Hambright soils at the southern end of the parcel (Figure 4). Although not all white leaf manzanita chaparral is sensitive, the white leaf manzanita chaparral in the southwest corner of the parcel includes an additional species (Sonoma sage; *Salvia sonomensis*), as a sub-dominant plant species, which qualifies it as a sensitive vegetation association under the alliance in VegCAMP (37.305.04).

The parcel is bisected by a small ephemeral channel that has a bed and bank. The channel apparently developed as a result of runoff directed across the property from an adjacent parcel to the east, and water flows east to west where it crosses under Soda Canyon Road. Other water features include a breached stock pond which detains water flow and an ephemeral

1 A Manual of California Vegetation Online (<https://vegetation.cnps.org/keys>) and VegCAMP (<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline>) indicates that this is a sensitive plant community but the sensitivity rank has not been determined .

erosional gully fed from a breach of the stock pond. The proposed project will remove the breached stock pond and regrade it into the surrounding proposed vineyard. The site is in the watershed of Rector Canyon Creek, upstream of Rector Reservoir. The Rector Reservoir watershed is a sub-watershed of the Napa River watershed.

Several other rare plant species (CRPR 1B.2) were determined to be potentially present within the parcel during the first site visit, based on habitats present within the parcel and known occurrences within Napa County. Therefore, subsequent surveys for these species were conducted in the late spring and summer when the plants bloom and are readily identified. These species include Napa bluecurls (*Trichostema ruygtii*), small flower calycadenia (*Calycadenia micrantha*), Jepson's leptosiphon (*Leptosiphon jepsonii*), and narrow-anthered brodiaea (*Brodiaea leptandra*). None of these species were found to occur on the parcel.

The parcel contains 301 trees, including 179 blue oaks (*Quercus douglasii*), 91 interior live oaks (*Quercus wislizeni*), 17 black oaks (*Quercus kelloggii*), seven bay laurels (*Umbellularia californica*), two valley oaks (*Quercus lobata*), two madrones (*Arbutus menziesii*), one gray pine (*Pinus sabiniana*), one Monterey pine (*Pinus radiata*) and one walnut tree (*Juglans* sp.). A tree survey and map are included in the report (see Figure 3 in Appendix A, and Table 1), although the survey was completed in 2017, and some trees have died since then (A. Peterson, pers. comm.).

The parcel does not contain suitable habitat for state or federally listed wildlife species, does not contain a wildlife nursery site, and is not within the plan area of a Habitat Conservation Plan or Natural Communities Conservation Plan. However, development on the parcel could impact special-status plant species, a sensitive natural community, nesting birds, bats, wildlife movement, and downstream water quality. Mitigation measures are recommended to prevent significant impacts to biological resources from the proposed development of a vineyard.

2 Regulatory Setting

Biological resources in California are protected under federal, state, and local laws. The laws that may pertain to the biological resources found on the project parcel include the following:

- Federal Endangered Species Act (protects species listed by the federal government as threatened or endangered)
- U.S. Migratory Bird Treaty Act (protects most birds in the U.S.)
- U.S. Bald and Golden Eagle Protection Act (protects bald and golden eagles)
- U.S. Clean Water Act (protects water quality in waters of the U.S.)
- California Environmental Quality Act (mitigates the environmental effects of human-initiated development)
- California Endangered Species Act (protects species listed by the state of California as threatened or endangered)
- California Fish and Game Code (protects stream bed, bank and channel; nesting birds, fully protected birds; migratory birds, non-game mammals, and fully protected mammals, reptiles, amphibians, and fish)

- Napa County General Plan (protects special-status species, water resources, and native vegetation communities)

2.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) is administered by the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries). Under the federal ESA, the USFWS has primary responsibility for terrestrial and freshwater organisms and NOAA Fisheries has primary responsibility of marine wildlife and anadromous fish. FESA provides protection for species included on the federal list of endangered and threatened species (known as "listed species"). In particular, FESA prohibits "take" of threatened or endangered species, as well as destruction or adverse modification of designated critical habitat of these species. "Take" is defined by the FESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect [a federally listed species] or to attempt to engage in any such conduct" (16 U.S. Code [U.S.C.] 1532(19), 1538). Federal regulations also define "take" to include the incidental destruction of animals in the course of an otherwise lawful activity, such as habitat loss due to development. Therefore, the definition of "take" includes significant habitat modification or degradation that kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 Code of Federal Regulations [CFR] 17.3). For plants, FESA governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging up, damaging, or destroying any federally listed plant on non-federal land in knowing violation of state law (16 U.S. C. 1538(a)(2)(B)).

"Take" may be allowed under a permit by either Section 7 or Section 10 of FESA. Under Section 7 of FESA, federal agencies (e.g., U.S. Army Corps of Engineers [USACE]) are required to consult with the USFWS and/or NOAA Fisheries if their actions, including permit approvals or funding, could adversely affect a listed species or its critical habitat. Through consultation and the issuance of a Biological Opinion, the USFWS and/or NOAA Fisheries may issue an incidental take statement, allowing take of the species that is incidental to another authorized activity, provided the action will not jeopardize the continued existence of the species. Section 10 of FESA provides for issuance of incidental take permits to private parties if there is no federal involvement in the project. Section 10 of the FESA requires the development of a Habitat Conservation Plan (HCP).

2.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the MBTA provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. In short, under the MBTA it is illegal to remove vegetation containing nests that are being actively used, since this could result in killing a bird or destroying an egg. This would also be a violation of California Fish and Game Code (see section 2.7, below).

2.3 Bald and Golden Eagle Protection Act

Under the Bald and Golden Eagle Protection Act (BGEPA) it is unlawful to import, export, take, sell, purchase, or barter any bald eagle or golden eagle, or their parts, products, nests, or eggs. "Take" includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing. Exceptions may be granted by the USFWS for scientific or exhibition use and for cultural use by Native Americans. In addition, in 2009 the USFWS established new permit regulations under the BGEPA that allows for incidental take of eagles while conducting otherwise lawful activities (50 CFR 22.26). No permits may be issued for import, export, or commercial activities involving eagles.

2.4 Clean Water Act

The federal Clean Water Act (CWA) is the primary federal law regulating water quality. The implementation of the CWA is the responsibility of the U.S. Environmental Protection Agency (EPA). However, the EPA depends on other agencies, such as the individual states and the U.S. Army Corps of Engineers (USACE), to assist in implementing the CWA. The objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Sections 404 and 401 of the CWA apply to activities that would impact waters of the U.S.

Section 404: As part of its mandate under Section 404 of the CWA, the EPA regulates the discharge of dredged or fill material into "waters of the U.S.". "Waters of the U.S." include territorial seas, tidal waters, and non-tidal waters in addition to wetlands and drainages that support wetland vegetation, exhibit ponding or scouring, show obvious signs of channeling, or have discernible banks and high water marks. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3(b)). The discharge of dredged or fill material into waters of the U.S. is prohibited under the CWA except when it is in compliance with Section 404 of the CWA. Enforcement authority for Section 404 was given to the USACE, which it accomplishes under its regulatory branch. The EPA has veto authority over the USACE's administration of the Section 404 program and may override a USACE decision with respect to permitting.

Substantial impacts to waters of the U.S. may require an Individual Permit. Projects that only minimally affect waters of the U.S. may meet the conditions of one of the existing Nationwide Permits, provided that such permits' other respective conditions are satisfied. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required from the State of California for Section 404 permit actions.

Section 401: Any applicant for a federal permit to impact waters of the U.S. under Section 404 of the CWA, including Nationwide Permits where pre-construction notification is required, must also provide to the USACE a certification or waiver from the State of California. The "401 Certification" is provided by the State Water Resources Control Board through the local Regional Water Quality Control Board (RWQCB). This parcel is within the San Francisco Bay Region of the RWQCB.

The RWQCB issues and enforces permits for discharge of treated water, landfills, stormwater runoff, filling of any surface waters or wetlands, dredging, agricultural activities and wastewater recycling. The RWQCB recommends that an application for certification under CWA Section 401 be made at the same time that the 404 application is submitted to the any applications are provided to other agencies, such as the USACE. The permit cannot be issued until completion of environmental review under the California Environmental Quality Act (CEQA). The application to the RWQCB is similar to the pre-construction notification that is required by the USACE. It must include a description of the habitat that is being impacted, a description of how the impact is proposed to be minimized and proposed mitigation measures with goals, schedules, and performance standards. Mitigation must include a replacement of functions and values, and replacement of wetland at a minimum ratio of 2:1, or twice as many acres of wetlands provided as are removed. The RWQCB looks for mitigation that is on site and in-kind, with functions and values as good as or better than the water-based habitat that is being removed.

2.5 California Endangered Species Act

The California Endangered Species Act (CESA; Fish and Game Code 2050 et seq.) generally parallels the federal Endangered Species Act. It establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. Section 2080 of the California Fish and Game Code prohibits the take, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. "Take" is defined in Section 86 of the California Fish and Game Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." This definition differs from the definition of "take" under FESA. CESA is administered by the California Department of Fish and Wildlife (CDFW). CESA allows for take incidental to otherwise lawful projects, but mandates that State lead agencies consult with the CDFW to ensure that a project would not jeopardize the continued existence of threatened or endangered species.

2.6 California Environmental Quality Act

CEQA (Public Resources Code Sections 21000 et. seq.) requires public agencies to review activities which may affect the quality of the environment so that consideration is given to preventing damage to the environment. When a lead agency issues a permit for development that could affect the environment, it must disclose the potential environmental effects of the project. This is done with an "Initial Study and Negative Declaration" (or Mitigated Negative Declaration) or with an "Environmental Impact Report". Certain classes of projects are exempt from detailed analysis under CEQA.

The state maintains a list of sensitive, or "special-status", biological resources, including those listed by the state or federal government or the California Native Plant Society as endangered, threatened, rare or of special concern due to declining populations. Projects that directly impact these resources may not qualify for a categorical exemption.

This report responds to the CEQA checklist questions regarding biological resources and is a supporting technical report to the CEQA process.

2.7 California Fish and Game Code

California Fish and Game Code Sections 1600-1607

Sections 1600-1607 of the California Fish and Game Code require that a Notification of Lake or Streambed Alteration be submitted to the CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The CDFW reviews the proposed actions in the application and, if necessary, prepares a Lake or Streambed Alteration Agreement that includes measures to protect affected fish and wildlife resources onsite and downstream.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) was created with the intent to preserve, protect, and enhance rare and endangered plants in California (California Fish and Game Code Sections 1900 to 1913). The NPPA is administered by the CDFW, which has the authority to designate native plants as endangered or rare and to protect them from “take.” The CDFW maintains a list of plant taxa that have been officially classified as endangered, threatened or rare.

Fully Protected Species

California Fish and Game Code Sections 3511, 4700, 5050 and 5515 address Fully Protected species. Prior to the passage of the California ESA, the classification of Fully Protected was the State’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Subsequently, many Fully Protected species have been listed under the California and/or federal ESAs. The only exceptions are golden eagle, white-tailed kite, trumpeter swan, northern elephant seal, and ringtail. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

California Fish and Game Code Sections 3505, 3503.5, and 3513

Nesting birds, including raptors, are protected by California Fish and Game Code Section 3503, which reads, “It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” In addition, under California Fish and Game Code Section 3503.5, “it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto”. Passerines and non-passerine land birds are further protected under California Fish and Game Code 3513, enacted under the California Migratory Bird Protection Act. CDFW typically recommends surveys for nesting birds that could potentially be directly (e.g., actual removal of trees/vegetation) or indirectly (e.g., noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” under the law.

2.8 Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface and ground water. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the Regional Water Quality Control Boards (RWQCBs) develop basin plans, which identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under Porter-Cologne, referred to as “waters of the State,” include isolated waters that are not regulated by the USACE. Any person discharging, or proposing to discharge, waste (e.g., dirt) to waters of the State must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver to WDRs before beginning the discharge.

2.9 Napa County Policies

Napa County General Plan

Napa County adopted a General Plan in 2008 that provides a broad framework for planning the future for the County. The General Plan was updated in 2013. The following conservation goals and policies are relevant to the biological resources on this parcel.

Open Space Conservation Goals and Policies

Goal CON-1: The County of Napa will conserve resources by determining the most appropriate use of land, matching land uses and activities to the land's natural suitability, and minimizing conflicts with the natural environment and the agriculture it supports.

- *Policy CON-2c:* Require that existing significant vegetation be retained and incorporated into agricultural projects to reduce soil erosion and retain wildlife habitat. When retention is found to be infeasible, replanting of native or non-invasive vegetation shall be required.
- *Policy CON-2d:* Encourage the use of recycled water, particularly within groundwater deficient areas, for vegetation enhancement, frost protection, and irrigation to enhance agriculture and grazing.
- *Policy CON-9d:* Requirements for mitigation of development impacts, either on-site or at other locations in the county or through the payment of in-lieu fees in limited circumstances, when impacts cannot be avoided.

Natural Resources Goals and Policies

Goal CON-2: Maintain and enhance the existing level of biodiversity.

Goal CON-3: Protect the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats, and comply with all applicable state, federal, or local laws or regulations.

Goal CON 4: Conserve, protect, and improve plant, wildlife, and fishery habitats for all native species in Napa County.

Goal CON-5: Protect connectivity and continuous habitat areas for wildlife movement.

Goal CON 6: Preserve, sustain, and restore forests, woodlands, and commercial timberland for their economic, environmental, restoration, and open space values.

- *Policy CON-11m:* Control sediment production from mines, roads, development projects, agricultural activities, and other potential sediment sources.
- *Policy CON-13:* The County shall require that all discretionary residential, commercial, industrial, recreational, 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 [note: only the items pertinent to the project are included here]:
 - o Provide protection for supporting special-status species through buffering or other means.
 - o Provide replacement habitat of like quantity and quality on- or off-site for special-status species to mitigate impacts to special-status species.
 - o Enhance existing habitat values, particularly for special-status species, through restoration and replanting native plant species as part of discretionary permit review and approval.
 - o Require temporary or permanent buffers of adequate size (based on the requirements of the subject special-status species) to avoid nest abandonment by birds and raptors associated with construction and site development activities.
 - o Demonstrate compliance with applicable provisions and regulations of recovery plans for federally listed species.
- *Policy CON-16:* The County shall require a biological resources evaluation for discretionary projects in areas identified to contain or potentially contain special-status species based upon data provided in the Baseline Data Report (BDR), CNDDb, or other technical materials. This evaluation shall be conducted prior to the approval of any earthmoving activities. The County shall also encourage the development of programs to protect special-status species and disseminate the updated information to state and federal resource agencies.
- *Policy CON-18e:* 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 caused by the new vineyard development.
- *Policy CON-24:* Maintain and improve oak woodland habitat to provide for slope stabilization, soil protection, species diversity, and wildlife habitat through appropriate measures.

- *Policy CON-30:* All public and private projects shall avoid impacts to wetlands to the extent feasible. If avoidance is not feasible, projects shall mitigate impacts to wetlands consistent with state and federal policies providing for no net loss of wetland function.

Water Resources Goals and Policies

Goal CON-9: Control urban and rural storm water runoff and related non-point source pollutants, reducing to acceptable levels pollutant discharges from land-based activities throughout the county.

Goal CON-10: Conserve, enhance and manage water resources on a sustainable basis to attempt to ensure that sufficient amounts of water will be available for the uses allowed by this General Plan, for the natural environment, and for future generations.

Goal CON-11: Prioritize the use of available groundwater for agricultural and rural residential uses rather than for urbanized areas and ensure that land use decisions recognize the long-term availability and value of water resources in Napa County.

- *Policy CON-42:* The County shall work to improve and maintain the vitality and health of its watersheds. Specifically, the County shall:
 - o Use all available sources of assistance to protect and enhance the Napa River and its tributaries and watershed to meet or exceed water quality standards imposed by state and federal authorities (e.g., pursue grants and other funding opportunities to assist in the identification, testing, and improvement of individual septic as well as community waste disposal systems, and to support watershed monitoring/sampling and scientific understanding to inform and develop effective and targeted management options in an adaptive and locally driven manner).
 - o Support environmentally sustainable agricultural techniques and best management practices (BMPs) that protect surface water and groundwater quality and quantity (e.g., cover crop management, integrated pest management, informed surface water withdrawals and groundwater use).
 - o Recognize that unmanaged forests and watersheds can have unintended adverse environmental consequences such as increasing the threat and intensity of wild land fires, which could lead to widespread erosion and degradation of water quality. Support voluntary efforts by landowners to reduce fuel loads in forests and watersheds to reduce this threat.
 - o Recognize that efforts to protect and preserve water for wildlife habitat and watershed health in Napa County can have long term benefits related to adequate water supplies and water quality. [Implemented by Action Items CON WR-1, 4, and 7].
- *Policy CON-48:* Proposed developments shall implement project-specific sediment and erosion control measures (e.g., erosion control plans and/or storm water pollution prevention plans) that maintain pre-development sediment erosion conditions or at minimum comply with state water quality pollution control (i.e., Basin Plan)

requirements and are protective of the County's sensitive domestic supply watersheds. Technical reports and/or erosion control plans that recommend site-specific erosion control measures shall meet the requirements of the County Code and provide detailed information regarding site specific geologic, soil, and hydrologic conditions and how the proposed measure will function.

- *Policy CON-50:* The County will take appropriate steps to protect surface water quality and quantity, including the following:
 - o Preserve riparian areas through adequate buffering and pursue retention, maintenance, and enhancement of existing native vegetation along all intermittent and perennial streams through existing stream setbacks in the County's Conservation Regulations (also see Policy CON-27 which retains existing stream setback requirements).
 - o The County shall require discretionary projects to meet performance standards designed to ensure peak runoff in 2-, 10-, 50-, and 100-year events following development is not greater than predevelopment conditions.
 - o In conformance with National Pollution Discharge Elimination System (NPDES) requirements, prohibit grading and excavation unless it can be demonstrated that such activities will not result in significant soil erosion, silting of lower slopes or waterways, slide damage, flooding problems, or damage to wildlife and fishery habitats.
 - o Adopt development standards, in conformance with NPDES Phase II requirements, for post-construction storm water control.
 - o Address potential soil erosion by maintaining sections of the County Code that require all construction-related activities to have protective measures in place or installed by the grading deadlines established in the Conservation Regulations. In addition, the County shall ensure enforceable fines are levied upon code violators and shall require violators to perform all necessary remediation activities.
- *Policy CON-60.5:* All aspects of landscaping from the selection of plants to soil preparation and the installation of irrigation systems should be designed to reduce water demand, retain runoff, decrease flooding, and recharge groundwater.

Napa County Voluntary Oak Woodlands Management Plan, the California Oak Woodlands Conservation Act, and the Oak Woodlands Conservation Program

The Napa County Voluntary Oak Woodlands Management Plan provides a conservation framework for the preservation of oak woodland resources in the County. By having this Plan in place, the County and landowners in the County can obtain funding through the State Oak Woodlands Conservation Program, established by the Oak Woodlands Conservation Act.

The Act was added to the California Environmental Quality Act (CEQA) statutes as Public Resources Code Section 21083.4. It requires the County to determine whether a project would

result in a significant impact on oak woodlands, and to mitigate significant impacts through conservation easements, re-planting, contributing to the Oak Woodlands Conservation Fund, or other measures devised by the County. Exemptions are allowed for certain land uses, including conversion of oak woodlands on agricultural land used for commercial purposes.

Napa County Zoning Ordinance Chapter 18.108 Conservation Regulations and 18.108.100 Erosion Hazard Areas – Vegetation Preservation and Replacement

Under the Napa County Conservation Regulations, Agricultural Erosion Control Plans are required for agricultural projects involving grading and earthmoving activities on slopes over 5%. Approval of Erosion Control Plans by the County is subject to review under CEQA. Section 18.108.100 of the County Conservation Regulations sets the following conditions on projects subject to discretionary review, include projects that require an Erosion Control Plan:

- A. Existing vegetation shall be preserved to the maximum extent consistent with the project. Vegetation shall not be removed if it is identified as being necessary for erosion control in the approved erosion control plan or if necessary for the preservation of threatened or endangered plant or animal habitats as designated by state or federal agencies with jurisdiction and identified on the county's environmental sensitivity maps.
- B. Existing trees six inches in diameter or larger, measured at diameter breast height (DBH), or tree stands of trees six inches in diameter or larger located on a site for which either an administrative or discretionary permit is required shall not be removed until the required permits have been approved by the decision-making body and tree removal has been specifically authorized.
- C. Trees to be retained or designated for retention shall be protected through the use of barricades or other appropriate methods to be placed and maintained at their outboard drip line during the construction phase. Where appropriate, the director may require an applicant to install and maintain construction fencing around the trees to ensure their protection during earthmoving activities.
- D. Wherever 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.
- E. Vegetation required to be preserved but removed either advertently or inadvertently, or before any required permit has been issued, shall be replaced with fifteen-gallon trees at a ratio of 2:1 at locations approved by the director or designee, or replaced with smaller trees at a higher ratio to be determined by the director or designee.
- F. All graded areas for nonagricultural activities shall be replanted with permanent vegetation. A revegetation plan shall be submitted for approval by the director or designee concurrently with the erosion control plan or as part of the NPDES program. All approved plant materials shall be installed prior to occupancy. Plant materials shall be drought-tolerant and compatible with the existing habitat area in which the project is located.
- G. To the extent relevant to the agriculture activity proposed, the project shall substantially conform to the guidelines contained in the Information Manual: Riparian Vegetation Management for Pierce's Disease in North Coast California Vineyards.
- H. To prevent importation of plant insects or diseases, plant materials shall be purchased locally when practical. The county agricultural commissioner's office shall be notified of all impending deliveries of live plants with points of origin outside of the county.

3 Methods

This section describes the methods used to complete the biological resources evaluation. Methods include database and literature review, field surveys, and an assessment of sensitive habitats and aquatic features.

3.1 Literature Review

Available background information pertaining to the biological resources on and in the vicinity of the project was reviewed prior to conducting field surveys. Information was compiled and subsequently compared against site conditions during field surveys. The following sources were consulted:

- CDFW California Natural Diversity Database record search of the Yountville, Rutherford, Saint Helena, Chiles Valley, Sonoma, Napa, Walter Springs, Mount George, Capell Valley, Cuttings Wharf, Sears Point, Petaluma River, Cordelia, Kenwood, Calistoga, Glen Ellen, Aetna Springs, and Lake Berryessa U.S. Geological Survey (USGS) 7.5-Minute Quadrangles
- CNPS Rare Plant Program Inventory of Rare and Endangered Plants of California (CNPS 2022)
- USFWS list of endangered and threatened species and Critical Habitat record search for the parcel (USFWS 2022)
- Personal communication with CDFW personnel (Suzanne Gilmore)
- Citizen science databases such as ebird, inaturalist
- Napa County Baseline Data Report
- VegCamp maps

3.2 Field Surveys

Multiple site visits to record biological resources have occurred periodically over the last nine years, as summarized below.

A reconnaissance-level biological survey of the parcel was conducted on March 28, 2013, by TRA Environmental Sciences biologists Taylor Peterson and Sarah Daniels. The parcel was surveyed on foot from approximately 10:00 a.m. to 3:00 p.m. The parcel was surveyed from north to south using meandering pedestrian transects, with particular emphasis on the southern portion of the parcel that contains habitat for the holly-leaved ceanothus. During the field visit, plant species, any signs (e.g., tracks, scat, and feathers) of wildlife, and habitats present in the parcel were documented. Photographs of the representative habitat types in the parcel were taken. Locations of holly-leaved ceanothus were mapped using a Trimble GeoExplorer Global Positioning System (GPS) device with 1 meter accuracy. Creeks, drainages, ponds, or other water bodies were also mapped.

Surveys were also conducted over multiple dates in 2013 and 2014 to document the species and number of trees found within the parcel.

A site visit was made on December 18, 2015, by MIG|TRA biologists Taylor Peterson and David Gallagher. The homestead was surveyed for the presence of bats or signs of bat (such as

guano, staining). Additionally, the stock pond and associated drainages were surveyed for the presence of water as well as the presence of amphibians and reptiles.

A follow-up site visit was made on April 13, 2017, by MIG biologist David Gallagher. The breached stock pond and associated drainages were surveyed for the presence of water, wetland vegetation as well as the presence of amphibians and reptiles. The chaparral in the southern portion of the parcel was surveyed for special-status plants known to be blooming and/or identifiable at the time of the survey.

An additional visit was conducted by MIG biologists David Gallagher and Taylor Peterson on April 16, 2018, to survey the Rock Outcrop-Hambright soils in the southern portion of the site for rare plant species. This was followed by a survey by MIG biologists Amy Parravano and Taylor Peterson on June 13, 2018, to search the southern half of the site for later blooming rare plant species. A wandering transect method was used to survey for the species in suitable habitat.

Finally, site visits were conducted in February 2022 to verify that site conditions had not substantially changed since 2018, and in June 2022 to map the sensitive association in the white leaf manzanita chaparral in detail.

3.3 Sensitive Habitats and Aquatic Features

Habitats were assessed to determine if any wetlands and “waters” within the jurisdiction of the USACE, RWQCB, or CDFW were present. The project area was inspected for the presence of wetlands, drainages, streams, and other aquatic features, including those that support stream-dependent (riparian) plant species, and these features were mapped. In addition, plant communities were evaluated to determine if they are considered sensitive under federal or state regulations or policies. Sensitive natural communities are communities that are especially diverse; regionally uncommon; or of special concern to local, state, and federal agencies. Elimination or substantial degradation of these communities would constitute a significant impact under CEQA.

Wetlands are defined for regulatory purposes in the 33 CFR 328.3 and 40 CFR 230.3 as areas “inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” To be considered subject to federal jurisdiction, a wetland must normally exhibit positive indicators for hydrophytic vegetation, hydric soil, and wetland hydrology”.

3.4 Special-Status Species Habitat Evaluation

During the biological surveys, biologists evaluated the suitability of all vegetation communities to support special-status species documented in and within the vicinity of the project area. For the purposes of this assessment, special-status animal and plant species include:

- Species listed or proposed for listing as threatened or endangered under the federal ESA (50 CFR 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the Federal Register [proposed species]).
- Species that are candidates for possible future listing as threatened or endangered under the federal ESA (73 Federal Register [FR] 75176, November 9, 2009).

- Species listed or proposed for listing by the state of California as threatened or endangered under the California ESA (14 CCR 670.5).
- Species that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines, Section 15380).
- Plants listed as rare under the California NPPA (California Fish and Game Code, Section 1900 et seq.).
- Plants considered by CNPS to be “rare, threatened, or endangered in California”, or on a watch list (California Rare Plant Rank [CRPR] 1A, 1B, 2A, 2B, 3, and 4).
- Animal species listed as of special concern by the CDFW.
- Animals fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish]).

The potential occurrence of special-status plant and animal species within the project area was initially evaluated by developing a list of special-status species that are known to, or have the potential to, occur near the project area based on a review of past studies; search of current database records (e.g., CNDDDB and CNPS Electronic Inventory records, among others); and review of the USFWS list of federal endangered and threatened species. The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed during the multiple biological surveys.

The list of species observed during site visits is included in Appendix B, Table 2. The list of special-status animals and plants that were considered in the analysis is included in Appendix B, Tables 3 and 4. Species that may occur on site are discussed in sections 4.8 and 4.9, below.

4 Existing Conditions

This section describes soils, vegetation communities, aquatic resources, wildlife movement corridors, sensitive plant communities, wildlife observations, special-status species present or potentially present, and other pertinent information about biological resources within the parcel.

4.1 Soils and Topography

Soil types were determined by accessing the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2013). Soil mapping from the NRCS is on a broad scale and small variations in soil type are not always available. The project parcel is mapped in the Web Soil Survey as Guenoc-Rock Outcrop with 5 to 30 percent slopes and Rock Outcrop-Hambright with 50 to 75 percent slopes (Figure 4), however, the Rock Outcrop-Hambright soils are not on 50-75 percent slopes, but are much flatter. Guenoc-Rock Outcrop is a well-draining soil, which allows rapid runoff. This soil is formed in material weathered from basalt and andesite, which is volcanic in origin. It dominates the northern portion of the parcel. Rock Outcrop-Hambright soils are present in the southern portion of the project parcel. This is a well-draining soil, which allows rapid runoff and has a high potential for erosion. This soil is formed in material weathered from igneous rock, which is volcanic in origin. Except for the slope definition the soil survey was determined to be reasonably accurate during site surveys, and small variations were not observed, based on vegetation type and soil color and consistency. No serpentine soils (which often support rare plants), are present on the project parcel, based on site observations of soils and vegetation, as well as the mapping provided in the soil survey.

The parcel slopes gently from elevation 1468 in the northeast corner down to elevation 1382 in the southwest corner, with an estimated average slope of about 5.6%. The homestead area is slightly flatter, and a berm was built to create the stock pond. Otherwise, the topography is natural.

4.2 Plant Communities & Associated Wildlife Habitats

The parcel contains three dominant vegetation types, based on definitions provided in A Manual of California Vegetation (Sawyer et al. 2009), and VegCAMP. These are blue oak woodland, California annual grassland, and white leaf manzanita chaparral. Within the white leaf manzanita chaparral there is a small area that also contains Sonoma sage, and this association is currently identified in VegCAMP as sensitive. The parcel also contains an old homestead. Water features include a breached stock pond, and ephemeral drainages.

Blue Oak Woodland

Blue oak (*Quercus douglasii*) woodland is a distinct woodland community endemic to California. The canopy is continuous to intermittent, or can be open and savanna-like. Shrubs are sparse to intermittent, and the herbaceous layer is sparse or grassy. The blue oak woodland on the parcel has an intermittent canopy and an herbaceous understory that is grazed annually. There are a few interior live oaks and black oaks mixed in, and occasional manzanita shrubs.

The blue oak woodland provides foraging, nesting and migratory habitat for birds and small mammals. The grasslands and herbs in the understory also provide habitat for birds, mammals, amphibians and reptiles, and forage for larger wildlife species. Because of the existing home site and associated outbuildings, and the history of clearing and disturbance to the vegetation on the site, the grass and herb understory is dominated by non-native species.

The trees on the parcel were mapped in 2017. At that time the parcel contained 301 trees, including 179 blue oaks, 91 interior live oaks, 17 black oaks, 7 bay laurels, 2 valley oaks, 2 madrones, 1 gray pine, 1 Monterey pine and 1 walnut tree. The trees range in size from 5 to 42.5 inches in diameter at 4.5 feet above grade (diameter at breast height [DBH]). The trees are labeled with numbered aluminum tags. See Figure 3 in Appendix A and Table 2 in Appendix B. Some trees have died since 2017, and there is very little recruitment. There is a total of 4.9 acres of blue oak woodland on the parcel.

California Annual Grassland

California annual grassland on the parcel is dominated by non-native annual grasses, including brome (*Bromus* spp.) and harding grass (*Phalaris aquatica*). It also contains weedy herbaceous plants such as thistles, filaree, mustard, radish, fiddleneck, and clover. A list of plant species found in the annual grassland is included in Table 2 in Appendix B. Because of regular disturbance over time the grassland is dominated by non-native plants

The annual grassland provides forage and nesting habitat for common birds, small mammals, amphibians and reptiles.

White Leaf Manzanita Chaparral Alliance

White leaf manzanita (*Manzanita viscida*) chaparral is a shrub community endemic to California. This plant community occurs across the southern end of the property (see Figure 6 in Appendix A). The chaparral is dominated by white leaf manzanita, and includes chamise, Sonoma sage (*Salvia sonomensis*), holly-leaf ceanothus, and coyote brush. An association of this alliance that is listed as a sensitive plant community occurs in the southeast corner of the property, as described in section 4.5 below and shown in Figure 6. There is a total of 6.8 acres of white leaf manzanita chaparral on the parcel, including 0.8 acre of the sensitive association.

4.3 Homestead

A home was built on the northern portion of the parcel, and has fallen into disrepair. A single outbuilding, a water tank tower without a water tank, is associated with the homestead site (Appendix C: Representative Photographs). Landscape plant species occur around the homestead. Landscaping extends approximately 100 feet around the home.

4.4 Aquatic Features

The project site contains ephemeral drainages and a breached stock pond. A drainage is a perennial or seasonal linear water feature (i.e., features that flow year-round or throughout the wet season). A pond is a standing body of water that can persist year-round or seasonally. An intermittent drainage flows in the winter. An ephemeral drainage flows for a few days after a storm event.

There are two drainages that cross the site from east to west near the center of the property. Both are ephemeral drainages that convey stormwater runoff from a neighboring property on the east boundary. Both exhibit channels; the northerly drainage exhibits an ordinary high water mark and falls under the jurisdiction of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. The southerly drainage is a shallowly eroded gully that has developed downgradient of the stock pond and drains the pond through a berm breach. During the April 2017 and February 2022 site visits, pond depth was 1-2 feet. The pond dries in the summer, based on an examination of multiple years of aerial photographs.

Runoff from the parcel could drain to Rector Creek to the west and Milliken Creek to the south. Rector Creek flows into Rector Reservoir, which in turns flows into the Napa River. Milliken Creek flows directly into the Napa River. The connectivity of these creeks to the parcel was not verified in the field. The water features are shown in Figure 5 in Appendix A, and photographs are included in Appendix C.

4.5 Plant Communities of Concern

CDFW and CNPS have identified several native plant communities that are rare and unique to California. Impacts to these plant communities are considered significant under CEQA. Sensitive plant communities identified by CDFW within the parcel include an association within the white leaf manzanita alliance, (*Arctostaphylos viscida*/*Adenostoma fasciculata*/*Salvia sonomensis*). It is shown in Figure 6 in Appendix A in the southeast corner of the parcel. It has

been identified as sensitive by CDFW, but has not yet been ranked pending additional information on the distribution.

4.6 Wildlife Movement Corridors

Wildlife movement includes migration (*i.e.*, usually one way per season), inter-population movement (*i.e.*, long-term genetic flow) and small travel pathways (*i.e.*, daily movement corridors within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities, such as foraging or escape from predators, they also provide connection between outlying populations and the main corridor, permitting an increase in gene flow among populations. These linkages among habitats can extend for miles and occur on a large scale throughout California. Habitat linkages facilitate movement between populations located in discrete areas and populations located within larger habitat areas.

One of the goals of the Napa County General Plan is to consider wildlife movement corridors within the context of agricultural development, especially new vineyard development. In Napa County, a least cost path analysis was conducted to provide an example of one approach to identifying movement corridors quantitatively (Napa County Baseline Data Report 2005). The analysis assigned both Blue oak woodland and white leaf manzanita chaparral the highest beneficial cost values of 1 (on a scale of 1-10). Agricultural land was assigned a value of 5. Higher values are more difficult for most species to traverse.

The parcel is located in a 0.5-mile wide swath that still contains natural habitat connecting the upper slopes of the Vaca Mountains with Rector Reservoir. The swath also contains residential development and vineyard/grazing land uses. Areas to the north and south are more fragmented by agricultural land uses, particularly to the south. The parcel has been fenced to exclude wildlife for many years, likely forcing wildlife to establish movement patterns around the parcel.

4.7 Wildlife Observations

Field Surveys

Several amphibian species were identified in the tadpole stage in early spring in the stock pond and by interviewing the landowner. The dominant amphibian species observed were western toad (*Anaxyrus boreas*) and chorus frog (*Pseudacris sp.*).

Three California newts (*Taricha torosa*) were observed in the stock pond in December 2015. The water depth was 8 inches or less. Two of the newts were engaged in amplexus (mating). No other amphibians or reptiles were observed in the stock pond.

Chorus frog and western toad larvae, as well as egg masses, were observed in the stock pond in April 2017. The water depth was 1-2 feet. No other amphibians or reptiles were observed in or near the stock pond.

Several species of birds were observed or heard during the numerous site visits. This is not an exhaustive list, as many other species would be expected to occur throughout the year. Birds observed during site visits include:

American robin (*Turdus migratorius*)
Western scrub jay (*Aphelocoma californica*)
California quail (*Callipepla californica*)
mourning dove (*Zenaida macroura*)
dark-eyed junco (*Junco hyemalis*)
Anna's hummingbird (*Calypte anna*)
oak titmouse (*Baeolophus inornatus*)
acorn woodpecker (*Melanerpes formicivorus*)
northern flicker (*Colaptes auratus*)
western bluebird (*Sialia mexicana*)
black phoebe (*Sayornis nigricans*)

Several ground squirrel (*Otospermophilus beecheyi*) burrows are present adjacent to the house and around the entrance to the property. Dusky-footed woodrat houses (*Neotoma fuscipes*) occur in the chaparral. Field mice and voles are assumed to be present. No mammals were observed during the field surveys. Because of the parcel's location near large areas of open space it is assumed that several common species of wildlife also occur there, since the parcel provides nesting and forage habitat. No wildlife nursery sites, such as a maternal bat roost, fawning ground, or fish spawning areas occur on the parcel.

4.8 Special-Status Animals

Based on a review of the CNDDB, and the preparer's knowledge of sensitive species, several special-status wildlife species were determined to possibly occur on the parcel (see Section 3.4 in Methods, and Table 4 in Appendix B). Most are limited to habitats that are not present on the parcel and are not expected to occur there. The species with a moderate to high potential to occur on the parcel are discussed in further detail below.

The USFWS national map of designated Critical Habitat was viewed on-line to determine if the parcel is within Critical Habitat for any federally listed species. The Critical Habitat designation identifies areas that are important to the recovery of a federally listed species; it does not necessarily indicate presence of the species. The parcel is not within designated Critical Habitat for any federally listed species.

Amphibians

California Red-legged Frog

California red-legged frog (*Rana draytonii*, CRLF) is federally listed as threatened (FT) and is designated by the state as a Species of Special Concern (CSSC). CRLF occurs in different habitats depending on life stage, season, and weather conditions. CRLF typically uses a variety of aquatic habitats (e.g., ephemeral ponds, intermittent streams, seasonal wetlands, springs, seeps, perennial creeks, artificial ponds, marshes, dune ponds, and lagoons), as well as riparian and upland habitats. The common factor among habitats where CRLF occurs is the association with a perennial water source, ideally free of non-native predators.

The parcel is five miles from the nearest known location of California red-legged frog, and does not contain viable breeding habitat for this species. Aerial photographs were assessed to determine whether permanent ponds are located between the known locations and the project

site because CRLF movement typically relates to breeding pond locations, and the species has been documented to travel up to 2 miles from a breeding site. It is very unlikely that CRLF occur on the parcel because the closest known breeding areas for CRLF are Oak Moss Creek and Wragg Creek, which are 5 to 6 miles away. There is no perennial water on site, and other suitable habitat features are not present. We found no evidence of ponds between the known breeding sites and the project site.

In addition, the stock pond dries by the end of July (Google Earth history, 1993-2014), which is not long enough to support a successful breeding effort for CRLF. If CRLF were to somehow reach the parcel and lay eggs in the pond they would not survive to maturity because the pond dries too quickly. As a result, a pond such as this can adversely impact a species by creating a population sink. CRLF tadpoles or adults were not observed in the stock pond during the site visits.

Foothill Yellow-legged Frog

Foothill yellow-legged frog (*Rana boylei*; FYLF) is proposed for federal listing as Threatened, and is a California Species of Special Concern. It inhabits partly shaded, shallow streams and riffles in a variety of habitats, but requires permanent water and does not migrate between ponds like CRLF does. CNDDDB occurrences have been documented at Sage Creek and Capell Creek within 5 miles of the parcel, but permanent aquatic habitat is not present on the parcel or nearby, and FYLF is not expected to occur there.

Birds

White-tailed kite

The white-tailed kite (*Elanus leucurus*; WTKI) is a medium-sized raptor that is found throughout the United States, and resides and breeds in California. WTKI is found year round in Napa County. This species forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands and uses trees with dense canopies for cover. It makes a nest of loosely piled sticks and twigs and lined with grass, straw, or rootlets. Nests are placed near the top of a tree in a dense canopy of oak, willow, or other tree stands and are usually located near an open foraging area.

The parcel contains marginal hunting and foraging habitat for this species. There is a moderate potential for WTKI to occur within the parcel since suitable nesting habitat exists given the proximity of the parcel to agricultural land and the presence of oak woodland with a dense canopy cover. Recommendations to minimize impacts to this species are provided in section 5.3 (Measure BIO-3).

Other Migratory Birds and Raptors

The parcel contains a variety of nesting habitat, including grassland, chaparral, and oak woodland. Numerous passerine birds were noted during the biologists' site visit, and ample nesting materials and nesting sites occur on the property. Birds protected by the MBTA and California Fish and Game Code are expected to nest onsite.

Mammals

Pallid bat

The pallid bat (*Antrozous pallidus*) is a large bat with prominent ears. Pallid bats are found throughout the Western US, from California to Texas. Pallid bats roost alone, in small groups or gregariously in crevices in trees, or rocks. They will roost in human structures, as well, and have been found low to the ground, as well as high up in trees or in rocks. However, they are sensitive to human disturbance. Pallid bats forage in open forests and grasslands. In California, these bats may over winter in their primary roost. The biological reconnaissance surveys identified potential roost sites within tree cavities, an abandoned home, and a wooden water tower. However, no bats or sign of bats have been found.

There is a moderate potential for pallid bats to occur within the parcel given nearby documented occurrences and the presence of suitable roost sites. There are over 30 trees on the parcel with cavities potentially suitable for bat use; these are identified in the tree survey table provided in Appendix B as trees with cavities, and mitigation is included to inspect these trees prior to removal.

Other bats

Other bat species besides the pallid bat could be found on the project site in the abandoned structures and the foliage of oak trees. Disturbance of the maternity colonies of any species of bat is significant under CEQA guidelines and California Fish and Game Code. Measures are recommended to protect bats.

4.9 Special-Status Plants

Holly-leaved ceanothus (*Ceanothus purpureus*; CRPR 1B.2 = rare, threatened or endangered in California and elsewhere) occurs in the white leaf manzanita chaparral habitat within the parcel (Figure 5, Appendix A; Photo 5; Appendix C: Representative Photographs). No other special status plants were detected during multiple site surveys, including surveys during the appropriate bloom periods.

Based on a review of the CNDDDB, and the preparer's knowledge of sensitive species, several special-status plant species were evaluated for the potential to occur in the parcel (Table 3 in Appendix B). Many of these plant species are limited to habitats that are not present in the study area and are not expected to occur. The species with a potential to occur on the parcel are discussed in further detail below. Searches of the California Natural Diversity Database (CNDDDB; CDFW 2021), California Native Plant Society Electronic Inventory (CNPS 2021), Calflora Electronic Inventory (Calflora 2021), and the Napa County Baseline Data Report (NCBDR; Napa County 2005) result in no documented occurrences of special-status bryophytes or lichens in Napa County.

Green monardella

Green monardella (*Monardella viridis*; CRPR 4.3) is a perennial herb in the mint family. This plant is endemic to California, where it is known from Lake, Napa, Solano, and Sonoma counties. It grows in chaparral, cismontane woodland, and broadleaf upland forest, sometimes

on serpentine soil. It blooms from June to September. There is suitable habitat within the parcel and there are several documented nearby occurrences. Species specific surveys during the bloom period were conducted in 2018 and this species was not found to occur on the parcel.

Holly-leaved ceanothus

Holly-leaved ceanothus (*Ceanothus purpureus*; CRPR 1B.2) is a perennial shrub in the buckthorn family. It is endemic to northern California, where it is known only from the inner north coast ranges north of the Bay Area, mainly in Sonoma and Napa Counties. It generally grows in volcanic substrates in chaparral habitat. It blooms from February to April. Holly-leaved ceanothus is present within the parcel (Figure 5 in Appendix A). Impacts to this species would be assessed and mitigated through the local planning process, and do not require state or federal permits. Avoidance and mitigation measures for this plant are included in section 5.3.

Jepson's leptosiphon

Jepson's leptosiphon (*Leptosiphon jepsonii*; CRPR 1B.2) is an annual herb in the phlox family. It is endemic to California, where it is known from Sonoma, Lake, Napa, and Yolo counties. It is found in chaparral, cismontane woodland, often in partially shaded grassy slopes on volcanic or serpentine substrate. It blooms from March to May. Species specific surveys during the bloom period were conducted and this species was not found to occur on the parcel.

Napa bluecurls

Napa bluecurls (*Trichostema ruygtii*; CRPR 1B.2) is an annual herb in the mint family. It is endemic to northern California, where it is only known from Napa County. It grows in open areas generally on thin clay soils. It blooms from June to October. This species is not considered likely to occur on site because of past disturbance of open grassland areas, and the parcel contains primarily volcanic soils, not clay soils; however, it has been found in the nearby region and its presence could not be precluded without additional surveys. Species specific surveys during the bloom period were conducted and this species was not found to occur on the parcel.

Narrow-anthered brodiaea

Narrow-anthered brodiaea (*Brodiaea leptandra*; CRPR 1B.2) is a perennial herb in the brodiaea family. It is endemic to California, where it is known from Lake, Napa, and Sonoma counties. It is found in broadleaf upland forest, chaparral, cismontane woodland, valley and foothill grassland, and lower montane coniferous forest on volcanic soils. It blooms from May to July. Suitable habitat is present on the parcel within the chaparral habitat. This species is known to occur within five miles of the parcel but species specific surveys during the bloom period were conducted and this species was not found to occur on the parcel.

Nodding harmonia

Nodding harmonia (*Harmonia nutans*; CRPR 4.3) is an annual herb in the daisy family. It is endemic to California, where it is known from Lake, Napa, Sonoma, and Yolo counties. It grows in chaparral and cismontane woodland on rocky, gravelly volcanic outcrops. It blooms from March to May. Suitable volcanic substrate is present in the Rocky Outcrop-Hambrecht soils in the southern end of the parcel containing chaparral habitat. The species is known to occur

within five miles of the parcel but species-specific surveys during the bloom period were conducted and this species was not found to occur on the parcel.

Victor's gooseberry

Victor's gooseberry (*Ribes victoris*; CRPR 4.3) is a perennial shrub. It is endemic to California, where it is found in Mendocino, Marin, Napa, Solano, and Sonoma counties. It grows in chaparral and broadleaf upland forest, usually in mesic, shady areas. It blooms between March and April. There is suitable habitat within the parcel and there are several documented nearby occurrences. However, this species was not observed during field surveys, including a species-specific survey done in April 2018.

Small-flowered calycadenia

Small-flowered calycadenia (*Calycadenia micrantha*; CRPR 1B.2) is an annual herb found in the sunflower family. It is found in chaparral, valley and foothill grasslands on rocky talus or scree, and/or sparsely vegetated areas, sometimes on serpentine, and in meadows or seeps on volcanic substrate. It is known from Colusa, Lake, Monterey, Napa, and Trinity counties. It blooms from June to September. This species has specific habitat requirements and is not likely to occur on the parcel; however, because it has been found within five miles of the parcel on volcanic soils its presence could not be ruled out. Species specific surveys during the bloom period were conducted and this species was not found to occur on the parcel.

5 Biological Impact Assessment and Avoidance and Mitigation Measures

5.1 Significance Criteria

Potential impacts to biological resources were determined in accordance with Appendix G of the CEQA Guidelines. Impacts would be considered potentially significant if the proposed project will:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS
- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- f) Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state HCP

5.2 Summary of Project Impacts

The parcel is surrounded by rural residential and agricultural land uses, including vineyards. The parcel remains largely undeveloped, although it has been impacted by regular grazing and residential uses. The proposed project involves the conversion of blue oak woodland and white leaf manzanita chaparral to vineyard. There are two associations within the white leaf manzanita alliance; one of these is a sensitive natural vegetation community. Holly-leaved ceanothus, a special-status plant, also occurs in the chaparral.

The two blocks slated for vineyard development are shown on Figure 2.

Development of Block 1 would remove 6.1 acres of the 6.8 acres of white leaf manzanita chaparral on the parcel, and would remove 96 of the 115 rare holly-leaved ceanothus plants. These impacts would have a substantial adverse effect on special-status species and a sensitive natural community. Development of Block 1 would result in the removal of 83 trees 6 inches or greater DBH.

Block 1 includes a breached stock pond that detains water in the winter and spring, keeping it from natural drainages, and may act as a population sink for amphibians that may be attracted to lay eggs in the winter and spring but the pond dries out too early to support metamorphosis.

Development of Block 2 would remove 0.84 acres of blue oak woodland, including 55 trees 6 inches or greater DBH.

The blocks are set back from the ephemeral drainages that cross the parcel and will not impact them.

With the implementation of mitigation measures BIO-1 through BIO-7, the project will not result in significant impacts to biological resources, including special-status animals and plants, sensitive communities, nesting birds, roosting bats, and downstream resources. These measures include conserving white leaf manzanita and oak woodland habitats, protecting rare plants, pre-construction surveys to comply with state and federal laws protecting bird, bat, and special-status species; and implementing an Agricultural Erosion Control Plan as required by the County to minimize disturbance and protect water quality.

The potential biological impacts of the project include the loss of natural woodland and chaparral habitat, both of which provide valuable habitat and migratory paths for native plants and wildlife. However, the proposed vineyard is small in the context of the surrounding land uses and the impact to local wildlife and plant dispersal will be undetectable on a regional scale.

Summary of Mitigation Measures

The following is a list of the mitigation measures recommended to avoid significant impacts to biological resources. These are described in more detail in sections 5.3 through 5.7.

BIO-1 Pre-construction Survey for CRLF

BIO-2 Remove Stock Pond Berm to Protect Special-status Amphibians and Downstream Resources

BIO-3 Pre-construction Survey for Bats

BIO-4 Nesting Bird Survey and Nest Protection
BIO-5 Preserve/Replant Holly-leaved Ceanothus
BIO-6 Best Management Practices to Protect Downstream Water Quality
BIO-7 Preserve White Leaf Manzanita Sonoma Sage Association of the White Leaf Manzanita Chaparral

5.3 Sensitive Species – *Less-than-Significant Impact with Mitigation*

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

Special-Status Animals

Amphibians

Special-status amphibians, including the California red-legged frog (CRLF) and the Foothill yellow-legged frog (FYLF) are not expected to occur on the parcel but are known to occur within five miles of the parcel. The stock pond may attract dispersing amphibians. If CRLF or FYLF were to reach the parcel, take could occur if individuals travel or migrate into work areas and become trapped or crushed, or if harassment occurs resulting in altered behavioral patterns that impact survival. The project could also result in indirect impacts to this aquatic species if storm water carries pollutants or sediment downstream that adversely impact habitats occupied by CRLF or other special-status amphibian species.

Because the pond dries in the early summer, it could be a population sink for amphibians that are attracted to lay eggs in a pond that will dry too fast for the life cycle to be successful. Measure BIO-2, which is to remove the stock pond, is recommended to prevent it from being a population sink, and to prevent it from retaining water that would usually flow to habitats downstream.

Potential impacts to special-status amphibians are less than significant with the implementation of measures BIO-1 and BIO-2, and water quality protection measures implemented under the Erosion Control Plan required for the project, including those in measure BIO-6.

Measure BIO-1: Pre-construction Survey for Special-status Amphibians: A qualified biologist shall conduct a pre-construction survey within the project area for the presence of special-status amphibians. The survey will be conducted immediately prior to the initial onset of project activities. If any special-status species are found, work will not start until the appropriate state and/or federal resource agencies are contacted and avoidance and mitigation measures are in place.

A qualified biologist is an individual with a degree in biological sciences or related resource management with a minimum of two seasonal years post-degree experience conducting surveys for California red-legged frog and Foothill yellow-legged frog. During or following academic training, the qualified biologist shall have achieved a high level of professional experience and knowledge in biological sciences and special-status species identification, ecology, and habitat requirements (CDFW 2022).

Measure BIO-2: Remove the Stock Pond Berm to Protect Special-status Amphibians and Downstream Resources. The stock pond diverts water flow from downstream resources, and potentially creates a population sink for amphibians that require ponded water into late summer/early fall to complete metamorphosis, including special-status amphibians if they should ever occur on the parcel. Measure BIO-2 is to remove the berm around the pond to restore natural drainage flows and remove the potential population sink for amphibians.

Roosting Bats

The trees and structures within the project area could provide suitable roosting habitat for several bat species protected under California Fish and Game Code. Removal or disturbance of roost habitat may result in significant impacts to bat populations if an occupied or perennial (but unoccupied) maternity or colony roost is disturbed or removed. However, with the implementation of a pre-construction survey under Measure BIO-3, the impacts from the project would be less than significant. A pre-construction survey is necessary if a roost is established between the time of the biological surveys and the project work.

Measure BIO-3: Pre-construction Survey for Bats. A preconstruction survey of trees and structures in the parcel for colony bat roosts will be conducted by a qualified biologist within 30 days prior to the onset of project activities, and the survey will be documented. If an occupied maternity or colony roost is detected, the qualified biologist will consult CDFW staff to determine appropriate measures, such as bat exclusion methods, if the roost cannot be avoided. Trees with cavities identified in the tree survey (Appendix B), shall be re-surveyed for current condition and sign of a maternity or colony bat roost.

A qualified biologist is an individual with a degree in biological sciences or related resource management with a minimum of two seasonal years post-degree experience conducting surveys for California bats. During or following academic training, the qualified biologist will have achieved a high level of professional experience and knowledge in biological sciences and special-status species identification, ecology, and habitat requirements (CDFW 2022).

White-tail kite and Nesting Birds

White-tail kite (WTKI) may forage and nest within the project area. Foraging WTKI could be temporarily impacted during project activities due to increased noise levels and human activity in work areas. Since there is an abundance of additional foraging habitat present in the immediate vicinity of the project site, impacts to foraging WTKI are not significant.

Additionally, the project could impact nesting WTKI. To avoid or minimize impacts to nesting WTKI, all vegetation removal and trimming as well as ground disturbing activities should be scheduled to take place outside of breeding season (the breeding season is February 1 to September 15). If project activities occur during the breeding season, it is recommended that pre-construction surveys for nesting birds be completed (Measure BIO-4) to protect nesting WTKI, if present.

The impacts from the project on WTKI would be less than significant with the implementation of Measure BIO-4.

The parcel provides suitable habitat for nesting birds protected under the federal MBTA and California Fish and Game Code. If construction activities are started during the avian breeding season (February 1 to September 15), injury to individual birds or nest abandonment that impacts reproduction could occur. Project impacts to nesting birds would be less than significant with the implementation of Measure BIO-4.

Measure BIO-4 Nesting Bird Survey and Nest Protection. When any site disturbance activities related to the project start between February 1 and September 15, all suitable habitats located within the project's area of disturbance, including staging and storage areas, plus a 300-foot buffer around these areas will be surveyed by a qualified biologist, as feasible, for the presence of active nests no more than seven days before commencement of any site disturbance activities and equipment mobilization. If project activities are delayed by eight or more days, an additional nesting bird survey shall be performed. Active nesting is present if a bird is sitting in a nest, a nest has eggs or chicks in it, or adults are observed carrying food to the nest. The results of the surveys shall be documented.

A qualified biologist is an individual with a degree in biological sciences or related resource management with a minimum of two seasonal years post-degree experience conducting surveys for nesting birds. During or following academic training, the qualified biologist will have achieved a high level of professional experience and knowledge in biological sciences and special-status species identification, ecology, and habitat requirements (CDFW 2022).

If pre-construction nesting bird surveys result in the location of active nests, no site disturbance and mobilization of heavy equipment, shall take place within 300 feet of the nest, or as determined by the qualified biologist in consultation with CDFW, until the chicks have fledged. Monitoring will occur approximately every two weeks until the chicks have fledged, and monitoring dates and findings will be documented.

Project impacts to nesting birds would be less than significant with the implementation of Measures BIO-4, BIO-5, and BIO-7, which preserves a portion of chaparral habitat in Block 1.

Special-status Plants

Holly-leaved ceanothus

Holly-leaved ceanothus occurs in the white leaf manzanita chaparral habitat in the southern portion of the project area in vineyard Block 1. Since holly-leaved ceanothus is a special-status plant, the impacts from the project are potentially significant unless mitigated.

Holly-leaved ceanothus grows best on volcanic substrate within chaparral habitats, which is only found in the southern portion of the project area. It is feasible to replant or seed Holly-leaved ceanothus in areas on the parcel to replace plants removed by the project.

There are three possible measures that would mitigate impacts to Holly-leaved ceanothus. One is to remove Block 1 from the proposed project to avoid impacts entirely. This measure would not protect Holly-leaved ceanothus in the future. The second is to preserve stands of Holly-leaved ceanothus, preferably while also preserving the sensitive association of white leaf manzanita chaparral, in off-site locations in a 2:1 ratio (per General Plan policy) within Napa County. Areas proposed for preservation must contain verified extant populations of similar size

and quality, and equal or greater density to the populations impacted by the project. Off-site mitigation sites have not been identified. The third measure, which is recommended as measures BIO-5 and BIO-7, which are to replace plants removed for the vineyard under a replanting plan developed prior to project approval, and to revise the project to protect the higher density area of holly-leaved ceanothus and the sensitive association of the white leaf manzanita chaparral in the southeast corner of Block 1, respectively.

Measure BIO-5: Preserve/Replant Holly-Leaved Ceanothus This measure recommends that the project be revised to protect at least some of the area of high-density holly-leaved ceanothus in the southeast corner of the site and prepare a replanting plan for County review prior to project approval to replace holly-leaved ceanothus plants that are removed. The replanting plan shall include an assessment of how many plants will be removed by the project, how many will be planted, and where they will be planted. It shall describe the methods to be used (seeds or cuttings, and source), the replanting ratio, maintenance to be done during an initial establishment period (including irrigation), success criteria, monitoring methods, and monitoring period.

The impacts from the project on holly-leaved ceanothus would be less than significant with the incorporation of Measure BIO-5.

5.4 Sensitive Natural Vegetation Communities, Including Wetlands – *Less-than-Significant Impact with Mitigation*

Sensitive vegetation communities include riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or designated by the USFWS and CDFW. Sensitive communities on the parcel include aquatic features and the white-leaf manzanita/Sonoma sage chaparral association, as discussed below.

Aquatic Features

The parcel contains ephemeral drainages that are not proposed to be impacted. The proposed project could have indirect impacts if storm water carries pollutants or sediment from project activities into drainages. The project is required to have an Agricultural Erosion Control Plan because the slopes exceed 5%. Implementation of the Agricultural Erosion Control Plan, and Best Management Practices will protect water quality during construction and operation.

See section 5.3 and measure BIO-2 for a discussion of the breached stock pond on the parcel.

Measure BIO-6: Best Management Practices to Protect Downstream Water Quality. The potential for adverse effects to water quality and subsequently to biological resources will be avoided by implementing BMPs established in the Agricultural Erosion Control Plan. The BMPs will minimize erosion or other sources of water pollution. It is recommended that the Erosion Control Plan incorporate the following BMPs to prevent significant impacts to biological resources on and downstream of the project site.

Ground disturbance and vegetation removal may not exceed the minimum amount necessary to complete work at the site.

Store, handle, and dispose of construction materials and wastes properly, so as to

prevent their contact with stormwater.

Control and prevent the discharge of all potential pollutants, including solid wastes, paints, concrete, petroleum products, chemicals, wash water or sediment and non-stormwater discharges to storm drains and water courses.

Avoid cleaning, fueling, or maintaining vehicles on site, except in a designated area in which run-off is contained.

Perform clearing and earth moving activities during dry weather to the maximum extent practical.

Delineate clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees with field markers.

Remove spoils promptly and avoid stockpiling of fill materials when rain is forecast. Cover soil stockpiles and other materials with a tarp or other waterproof material during qualifying rain events.

Limit construction access routes and stabilize designated access points.

Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination and dispersal by wind and to prevent wildlife access. Sanitary facilities will be maintained within the parcel during construction.

Do not include invasive, non-native plant species rated as moderate or high on the Cal-IPC website in any erosion control mix or planting. (<https://www.cal-ipc.org/plants/inventory/>)

Do not drive through a wetted channel.

White Leaf Manzanita Chaparral and Oak Woodland

There are 6.8 acres of white leaf manzanita chaparral at the southern end of the parcel, including 0.8 acre of the sensitive white leaf manzanita/Sonoma sage chaparral association in the southwest corner of the parcel (Figure 6). Block 1 would impact 6.1 acres of white leaf manzanita chaparral, including most of the sensitive chaparral association. The white leaf manzanita/Sonoma sage chaparral is a currently listed in VegCAMP provisionally as a special-status plant community. It is also protected under Napa County General Plan policies (CON-17; see section 2.9).

The parcel also contains 7 acres of blue oak woodland. Block 2 impacts 0.84 acre of blue oak woodland. The blue oak woodland is also protected by the County (policy CON-24).

The proposed project will impact these protected communities, which is a potentially significant impact unless mitigated.

Block 2 impacts 0.84 acre of blue oak woodland. There is sufficient blue oak woodland on the property to offset the project impacts in compliance with General Plan policy CON-24. As required by County Code Section 18.108.020E, prior to project approval the preserved canopy shall be enforceably restricted with a perpetual protective easement or deed restriction.

Measure BIO-7 Preserve the White Leaf Manzanita/Sonoma Sage Association, including Holly-leaved Ceanothus in the Southeast Corner of the Parcel. It is recommended that the outline of Block 1 be reconsidered to protect the sensitive association of white leaf manzanita/Sonoma sage chaparral in the southeast corner of the site, as shown on Figure 6. This would also protect holly leaf ceanothus.

5.5 Interfere with Native Wildlife Movement – *Less-than-Significant Impact*

The parcel is not identified in the BDR as an important wildlife corridor. Wildlife likely uses the natural habitat present within the parcel for movement between other nearby natural habitats, however, the parcel has long been fenced, limiting access to larger mammals, so they have likely developed patterns of travel that do not depend on the parcel. Construction activities could result in temporary barriers to wildlife movement, but these are not expected to be significant because they are temporary.

5.6 Conflict with Local Policies – *Less-than-Significant Impact with Mitigation*

The Napa County General Plan provides a framework to protect natural resources within the County, including the preparation of a biological impact analysis that includes effective avoidance and mitigation measures (this report). Additionally, the General Plan requires oak woodland habitat to be maintained and improved to provide for slope stabilization, soil protection, species diversity, and wildlife habitat.

The project does require removal of trees that could be in conflict with Napa County Zoning Ordinance Chapter 18.108. However, with the implementation of measures BIO-5 and BIO-7 the project will be in compliance with this local ordinance. It is anticipated that all other ordinances will be complied with through the permit process.

5.7 Conflict with any Conservation Plan – No Impact

The parcel is not within an area covered by an HCP or NCCP. As a result, the project will have no impact related to a conservation plan.

6 References

- Baldwin, B.G., D.H. Goldman, D. J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.
- Barbour, M.G., T. Keeler Wolf, and A. Shoenherr. 2007. Terrestrial Vegetation of California, 3rd Edition. University of California Press. Berkeley and Los Angeles, CA.
- Bulger J.B., N.J. Scott Jr., R.B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frogs *Rana aurora draytonii* in coastal forests and grasslands. *Biological Conservation* 110: 85–95.
- California Department of Fish and Wildlife. 2005. California Life History Accounts and Range Maps. <https://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx>. Accessed December 2015.
- California Department of Fish and Wildlife. 2022. List of Vegetation Alliances and Associations Natural Diversity Database. http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp . Accessed March and April 2022.
- California Department of Fish and Wildlife. 2022. California Natural Diversity Database. RareFind 5 (version 5.1.1). Accessed March 2022.
- California Department of Fish and Wildlife (CDFW). 2022. Special Animals List. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>. Accessed March 2022.
- California Department of Fish and Wildlife. 2022. Streambed Alteration Agreement EPIMS Notification Number SCL-20973-R3. Guadalupe River, a Tributary to San Francisco Bay.
- California Native Plant Society (CNPS). 2022. CNPS Botanical Survey Guidelines. California Native Plant Society, Sacramento, CA. http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf. Accessed March 2022.
- CNPS. 2022. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed March 2022].
- Napa County Baseline Data Report. 2005. Chapter 4 Biological Resources. <https://www.napawatersheds.org/baseline-data-report>. Accessed March 2022.
- Sawyer, J.O., T. Keeler-Wolf, and J. Evans. 2009. A Manual of California Vegetation 2nd edition. California Native Plant Society. Sacramento, CA.
- The Jepson Herbarium. 2015. Jepson Online Interchange. <http://ucjeps.berkeley.edu/interchange/>. Accessed December 2015.

3496 Soda Canyon Road Vineyard Project
Biological Resources Survey
February 2022

United States Department of Agriculture (USDA), 2013. National Resource Conservation Service (NRCS) Web Soil Survey.

<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed 2013.

USFWS. 2022. Information for Planning and Conservation (IPaC). Website

<https://ecos.fws.gov/ipac/> [accessed May 2017].

USFWS. 2022. National Critical Habitat Mapper.

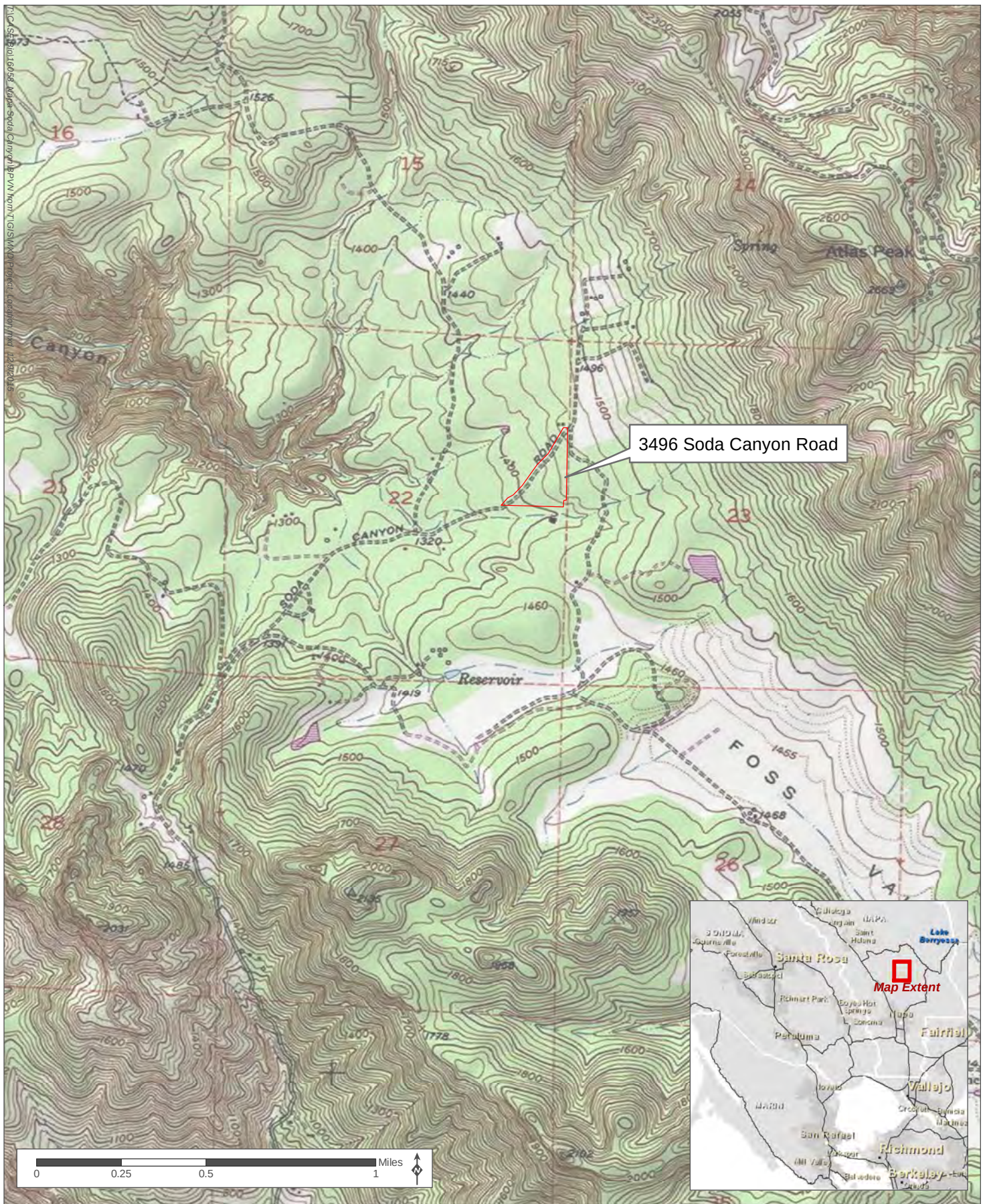
<https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77> accessed March 2022.

7 Appendices

This page deliberately left blank.

Appendix A: Figures

This page deliberately left blank.

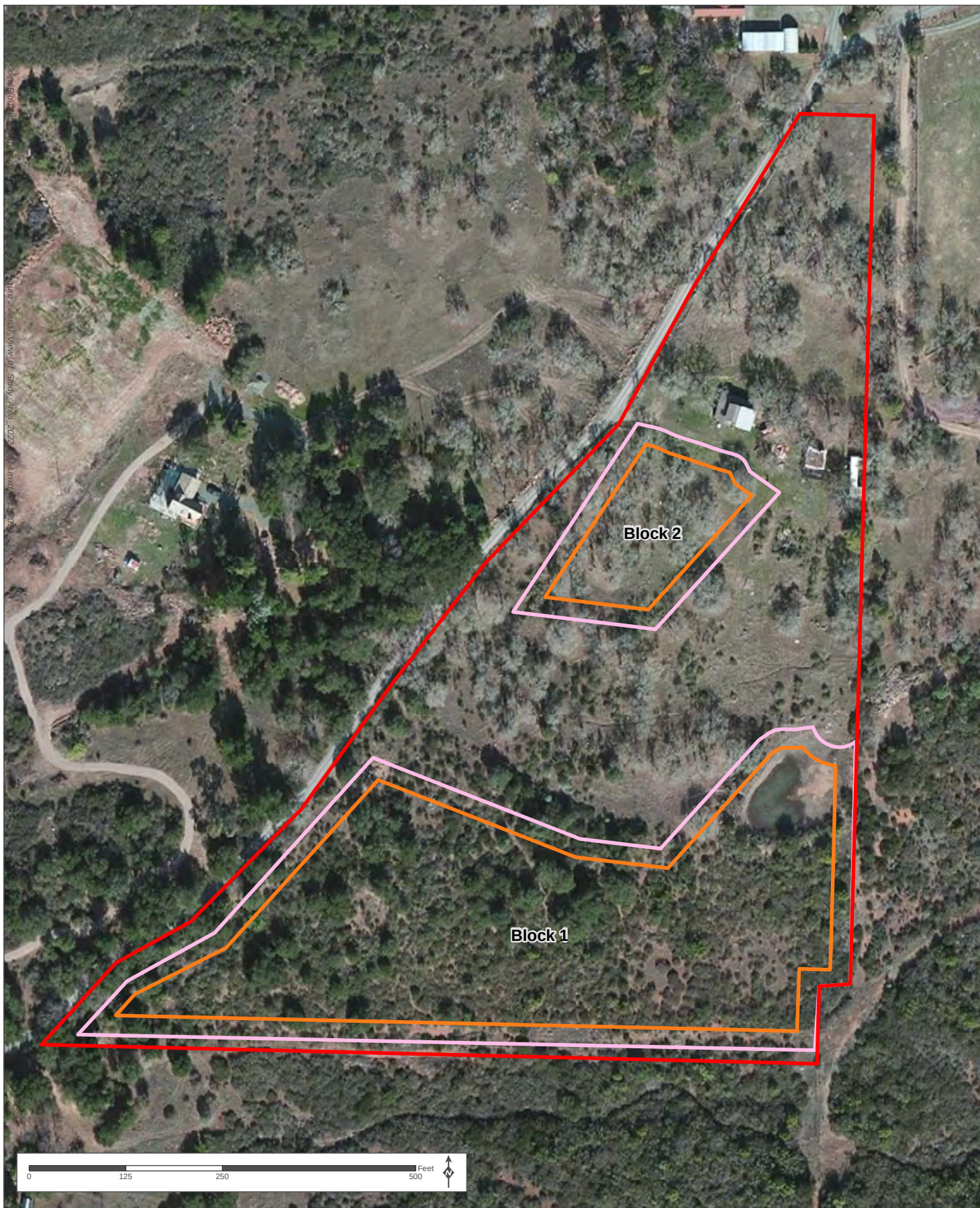


Source: ESRI ArcGIS Online (December 2015)

Project Parcel

Figure 1 Project Location

3496 Soda Canyon Road

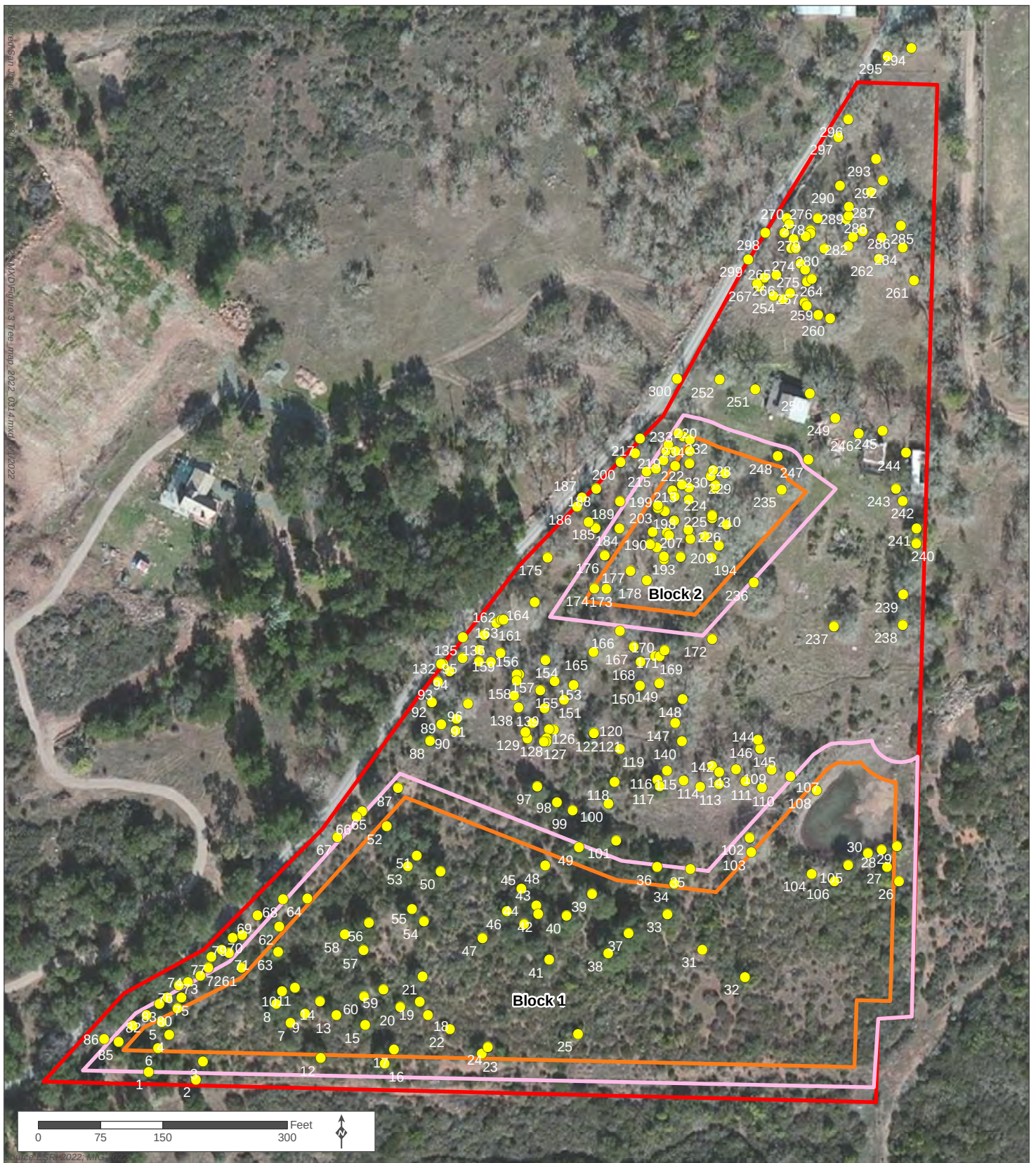


Source: Parcel Parcel from RSA; ESRI 2022; MIG 2022

- Project Parcel
- Proposed Block Boundaries (5.3 acres)
- Proposed Clearing Limits (7.2 acres)

Figure 2 Aerial View of the Study Area

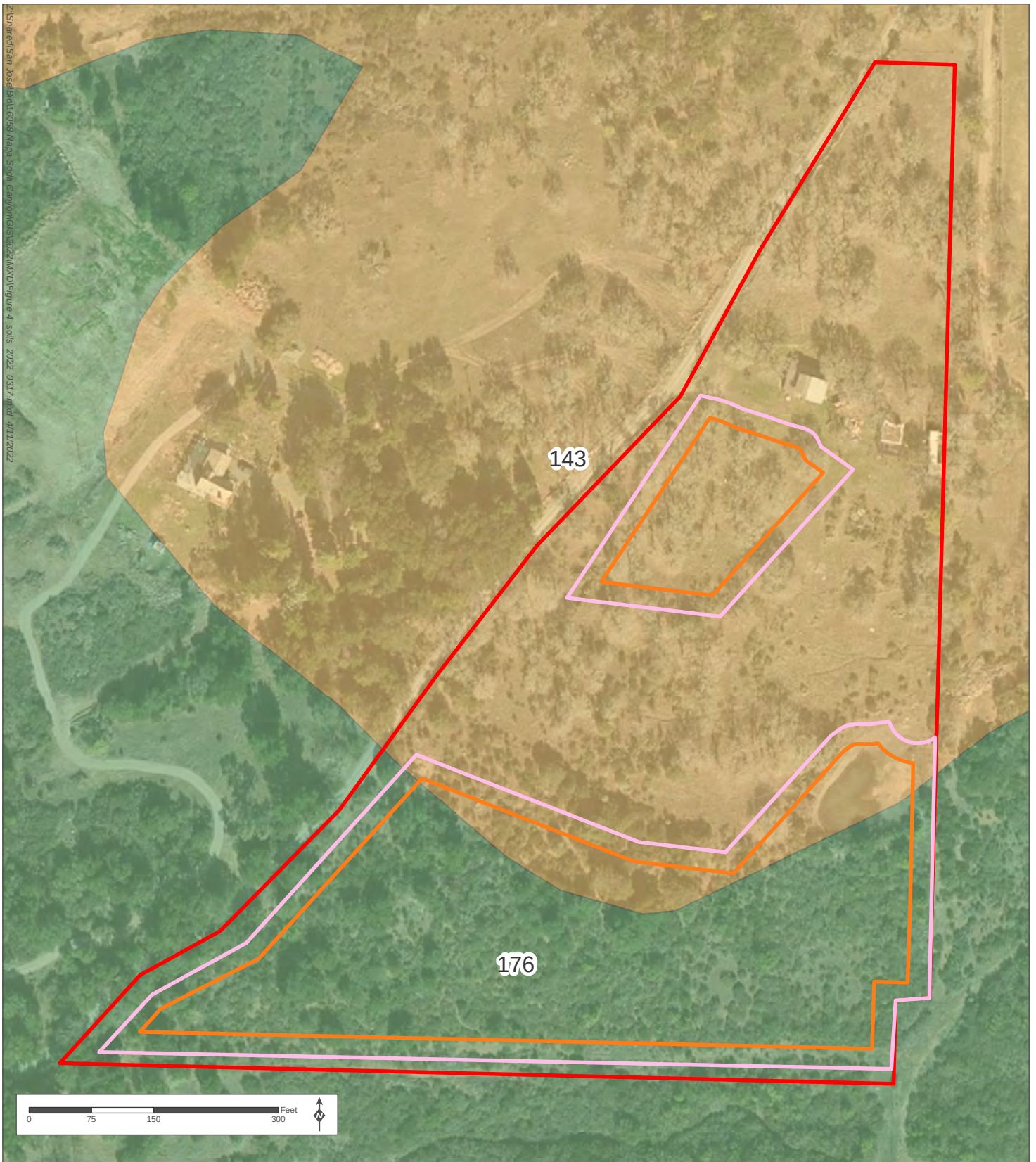
3496 Soda Canyon Road



Source: ESRI 2022; MIG 2022;

- ▬ Project area
- ▬ Proposed Block Boundaries (5.3 acres)
- ▬ Proposed Clearing Limits (7.2 acres)
- Recorded tree locations 2017

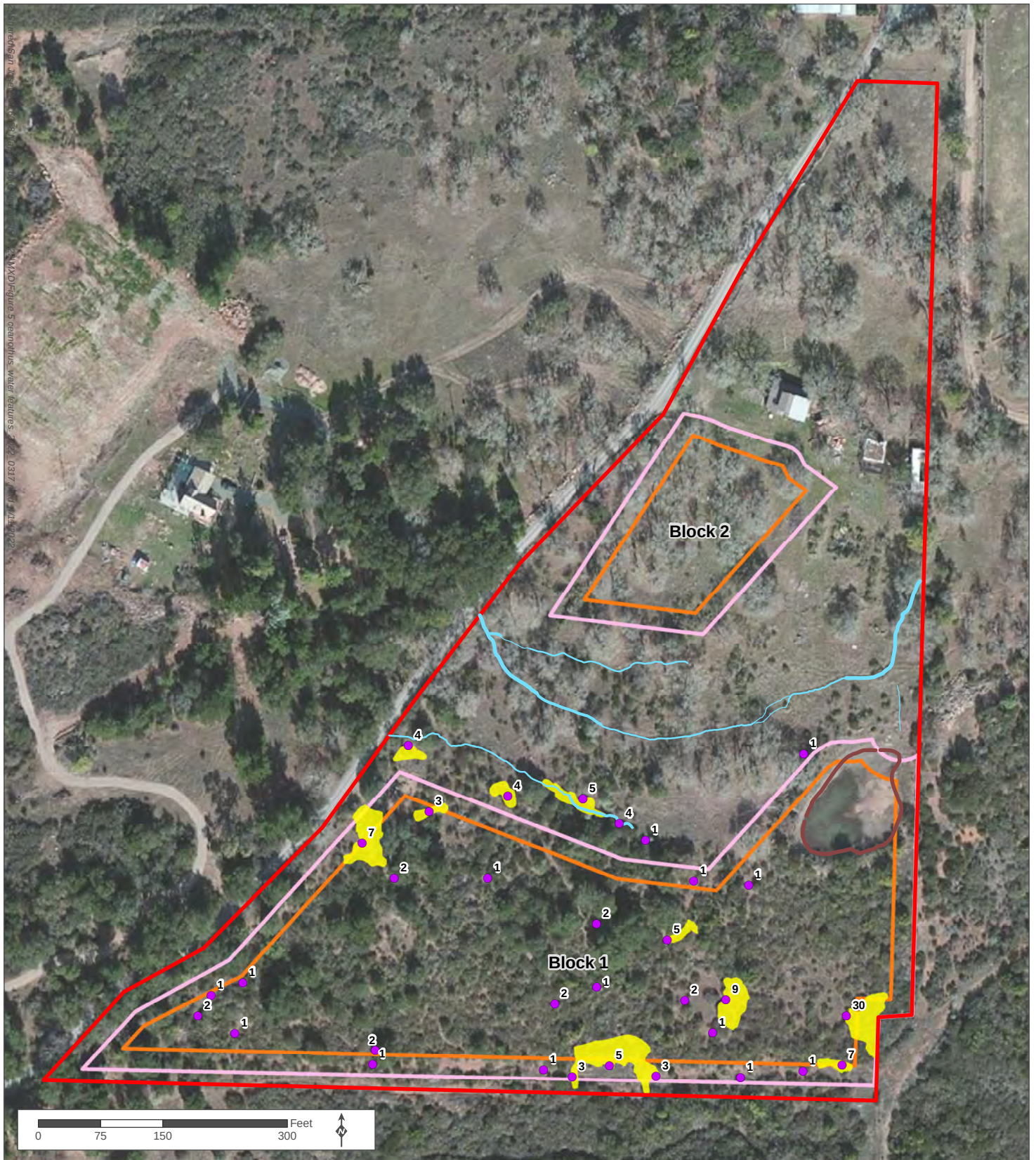
Figure 3 Results of Tree Survey
3496 Soda Canyon Road



- Project parcel
- 143 - Guenoc-Rock outcrop complex, 5 to 30 percent slopes
- 176 - Rock outcrop-Hambright complex
- Proposed Block Boundaries (5.3 acres)
- Proposed Clearing Limits (7.2 acres)

Figure 4 Soils in the Project Area

3496 Soda Canyon Road



- Project area
- Proposed Block Boundaries (5.3 acres)
- Proposed Clearing Limits (7.2 acres)
- Old Stock Pond Berm
- Ceanothus purpureus multiple occurrences
- C. purpureus occurrence (labeled by number of individuals)

Stream & Drainage

Width

- 1 foot
- 2 foot
- 3 foot
- 4 foot

Figure 5 Holly-leaved Ceanothus Occurrences and Site Water Features

3496 Soda Canyon Road



Source: Project Area from RSA; ESRI 2022; MIG 2022.

- | | |
|---|--|
| Project Area | Whiteleaf Manzanita Chaparral Alliance Associations |
| Proposed Block Boundaries (5.3 acres) | <i>Arctostaphylos viscida</i> – <i>Quercus wislizeni</i> (6.0 acres) |
| Proposed Clearing Limits (7.2 acres) | <i>Arctostaphylos viscida</i> – <i>Adenostoma fasciculatum</i> (.80 acres) |
| Old Stock Pond Berm | |
| California Annual Grassland (2.5 acres) | |
| Blue Oak Woodland (4.9 acres) | |

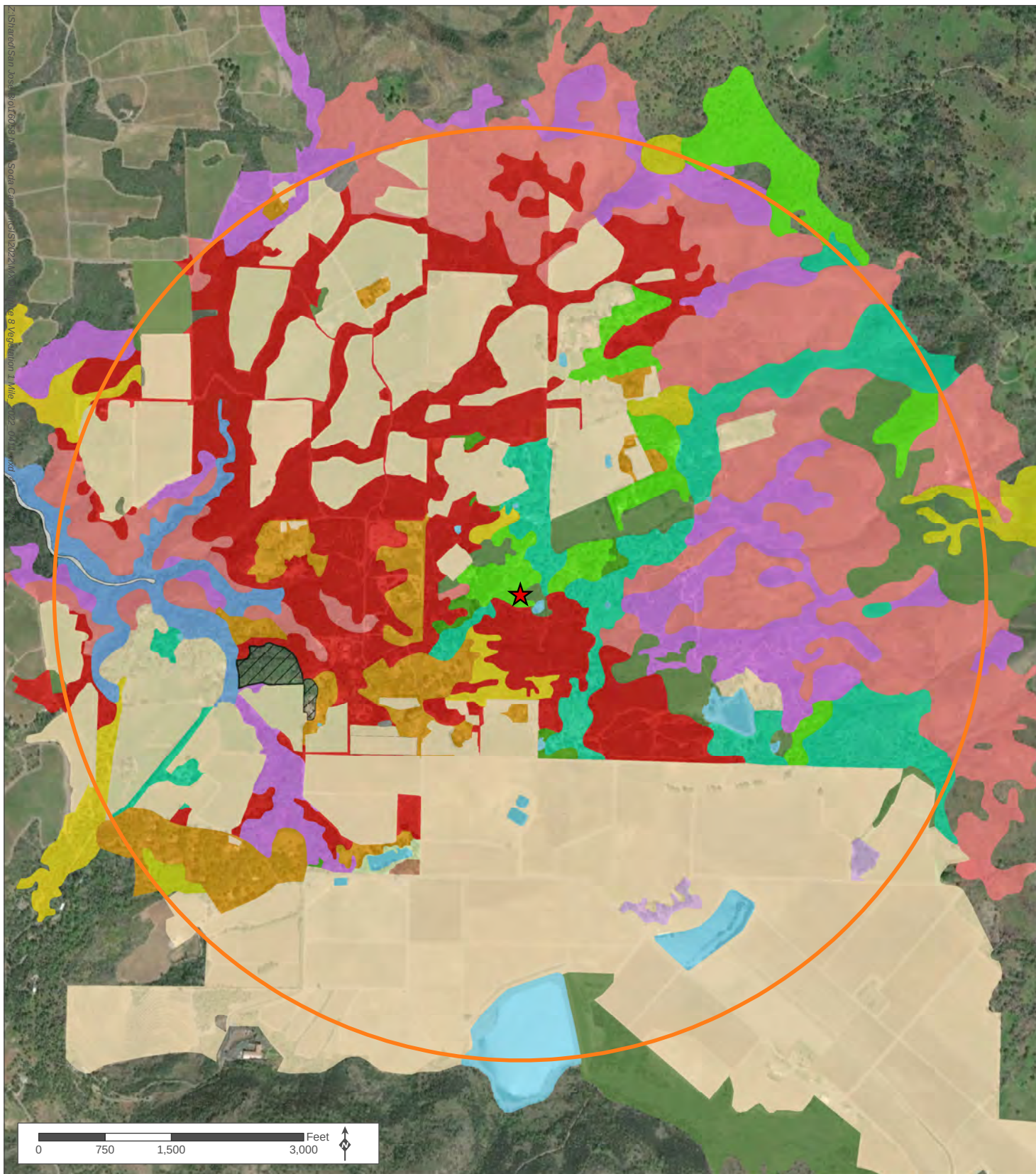


Figure 7 Vegetation Alliances

3496 Soda Canyon Road

Appendix B: Species Lists

This page deliberately left blank.

Table 1. Tree Survey Data

3496 Soda Canyon Road Vineyard Project
Biological Resources Survey
February 2022

Tree	Species	Single	Forked	Mult-Stem				Comments
1	QUAG			19.2	20.3			2 cavities, no bats, rat nest at base
2	QUAG		11.3 @ 3.5' above grade					no cavity
3	QUAG			5.9	5	5	4	no cavity
4	QUAG	15.3						no cavity
5	QUAG	18.3						no cavity
6	QUAG	21.2						cavities, no bats, rat nest at base, poor health
7	QUAG	17.3						no cavity
8	QUAG			14.5	16.9			no cavity
9	QUAG	19.2						no cavity
10	QUAG			15.7	10.1			no cavity
11	QUAG			16.1	9.2			no cavity
12	QUAG	16.2						no cavity, WR nest nearby
13	QUAG			7.4/6.1	5.6	8.8	5.8	no cavity
14	QUAG			5.2	3	5.9		no cavity, WR nest nearby
15	QUAG			6	7	9.4	5/4	no cavity, WR nest at base
16	QUAG			9.8	10.6	18.5	5	no cavity
17	QUAG			5.8/6.2	6.1/5.1	5.3	5.3	no cavity
18	QUAG			7.1	3.6	3.4		no cavity
19	QUAG			5.3	5.4	3	5.4	no cavity
20	QUAG			3	5.9			no cavity, WR at base
21	QUAG			8/7	8.2/6	6.5/7	8/8.1	no cavity
22	QUAG			6/3	6.2/3.5	3.5/5.8	3/2	no cavity, WR at base
23	QUAG			4.9/3.9	6.9/4.8	5		no cavity
24	QUAG			4/3	2/2	3/3/3	4/4.5/4	no cavity, 2 WR at base
25	UMCA			3.4	3	3	2.5/3	no cavity
26	UMCA		6.6 @ 2' above ground	~5 stems	1-3'			no cavity
27	UMCA	6.4						no cavity
28	QUKE	5.7						no cavity, WR nearby
29	UMCA	11.2						no cavity
30	QUAG	10						no cavity
31	QUAG			5.5	5.6	4	3	no cavity
32	QUAG			6.6	4.8	3		no cavity, WR nearby
33	QUAG			11.8	12.4	11.9	12.9	no cavity
34	QUAG			9.7	10.7	11		no cavity
35	QUAG			19.8	8.1			cavity, WR
36	QUAG			12.8	10			no cavity, WR
37	QUAG	24.8						no cavity
38	QUAG			22.1	17.9			cavity, WR
39	QUAG			16.8	10.1	9.4		no cavity
40	QUAG	13.7						no cavity
41	QUAG	20.6						no cavity
42	QUAG	8.8						no cavity
43	QUAG	14.5						no cavity
44	QUAG			8	6	5	4	3
45	QUAG			7	3.9			no cavity
46	QUAG			6.6	4.7	8.1	4	3/8.5/4
47	QUAG	5.7						no cavity
48	QUAG	21						multi-cavity, no bat sign
49	QUAG		30 @ 2' above grade					no cavity
50	QUAG		32 @ 1.5' above grade					cavity, no bat sign, wood rat at base
51	QUAG		31.8 @ 1' above grade					cavity, no bat sign
52	QUAG		64.4 @ 1' above grade, 3 pronged fork					cavity, no bat sign, bee hive
53	QUAG	22.3						cavity in base, no bat sign
54	QUAG	17.4						no cavity, woodrat at base
55	QUAG	13.9						no cavity
56	QUAG		30.5 @ 1 ft above grade					no cavity
57	QUAG			5.6	3.8	3.3	6.4	6
58	QUAG	17.6						woodrat nearby
59	QUAG			9.4	8.3	3		shallow cavity
60	QUAG			4.4	6.4	3.1	5	5,3,3,4
61	QUAG	22.2						no cavity
62	QUAG	18.8						no cavity
63	ABME			7.1	7.6	5.4	3.1	3 other ABME in the grouping, less than 5" DBH, no cavities
64	QUAG			13.2	4.1	6.9		no cavity
65	QUAG	9.8						cavity at base
66	QUAG	13.3						no cavity
67	QUAG	22						no cavity
68	QUAG			21.3	6.5			no cavity
69	QUKE		26.7 @ 2' above grade					no cavity
70	QUAG			10.5	9	9	8	7.7
71	QUAG	9.9						no cavity
72	QUAG			15.4	8			no cavity
73	QUAG			4.2	7			no cavity
74	QUAG			10.6	5.1			no cavity
75	QUAG	17	16 @ 15" above grade					woodrat at base
76	QUAG	6.2		8.4	7.1			
77	QUAG							
78	QUAG							
79	QUAG			13.4	5	4	5.8	cavity
80	QUAG			5.6	4.7			no cavity
81	QUAG	7.1						no cavity
82	QUKE							no cavity
83	ABME	7.9						no cavity
84	QUAG	24.6						no cavity
85	QUKE			14.6	15			no cavity
86	QUAG			8.4	8.4	4.3		no cavity
87	QUAG		7.2 @ 6" above grade					no cavity
88	QUAG			7.2	7.5	2	2.5	1,10.7
89	QUAG		26.1 @ 14" above grade					no cavity
90	QUAG	7.3						no cavity
91	QUAG	20.5						no cavity
92	QUAG							no cavity
93	QUAG	7.8		7.3	7.1			no cavity
94	QUAG	6.8						no cavity
95	QUAG	11.4						no cavity
96	QUAG	8.5						no cavity
97	QUAG	23.3						cavity, no bat sign
98	QUAG	7.1						no cavity
99	QUAG			13.5	7			multi-stemmed measurements taken below fork ~1ft above grade
100	PISA	7.5						

3496 Soda Canyon Road Vineyard Project
Biological Resources Survey
February 2022

101	QUAG		15.6 @ 1' above grade						no cavity, WR nearby
102	QUDO	12.3							no cavity
103	QUDO	21.4							no cavity
104	QUAG	6.2							no cavity
105	QUAG								no cavity
106	QUAG								no cavity
107	QUDO	21							no cavity
108	QUAG	5.4							no cavity
109	QUDO	29.1							no cavity
110	QUDO	16.4							cavity at base
111	QUDO	19.4							no cavity
112	QUDO	16.5							no cavity
113	QUDO	16.8							no cavity
114	QUDO				11.6	11.7			no cavity
115	QUDO				10.5	10.8			no cavity
116	QUDO	11.7							no cavity
117	QUAG				5.6	15.6			no cavity
118	QUAG	6.1							no cavity
119	QUDO	15.0							cavity
120	QUDO	11.3							no cavity
121	QUAG	10.5							no cavity
122	QUDO	14.9							cavity at base
123	QUDO	16.0							no cavity
124	QUDO				8.1	6.8			no cavity
125	QUDO	9.4							no cavity
126	QUDO	9.3							Poor health
127	QUDO	13.4							cavity at base
128	QUDO	8.8							no cavity
129	QUDO	7.0							no cavity
130	QUDO				7.0	9.7 @ 2'			no cavity
131	QUDO	6.0							no cavity
132	QUDO	14.0							cavity at base, no activity
133	QUDO	10.1 @ 3'							red marker, no cavity
134	QUDO	14.3							no cavity
135	QUDO				6.8	14.8 @ 2'			southside of creek, no cavity
136	QUDO	9.8							no cavity
137	QUDO				12.4	11.6			southside of creek, no cavity
138	QUDO	12.3							no cavity, southside of creek
139	QUDO	11.4							no cavity, southside of creek
140	QUDO	12.1							no cavity, southside of creek
141	QUDO	16.7							no cavity, southside of creek
142	QUDO	14.4							no cavity, southside of creek
143	QUDO	17.9							no cavity, southside of creek, poor health
144	QUDO		13.5	11.0					no cavity, southside of creek
145	QUDO		9.7	12.2					no cavity, southside of creek
146	QUDO	12.3							cavity at base, green stake, southside of creek
147	QUKE	24.7							northside of cree, no cavity, between channels
148	QUDO	22.0							northside of cree, no cavity, between channels
149	QUDO				14.7	21.0			northside of cree, no cavity, between channels
150	?	18.5							nest at bottom, no cavity
151	QUDO	13.8							no cavity
152	QUDO	11.4							no cavity
153	QUDO	11.5							no cavity
154	QUDO				12.0	9.8	15.5		cavity at base, in use
155	QUDO	8.0							no cavity
156	7, photo	8.4							no cavity
157	QUDO	6.7							no cavity
158	QUDO	9.7							no cavity
159	QUDO	14.4							no cavity
160	QUDO	12.1							no cavity, northside of creek
161	QUDO		13.0	17.2					poor health, cavity at base
162	QUKE	19.0							no cavity
163	QUDO	18.5							no cavity
164	QUDO	21.5							cavity with bird's nest
165	QUDO		23.5	17.8					no cavity
166	QUDO	18.3							no cavity
167	QUKE	12.3							no cavity
168	QUKE	17.6							cavity at base
169	QUDO				7.5	5.5			cavity at base
170	QUDO				10.0	8.5			cavity at base
171	QUAG	11.9							no cavity
172	QUKE	18.9							no cavity
173	QUDO				8.4	6.9	7.9		no cavity
174	QUDO	16.5							no cavity
175	QUKE	26.2							cavity at base, poor health
176	QUDO		15.2 @ 2'	15.9 @ 2'					no cavity
177	QUDO	12.8							no cavity
178	QUDO				9.9	19.6			no cavity
179	QUDO	9.9							no cavity
180	QUDO	13.5							no cavity
181	QUDO	11.2							no cavity
182	QUDO	12.7							no cavity
183	QUDO		8.5	8.3					no cavity
184	QUDO	11.4							no cavity
185	M PINE	16.6							no cavity
186	QUKE	28.8							no cavity
187	QUKE	22.4							no cavity
188	QUKE	20.8							no cavity
189	QUDO	20.9							cavity at base
190	QUDO	13.2							no cavity
191	QUDO	9.2							no cavity
192	QUDO	8.1							no cavity
193	QUDO	8.6							no cavity
194	QUDO	14.8							no cavity, poor health
195	QUDO				7.3	6.5	8.3		no cavity
196	QUDO	7.0							no cavity
197	QUDO	8.5							no cavity
198	QUDO	10.7							no cavity
199	QUDO	15.2							no cavity
200	QUDO	12.6							no cavity
201	QUDO	9.4							no cavity

3496 Soda Canyon Road Vineyard Project
Biological Resources Survey
February 2022

202	QUDO	11.5								no cavity
203	QUDO	11.7								no cavity
204	QUDO	10.8								no cavity
205	QUDO	5.7								no cavity
206	QUDO	5.1								no cavity
207	QUDO		4.5	7.0						no cavity
208	QUDO	8.0								no cavity
209	QUDO	21.7								no cavity
210	QUDO	8.9								no cavity
211	QUDO				5.7	3.8				no cavity
212	QUDO	6.1								no cavity
213	QUDO	11.0								no cavity
214	QUDO	13.3 @ 30"								no cavity
215	QUDO	10.7								no cavity
216	QUDO	14.6								no cavity
217	QUDO	13.7								no cavity, poor health
218	QUDO		6.4	4.9						cavity at base, poor health
219	QUDO	8.6								no cavity
220	QUDO	10.6								no cavity
221	QUDO	9.0								no cavity
222	QUDO	8.6								no cavity
223	QUDO	15.4								no cavity
224	QUDO		8.2	12.3						no cavity
225	QUDO	10.3								no cavity
226	QUDO				10.9	14.7	15.3	16.2		no cavity
227	QUDO		7.2	9.0						no cavity
228	QUDO				6.3	4.1	7.2			no cavity
229	QUDO	5.9								no cavity
230	QUDO	12.4								no cavity
231	QUDO				6.8	8.4				no cavity, poor health
232	QUDO		7.5	15.2						no cavity
233	QUDO		6.4	6.2						no cavity
234	QUDO	16.5								no cavity
235	QUDO	27.5								cavity at base, poor health
236	QUDO	42.5								no cavity
237	QUDO	20.4								no cavity
238	QUDO				19.0	19.8	17.7			cavity at base, poor health
239	QUDO	23.3								no cavity
240	UMCA		15.2	13.9						no cavity
241	UMCA				11.5	12.0	15.8			no cavity
242	QUKE		18.5	16.4						no cavity
243	QUAG		8.6	12.1						no cavity
244	QUKE	24.0								no cavity
245	QUKE	30.7								cavity at bottom, poor health
246	QUKE	37.6								no cavity, poor health
247	QUDO	17.5								no cavity
248	walnut				6.4	7.4				no cavity
249	QUDO	28.7								no cavity
250	QUDO		18.1	16.8						no cavity, poor health
251	QUDO	25.0								no cavity
252	QUDO		14.3	26.1						no cavity, poor health
253	QUDO	12.2								no cavity, poor health
254	QUDO		13.6	16.8						no cavity
255	QUDO				12.3	13.1	15.3			no cavity
256	QUDO	6.5								possibly dead
257	QUDO	10.9								no cavity
258	QUDO	14.6								no cavity
259	QUDO	23.1								cavity at base, poor health
260	QUDO	32.8								hollow, split
261	QUDO	26.1								no cavity
262	QUDO				19.4	22.1	14.6			no cavity
263	QUDO	12.4								cavity at base, poor health
264	QUDO		12.9	10.4						no cavity, poor health
265	QUDO	20.1								no cavity
266	QUDO	10.4								no cavity, poor health
267	QUDO		13.0	6.4						no cavity
268	QUDO	9.2								no cavity
269	QUDO	9.8								no cavity
270	QUDO	11.6								no cavity
271	QUDO	13.0								no cavity
272	QUDO	10.5								no cavity
273	QUDO	8.8								no cavity
274	QUDO	10.9								no cavity, poor health
275	QUDO	17.1								no cavity
276	QUDO				12.5	9.0				no cavity
277	QUDO	10.7								no cavity, poor health
278	QUDO	11.8								no cavity
279	QUDO	13.5								no cavity
280	QUDO	12.8								no cavity, poor health
281	QUDO	14.1								no cavity
282	QUDO	12.4								no cavity
283	QUDO	16.5								no cavity
284	QUDO		18.1 @ 2'	25.4 @ 2'						no cavity
285	QUDO	22.2								cavity at base, hollow
286	QUDO	15.1								no cavity
287	QUDO	15.7								no cavity
288	QUDO	17.3								no cavity
289	QUDO	12.3								no cavity
290	QUDO	21.2								no cavity
291	QUDO	15.1								no cavity
292	QUDO	25.0								no cavity
293	QUDO		10.3	11.1						no cavity, poor health
294	QUDO	13.9								cavity at base, poor health, top of property
295	QUDO	20.1								no cavity
296	QUDO				16.0	19.7	18.2			no cavity
297	QUDO	18.9								no cavity
298	QUDO	9.7								no cavity
299	QUDO		12.9	13.4						no cavity
300	QUDO	12.6								poor health, hollow base

List of table abbreviations:

ABME: *Arbutus menziesii*

PISA: *Pinus sabiniana*

QUAG: *Quercus agrifolia*

QUDO: *Quercus dumosa*

QUKE: *Quercus kelloggii*

UMCA: *Umbellularia californica*

WR: dusky footed wood rat (*Neotoma fuscipes*)

Table 2. 3496 Soda Canyon Road List of Plants Observed Onsite During Site Surveys

Family	Scientific name	Common name	Habitat
Trees			
Fagaceae			
	<i>Quercus douglasii</i>	Blue oak	Oak woodland
	<i>Quercus kelloggii</i>	Black oak	Oak woodland
	<i>Quercus lobata</i>	Valley oak	Oak woodland
Lauraceae			
	<i>Umbellularia californica</i>	Bay laurel	Oak woodland
Pinaceae			
	<i>Pinus sabiniana</i>	Gray pine	Oak woodland
Shrubs			
Anacardiaceae			
	<i>Toxicodendron diversilobum</i>	Poison oak	Oak woodland, Chaparral
Asteraceae			
	<i>Baccharis pilularis</i>	Coyote brush	Oak woodland, Chaparral
Ericaceae			
	<i>Arctostaphylos manzanita</i>	Manzanita	Oak woodland, Chaparral
Fabaceae			
	<i>Genista monspessulanis</i>	French broom	Chaparral
Fagaceae (oak)			
	<i>Quercus berberidifolia</i>	Scrub oak	Chaparral
Hydrophyllaceae			
	<i>Eriodictyon californicum</i>	Yerba santa	Chaparral
Lamiaceae			
	<i>Salvia mellifera</i>	Black sage	Chaparral
Rhamnaceae			
	<i>Ceanothus oliganthus</i>	Jim bush	Chaparral
	<i>Ceanothus purpureus</i>	Holly-leaved ceanothus	Chaparral

3496 Soda Canyon Road Vineyard Project
 Biological Resources Survey
 February 2022

Family	Scientific name	Common name	Habitat
	<i>Frangula sp.</i>	coffeeberry	Chaparral
Rosaceae			
	<i>Adenostema fasciculatum</i>	chamise	Chaparral
	<i>Cercocarpus betuloides</i>	Mt. mahogany	Chaparral
	<i>Heteromeles arbutifolia</i>	toyon	Chaparral
Grasses and Herbs			
Agavaceae			
	<i>Chlorogalum pomeridianum</i>	Soap plant	Oak woodland
Alliaceae			
	<i>Allium sp. (fimbriatum?)</i>	Wild onion	Oak woodland
	<i>Allium neopolitanum</i>	White garlic	Oak woodland, house site
Amaryllidaceae			
	<i>Narcissus pseudonarcissus</i>	Daffodil	Oak woodland, house site
Apiaceae			
	<i>Lomatium sp.</i>	Common lomatium	Oak woodland; Chaparral
	<i>Perideridia kelloggii</i>	yampah	Oak woodland
	<i>Sanicula sp.</i>	Purple sanicle	Oak woodland
Asteraceae			
	<i>Carduus pycnocephalus</i> subsp. <i>pycnocephalus</i>	Italian thistle	Oak woodland; grassland
	<i>Silybum marianum</i>	Milk thistle	Oak woodland; grassland; house site
	<i>Wyethia sp.</i>	Mule ears	Oak woodland, chaparral
Boraginaceae			
	<i>Amsinckia menziesii</i>	Common fiddleneck	Oak woodland; grassland

3496 Soda Canyon Road Vineyard Project
 Biological Resources Survey
 February 2022

Family	Scientific name	Common name	Habitat
	<i>Cynoglossum occidentale</i>	Western hound's tongue	Oak woodlandChaparral
	<i>Plagiobothrys nothofulvus</i>	Common popcornflower	Chaparral
Brassicaceae			
	<i>Brassica nigra</i>	Black mustard	Oak woodland; grassland
	<i>Rhaphanus sativus</i>	Wild radish	Oak woodland; grassland
	<i>Thysanocarpus curvipes</i>	Hairy fringedpod	Chaparral
Caprifoliaceae			
	<i>Lonicera sp.</i>	honeysuckle	Chaparral
Caryophyllaceae			
	<i>Cerastium glomeratum</i>	Large mouse ears	
Cyperaceae			
	<i>Eleocharis macrostachya</i>	Common spikerush	Stock pond
Fabaceae			
	<i>Acmispon glaber</i>	deerweed	Chaparral
	<i>Lupinus nanus</i>	Sky lupine	Oak woodland; grassland
	<i>Trifolium sp.</i>	clover	Oak woodland; grassland
	<i>Vicia sp.</i>	vetch	Oak woodland; grassland
Geraniaceae			
	<i>Erodium botrys</i>	storksbill	Oak woodland, grassland, chaparral
	<i>Erodium cicutarium</i>	Red-stemmed filaree	Oak woodland, grassland
Iridaceae			
	<i>Iris douglasiana</i>	Douglas' iris	Oak woodland
	<i>Iris macrosiphon</i>	Wild iris	Oak woodland
	<i>Sisyrinchium bellum</i>	Western blue-eyed grass	Oak woodland
Lamiaceae			

3496 Soda Canyon Road Vineyard Project
 Biological Resources Survey
 February 2022

Family	Scientific name	Common name	Habitat
	<i>Salvia sonomensis</i>	Sonoma sage	chaparral
Lythraceae			
	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	Stock pond
Malvaceae			
	<i>Malva neglecta</i>	Common mallow	Oak woodland, house site, grassland
Melanthiaceae			
	<i>Toxicoscordion fremontii</i>	Death camas	chaparral
Montiaceae			
	<i>Claytonia perfoliata</i>	Miner's lettuce	Oak woodland, grassland
Myrsinaceae			
	<i>Lysimachia arvensis</i>	Scarlet pimpernel	Oak woodland, chaparral, grassland
	<i>Lysimachia minima</i>	Chaffweed	Stock pond
Onagraceae			
	<i>Camissonia sp.</i>	Sun cups	Oak woodland, grassland
	<i>Epilobium canum</i>	California fuschia	Chaparral
	<i>Epilobium sp.</i>		Stock pond
Plantaginaceae			
	<i>Plantago erecta</i>	California plantain	Oak woodland, grassland
Poaceae			
	<i>Aira caryophyllea</i>	Silver hairgrass	chaparral
	<i>Bromus sp.</i>	Brome grass	Oak woodland, grassland
	<i>Festuca microstachys</i>	Fescue	Oak woodland, grassland
	<i>Phalaris aquatica</i>	Harding grass	Oak woodland, house site, grassland
	<i>Triticum sp.</i>	Wheat	Oak woodland, grassland

3496 Soda Canyon Road Vineyard Project
 Biological Resources Survey
 February 2022

Family	Scientific name	Common name	Habitat
Polemoniaceae			
	<i>Leptosiphon parviflorus</i>	Variable linanthus	Chaparral
Polygonaceae			
	<i>Rumex crispus</i>	Curly dock	Oak Woodland, grassland/
Primulaceae			
	<i>Primula clevelandii</i>	Shooting star	Oak woodland, chaparral
Scrophulariaceae			
	<i>Verbascum sp.</i>	Turkey mullein	Oak woodland, grassland
Ranunculaceae			
	<i>Ranunculus aquatilis</i>	Whitewater crowfoot	Stock pond
	<i>Ranunculus californicus</i>	California buttercup	Oak woodland, grassland
	<i>Ranunculus muricatus</i>	Spiny buttercup	Oak woodland, grassland/
	<i>Ranunculus repens</i>	Creeping buttercup	Oak woodland, grassland
Rubiaceae			
	<i>Galium sp.</i>	bedstraw	Oak woodland, grassland
Viscaceae			
	<i>Phoradendron sp.</i>	mistletoe	Oak woodland

Table 3: Special-status Plant Species Potentially Occurring within the Parcel

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
Franciscan onion (<i>Allium peninsulare</i> var. <i>franciscanum</i>)	CRPR 1B.2	Endemic to California. Found in coastal California in Mendocino, Santa Clara, San Mateo, and Sonoma counties.	Perennial herb found in cismontane woodland and valley and foothill grasslands, often on dry hillsides. Occurs at elevations from 170 to 1,000 feet.	May – June	Low. No CNDDDB occurrences have been documented within 5 miles of the parcel. Suitable habitat is present within the parcel. However, this species has not been documented in Napa county.
Napa false indigo (<i>Amorpha californica</i> var. <i>napensis</i>)	CRPR 1B.2	Endemic to California. Found in Sonoma, Napa, Marin, and Monterey counties.	Perennial deciduous shrub found in openings in broadleaf upland forests, chaparral, and cismontane woodlands. Occurs at elevations from approximately 400 to 6,600 feet.	April – July	Low. Even though there are no CNDDDB occurrences documented within 5 miles of the parcel, there are recent documented occurrences in Napa county. There is suitable habitat present within the parcel. However, none were observed during the March 2013 and April 2017 site visits.
Clara Hunt's milk-vetch (<i>Astragalus claranus</i>)	FE; ST; CRPR 1B.1	Endemic to California. Found in Napa and Sonoma counties.	Annual herb found on open grassy hillsides, especially on exposed shoulders, in cismontane woodland, valley and foothill grasslands, and chaparral. Found in serpentine/volcanic, rocky, or thin clay soils. Occurs at elevations from approximately 250 to 900 feet.	March – May	Low. Occurrences have not been documented within 5 miles of the parcel. This species was not found during site surveys and the site does not contain thin clay or serpentine soil habitat.
Alkali milkvetch (<i>Astragalus tener</i> var. <i>tener</i>)	CRPR 1B.2	Endemic to California. Known from Sacramento and San Joaquin valleys, San Francisco Bay area, and the inner ranges of the south coast.	Annual herb found on playas, valley and foothill grassland, vernal pools in alkaline soils. Occurs at elevations from sea level to 200 feet.	March – June	None. There is no suitable habitat present on the parcel.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
Sonoma manzanita (<i>Arctostaphylos canescens</i> ssp. <i>sonomensis</i>)	CRPR 1B.2	Endemic to California in northern counties from Sonoma to Humboldt.	Perennial evergreen shrub found in chaparral, lower montane coniferous forest, and open forests; sometimes in serpentine soil. Occurs at elevations from approximately 600 to 5,500 feet.	January – June	Low. No CNDDDB occurrences documented in Napa County or within 5 miles of the parcel. Even though there is suitable habitat present in the parcel, this sub-species has only been documented in the outer north coast ranges. None were observed during the March 2013 and April 2017 site visits.
Rincon Ridge manzanita (<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>)	CRPR 1B.1	Endemic to California. Found in Sonoma and Napa counties.	Perennial evergreen shrub found in chaparral and cismontane woodland. Highly restricted to red rhyolites soil. Occurs at elevations from approximately 250 to 1,200 feet.	February – May	None. No suitable soils are present in the parcel and this sub-species has only been documented in the outer north coast ranges.
Big-scale balsamroot (<i>Balsamorhiza macrolepis</i>)	CRPR 1B.2	Endemic to California. Found in the Sierra Nevada foothills, Sacramento valley, and San Francisco Bay area, including Sonoma county.	Perennial herb found in chaparral, cismontane woodland, valley and foothill grassland on open grassy or rocky slopes. Sometimes found on serpentine. Occurs at elevations from sea level to 4,620 feet.	March – June	Low. There is suitable habitat present on the parcel. However, there are no CNDDDB occurrences within 5 miles of the parcel and has not been documented in Napa county.
Sonoma sunshine (<i>Blennosperma bakeri</i>)	FE; CE; CRPR 1B.1	Endemic to California. Known only from Sonoma county.	Annual herb found in valley and foothill grassland under mesic conditions and vernal pools. Occurs at elevations from approximately 66 to 132 feet.	February – April	Low. There is marginal habitat present within the parcel (stock pond). Not known from Napa County.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
Narrow-anthered brodiaea (<i>Brodiaea leptandra</i>)	CRPR 1B.2	Endemic to California. Found in Lake, Napa, and Sonoma counties.	Perennial herb found in broadleaf upland forest, chaparral, cismontane woodland, valley and foothill grassland, and lower montane coniferous forest on volcanic soils. Occurs at elevations from approximately 360 to 3,000 feet.	May – July	High Suitable habitat is present within the parcel. There is a CNDDDB occurrence within 5 miles of the parcel.
Small-flowered calycadenia (<i>Calycadenia micrantha</i>)	CRPR 1B.2	Endemic to California. Occurs in Colusa, Lake, Monterey, Napa, and Trinity counties.	Annual herb found in chaparral, valley and foothill grasslands on rocky talus or scree, and/or sparsely vegetated areas, sometimes on serpentine. Also in meadows or seeps on volcanic substrate. Occurs at elevations from approximately sea level to 5,000 feet.	June – September	Moderate. Occurrences have been documented within 5 miles of the parcel. The parcel does not contain rocky talus or scree, but does contain volcanic soils.
Mead's owl's-clover (<i>Castilleja ambigua</i> var. <i>meadii</i>)	CRPR 1B.1	Endemic to California. Known only from Napa county.	Annual herb found in meadows and seeps, vernal pools on gravelly, volcanic, clay soils. Occurs at elevations from 1,485 to 1,567 feet.	April – May	None. There is no suitable habitat present on the parcel.
Rincon Ridge ceanothus (<i>Ceanothus confusus</i>)	CRPR 1B.1	Endemic to California. Known only from Lake, Napa, and Sonoma counties.	Perennial evergreen shrub found in closed-cone coniferous forest, chaparral, and cismontane woodland on volcanic or serpentine substrates. Occurs at elevations from approximately 250 to 3, 600 feet.	February – June	Low. Suitable habitat is present on the parcel. However, there are no CNDDDB occurrences within 5 miles of the parcel and this species has only been documented in the outer ranges of the north coast. None were observed during the March 2013 and April 2017 site visits.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
Calistoga ceanothus (<i>Ceanothus divergens</i>)	CRPR 1B.2	Endemic to California. Found in Napa, Sonoma, and Lake counties.	Perennial evergreen shrub found in chaparral and cismontane woodlands, especially on rocky, serpentine or volcanic soils. Occurs at elevations from approximately 550 to 3,100 feet.	February – April	Low. No CNDDDB occurrences have been documented within 5 miles of the parcel. Some suitable habitat, including volcanic soils, is present in the parcel. None were found during the March 2013 and April 2017 surveys.
Holly-leaved ceanothus (<i>Ceanothus purpureus</i>)	CRPR 1B.2	Endemic to California. Found in Napa, Shasta, Solano, Sonoma, and Trinity counties.	Perennial evergreen shrub found in chaparral and cismontane woodland. Occurs in rocky, volcanic soils. Occurs at elevations from approximately 400 to 2,100 feet.	February – June	Present. Suitable habitat is present in the parcel. Additionally, approximately 115 individuals were documented in the parcel during the March 2013 site visit.
Sonoma ceanothus (<i>Ceanothus sonomensis</i>)	CRPR 1B.2	Endemic to California. Found in Napa and Sonoma counties.	Perennial evergreen shrub found in chaparral especially on sandy, serpentine, or volcanic soils. Occurs at elevations from approximately 700 to 2,600 feet.	February – April	Low. No CNDDDB occurrences have been documented within the last 30 years in Sonoma or Napa counties. Some suitable habitat, including rocky/volcanic soils, is present in the parcel. However, this species is mainly known from the outer ranges of the north coast. None were observed during the March 2013 site survey for holly-leaved ceanothus and April 2017 special-status plant survey.
Serpentine cryptantha (<i>Cryptantha dissita</i>)	CRPR 1B.2	Endemic to California. Found in the outer and inner ranges of the north coast (Napa, Lack, and Sonoma counties) and Klamath Ranges.	Annual herb found in chaparral and foothill woodlands on rocky outcrops and gravelly slopes. Serpentine endemic. Occurs at elevations from approximately 1,300 to 1,900 feet.	April – June	None. There is no suitable habitat within the parcel.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
Dwarf downingia (<i>Downingia pusilla</i>)	CRPR 2B.2	Also, found outside of California. Found in the inner and outer ranges of the north coast (Sonoma and Napa counties), Sacramento Valley, and San Joaquin Valley.	Annual herb found in valley and foothill grassland in mesic conditions, and vernal pools. Occurs at elevations from approximately sea level to 1,610 feet.	March – May	Low. There is marginal habitat within the parcel (stock pond).
Green's narrow-leaved daisy (<i>Erigeron greenei</i>)	CRPR 1B.2	Endemic to California. Found in the outer north coast ranges (Napa and Sonoma counties).	Perennial herb found in chaparral, woodland and conifer forests on serpentine, volcanic soils or rocky alluvium. Occurs at elevations from approximately 1,500 to 5,280 feet.	May – September	Low. There is a CNDDDB occurrence within 5 miles of the parcel, but is from 1938. There is suitable habitat present within the parcel.
San Joaquin spearscale (<i>Atriplex joaquinana</i>)	CRPR 1B.2	Endemic to California. Found in the inner ranges of the north coast (Napa county), central valley, central coast, San Francisco Bay area, and the inner ranges of the south coast.	Annual herb found in chenopod sub, meadows and seeps, playas, valley and foothill grassland in alkaline soils. Occurs at elevations from approximately sea level to 2,755 feet.	April – October	None. There is no suitable habitat within the parcel.
Nodding harmonia (<i>Harmonia nutans</i>)	CRPR 4.3	Endemic to California. Found in the inner ranges of Lake, Napa, Sonoma, and Yolo Counties.	Annual herb found in chaparral and cismontane woodland on rocky, gravelly volcanic outcrops. Occurs at elevations from 250 to 3200 feet.	March – May	High. There is suitable volcanic substrate within the parcel and there are several documented nearby occurrences. None were observed during the April 2017 site visit.
Two-carpellate western flax (<i>Hesperolinon bicarpellatum</i>)	CRPR 1B.2	Endemic to California. Found in Lake, Napa, and Sonoma counties.	Annual herb found in serpentine barrens at the edge of chaparral. Occurs at elevations from approximately 200 to 3,297 feet.	May – July	None. There is no suitable habitat within the parcel.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
Brewer's western flax (<i>Hesperolinon breweri</i>)	CRPR 1B.2	Endemic to California. Found in Napa, Solano, and Contra Costa counties.	Annual herb found in the chaparral, cismontane woodland, and valley and foothill grassland. Occasionally found in serpentine soils. Occurs at elevations from 100 to 3,100 feet.	May – July	Low. There is suitable habitat within the parcel. However, this species has not been documented near the parcel and no records exist for this species after 1959 in Napa County.
Sharsmith's western flax (<i>Hesperolinon sharsmithiae</i>)	CRPR 1B.2	Endemic to California. Known only from Lake and Napa Counties.	Annual herb found in serpentine barrens in chaparral. Occurs at elevations from approximately 200 to 3,297 feet.	May – July	None. There is no suitable habitat within the parcel.
Tehama County western flax (<i>Hesperolinon tehamense</i>)	CRPR 1B.3	Endemic to California. Found in Alameda, Lake, Napa, Stanislaus, Glenn, and Tehama counties.	Annual herb found in serpentine barrens in chaparral and cismontane woodland. Occurs at elevations from approximately 350-4,100 feet.	May – July	None. CNDDDB occurrences have been documented within 5 miles of the parcel. No serpentine soils occur on site.
Thin-lobed horkelia (<i>Horkelia tenuiloba</i>)	CRPR 1B.2	Endemic to California. Found in the north county outer ranges (Sonoma and Mendocino counties) and San Francisco Bay area (Marin County).	Perennial herb found in openings in broadleaf upland forest, chaparral, valley and foothill grassland on sandy soils. Occurs at elevations from approximately sea level to 150 to 1,650 feet.	May – August	None. No suitable habitat present.
Northern California black walnut (<i>Juglans hindsii</i>)	CRPR 1B.1	Endemic to northern California Historically found in Contra Costa, Lake, Napa, Sacramento, Solano, and Yolo counties; however, it is thought to be extirpated from Sacramento, Solano, and Yolo counties.	Perennial deciduous tree found in riparian habitats often associated with a creek or stream. Few native stands remain. Occurs at elevations from approximately sea level to 1,445 feet.	April – May	None. No suitable riparian habitat is present in the parcel. In addition, none were observed within the parcel during the 2013 tree survey.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
Bristly leptosiphon (<i>Leptosiphon acicularis</i>)	CRPR 4.2	Endemic to California. Occurs along the north coast and in the north coast ranges as well as the San Francisco Bay Area.	Annual herb found in chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland.	April – July	Low. There is some suitable habitat within the parcel but there are no recent nearby occurrences. This species was not observed during the April 2017 site visit.
Jepson's leptosiphon (<i>Leptosiphon jepsonii</i>)	CRPR 1B.2	Endemic to California. Found in Sonoma, Lake, Napa, and Yolo counties.	Annual herb found in chaparral, cismontane woodland. Often in partially shaded grassy slopes on volcanic or serpentine substrate. Occurs at elevations from approximately 350 to 1,650 feet.	March – May	High. Suitable habitat for this species is present in the parcel. CNDDDB occurrences have been documented within 5 miles of the parcel. This species was not observed during the March 2013 site visit.
Mason's lilaeopsis (<i>Lilaeopsis masonii</i>)	SR; CRPR 1B.1	Endemic to California. Occurs in the northeastern portion of the San Francisco Bay area in Alameda, Contra Costa, and Napa counties, as well as in Suisun Bay area, and the Sacramento-San Joaquin river delta, in Solano, San Joaquin, and Sacramento counties.	A perennial rhizomatous herb found in freshwater and brackish marshes and riparian scrub. Often found in tidal zones in muddy or silty soils formed through river deposition or river bank erosion. Occurs at elevations from sea level to approximately 32 feet.	April – November	None. No suitable marsh or riparian habitat present in the parcel.
Sebastopol meadowfoam (<i>Limnanthes vinculans</i>)	FE; SE; CRPR 1B.1	Endemic to California. Found in Napa and Sonoma counties.	Annual herb found in mesic meadows, vernal pools, and valley and foothill grasslands. Usually found in swales, wet meadows, or marshy areas in valley oak savanna on poorly drained clay and sandy loam soils. Occurs at elevations from approximately 50 to 1,000 feet.	April – May	Low. There is marginal habitat within the parcel (stock pond). Not known from Napa County.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
Cobb Mountain lupine (<i>Lupinus sericatus</i>)	CRPR 1B.2	Endemic to California. Found in Sonoma, Napa, Colusa, and Lake counties.	Perennial herb found in chaparral, cismontane woodland, broadleaf upland forests, and lower montane coniferous forests. Often found in gravelly soils on open wooded slopes in stands of knobcone pine-oak woodland. Occurs at elevations from approximately 900 to 5,000 feet.	March – June	Low. Occurrences have not been documented within 5 miles of the parcel. No knobcone pine or gravelly soil habitat. None were observed in the parcel during the March 2013 and April 2017 site visits.
Heller's bush mallow (<i>Malacothamnus helleri</i>)	CRPR 3.3	Endemic to California. Found in Colusa, Lake, Napa, and Yolo counties.	Perennial shrub found in chaparral and riparian woodland in open areas, often on sandstone or gravel substrate. Occurs at elevations from approximately 1,000 to 2,100 feet.	May – July	Low. There is no gravel or sandstone substrate within the parcel. Known from the Lake Berryessa area. None were observed during the April 2017 site visit.
Green monardella (<i>Monardella viridis</i>)	CRPR 4.3	Endemic to California. Found in Lake, Napa, Solano, and Sonoma counties.	Perennial herb found in chaparral, cismontane woodland, and broadleaf upland forest, sometimes on serpentine soil. Occurs at elevations from 350 to 3,300 feet.	June – September	Moderate. There is suitable habitat within the parcel and there are several nearby occurrences.
Few-flowered navarretia (<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>)	FE; ST; CRPR 1B.1	Endemic to California. Found in Napa and Lake counties.	Annual herb found in vernal pools, especially in volcanic ash flow and volcanic substrate. Occurs at elevations from approximately 1,300 to 2,800 feet.	May – June	None. There are no vernal pools present within the parcel.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
Sonoma beardtongue (<i>Penstemon newberryi</i> var. <i>sonomensis</i>)	CRPR 1B.3	Endemic to California. Found in Lake, Napa and Sonoma counties.	Perennial herb found in chaparral especially in crevices in rock outcrops and on talus slopes. Occurs at elevations from approximately 2,300 to 4,500 feet.	April – August	None. There is no suitable habitat present within the parcel.
Victor's gooseberry (<i>Ribes victoris</i>)	CRPR 4.3	Endemic to California. Found in Mendocino, Marin, Napa, Solano, and Sonoma counties.	Perennial shrub found in chaparral and broadleaf upland forest, usually in mesic, shady areas. Occurs at elevations from approximately 350 to 2,500 feet.	March – April	Moderate. There is suitable habitat within the parcel and there several nearby occurrences. None observed during the April 2017 site visit.
Napa bluecurls (<i>Trichostema ruygtii</i>)	CRPR 1B.2	Endemic to California. Found in Lake, Napa, and Solano counties.	Annual herb found in open, sunny areas in cismontane woodland, chaparral, valley and foothill grasslands, vernal pools, or lower montane coniferous forests. Occurs at elevations from approximately 100 to 2,200 feet.	June – October	High. Suitable habitat is present within the parcel. In addition, CNDDDB occurrences have been documented near the parcel.
Showy rancheria clover (<i>Trifolium amoenum</i>)	FE; CRPR 1B.1	Endemic to California. Found in Marin, Sonoma, Napa, Solano, Santa Clara, and San Mateo counties. Thought to be extirpated in Napa, Solano, and Santa Clara counties.	Annual herb found in coastal bluff scrub and valley and foothill grassland in moist heavy soils. Sometimes occurs on serpentine soils. Often occurs in open sunny sites, sometimes in swales or along roadsides. Occurs at elevations from near sea level to 1,361 feet.	April – June	None. The parcel does not contain suitable habitat.
Oval-leaved viburnum (<i>Viburnum ellipticum</i>)	CRPR 2B.3	Found in California, Oregon, and Washington. In California found from Fresno to Humboldt counties.	Perennial deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forests. Occurs at elevations from approximately 700 to 4,600 feet.	May – June	Low. There are no CNDDDB occurrences documented within 5 miles of the parcel. Suitable habitat is present within the parcel. However, none were observed during the March 2013 and April 2017 site visits.

Species	Listing Status	Range in California	Habitat	Blooming Season	Potential to Occur
See Table Notes on next page					
Federal: FE = Listed as endangered under the Federal Endangered Species Act. FT = Listed as threatened under the Federal Endangered Species Act. California: SE = Listed as endangered under the California Endangered Species Act. ST = Listed as threatened under the California Endangered Species Act. SR = Listed as rare in California.		Potential Occurrence explanations: Present: Species was observed within the parcel, or recent species records (within five years) from literature are known within the parcel. High: The CNDDDB or other reputable documents record the occurrence of the species off-site, but within a 5-mile radius of the parcel and within the last 10 years. High-quality suitable habitat is present within the parcel. Moderate: Species does not meet all terms of High or Low category. For example: CNDDDB or other reputable documents may record the occurrence of the species near but beyond a 5-mile radius of the parcel, or some of the components representing suitable habitat are present within or adjacent to the parcel, but the habitat is substantially degraded or fragmented. Low: The CNDDDB or other documents may or may not record the occurrence of the species within a 5-mile radius of the parcel. However, few components of suitable habitat are present within or adjacent to the parcel. None: The CNDDDB or other documents do not record the occurrence of the species within or reasonably near the parcel and within the last 10 years, and no or extremely few components of suitable habitat are present within or adjacent to the parcel; or the site is outside of specie's range.		California Rare Plant Rank: Rank 1A – Presumed extinct in California; Rank 1B – Rare, threatened, or endangered in California and elsewhere; Rank 2A: Plants presumed extirpated in California, but more common elsewhere; Rank 2B: Rare, threatened, or endangered in California, but more common elsewhere; Rank 3 – Plants for which more information is needed – A review list; and Rank 4 – Plants of limited distribution – A watch list. 0.1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat 0.2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat) 0.3- Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)	

Table 4: Special-status Wildlife Species Potentially Occurring Within the Parcel

Species	Listing Status	Range in California	Habitat	Potential to Occur
Invertebrates				
Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	FT	Endemic to the Central Valley of California from southern Shasta County to Kern County.	Found in riparian habitats and associated upland habitats where elderberry (<i>Sambucus</i> sp.) including blue elderberry (<i>Sambucus mexicana</i>) grows. Leaves and flowers of the elderberry provide food for the adult beetle while the interior pith of elderberry stems and roots at least 1-inch in diameter at ground level provide food and shelter for developing larva. Frequently, the only exterior evidence of the valley elderberry longhorn beetle using the shrub is an exit hole created by the larva just before the pupal stage.	None. No elderberry shrubs are present in the parcel.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Potential to Occur
Fish				
Steelhead-central California coast Distinct Population Segment (DPS) (<i>Oncorhynchus mykiss irideus</i>)	FT	Includes all populations from the Russian River south to Soquel Creek and to, but not including, the Pajaro River. Populations in the San Francisco and San Pablo Basins are also included.	Comprised of all winter-run fish. Winter-run steelhead spawn between December and April, with peak activity between January and March. However, migrating steelhead may be seen in the San Francisco Bay and Suisun Marsh area as early as August. In California, juvenile steelhead develop in freshwater for 1 to 4 years (typically 2 years) before migrating downstream to the marine environment as smolts in the spring months. After 1 to 4 years of growth at sea, adult steelhead return to their natal streams to spawn. A small percentage of returning adults may stray to non-natal streams for spawning. Steelhead are primarily drift feeders and may forage in open waters of estuarine subtidal and riverine tidal habitats. This species occurs in cool, swift-moving streams with clean, non-silty gravel beds for spawning and egg incubation.	None. There is No suitable estuarine or riverine habitat present within or adjacent to the parcel. The parcel is in the Rector Reservoir watershed.

Species	Listing Status	Range in California	Habitat	Potential to Occur
Amphibians				
California red-legged frog (<i>Rana draytonii</i>)	FT; CSSC	Endemic to California and northern Baja California. Historically, this species was found along the coast and Coast Ranges from Mendocino County in northern California south to northern Baja California, and inland east through the northern Sacramento Valley into the foothills of the Sierra Nevada mountains, south to Tulare County, and possibly Kern County. Currently, it is found primarily in coastal drainages from Marin County, California south to northern Baja California, Mexico and in isolated drainages in the Sierra Nevada, northern Coast, and northern Transverse Ranges.	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Found at elevations from near sea level to approximately 5,200 feet. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat such as animal burrows and other moist refuges.	Moderate. CNDDDB occurrences of this species have been documented at Oak Moss Creek and Wragg Creek, which are approximately 5 and 6 miles from the parcel, respectively. CRF are documented to move up to 2 miles. A stock pond is present on-site which could provide habitat for this species, however connecting ponds or drainages were not found in review of aerial photography. The stock pond would currently function as a population sink because it does not contain water long enough during the breeding season to allow tadpoles to metamorphose.

Species	Listing Status	Range in California	Habitat	Potential to Occur
Foothill yellow-legged frog (<i>Rana boylei</i>)	Proposed Threatened (North Coast DPS) CSSC	Occurs in California in the Coast Ranges from the Oregon border south to the Transverse Mountains in Los Angeles County, and along the western flank of the Sierra south to Kern County. An isolated population has also been reported in San Joaquin County on the floor of the Central Valley.	Inhabits partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats, including valley and foothill hardwood, riparian, mixed conifer, coastal scrub, mixed chaparral, and wet meadows. Elevation range extends from near sea level to 6,370 feet. Rarely encountered far from permanent water. Need at least some cobble-sized substrate for egg laying. Breeding occurs from mid-March to May. Females deposit eggs in clusters of 200 to 300 and the eggs hatch in about five days. Tadpoles transform to frogs in three to four months.	Low. CNDDDB occurrences have been documented at Sage Creek and Capell Creek, which are within 5 miles of the parcel. In addition, a CNDDDB occurrence was documented at the Napa River near Yountville in 1956, which is within 5 miles of the parcel. There is no permanent water on or near the parcel, therefore there is low quality habitat within the parcel.
Western pond turtle (<i>Actinemys marmorata</i>)	CSSC	Occurs from Oregon border of Del Norte and Siskiyou counties south along the coast to San Francisco Bay, inland through the Sacramento Valley and on western slope of Sierra Nevada. Absent from desert regions, except in the Mojave Desert along the Mojave River.	Inhabits permanent or nearly permanent water in ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms. Elevation range extends from near sea level to 4,690 feet. Requires basking sites, such as partially submerged logs, rocks, mats of floating vegetation, or mud banks.	Low. CNDDDB occurrences have been documented at Conn Creek and Capell Creek, which are within 5 miles of the parcel. A stock pond with permanent or nearly permanent water is present on site. Although the stock pond may provide some suitable habitat for western pond turtle, it may not contain enough vegetative cover or basking sites to be considered suitable habitat for this species.
Birds				
Double-crested cormorant (<i>Phalacrocorax auratus</i>)	WL	Found over much of California year-round, but breeding populations occur mostly along the state's coast. In southern California they only breed on a few of the Channel Islands and the Coronado	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of California. Nests along the coast in sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins. Forages for fish and	None. No suitable roosting, nesting, or foraging habitat for double-crested cormorant is present within the parcel.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Potential to Occur
		Islands in adjacent Baja California Norte. A few nesting colonies also occur in inland California along lakes and rivers.	crustaceans in open water. Breeding generally occurs from April to July or August.	
Bald eagle (<i>Haliaeetus leucocephalus</i>)	FD; SE; CFP	In winter, occurs throughout California at lakes, reservoirs, rivers, and some rangelands and coastal wetlands. Breeding habitats are mainly in mountain and foothill forests and woodlands near reservoirs, lakes, and rivers. Most breeding territories are in northern California, but also nest in scattered locations in the central and southern Sierra Nevada mountains and foothills.	Nests within one mile of water often by lake margins, near rivers or on the ocean shore. Nests in large, dominant trees with open branches. California resident breeding pairs remain in California during the winter, typically in the vicinity of their nesting areas, except when winter conditions are too severe and they must move to lower elevations. Roosts communally in the winter. Breeding generally occurs from January through July or August.	None. No suitable roosting, nesting, or foraging habitat for bald eagle is present within the parcel.
Golden eagle (<i>Aquila chrysaetos</i>)	CFP; WL	Occurs in mountainous areas, cliffs, canyons, deserts, shrub lands, grasslands, oak woodlands, and forests throughout California. To date, limited population information exists on distribution in California.	Nests in cliff-walled canyons and large trees in open areas. Avoid nesting near urban habitat and generally do not nest in densely forested areas. Breeding generally occurs from late January through August.	None. No CNDDB occurrences for golden eagle have been documented within 5 miles of the parcel. No suitable roosting, nesting, or foraging habitat is present within the parcel.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Potential to Occur
Purple martin (<i>Progne subis</i>)	CSSC	Occurs in California as a summer resident and migrant from mid-March to late September. Widely, but locally distributed in forest and woodland areas at low to intermediate elevations throughout most of the state. Populations are densest in central and northern coastal conifer forests and smaller and more localized in the Sierra Nevada, interior foothills, and southern California.	Inhabits woodlands, low elevation coniferous forest of Douglas fir (<i>Pseudotsuga menziesii</i>), ponderosa pine (<i>Pinus ponderosa</i>), and Monterey pine (<i>Pinus radiata</i>). Nests in old woodpecker cavities, or human-made structures. Nests often located in tall, isolated trees/snags. Nest sites typically have low canopy cover at the nest height and most tree nest sites are located in the upper slopes of hilly and mountainous terrain. Usually do not use snags along canyon bottoms or sites with dense vegetation at or above nest height. Breeding generally occurs from May to mid-August.	Low. No CNDDDB occurrences for purple martin have been documented within 5 miles of the parcel. Trees in the parcel are likely not suitable for purple martin nesting.
White-tailed kite (<i>Elanus leucurus</i>)	CFP	Year-round resident in lowland areas west of Sierra Nevada from head of Sacramento Valley south, including coastal valleys and foothills, to western San Diego County at Mexico border.	Inhabits low foothills or valley areas with scattered oaks and river bottoms or marshes next to deciduous woodland. Forages in open grasslands, meadows, agricultural fields, or marshes close to isolated, dense-topped trees for nesting and perching. Breeding typically occurs from February to October.	Moderate. Two CNDDDB occurrences for white-tailed kite have been documented within 5 miles of the parcel. These occurrences were documented in 1986 and 1988 and one of these occurrences is presumed to be extirpated. Suitable nesting habitat is present within the parcel and suitable foraging habitat is present surrounding the parcel.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Potential to Occur
Tricolored blackbird (<i>Agelaius tricolor</i>)	CSSC	Permanent residents of California. Occurs throughout California, particularly in the Central Valley and vicinity. Prefers living in colonies.	Nests in colonies in substrate near open water, and forages within a few kilometers of the colony. Breeding typically occurs from mid-March through early August.	None. No CNDDB occurrences for tri-colored blackbird have been documented within 5 miles of the parcel. The stock pond on the parcel site does not have sufficient vegetation to provide suitable roosting, nesting, or foraging habitat on site.
Saltmarsh common yellowthroat (<i>Geothlypis trichas sinuosa</i>)	CSSC	Subspecies of the common yellowthroat (<i>Geothlypis trichas</i>). Endemic to the fresh and salt water marshes of the San Francisco Bay region.	Breeds in woody swamps, brackish marshes, and freshwater marshes. Requires thick, continuous cover down to water surface for foraging. Requires tall grasses, tule patches, and willows for nesting. Breeding typically occurs from mid-March to late July.	None. No CNDDB occurrences for saltmarsh common yellowthroat have been documented within 5 miles of the parcel. No suitable nesting or foraging habitat is present within the parcel.
San Pablo song sparrow (<i>Melospiza melodia samuelis</i>)	CSSC	Subspecies of the song sparrow (<i>Melospiza melodia</i>). Confined to tidal and muted tidal salt marshes fringing the San Pablo Bay in the northern reaches of the San Francisco Bay estuary.	Inhabits virtually all tidal salt marsh habitat in the San Pablo Bay. Requires dense vegetation for nesting sites, song perches, and cover from predators. The dominant plants of tidal salt marshes in San Pablo Bay are California cord grass (<i>Spartina foliosa</i>) in low elevations, pickleweed (<i>Salicornia virginica</i>) at higher elevations, and gumplant (<i>Grindelia stricta</i>) on the highest ground along slough edges and levees. Typically absent or less dense where cord grass less than 46 centimeters high or pickleweed was less than 30.5 centimeters high. Breeding typically occurs from early March to July.	None. No CNDDB occurrences for San Pablo song sparrow have been documented within 5 miles of the parcel. No suitable nesting or foraging habitat is present within the parcel.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Potential to Occur
Mammals				
Western red bat (<i>Lasiurus blossevillii</i>)	CSSC	Found throughout California from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts. Winter range includes western lowlands and coastal regions south of the San Francisco Bay.	Roosting habitat includes forests and woodlands from sea level up through mixed coniferous forests. Roosts in trees from 2 to 40 feet above the ground. Forages over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Not found in desert areas. Prefers habitats with edges and mosaics with trees protected from above and open below with open areas for foraging. Mating occurs in August and September.	Low. No CNDDDB occurrences of western red bat documented within 5 miles of the parcel. Some suitable woodland habitat for roosting and foraging is present within the parcel.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	CSSC	Found throughout California in a wide variety of habitats, but the details of its distribution are not well known.	Found in all but subalpine and alpine habitats. Commonly found in mesic habitats in California. Roosts in the open, hanging from walls and ceilings in caves, mines, tunnels, buildings, or other human-made structures. Roosting sites are limited and the species is sensitive to human disturbance. Mating typically occurs from November to February.	Low. No CNDDDB occurrences of Townsend's big-eared bat have been documented within 5 miles of the parcel. Limited suitable foraging habitat is present in the parcel. However, there is suitable roosting habitat (large tree cavities and abandoned buildings). No bats were detected in December 2015 during a reconnaissance survey.

3496 Soda Canyon Road
Biological Resources Evaluation

Species	Listing Status	Range in California	Habitat	Potential to Occur
Pallid bat (<i>Antrozous pallidus</i>)	CSSC	Locally common species of low elevations in California except the high Sierra from Shasta to Kern counties and northwest corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County.	Inhabits deserts, grasslands, shrublands, woodlands and forests from sea level up through mixed conifer forests. Most common in open dry habitats with rocky areas for roosting and foraging. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Day roosts must protect bats from high temperatures. Night roosts in more open sites, such as porches and open buildings. Very sensitive to disturbance of roosting sites. Mating typically occurs from October to February.	Moderate. Two CNDDDB occurrences of pallid bat have been documented within 5 miles of the parcel in the vicinity of Lake Hennessey. Limited suitable foraging habitat but suitable roosting habitat exists (tree cavities and abandoned buildings). No bats were detected in December 2015 during a reconnaissance survey.
American badger (<i>Taxidea taxus</i>)	CSSC	Occurs throughout California and the western United States and Canada. Locally, documented southwest of Napa (CNDDDB 1911).	Inhabits a variety of open habitats with friable soils. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Construct underground burrows for protection and sleeping. Mating occurs in late summer or early autumn.	Low. No CNDDDB occurrences of American badger have been documented within 5 miles of the parcel. In addition, the last known occurrence near the parcel was documented in 1911. No suitable habitat is present within the parcel.
Federal: FE = Listed as endangered under the Federal Endangered Species Act. FT = Listed as threatened under the Federal Endangered Species Act. FD = Delisted under the Federal Endangered Species Act.			California: SE = Listed as endangered under the California Endangered Species Act. ST = Listed as threatened under the California Endangered Species Act. SR = Listed as rare in California CSSC = Listed as a species of special concern in California. CFP = Listed as fully protected in California WL = Listed as a watchlist species in California	

3496 Soda Canyon Road
Biological Resources Evaluation

Potential Occurrence explanations:

Present: Species was observed within the parcel, or recent species records (within five years) from literature are known within the parcel.

High: The CNDDDB or other reputable documents record the occurrence of the species off-site, but within a 5-mile radius of the parcel and within the last 10 years. High-quality suitable habitat is present within the parcel.

Moderate: Species does not meet all terms of High or Low category. For example: CNDDDB or other reputable documents may record the occurrence of the species near but beyond a 5-mile radius of the parcel, or some of the components representing suitable habitat are present within or adjacent to the parcel, but the habitat is substantially degraded or fragmented.

Low: The CNDDDB or other documents may or may not record the occurrence of the species within a 5-mile radius of the parcel. However, few components of suitable habitat are present within or adjacent to the parcel.

None: CNDDDB or other documents do not record the occurrence of the species within or reasonably near the parcel and within the last 10 years, and no or extremely few components of suitable habitat are present within or adjacent to the parcel; or the site is outside of specie's range.

Appendix C: Representative Photographs

This page deliberately left blank.



Photo 1. Homestead.



Photo 2. Inundated meadow with oak woodland near stock pond.



Photo 3. Looking west at the breached stock pond. Photo date April 2017.



Photo 3a. Looking northeast at the breached stock pond (April 2017).



Photo 4. Looking east at an intermittent stream. The surrounding grassland was inundated at the time the photo was taken (April 2017).



Photo 5. Blue oak woodland in Block 2 (April 2017).

This page deliberately left blank.